SOUTHERN CALIFORNIA EDISON

LUNDY HYDROELECTRIC PROJECT

(FERC PROJECT NO. 1390)



DRAFT LICENSE APPLICATION

VOLUME I

SOUTHERN CALIFORNIA EDISON®

Energy for What's Ahead℠

October 2026

SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
Volume I

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

Support from:

Kleinschmidt

LIST OF EXHIBITS

Initial Statement

Exhibit A	Project Description
Exhibit E	Environmental Report
Exhibit G	Project Maps
Exhibit H	General Information

SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
Initial Statement

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

Before the
United States of America
Federal Energy Regulatory Commission

Lundy Hydroelectric Project
FERC Project No. 1390

Application for New License for Major Water Power Project, 10 Megawatts or Less–Existing Dam

Initial Statement

The Code of Federal Regulations (CFR), Title 18, Section 5.18(a)(5)(i) refers to Section 4.61 (License for Minor Project and a Major Project 10MW or less–Existing Dam) for a description of information that an applicant must include in the initial statement of its license application.

(1) (Name of applicant) applies to the Federal Energy Regulatory Commission for a (license or new license, as appropriate) for the (name of project) water power project, as described hereafter. (Specify any previous FERC project number designation.)

(2) The location of the project is:
State or territory:_____
County:_____
Township or nearby town:_____
Stream or other body of water:_____

(3) The exact name, address, and telephone number of the applicant are:

_____

(4) The exact name, address, and telephone number of each person authorized to act as agent for the applicant in this application, if applicable, are:

_____

(5) The applicant is a [citizen of the United States, association of citizens of the United States, domestic corporation, municipality, or State, as appropriate] and (is/is not) claiming preference under section 7(a) of the Federal Power Act. See 16 U.S.C. 796.

(6) (i) The statutory or regulatory requirements of the state(s) in which the project would be located that affect the project as proposed with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting, and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act, are: [provide citation and

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brief identification of the nature of each requirement; if the applicant is a municipality, the applicant must submit copies of applicable state or local laws or a municipal charter, or, if such laws or documents are not clear, any other appropriate legal authority, evidencing that the municipality is competent under such laws to engage in the business of developing, transmitting, utilizing, or distributing power.]

(ii) The steps which the applicant has taken or plans to take to comply with each of the laws cited above are: (provide brief description for each requirement).

(7) Brief project description

(i) Proposed installed generating capacity ___MW.

(ii) Check appropriate box:

☐ Existing dam ☐ unconstructed dam

☐ Existing dam, major modified project (see § 4.30(b)(14))

(8) Lands of the United States affected (shown on Exhibit G)

Check appropriate box:

☐ Surveyed land ☐ Unsurveyed land

(9) Construction of the project is planned to start within ___ months, and is planned to be completed within ___ months, from the date of issuance of license.

(1) Southern California Edison Company (SCE or Applicant) applies to the Federal Energy Regulatory Commission (FERC or Commission) for a new license for the existing Lundy Hydroelectric Project (Lundy Project or Project), as described in the attached exhibits.

(2) The location of the Project is:

State: California
County: Mono County
Township or nearby town: Mono City
Stream or other body of water: Mill Creek

(3) The exact name, address, and telephone number of the Applicant are:

Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
800-655-4555

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(4) The exact name, address, and telephone number of each person authorized to act as agent for the Applicant in this application, if applicable, are:

Wayne P. Allen
Principal Manager, Regulatory Support Services
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
Phone: 626-302-9741
Email: wayne.allen@sce.com

Matthew Woodhall
Project Lead, Regulatory Support Services
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
Phone: 626-302-9596
Email: matthew.woodhall@sce.com

Kelly Henderson
Senior Attorney
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
Phone: 626-302-4411
Email: kelly.henderson@sce.com

(5) The Applicant is a public utility corporation incorporated in the State of California and does business in central, coastal, and southern California. The Applicant is not claiming preference under Section 7(a) of the Federal Power Act. See 16 United States Code (USC) 800(a). SCE is claiming preference as the incumbent licensee under Section 15(a)(2) of the Federal Power Act, 16 USC 808(a)(2).

(6) California Statutory and Regulatory Requirements

(i) The statutory or regulatory requirements in California, the state in which the Project is located, that affect the Project with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting, and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act are:

A. *California Water Code § 102* – allows for appropriation and use of water for power purposes.

B. *California Water Code § 13160* – regulates the federally required filing of applications for water quality certification with the State Water

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Resources Control Board, pursuant to Section 401 of the federal Clean Water Act, 33 USC § 1341.

C. *Public Utilities Code § 201, et seq.* – regulates the right of the public utility to produce, generate, transmit, or furnish power to the public.

(ii) The steps which the Applicant has taken or plans to take to comply with each of the laws cited above are:

A. The Applicant has the water rights necessary to operate the Project.

B. In compliance with FERC's regulations at 18 CFR § 5.23(b), the Applicant will request a water quality certification, including proof of the date on which the certifying agency received the request, no later than 60 days following FERC's issuance of the Notice of Acceptance and Ready for Environmental Analysis.

C. The California Public Utilities Commission has authorized SCE to produce, generate, transmit, or furnish power to the public.

(7) The Lundy Project is located on the east slope of the Sierra Nevada, approximately 4 miles west of Mono Lake in Mono County, California. The key Lundy Project facilities include Lundy Lake, Lundy Dam, intake, a flowline, a penstock, a powerhouse, and a return ditch (Mill Creek Return Ditch). The flowline and penstock convey water from Lundy Lake to the powerhouse. Water discharged from the powerhouse tailrace is sent to a "splitter box," which either directs flows to the Wilson Creek system or returns water to Mill Creek via the Mill Creek Return Ditch in conformance with adjudicated water rights.

(i) Proposed installed generating capacity: 3 MW

(ii) Check appropriate box:

☒ Existing dam ☐ Unconstructed dam

☐ Existing dam, major modified project

(8) Lands of the United States affected (shown on Exhibit G):

Ownership/Administration Agency	Acreage
United States Forest Service	53.1
Bureau of Land Management	0.9
Total U.S. Lands	54.0

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(i) ☒ Surveyed land ☐ Unsurveyed land

The Project is existing, with no plans for construction.

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ADDITIONAL GENERAL INFORMATION PURSUANT TO 18 CFR § 5.18

GENERAL INFORMATION

(1) Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construction, operate, or maintain the project.

SCE has obtained and will maintain any proprietary rights necessary to construct, operate, and maintain the Lundy Hydroelectric Project (Project) (FERC Project No. 1390).

(2) Identify (providing names and mailing addresses):

(i) Every county in which any part of the project, and any federal facilities that would be used by the project, would be located.

Mono County
1290 Tavern Road
Mammoth Lakes, CA 93546

Inyo National Forest
351 Pacu Ln #200
Bishop, CA 93514

There are no federal facilities used by the Project.

(ii) Every city, town, or similar political subdivision:

A. In which any part of the project, and any federal facilities that would be used by the project, would be located.

No incorporated city or town, or similar local political subdivision is located within the Project boundary. The Project is located in unincorporated Mono County near Mono City and Lee Vining, California.

There are no federal facilities used by the Project.

B. That has a population of 5,000 or more people and is located within 15 miles of the project dam.

There are no cities, or similar local political subdivisions with a population of 5,000 or more located within 15 miles of Lundy Dam.

(iii) Every irrigation district, drainage district, or similar special purpose political subdivision.

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A. In which any part of the project, and any federal facilities that would be used by the project, would be located.

There are no irrigation districts, drainage districts, or similar special purpose political subdivisions in which any part of the Project is located. There are no federal facilities used by the Project.

B. That owns, operates, maintains, or uses any project facilities that would be used by the project.

There are no irrigation districts, drainage districts, or similar special purpose political subdivisions in which any part of the Project is located.

(iv) Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application.

County of Mono
Board of Supervisors
P.O. Box 715
Bridgeport, CA 93517

Mono County, Department of Public Works (Engineering, Facilities, and Roads)
74 North School Street
P.O. Box 457
Bridgeport, CA 93517

Mono County, Division of Drinking Water
1290 Tavern Road
P.O. Box 3329
Mammoth Lakes, CA 93546

Los Angeles Department of Water and Power
300 Mandich Street
Bishop, CA 93514

Inyo-Mono Resource Conservation District
270 North See Vee Lane #6
Bishop, CA 93514-9624

County Supervisor-District 3
Bob Gardner
P.O. Box 564
June Lake, CA 93541

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Lahontan Regional Water Quality Control Board, South Lake Tahoe Office
2501 Lake Tahoe Blvd
So. Lake Tahoe, CA 96150

(v) All Indian tribes that may be affected by the project.

Antelope Valley Indian Community, Coville Paiute Tribe
P.O. Box 47
Coleville, CA 96107

Big Pine Paiute Tribe of Owens Valley
P.O. Box 700
Big Pine, CA 93513

Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514

Bridgeport Paiute Indian Colony
P.O. Box 37
Bridgeport, CA 93517

Fort Independence Indian Community of Paiute Indians
P.O. Box 67
Independence, CA 93526

Lone Pine Paiute-Shoshone Tribe
P.O. Box 747
Lone Pine, CA 93545

Mono Lake Kootzaduka'a Tribe
P.O. Box 117
Big Pine, CA 93513

North Fork Mono Tribe of California
13396 Tollhouse Road
Clovis, CA 93619

North Fork Rancheria of Mono Indians
P.O. Box 929
North Fork, CA 93643

Southern Sierra Miwuk Nation
P.O. Box 186
Mariposa, CA 95338

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Timbisha Shoshone Tribe
621 W Line St., Suite 109
Bishop, CA 93514

Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
P.O. Box 669
Tuolumne, CA 95379

Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation
25669 Highway 6
Benton, CA 93512

Walker River Paiute Tribe
P.O. Box 220
Schurz, NV 89427

Washoe Tribe of Nevada and California
919 U.S. Highway 395 N
Gardnerville, NV 89410

Yerington Paiute Tribe of the Yerington Colony and Campbell Ranch
171 Campbell Lane
Yerington, NV 89447

Yosemite-Mono Lake Paiute Indian Community
P.O. Box 157
Lee Vining, CA 93541

(3)

(i) For a license (other than a license under section 15 of the Federal Power Act) state that the applicant has made, either at the time of or before filing the application, a good faith effort to give notification by certified mail of the filing of the application to:

A. Every property owner of record of any interest in the property within the bounds of the project or, in the case of the project without a specific boundary, each such owner of property that would underlie or be adjacent to any Project works, including any impoundments; and

B. The entities identified in paragraph (11) above, as well as any other federal, state, municipal, or other local government agencies that there is reason to believe would likely be interested in or affected by the application.

(ii) Such notification must contain the name, business address, and telephone number of the applicant and a copy of the Exhibit G contained in the

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application, and must state that a license application is being filed with the Commission.

(4) In accordance with 18 CFR § 5.18(a)(4), a subscription and verification executed by an authorized representative of Southern California Edison Company is included in this application. The subscription and verification are provided following the Initial Statement and are incorporated herein by reference.

(5) In accordance with 18 CFR § 4.61 and § 5.18, the following exhibits are attached to and made part of this application:

Exhibit A, Description of the Project
Exhibit E, Environmental Report
Exhibit F, General Design Drawings and Supportive Information (CEII)
Exhibit G, Project Maps
Exhibit H, Description of Project Management and Need for Project Power

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SUBSCRIPTION

[To be provided in the Final License Application]

This Application for New License for the Lundy Hydroelectric Project, FERC Project No. 1390, is executed in the State of California, County of Mono, by Wayne P. Allen of Southern California Edison Company, 2244 Walnut Grove Avenue, Rosemead, California, 91770, who, being duly sworn, deposes and says that the contents of this application are true to the best of their knowledge or belief and that they are authorized to execute this application on behalf of SCE. The undersigned has signed this application on this XX day of XX, 202X.

SOUTHERN CALIFORNIA EDISON COMPANY

By: _____

Wayne Allen
Principal Manager
Regulatory Support Services
Southern California Edison Company

VERIFICATION

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the State of California this _____ of _____ 202X.

_____
Notary Public, residing at

_____

My commission expires:

_____

SEAL

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SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
EXHIBIT A: Description of the Project

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

SOUTHERN CALIFORNIA EDISON®
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Exhibit A: Description of Project

Section 5.18(a)(5)(i) of Title 18 of the Code of Federal Regulations (CFR) (4-1-2023 Edition) refers to Section 4.61 (License for Minor Water Power Projects and Major Water Power Projects 10 Megawatts or Less) for a description of information that an applicant must include in Exhibit A of its license application.

Exhibit A is a description of the project and the proposed mode of operation.

1) The exhibit must include, in tabular form if possible, as appropriate:
    - (i) The number of generating units, including auxiliary units, the capacity of each unit, and provisions, if any, for future units;
    - (ii) The type of hydraulic turbine(s);
    - (iii) A description of how the plant is to be operated, manual or automatic, and whether the plant is to be used for peaking;
    - (iv) The estimated average annual generation in kilowatt-hours or mechanical energy equivalent;
    - (v) The estimated average head on the plant;
    - (vi) The reservoir surface area in acres, and if known, the net and gross storage capacity;
    - (vii) The estimated minimum and maximum hydraulic capacity of the plant (flow though the plant) in cubic feet per second and estimated average flow of the stream or water body at the plant or point of diversion; for projects with installed capacity of more than 1.5 megawatts, monthly flow duration curves and a description of the drainage area for the project site must be provided;
    - (viii) Sizes, capacities, and construction materials, as appropriate, of pipelines, ditches, flumes, canals, intake facilities, powerhouses, dams, transmission lines, and other appurtenances; and
    - (ix) The estimated cost of the project.
    - (x) The estimated capital costs and estimated annual operation and maintenance expense of each proposed environmental measure.
2) State the purposes of project (for example, use of power output).
3) An estimate of the cost to develop the license application; and
4) The on-peak and off-peak values of project power, and the basis for estimating the values, for projects which are proposed to operate in a mode other than run-of-river.
5) The estimated average annual increase or decrease in project generation, and the estimated average annual increase or decrease of the value of project power due to a change in project operations (i.e., minimum bypass flows, limiting reservoir fluctuations) for an application for new license;
6) The remaining undepreciated net investment, or book value of the project;
7) The annual operation and maintenance expenses, including insurance, and administrative and general costs;
8) A detailed single-line electrical diagram;
9) A statement of measures taken or planned to ensure safe management, operation, and maintenance of the project.

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Southern California Edison Company (SCE) is the Licensee, owner, and operator of the Lundy Hydroelectric Project (Lundy Project or Project), licensed under the Federal Energy Regulatory Commission (FERC or Commission) Project No. 1390. The 3-megawatt (MW) Project consists of one dam, a reservoir, a flowline consisting of a pipeline and penstock, a powerhouse, and appurtenant facilities, as described in this Exhibit A. A list of current Project facilities is provided in Table A-1.

The Lundy Project is located on the eastern slope of the Sierra Nevada along Mill Creek, approximately 8 miles northeast of Lee Vining off Lundy Road in Mono County, California. The Lundy Project is situated on Mill Creek, partly within the Inyo National Forest, managed by the U.S. Department of Agriculture (USDA) Forest Service (USFS) (53.1 acres), and partly on federal lands administered by the Bureau of Land Management (BLM), Bishop Field Office (0.9 acre). The remaining Lundy Project lands are privately owned by SCE except for a small parcel near the powerhouse owned by Mono County. The Lundy Project location overview is shown in Figure A-1; a more detailed map set of the Project is included in Exhibit G, Project Maps.

1.0 Tabular Data for Project Components (i, ii, iii, iv, v, vi, vii, and viii)

The key Lundy Project facilities include Lundy Dam, a flowline consisting of pipeline and penstock, and Lundy Powerhouse. Lundy Dam, which impounds the 132-acre Lundy Lake, is located on Mill Creek, 7 miles upstream of where the creek enters Mono Lake. Water diverted from Mill Creek at the dam is transported through a pipeline and penstock to the Lundy Powerhouse. Water discharged from the powerhouse tailrace can be directed via a splitter box to either a water delivery system referred to as the Wilson System, which empties into Mono Lake, or be returned to Mill Creek through what is known as the Mill Creek return ditch (MCRD). The allocation of water to either the Wilson System or Mill Creek is managed in accordance with adjudicated water rights, as described in Section 4.4.1.1 of Exhibit E of the Draft License Application. All Lundy Project feature elevations presented are accurate to SCE's knowledge and are reported in the National Geodetic Vertical Datum of 1929 (NGVD29), unless otherwise noted.

See Table A-1 for a Lundy Project facilities summary table. See Figure A-1 for the location of Lundy Project facilities.

Table A-1. Project Facilities List

General Information	
Installed Capacity	3 MW
Impoundment	
Normal Surface Area	110 acres
Normal Full Pool Elevation	7,805.4 feet
Maximum Impoundment Elevation	7,815.5 feet
Useable Storage Capacity	4,029 acre-feet
Net Storage Capacity	4,113 acre-feet
Dam	
Height	48 feet (concrete wall)
Length of Dam	690 feet (earth and rockfill embankment)

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General Information	
Spillway Length	150 feet
Spillway Crest Elevation	7,807.0 feet
Intake	
Encased Steel Pipe Diameter	48-inch
Control	48-inch manually operated knife gate valve
Powerhouse	
Year Built	1911
Construction Type	Reinforced concrete building
Dimensions	69.5 feet long by 31.5 feet wide, with a bay that measures 17 feet long by 8 feet deep at its back
Turbines	
Number	Two
Type	Both units are Canyon Hydro Pelton-Style turbines.
Rating	1.5 MW each (3 MW total)
Turbine Design Capacity	2,010 HP (each unit)
Total Hydraulic Capacity	70 cfs (both units combined)
Maximum Hydraulic Capacity	70 cfs
Minimum Hydraulic Capacity	0 cfs
Turbine Design Head	660 feet
Average Annual Generation	Range of 4,116 megawatt-hours (MWh) to 16,799 MWh during 2016-2025
Flowline	
Type	Welded steel pipe
Length	Approximately 12,000 feet
Diameter	48 inch
Capacity	70 cubic feet per second
Penstock	
Type	Riveted steel pipe
Length	Approximately 3,900 feet
Diameter	Variable, 30 to 40 inches
Switchyard/Transmission Lines	
Transmission Line	15-foot-long 2.4-kilovolt (kV) transmission line extends from the Lundy Powerhouse to the No. 1 transformer located in the non-Project switchyard
Switchyard (non-Project)	Steel switchrack supports the 55 kV bus

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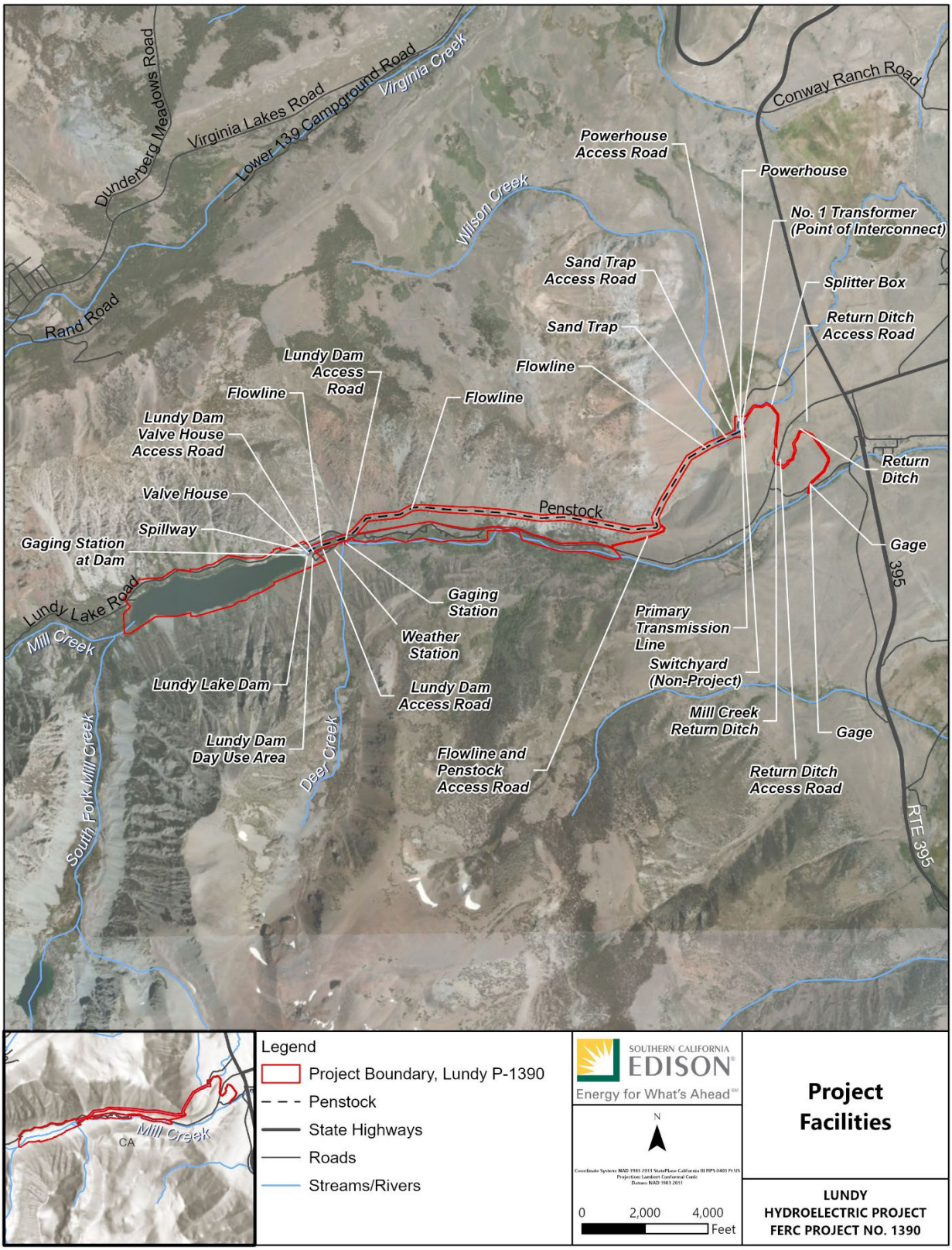


Figure A-1. Location of Lundy Project Facilities.

1.1 Powerhouse, Turbines, and Generators (18 CFR Section 4.61(c)(1)(i, ii, iii, iv, v, and vii))

The Lundy Powerhouse is a reinforced concrete building constructed in 1911 (Photo A-1). The powerhouse is located on Wilson Creek east (downstream) of Lundy Lake. The building is 69.5 feet long by 31.5 feet wide, with a bay that measures 17 feet long by 8 feet deep at its back to contain the gates at the lower end of the penstock. The Lundy Powerhouse facilities are shown in Figure A-2.

The powerhouse contains two Allis-Chalmers generators, each with a rated capacity of 1.5 MW. Both units are Pelton-style Canyon Hydro Units rated at 1.5 MW.

The switchyard (non-Project) is located adjacent to the powerhouse. A steel switchrack supports the 55-kilovolt (kV) bus. Fuse disconnect switches, grounding switches, single-phase lightning arrestors, potential devices, and other Project-related equipment are also located in the switchyard.

The Lundy Powerhouse and Lundy Dam are not staffed but are visited by Eastern Hydro Division Operation and Maintenance personnel (hydrographers) for inspections and documentation of leakage levels monthly during the winter and twice monthly during the summer, or weekly when the reservoir level is at or above 7,790 feet, in situations where weather and road conditions allow for safe access. More frequent visits are conducted depending on maintenance issues at the dams.

The maximum total discharge (hydraulic capacity) through the two powerhouse units is about 70 cubic feet per second (cfs).

The estimated average annual generation of the Project ranged from 4,116 megawatt-hours (MWh) to 16,799 MWh during the 2016–2025 period.

The Lundy Powerhouse is not used for hydro-resource optimization (peaking) operations. The estimated average head on the plant is 336 pounds per square inch (PSI). The minimum and estimated maximum hydraulic capacity of the plant (flow through the plant) are 0 cfs to 70 cfs. The estimated average discharge in the Lundy Powerhouse Tailrace over the period of record[1] is 19.68 cfs.

Monthly flow duration curves are provided in Exhibit E, Appendix E.6 of the DLA. A description of the drainage basin is included in DLA Exhibit E, Section 8.01, General Description of the River Basin.

[1] The period of record is October 1, 1988, through September 30, 2025

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Photo A-1. Lundy Powerhouse and Tailrace Facing Southeast.

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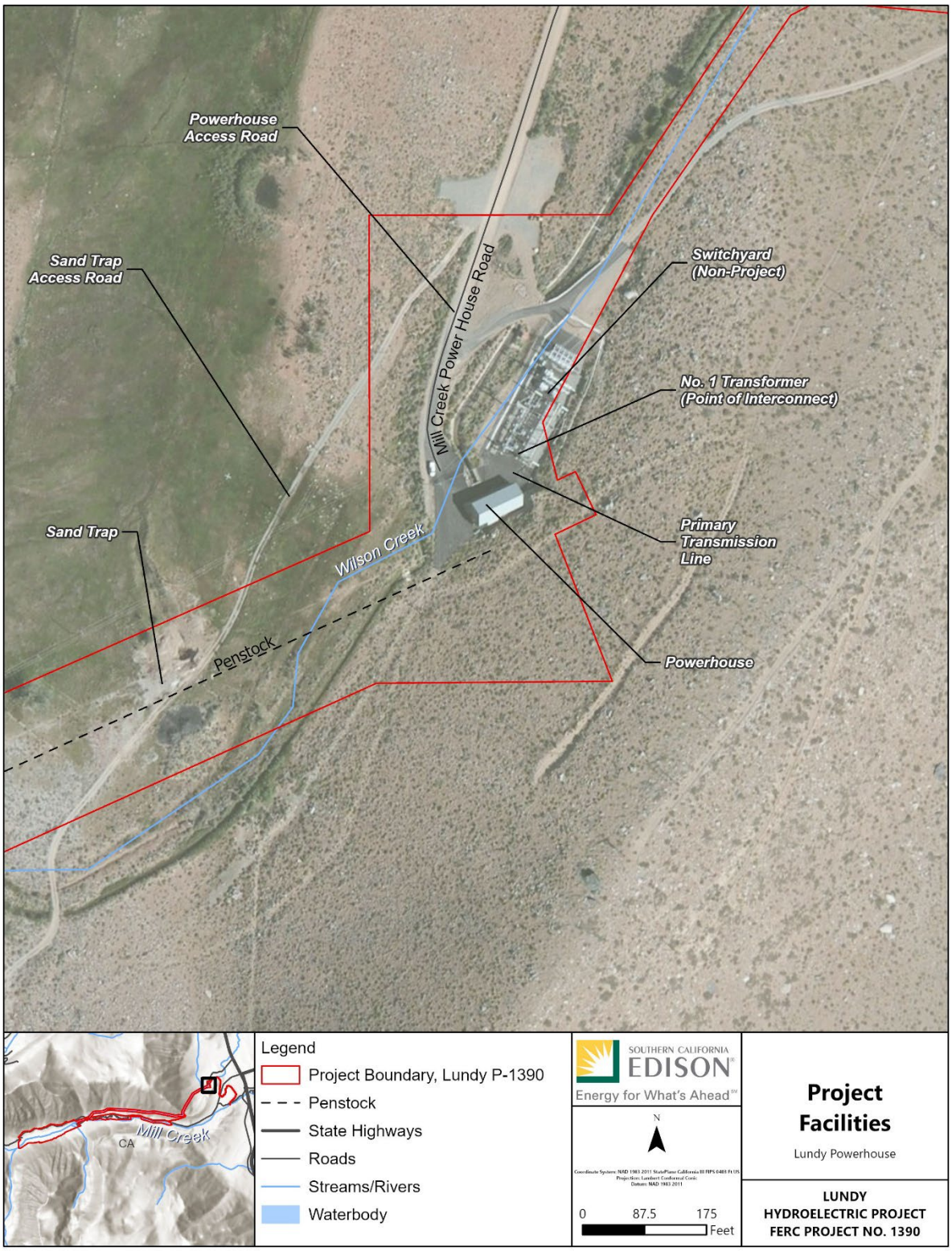


Figure A-2. Lundy Powerhouse Facilities.

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1.2 Impoundment (18 CFR Section 4.61(c)(1)(vi))

Lundy Lake is located on Mill Creek in Mono County, California, about 7 miles northwest of Lee Vining, California. The drainage area is approximately 20 square miles. Lundy Lake is generally drawn down in the winter to allow storage capacity for spring runoff.

The usable storage capacity at elevation 7,807.8 feet, crest of spillway to invert of outlet, is 4,029 acre-feet. The net storage capacity is 4,113 acre-feet. The normal maximum water surface area is approximately 110 acres at elevation 7,805.4 feet.

1.3 Dam (18 CFR Section 4.61(c)(1)(viii))

Lundy Dam is a dumped gravel and rockfill dam with a concrete core wall. The dam measures about 690 feet long, with a structural height of 48 feet from the base of the core wall to the top of the wall at an elevation of 7,815.5 feet. The dam has a spillway elevation of 7,807.8 feet. The spillway is a 150-foot-long by 7.7-foot-deep notch in the concrete core wall. The Lundy Lake and Lundy Dam facilities are shown in Figure A-3.

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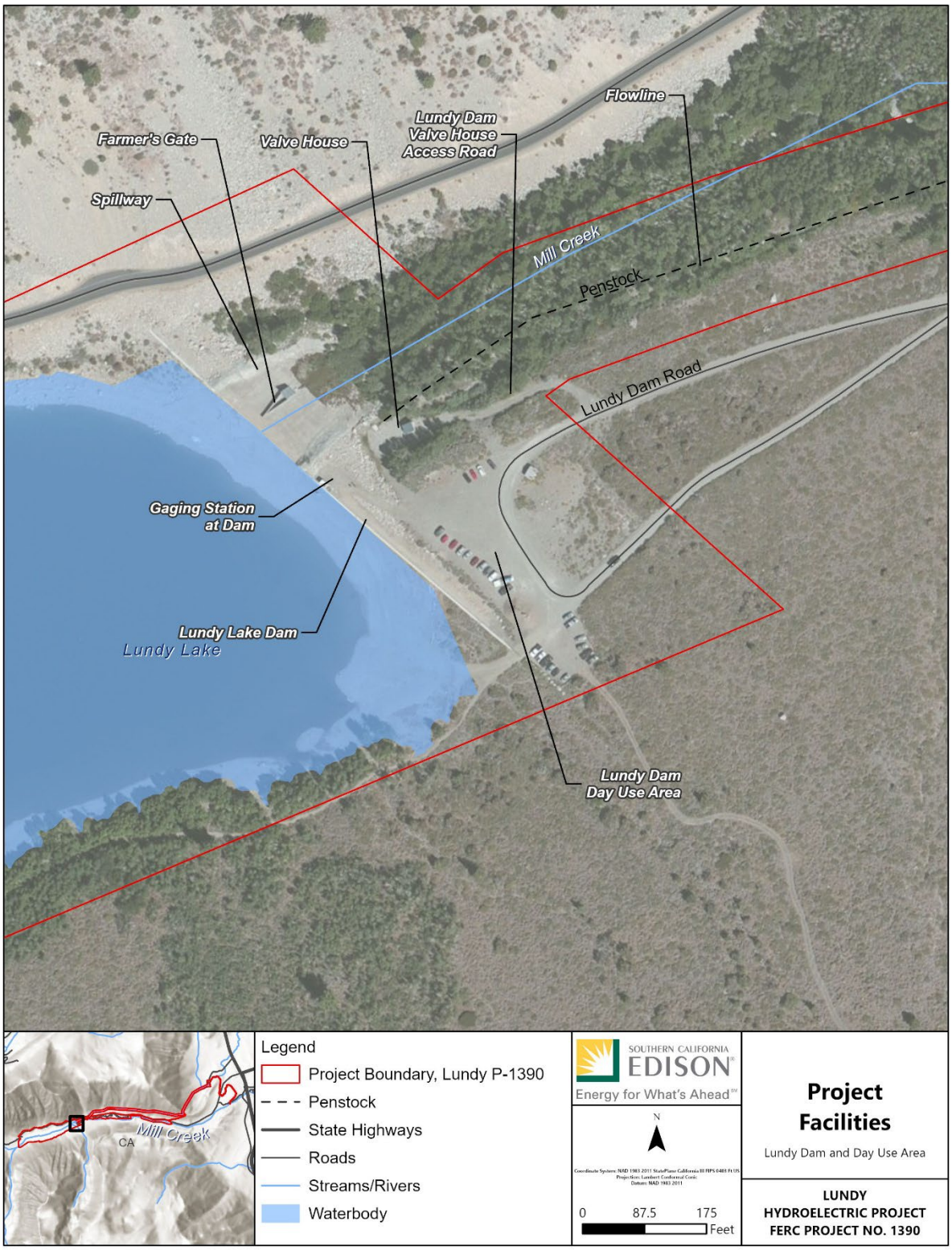


Figure A-3. Lundy Lake and Lundy Dam Facilities.

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1.4 Appurtenances

1.4.1 Intake and Conveyance System (18 CFR Section 4.61(c)(1)(viii))

The dam outlet works consist of a reinforced concrete structure equipped with trashracks and a 54-inch-diameter steel pipe about 140 feet long, which transitions to a 50-inch-diameter steel pipe approximately 130 feet long. These pipes are encased in concrete at the dam foundation level. A 48-inch manually operated gate valve is located in this pipe about 164 feet downstream of the intake.

The flowline consists of a 48-inch-diameter welded steel pipe, approximately 12,000 feet long, connected to the end of the 50-inch-diameter outlet works pipe. The water conduit is designed to carry approximately 70 cfs under optimum conditions.

The penstock is a riveted steel pipe approximately 3,900 feet long, varying in diameter from 36 to 30 inches and increasing to 40 inches for the last 700 feet approaching the powerhouse. The penstock bifurcates into two 22-inch-diameter pipes, one to each turbine, at the entrance to the powerhouse.

Water from the turbines discharges into the Wilson System, although some water can be directed at the splitter box to the MCRD extending from the tailrace to Mill Creek to meet water rights obligations. The splitter box redirects flow to the Wilson System through a Langemann gate, and two motor-operated valves control releases to the MCRD.

1.4.2 Primary Transmission Lines (18 CFR Section 4.61(c)(1)(viii))

The primary transmission line is a 15-foot-long, 2.4 kV transmission line that extends from the Lundy Powerhouse to the No. 1 transformer located in the non-Project switchyard, where it joins the transmission and distribution system.

As required by 18 CFR Section 4.61(c)(8), a single-line diagram showing the transfer of electricity from the Lundy Project to the transmission grid is included in Volume IV of this filing. This information is Critical Energy Infrastructure Information (CEII), and therefore has restricted availability.

1.4.3 Gaging Stations and Measurements (18 CFR Section 4.61(c)(1)(viii))

Gage locations in the Lundy Project vicinity are shown in Figure A-4 and listed in Table A-2. There are three gages that have been actively collecting data in compliance with the Streamflow Gaging Plan approved by FERC in 2008.[2] These gages are published by the U.S. Geological Survey (USGS) but are owned by SCE; the USGS maintains a contract with SCE to review streamflow records at these gages to comply with the requirements of Article 404 (minimum instream flows) and other FERC orders (e.g., FERC's November 15, 2007 Order Amending License, 121 FERC ¶ 61,154). Accordingly, SCE has been monitoring and measuring (1) the minimum flow release to Mill Creek below Lundy Dam, (2) the total flow in Mill Creek below Lundy Dam, and (3) Lundy Lake elevations. To enable a better accounting of releases from Lundy Dam to meet FERC license bypass

[2] Accession Number 20080808-3038

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flow requirements and to monitor and document deliveries to comply with state water rights requirements, SCE agreed to augment its gaging approach (Article 412 of the license). By Order dated August 30, 2023 (Order Approving Revised Streamflow Gaging Plan Pursuant to Article 412, 184 FERC ¶ 62,117), FERC approved a revised plan and accompanying infrastructure to measure and record the rate of water flow at the (4) Lundy Powerhouse tailrace; (5) Upper Conway ditch; (6) splitter box releases to the Wilson System; and (7) MCRD flows near the confluence with Mill Creek. These additional gages are now active.

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Table A-2. SCE Gaging Stations

SCE Gage No.	USGS Gage No.	Location
362	10287060	Lundy Lake Reservoir
N/A	N/A	Mill Creek below Lundy Dam instream flow release
355	10287069	Mill Creek below Lundy Lake
366	10287145	Upper Conway ditch [a]
365	10287195	Lundy Powerhouse tailrace [a]
N/A	N/A	Splitter box release to the Wilson System [b]
N/A	N/A	Mill Creek Return Ditch below splitter box [c]
N/A	N/A	Mill Creek Return Ditch near confluence with Mill Creek

N/A = not applicable.
Notes:
[a] Flows are reported at two locations: within the tailrace below the powerhouse (flow to the splitter box) and in the Upper Conway ditch. The combined quantities at these two locations equal total Lundy Powerhouse flow.
[b] Flow releases from the splitter box to the Wilson System are provided using a Langemann gate that is installed at the concrete control structure; the Langemann gate has the capability to measure and provide an accurate flow rate to downstream users, as required.
[c] This gage has been added since the Streamflow Gaging Plan has been amended and is being added to the Streamflow Gaging Plan as part of this relicensing proposal.

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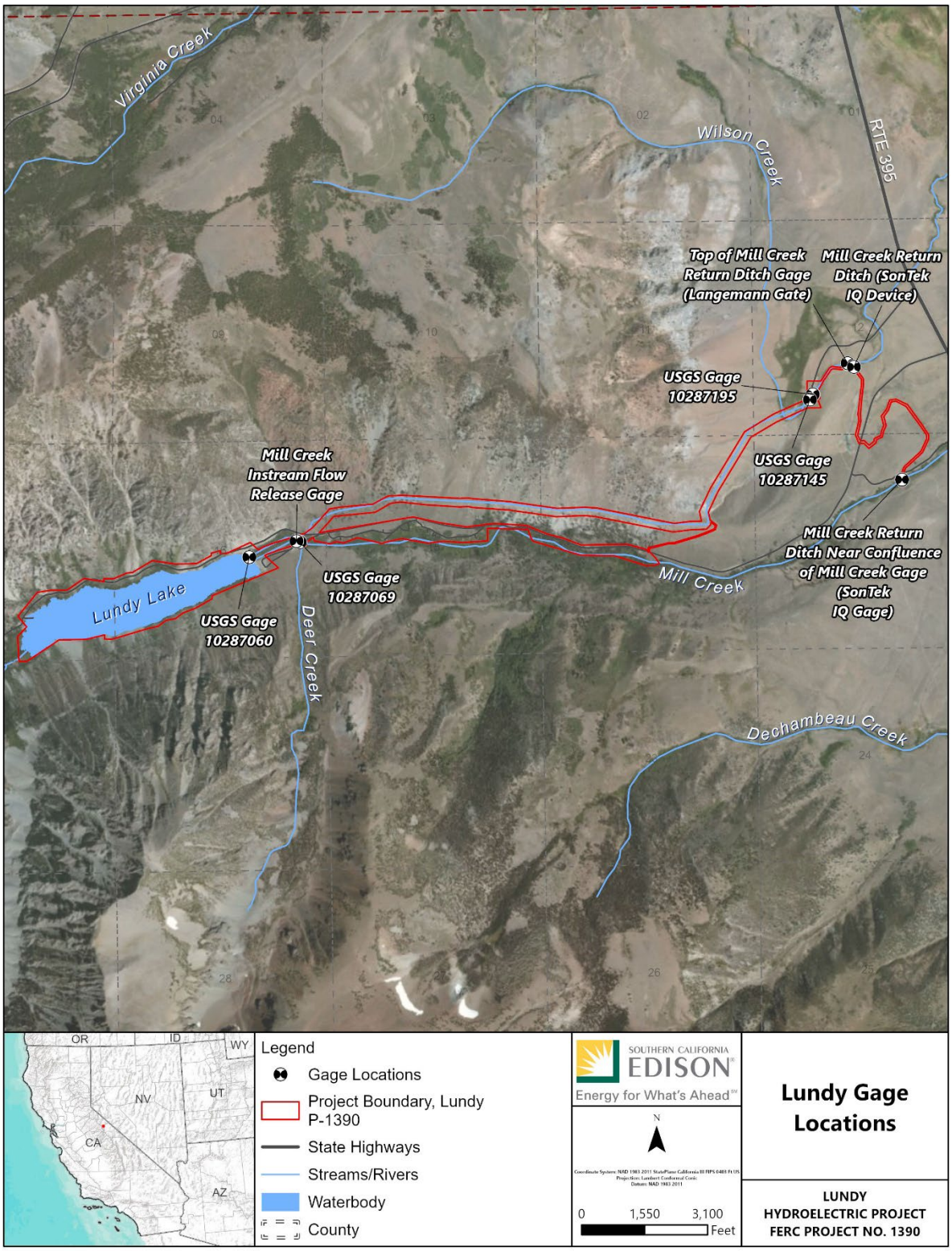


Figure A-4. Gage Locations in the Lundy Project Vicinity.

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1.4.4 Access Roads and Trails (18 CFR Section 4.61(c)(1)(viii))

The Lundy Project utilizes several roads to provide access to Project facilities. Only those road segments identified in Table A-3 as Project access roads are proposed to be included as Project roads under a new license.

SCE also uses portions of public roads, including Lundy Lake Road, Lundy Dam Road, and Mill Creek Powerhouse Road, to access Project facilities. Except where specifically identified in Table A-3 as Project roads, these public road segments are not proposed to be included as Project facilities or licensed Project roads. These roads serve broader public access purposes, including access to recreation destinations and other non-Project lands.

Table A-3 identifies each road segment used for Project access and specifies those segments proposed as a Project road under Proposed Action.

Table A-3. Lundy Project Roads

Road Segment	Purpose	Included in FERC Project? (Yes/No)
Lundy Lake Road	Provides access to Project recreation sites and public recreation sites located outside of the Project boundary	No
Lundy Dam Road	Provides access to Lundy Dam and non-Project recreation park area	No
Lundy Dam Valve House Access Road	Provides access to the Lundy Dam Valve House	Yes
Weather Station Access Road	Provides access to the Project weather station	Yes
Flowline and Penstock Access Road	Provides access to the Project penstock/flowline	Yes
Sand Trap Access Road	Provides access to the Project Sand Trap	Yes
Mill Creek Powerhouse Road	Provides access to Project facilities and public roads for backcountry access	No
Powerhouse Access Road	Provides gated access to the Project Powerhouse	Yes
Lundy Campground Access Roads	Provides access to FERC approved recreation site	Yes
Return Ditch Access Road-North	Provides access to the Project Mill Creek Return Ditch	Yes
Return Ditch Access Road-South	Provides access to the Project Mill Creek Return Ditch	Yes

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1.5 Estimated Project Cost (18 CFR Section 4.61(c)(1)(ix))

The Project is an existing, licensed facility. The value of the project is provided under Section 6.0 below.

1.6 Estimated Capital Costs and Estimated Annual Operation and Maintenance Expense of Each Proposed Environmental Measure (18 CFR Section 4.61(c)(1)(x))

The estimated capital cost and annual operation and maintenance expense of each proposed environmental measure totals $XX,XXX [to be provided in the Final License Application] as an annualized value over a 40-year license term (refer to Exhibit E, Section 9, Developmental Analysis).

2.0 Purpose of Project (18 CFR Section 4.61(c)(2))

The primary purpose of the Project is hydropower generation.

3.0 Estimate of the Cost to Develop the License Application (18 CFR Section 4.61(c)(3))

Pursuant to the Commission's regulations at 18 CFR Section 4.61(c)(3), the total estimated cost of relicensing for this Project is approximately $XX,XXX [to be provided in the Final License Application]. This includes consultation, studies, administrative, and legal costs.

4.0 On-Peak and Off-Peak Values of Project Power (18 CFR Section 4.61(c)(4))

Energy prices throughout the California Independent System Operator (CAISO) had an average value of $35-$40 per MWh in 2025.

5.0 Average Annual Increase or Decrease in Project Generation (18 CFR Section 4.61(c)(5))

SCE is proposing to continue to release a continuous minimum flow of 1 cfs (or inflow, whichever is less) into Mill Creek below Lundy Dam.

6.0 Undepreciated Net Investment or Book Value of the Project (18 CFR Section 4.61(c)(6))

The net investment of the Project in 2025 was approximately $6,805,201.

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7.0 Annual Operation and Maintenance Expenses (18 CFR Section 4.61(c)(7))

The annual operation and maintenance expense of the Project (based on historical data), including labor and overhead associated with operations and maintenance, is approximately $414,605.

8.0 Detailed Single-Line Electrical Diagram (18 CFR Section 4.61(c)(8))

A single-line diagram for the Project is included in Volume IV, which is filed as CEII.

9.0 Measures to Ensure Safe Management (18 CFR Section 4.61(c)(9))

SCE implements various measures to ensure safe management and operations and maintenance at the Project during all operating conditions. These measures are described in detail in Exhibit H. SCE completes all necessary corrective actions to address comments and recommendations arising from FERC inspections in a timely manner.

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SOUTHERN CALIFORNIA EDISON
LUNDY HYDROELECTRIC PROJECT
(FERC PROJECT NO. 1390)



EXHIBIT E
DRAFT LICENSE APPLICATION

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

October 2026

SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
EXHIBIT E: Environmental Report

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

Support from:

Kleinschmidt

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Appendix E.3 Recreation Resources Management Plan

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Appendix E.5 Historic Properties Management Plan (to be filed with the Final License Application)

Appendix E.6 Consultation Log

Appendix E.7 Flow Duration Curves

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LIST OF ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/g	microgram per gram
µg/g ww	microgram per gram wet weight
µg/L	microgram per liter
µS/cm	microsiemen per centimeter
ACHP	Advisory Council on Historic Preservation
amsl	above mean sea level
APE	Area of Potential Effects
Applicant	Southern California Edison Company
AQ-1	Fish Community Study
AVM	acoustic velocity meter
Basin Plan	Water Quality Control Plan for the Lahontan Region
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BLMS	Bureau of Land Management–designated sensitive species
BMI	benthic macroinvertebrate
BP	Before Present
C.I.	Confidence Interval
CAISO	California Independent System Operator
cal	calendar years
Cal-IPC	California Invasive Plant Council
CARB	California Air Resources Board
CDFG	California Department of Fish and Game (currently California Department of Fish and Wildlife, as of 2013)
CDFW	California Department of Fish and Wildlife (formerly California Department of Fish and Game)
CDPR	California Department of Parks and Recreation
CEC	California Energy Commission
CEII	Critical Energy Infrastructure Information
CEQA	California Environmental Quality Act

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CFR	Code of Federal Regulations
cfs	cubic feet per second
cfu	colony forming units
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Commission	Federal Energy Regulatory Commission
COMM	commercial or sport fishing
CPUE	catch per unit effort
CRMP	Cultural Resources Management Plan
CRPR	California Rare Plant Rank
CSCI	California Stream Condition Index
CUL	Tribal Tradition and Culture
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
D_{50}	Particle Size Distribution D_{50}
DLA	Draft License Application
DO	dissolved oxygen
DPS	distinct population segment
DSSMP	Dam Safety Surveillance and Monitoring Plan
DSSMR	Dam Safety Surveillance and Monitoring Report
E. coli	*Escherichia coli*
EAP	Emergency Action Plan
ECRP	Erosion Control and Revegetation Plan
eDNA	environmental DNA
EFH	Essential Fish Habitat
EJ	environmental justice
ESA	Endangered Species Act
FCE	Candidate as Federally Endangered
FCT	Candidate as Federally Threatened
FE	Federally Endangered
FERC	Federal Energy Regulatory Commission
FLA	Final License Application

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FP	Fully Protected
FPA	Federal Power Act
F.P.C.	Federal Power Commission
fps	foot per second
ft^2	square feet
ft^3	cubic feet
FT	Federally Threatened
g/m^2	grams per square meter
GHG	greenhouse gas
GIS	geographic information system
GLO	General Land Office
GPS	Global Positioning System
H	Historic-period
HPMP	Historic Properties Management Plan
HUC	Hydraulic Unit Code
ID	identification
IPaC	Information for Planning and Consultation
IUCN	International Union for the Conservation of Nature
JAM	Joint Agency Meeting
ka	thousand years ago
kV	kilovolt
kW	kilowatt
LADWP	Los Angeles Department of Water and Power
License Application	Application for a new license; submitted to FERC no less than 2 years in advance of expiration of an existing license
LiDAR	Light Detection and Ranging imagery
LMP	Land Management Plan
LRWQCB	Lahontan Region Water Quality Control Board
Lundy Project	Lundy Hydroelectric Project
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MCAPT	Mill Creek Accounting and Planning Tool
MCL	Maximum Contaminant Levels

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MCRD	Mill Creek Return Ditch
mg	milligram
mg/L	milligram per liter
MIF	minimum instream flow
mL	milliliter
MLC	Mono Lake Committee
mm	millimeter
MPN	most probable number
MW	megawatt
MWh	megawatt-hour
N/A	data not available
N-CE Corp	Nevada-California Electric Corporation
n.d.	no date
NA	not applicable
NAHC	Native American Heritage Commission
NERC	North American Electric Reliability Corporation
NFS	National Forest System
NGO	non-governmental organization
NGVD 29	National Geodetic Vertical Datum of 1929
NHPA	National Historic Preservation Act
NIR	near-infrared
NLCD	National Land Cover Database
NMFS	National Marine Fisheries Service
NNIP	non-native invasive plant
NOI	Notice of Intent
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Services
NRHP	National Register of Historic Places
NTU	nephelometric turbidity unit
NWI	National Wetlands Inventory
O&M	operation and maintenance
OEHHA	Office of Environmental Health Hazard Assessment

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P	Precontact
PAD	Pre-Application Document
pH	indicates acidity or alkalinity of a solution
PLSS	Public Land Survey System
PME	protection, mitigation, and enhancement
PMU	population management unit
ppb	parts per billion
ppt	parts per thousand
Project	Lundy Hydroelectric Project (FERC Project No. 1390)
RCA	Riparian Conservation Area
Rd	Road
RPPP	Rare Plant Protection Plan
RPS	Renewables Portfolio Standard
RTE	rare, threatened, and endangered
RV	recreational vehicle
s.u.	standard unit
SB	Senate Bill
SC	State Candidate for listing (California ESA)
SCC	Species of Conservation Concern
SCE	Southern California Edison [Company]
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SD1	Scoping Document 1
SD2	Scoping Document 2
SE	State Endangered (California ESA)
SHPO	State Historic Preservation Office
SMCL	Secondary Maximum Contaminant Level
SR	State Rare (California ESA)
SSC	Species of Special Concern
ST	State Threatened (California ESA)
SWRCB	State Water Resources Control Board
T&E	threatened and endangered
TAN	total ammonia nitrogen
TCP	Traditional Cultural Property

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TDS	total dissolved solids
TEAM	TEAM Environmental
TEK	Traditional Ecological Knowledge
TERR-1	General Botanical Resources Study
TERR-2	General Wildlife Resources Study
TLP	Traditional Licensing Process
TSS	total suspended solids
TWG	Technical Working Group
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WECC	Western Electricity Coordinating Council
WILD	wildlife habitat
WMP	Water Management Plan
WUA	weighted usable area
YOY	young-of-year

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1.0 INTRODUCTION

This Exhibit E – Environmental Exhibit (Exhibit E) is being filed with the Federal Energy Regulatory Commission (FERC or Commission) by Southern California Edison Company (SCE) as part of the Application for New License for the Lundy Hydroelectric Project (Lundy Project or Project) (FERC Project No. 1390).

As specified in Title 18 of the Code of Federal Regulations (CFR) § 5.18(b), this Exhibit E addresses the resources listed in the Pre-Application Document (PAD) provided for in 18 CFR § 5.6; follows FERC's guidelines in *Preparing Environmental Documents: Guidelines for Applicants, Contractors, and Staff* (FERC, 2008); and meets the format and content requirements specified by FERC.

This Exhibit E provides the necessary technical information and analyses to identify and evaluate potential impacts of continued operation and maintenance (O&M) of the Project and disposition of select Project facilities under the Proposed Action compared to the No-Action Alternative. In addition, the Exhibit E specifies new measures under the Proposed Action to protect and enhance environmental and cultural resources. The Proposed Action in this Exhibit E considers input from state and federal resource agencies, Native American Tribes, non-governmental organizations, and members of the public (collectively referred to as stakeholders) acquired during consultation activities completed for the relicensing of the Project.

1.1. REFERENCES

FERC (Federal Energy Regulatory Commission). 2008. *Preparing Environmental Documents: Guidelines for Applicants, Contractors, and Staff*. Office of Energy Projects, Division of Hydropower Licensing, Federal Energy Regulatory Commission, Washington, D.C. September 2008.

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2.0 APPLICATION

SCE is applying to FERC for a new license to continue operating the existing Project. This Draft Application for New License for a Major Water Power Project 10MW or Less (License Application) is filed pursuant to 18 CFR §§ 5.16(c) and 5.18. This Exhibit E *Environmental Report* was prepared by SCE in support of the License Application.

The Project is designated as FERC Project No. 1390 under a license issued on March 3, 1999, for 30 years, expiring on February 28, 2029. Through the filing of this License Application, SCE requests renewal of its license to continue O&M of the Project with a license term of 40 years.

2.1. PROJECT LOCATION

The Lundy Project is located on the eastern slope of the Sierra Nevada along Mill Creek, approximately 4 miles west of Mono City off Lundy Road in Mono County, California. The Lundy Project is situated on Mill Creek, partly within the Inyo National Forest, managed by the U.S. Forest Service (USFS) (53.1 acres), and partly on federal lands administered by the Bureau of Land Management (BLM) (0.9 acre). There is a small parcel of land owned by Mono County. The remaining Lundy Project lands are privately owned by SCE. Under the existing Project license, the total acreage of federal land used by the Project is 54.0 acres. Figure 2.1-1 depicts the location of the Project and land jurisdiction in the vicinity of the Project.

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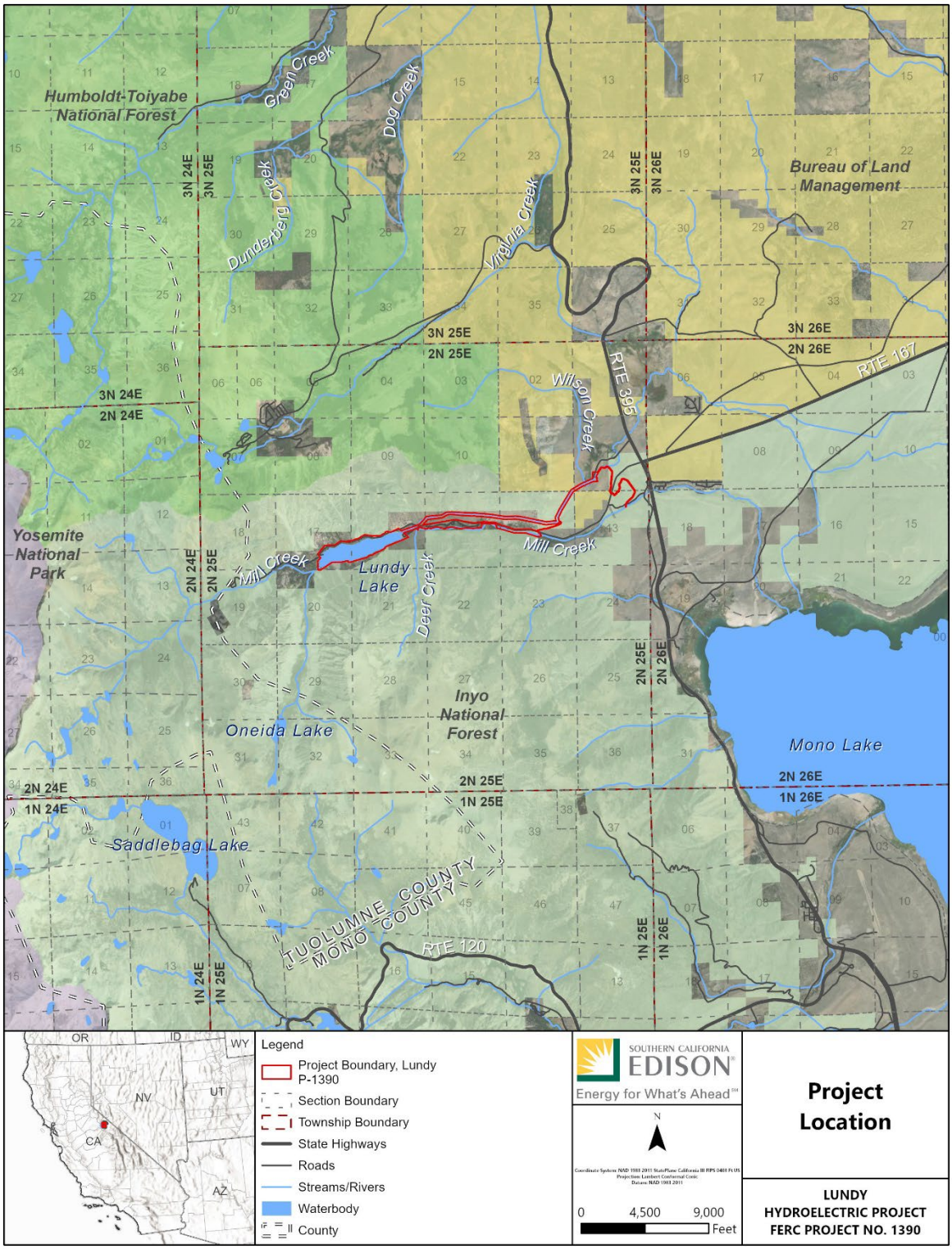


Figure 2.1-1. Lundy Project Location and Land Jurisdiction in the Vicinity of the Project Boundary.

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2.2. OVERVIEW OF EXISTING PROJECT

The principal Lundy Project facilities include Lundy Dam, Lundy Lake, a flowline consisting of pipeline and penstock, Lundy Powerhouse, and the Mill Creek Return Ditch (MCRD). The lake has historically been drawn down in the winter to provide storage capacity for spring runoff. The flowline and penstock convey water from Lundy Lake to the powerhouse. Minimum flows are provided into Mill Creek below the dam through 1) an instream acoustic velocity meter (AVM) release structure (up to 1.25 cubic feet per second [cfs]); 2) a "rock-drop" valve in the same area that provides additional flows up to 12 cfs; or 3) a "farmer's gate" in the dam that can only operate above an invert of 7,779 feet[1]. The farmer's gate is typically used in wet water years for flows exceeding the required daily water rights.

Refer to Section 4.0 *No-Action Alternative* for additional details on the existing Project location, facilities, operation, and maintenance activities.

2.3. REFERENCES

Fowler, F. H. 1923. Hydroelectric Power Systems of California and their Extensions into Oregon and Nevada. U.S. Geological Survey Water-Supply Paper 493. Government Printing Office, Washington, D.C.

Theodoratus, D. J., C. M. Blount, V. H. Diamond, and R. A. Hicks. 1988. Historic Overview of the Rush Creek and Lee Vining Creek Hydroelectric Projects. On file, Southern California Edison Company, Rosemead, California.

White, D.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. On file, Southern California Edison Company, Rosemead, California.

[1] Unless otherwise specified, all elevations in this License Application are referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

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3.0 PURPOSE OF ACTION AND NEED FOR POWER

3.1. PURPOSE OF ACTION

The federal action to be considered by FERC is the issuance of a new license to SCE, under the Federal Power Act (FPA), for continued O&M of the Lundy Project. In deciding whether to issue a license, FERC must determine that the Project would be best adapted to a comprehensive plan for improving or developing the waterway. In addition, FERC must give equal consideration to the purposes of energy, conservation, fish and wildlife resources, cultural resources, recreational resources, water quality, and other environmental resources.

FERC's issuance of a new license for the continued operation of the Project will allow SCE to continue producing electric power from a renewable resource for the term of the new license, while addressing the affected environmental, land use, public recreation, and cultural resources in accordance with the Commission's public interest and equal consideration mandates under the FPA.

This Environmental Exhibit (Exhibit E) was prepared consistent with the ILP requirements as set forth in 18 CFR § 5.18(b) and was designed to support FERC's required analysis under the National Environmental Policy Act (NEPA). In this Exhibit E, SCE assesses the effects associated with the Project, evaluates alternatives to the proposed Project, makes recommendations to FERC on whether to issue a new license, and (if so) makes recommended terms and conditions to become part of any license issued. This Exhibit E presents a description and analysis of environmental and economic effects of the No-Action Alternative and Proposed Action, including proposed environmental measures, where appropriate, to avoid, mitigate, or reduce those effects. Several other alternatives were considered in Exhibit E but were eliminated from detailed analysis because they were not considered reasonable, including federal government takeover, issuance of a non-power license, and Project decommissioning (refer to Section 6.0 *Other Alternatives*).

3.2. NEED FOR POWER

SCE is a public utility that supplies electricity to approximately 15 million people in a 50,000-square-mile service area covering portions of coastal, central, and southern California. SCE serves all customers through a diverse transmission system that includes a generation mix of gas, nuclear, wind, solar, geothermal, biomass, energy storage, and hydroelectric resources. SCE also purchases power from other utilities or non-utility power producers.

Hydroelectric power from the Project is produced at the Lundy Powerhouse, which has a total installed capacity of 3.0 megawatts (MW). Project operations are described for two periods: (1) Historical Operations (water years 1975–2004), prior to implementation of the Settlement Agreement; and (2) Current Operations (water years 2005–2025), post-implementation of the Settlement Agreement. Under Historical Operations (water years 1975–2004), average annual energy production was 9,981 megawatt hours (MWh).

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Under Current Operations (water years 2005–2025), average annual energy production was 7,780 MWh.

The Lundy Powerhouse is used to respond to California Public Utility Commission and California Independent System Operator (CAISO) demands for power. Demands can be market driven (i.e., energy needs and renewable load) or used to stabilize the grid. When the source transmission line is de-energized (115-kilovolt [kV] Casa Diablo line), the Lundy Powerhouse can be used to meet local demand. The Casa Diablo line can be de-energized to protect public safety, during extreme weather events, or to support maintenance activities like pole replacements or line upgrades.

The Casa Diablo line is the only source transmission line into the Mono Basin from the CAISO greater grid. The Lundy Powerhouse provides a local source of backup power to June Lake, Lee Vining, Bridgeport, Mono City, and the U.S. Marine Corps Pickle Meadows Base should the Casa Diablo line be de-energized.

With the Lundy Powerhouse and Casa Diablo line operational, there is sufficient generation and capacity to meet local demands during both peak and off-peak conditions. If a new license is issued that removes Lundy Powerhouse or significantly curtails generation capacity, SCE would have approximately 2,200 local customers without power each time the Casa Diablo line is de-energized. Absent the Lundy Powerhouse to serve as backup power to local communities, there would be significant impacts to customers.

The Project uses water from Mill Creek and its tributaries for water storage and power generation. Wintertime flows are regulated by the 1933 Sales Agreement (Sales Agreement) between Southern Sierras Power Company (predecessor to SCE) and the Los Angeles Department of Water and Power (LADWP).

3.2.1. Power Demand

The North American Electric Reliability Corporation (NERC) is a regulatory authority whose mission is to ensure the reliability and security of the power grid. NERC develops and enforces reliability standards; annually assesses seasonal and long-term reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel (NERC, 2024).

NERC monitors and enforces compliance with its reliability standards through six regional entities. Of those entities, the Western Electricity Coordinating Council (WECC) is responsible for coordinating and promoting Bulk Electric System reliability within the Western Interconnection. The Western Interconnection includes all or portions of 14 western states, two Canadian provinces, and a portion of Baja California in Mexico. SCE's service area is within the California/Mexico subregion of the Western Interconnection.

According to WECC forecasts for the Western Interconnection, demand is forecasted to increase by approximately 7 percent from 2020 to 2029. The summer peak demand is expected to increase by 9 percent during that same period (WECC, 2021). The region has a need for power over the near term, and power from the Project would continue to help meet that need in the future. If the Project were to shut down or significantly change

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operations, SCE would need to build new, incremental resources to fill the energy, capacity, and clean-attribute gaps. This would likely involve the development of new renewable projects and associated infrastructure, which would be time-consuming, costly, and require significant resources. As the electric sector nears a low-emissions future, SCE's latest analysis called "Reaching Net Zero" (SCE, n.d.) found that replicating the greenhouse gas (GHG) emissions reductions of 1 MW of clean firm resources (such as the Project) would necessitate between 7 and 11 MW of paired solar plus storage and require additional retention of natural gas resources to maintain reliability.

3.2.2. California Legislation

GHG emissions are regulated in California, and California continues to pursue extensive climate change policies. On September 8, 2016, former Governor Jerry Brown signed Senate Bill (SB) 32, California Global Warming Solutions Act of 2006: emissions limit, which extends the state's target to reduce GHG emissions. SB 32 mandates a 40 percent reduction in GHG emissions below 1990 levels by 2030 and built upon the Assembly Bill 32 GHG reduction target to reduce GHG to 1990 levels by 2020. To achieve the SB 32 reductions, the plan is to increase renewable energy use, improve energy efficiency, get more zero-emission vehicles on California's roadways, and curb emissions from key industries.

In addition, SB 350, Clean Energy and Pollution Reduction Act of 2015, increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. In 2019, SB 100, the 100 Percent Clean Energy Act of 2018, set the California 2030 Renewables Portfolio Standard (RPS) requirement to 60 percent with the goal of becoming carbon neutral by 2045 (CARB, 2023). Achieving this goal will increase the use of RPS-eligible resources, including solar, wind, biomass, geothermal, and others. To ensure these goals are met and GHG emission reductions are realized, large utilities were required to develop and submit integrated resource plans; these plans detail how each utility will meet their customers' resource needs, reduce GHG emissions, and ramp up the deployment of clean energy resources (CEC, 2023). SCE has developed a plan called Pathway 2045 that outlines how SCE will meet carbon neutrality by 2045, which includes the continued operation of SCE's existing hydroelectric fleet (SCE, 2019).

Energy generated by the Project reduces GHG emissions in California by displacing energy and other services that would otherwise be provided by gas-fired units. If the Project were not relicensed, SCE would need to obtain replacement from zero-emitting, firm (i.e., able to generate power 24 hours per day, 7 days per week, when needed), RPS-eligible energy sources, which would require new facilities (see Exhibit H, Description of Project Management and Need for Project Power). The environmental benefits of the Project, therefore, go beyond just its energy output: they play a critical role in California's broader decarbonization strategy.

3.2.3. Ensuring Grid Reliability and Flexibility

The role of smaller generation resources, such as the Project, is often underappreciated in the context of overall grid management. According to CAISO's 2024 Net Qualifying

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Capacity list (CAISO, 2023), smaller generation resources collectively contribute significantly to resource adequacy. Of the 52-gigawatt total Net Qualifying Capacity for September 2024, 1,466 of the 1,825 listed generation resources are smaller than 27 MW, demonstrating that smaller-scale assets like the Project play an outsized role in ensuring that California has the dependable energy it needs, particularly during times of peak demand.

One of the Project's most important attributes is its ability to provide firm, reliable power. However, unlike wind and solar, the Project output is not dependent on momentary weather patterns, giving it a level of predictability and stability that makes it a key resource for grid reliability. The Project's firm, carbon-free capacity is critical during periods when solar and wind resources are either unavailable or underperforming. By providing clean power during these critical periods, the Project helps prevent the need for ramping up fossil fuel peaker plants (i.e., powerplants that only run when there is high demand), which would increase carbon emissions and run counter to the state's climate goals.

Furthermore, this capability enhances grid reliability by ensuring a stable supply of electricity even when variable renewable sources falter. The ability to generate hydroelectric power effectively supports California's transition to a more sustainable energy portfolio by balancing out fluctuations in renewable energy generation. Moreover, during peak demand times—typically in the late afternoon and early evening—the demand for electricity can significantly exceed supply from solar resources that cease production with sunset. In these scenarios, hydroelectric facilities can quickly adjust their output to meet increased demand without relying on fossil fuels. This flexibility not only mitigates potential blackouts but also plays an essential role in maintaining affordable electricity costs for consumers.

By leveraging its dependable capacity during these high-demand intervals, the Project contributes significantly to reducing reliance on less environmentally friendly energy sources while supporting economic growth in alignment with California's climate objectives. Additionally, increasing the share of carbon-free hydroelectric power allows for greater integration of other renewable technologies into the energy mix without compromising the system.

Energy produced from the Project is used by SCE to (1) meet current demand for energy in its service area; (2) meet renewable energy goals; (3) provide a source of energy with low-GHG emissions; and (4) contribute to California resource adequacy and provide grid reliability and flexibility. Power from the Project would help meet a need for power within WECC's Western Interconnection in both the short and long term. The Project provides low-cost power that displaces nonrenewable, fossil-fired generation and contributes to a diversified generation mix. Displacing the operation of fossil-fueled facilities may avoid some power plant emissions and creates an environmental benefit.

3.3. REFERENCES

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WECC (Western Electricity Coordinating Council). 2021. Generation Resource Adequacy Forecast 2020-2029.

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4.0 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project under the terms and conditions of the current FERC license. This section was developed to meet the requirements for the description of the existing Project as specified in 18 CFR § 5.18(b)(4). The description of the No-Action Alternative is organized into the following major subsections:

- Project Overview
- Existing Project Facilities
- FERC Project Boundary
- Project Operations
- Project Maintenance
- Project Generation and Outflow Records
- Regulatory Requirements
- Project Safety

4.1. PROJECT OVERVIEW

4.1.1. PROJECT LOCATION

The Lundy Project is located on the eastern slope of the Sierra Nevada along Mill Creek, approximately 4 miles west of Mono City off Lundy Road in Mono County, California. The Lundy Project is situated on Mill Creek, partly within the Inyo National Forest, administered by USFS (53.1 acres), and partly on federal lands administered by BLM (0.9 acre).There are 1.1 acres of land owned by Mono County, 1.3 acres of privately owned land, and the remaining 272.9 acres are owned by SCE.

4.1.2. PROJECT BACKGROUND

In April 1910, an entity by the name of Hydro-Electric began construction on a hydroelectric power plant near the former mining town of Jordan on Mill Creek, northwest of Mono Lake and downstream from Lundy Lake, naming it the Jordan Powerhouse, with a transmission line running northeast toward the mining town of Bodie and then to Nevada. The completed powerhouse was operated for just a few months until it was destroyed by an avalanche. Additionally, the avalanche destroyed nearby attendants' cottages and an older copper smelter building. The powerhouse was rebuilt in 1911 at its current location and named Mill Creek. The rebuilt Project was sold in 1917 to the Nevada-California Power Company (controlled by the Nevada-California Electric Corporation [N-CE Corp]). By the early 1920s, N-CE Corp had subsidiaries and a controlling interest in several smaller companies and their electrical generation facilities,

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including the Southern Sierras Power Company and the Cain Irrigation Company. The system stayed in operation from its completion in late 1911 through the legal battles and corporate reorganizations of its early owners and then through its subsequent ownerships, including Nevada-California Power Company (1917-1936), N-CE Corp (1936-1941), and California Electric Power Company, aka Calectric (1941-1964), before SCE acquired the system as part of its acquisition of Calectric in 1964. SCE already had a Mill Creek Hydroelectric System in San Bernardino County, so the facility in Mono County became known as the Lundy Hydroelectric System (Fowler, 1923; Theodoratus et al., 1988; White, 1985). Additional details on the Lundy Project history can be found in Section 5.11 of the PAD.

As described in Section 2.2, the Lundy Project consists of storage, conveyance, generation, and water management facilities that support hydroelectric operations, water rights deliveries, and required downstream flow releases.

4.2. EXISTING PROJECT FACILITIES

This section describes Project facilities (from upstream to downstream), including the lake and dam; water conveyance systems; the powerhouse; gages; power and communication lines; and support facilities. A list of Project facilities is provided in Table 4.2-1. A summary of the physical characteristics/specifications of the primary Project facilities is provided in Table 4.2-2. Refer to Figure 2.1-1 for geographic depictions of the Project vicinity, land jurisdiction, and public land survey system (township, range, and section). Refer to Figure 4.2-1 for Project facility locations.

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Table 4.2-1. Lundy Project Facilities

Dam
Lundy Dam
Reservoir
Lundy Lake
Valve House
Lundy Dam Valve House
Stream Gages
Mill Creek Below Lundy Dam Instream Flow Release Mill Creek below Lundy Lake (USGS Gage No. 10287069; SCE Gage No. 355) Upper Conway ditch (USGS Gage No. 10287145; SCE Gage No. 366) Lundy Powerhouse tailrace (USGS Gage No. 10287195; SCE Gage No. 365) Splitter box release to the Wilson System Top of Mill Creek Return Ditch[2] Mill Creek Return Ditch near the confluence with Mill Creek
Reservoir Gages
Lundy Lake at Lundy Dam (Lundy Lake) (USGS Gage No. 10287060; SCE Gage No. 362)
Lundy Ancillary and Support Facilities
Weather Station, Flowline, Penstock, Sand trap, Switchyard (non-Project), Transmission Line

[2] This gage has been added since the 2023 FERC approval of the Revised Streamflow Gaging Plan.

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Table 4.2-2. Lundy Project Facility Specifications

General Information	
Installed Capacity	3 MW
Impoundment	
Normal Surface Area	110 acres
Normal Full Pool Elevation	7,805.4 feet
Maximum Impoundment Elevation	7,815.5 feet
Useable Storage Capacity	4,029 acre-feet
Net Storage Capacity	4,113 acre-feet
Dam	
Height	48 feet (concrete wall)
Length of Dam	690 feet (earth and rockfill embankment)
Spillway Length	150 feet
Spillway Crest Elevation	7,807.80 feet
Intake	
Encased Steel Pipe Diameter	48-inch
Control	48-inch manually operated knife gate valve
Powerhouse	
Year Built	1911
Construction Type	Reinforced concrete building
Dimensions	69.5 feet long by 31.5 feet wide, with a bay that measures 17 feet long by 8 feet deep at its back
Turbines	
Number	Two
Type	Both units are Canyon Hydro Pelton-Style turbines.
Rating	1.5 MW each (3 MW total)
Turbine Design Capacity	2,010 HP (each unit)
Total Hydraulic Capacity	70 cfs (both units combined)
Maximum Hydraulic Capacity	70 cfs
Minimum Hydraulic Capacity	0 cfs
Turbine Design Head	660 feet
Average Annual Generation	Range of 4,116 megawatt-hours (MWh) to 16,799 MWh during 2016-2025
Flowline	
Type	Welded steel pipe
Length	Approximately 12,000 feet
Diameter	48 inch
Capacity	70 cubic feet per second
Penstock	
Type	Riveted steel pipe
Length	Approximately 3,900 feet
Diameter	Variable, 30 to 40 inches
Switchyard/Transmission Lines	
Transmission Line	15-foot-long 2.4-kilovolt (kV) transmission line extends from the Lundy Powerhouse to the No. 1 transformer located in the non-Project switchyard
Switchyard (non-Project)	Steel switchrack supports the 55 kV bus

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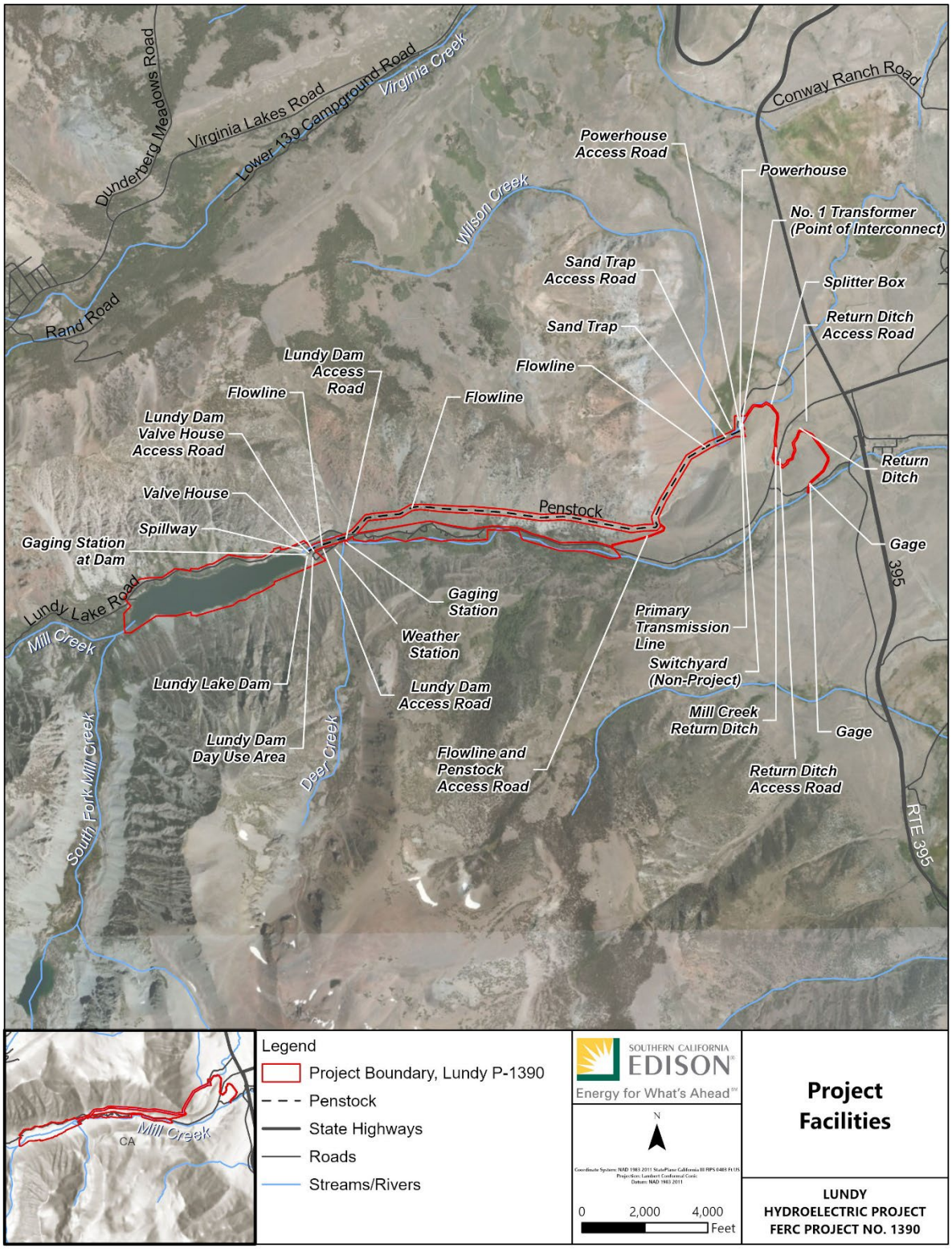


Figure 4.2-1. Project Facility Locations.

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4.2.1. LUNDY LAKE AND DAM

Lundy Lake is located on Mill Creek in Mono County, California, about 8 miles northeast of Lee Vining, California. The drainage area is approximately 20 square miles. Lundy Lake is generally drawn down in the winter to allow storage capacity for spring runoff.

Lundy Dam is a dumped gravel and rockfill dam with a concrete core wall. The dam measures about 690 feet long, with a structural height of 48 feet from the base of the core wall to the top of the wall at an elevation of 7,815.50 feet NGVD. The usable storage capacity at elevation 7,807.80 feet, crest of spillway to invert of outlet, is 4,029 acre-feet. The normal maximum water surface area is approximately 110 acres at an elevation of 7,805.40 feet NGVD. The dam has a spillway elevation of 7,807.80 feet NGVD. The spillway is a 150-foot-long by 7.7-foot-deep notch in the concrete core wall. The Lundy Lake and Dam facilities are shown in Figure 4.2-2.

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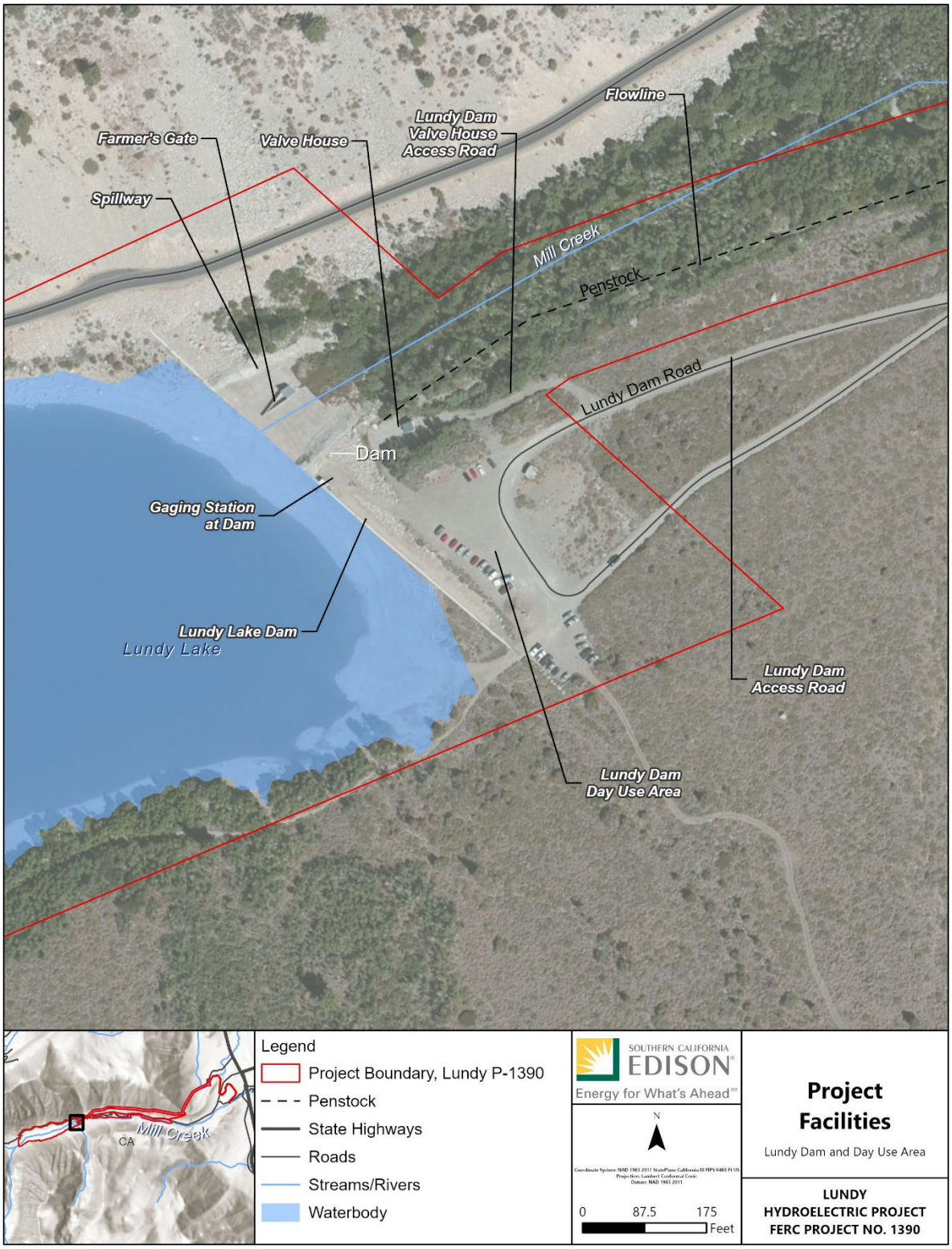


Figure 4.2-2. Lundy Lake and Dam Facilities Intake and Water Conveyance System.

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The dam outlet works consist of a reinforced concrete structure equipped with trashracks and a 54-inch-diameter steel pipe about 140 feet long, which transitions to a 50-inch-diameter steel pipe approximately 130 feet long. These pipes are encased in concrete at the dam foundation level. A 50-inch manually operated gate valve is located in this pipe about 164 feet downstream of the intake.

The flowline consists of a 48-inch-diameter welded steel pipe, approximately 12,053 feet long, connected to the end of the 50-inch-diameter outlet works pipe. The water conduit is designed to carry approximately 70 cfs under optimum conditions.

The penstock is a riveted steel pipe approximately 3,500 feet long, varying in diameter from 36 to 30 inches and increasing to 40 inches for the last 700 feet approaching the powerhouse. The penstock bifurcates into two 22-inch-diameter pipes, one to each turbine, at the entrance to the powerhouse.

Water from the turbines discharges into the Wilson System, although some water can be directed at the splitter box to the MCRD extending from the tailrace to Mill Creek to meet water rights obligations. The splitter box redirects flow to the Wilson System through a Langemann gate, and two motor-operated valves control releases to the MCRD.

4.2.2. LUNDY POWERHOUSE AND SWITCHYARD

The Lundy Powerhouse is a reinforced concrete building constructed in 1911 (Photo 4.2-1). The powerhouse is located on Wilson Creek east (downstream) of Lundy Lake. The building is 69.5 feet long by 31.5 feet wide, with a bay that measures 17 feet long by 8 feet deep at its back to contain the gates at the lower end of the penstock. The powerhouse contains two Canyon Pelton-type turbines, each directly connected to an Allis Chalmers generator rated at 1,500 kilowatts (kW). The Lundy Powerhouse facilities are shown in Figure 4.2-3.

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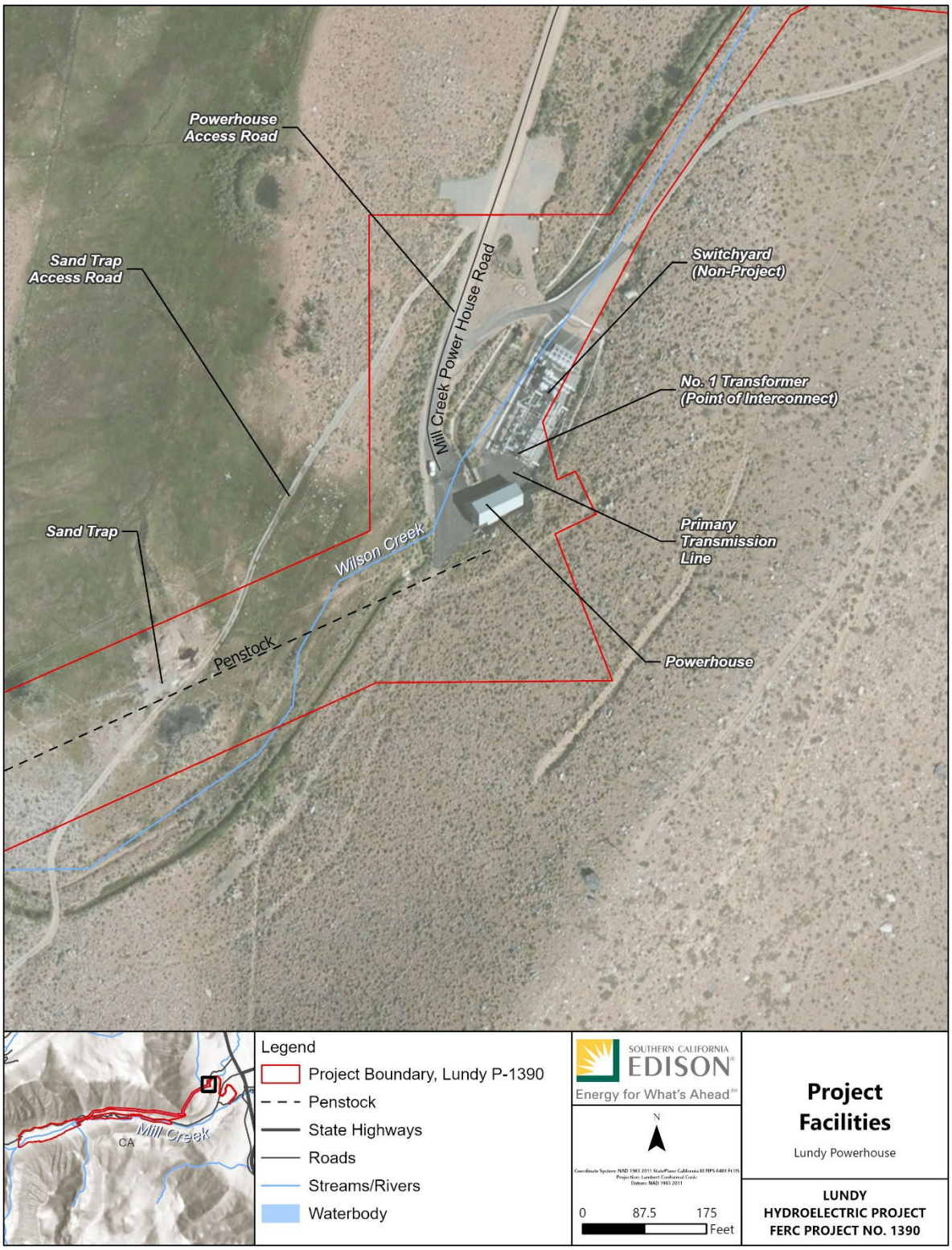


Figure 4.2-3. Lundy Powerhouse Facilities

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Photo 4.2-1. Lundy Powerhouse Facing Southeast.

The switchyard (non-Project) is located adjacent to the powerhouse. A wood pole switchrack supports the 55 kV bus. Fuse disconnect switches, grounding switches, single-phase lightning arrestors, potential devices, and other Project-related equipment are also located in the switchyard.

4.2.3. Gaging Stations and Measurements

4.2.3.1. Stream Gaging

Gage locations in the Lundy Project vicinity are shown in Figure 4.2-4 and listed in Table 4.2-3. There are three gages that have been actively collecting data in compliance with the Streamflow Gaging Plan approved by FERC in 2008 and revised in 2023. These gages are published by the U.S. Geological Survey (USGS) but are owned by SCE; USGS maintains a contract with SCE to review streamflow records at these gages to comply with the requirements of Article 404 (minimum instream flows) and other FERC orders (e.g., FERC's November 15, 2007 Order Amending License, 121 FERC ¶ 61,154). Accordingly, SCE has been monitoring and measuring (1) the minimum flow release to Mill Creek below Lundy Dam, (2) the total flow in Mill Creek below Lundy Dam, and (3) Lundy Lake elevations. For a better accounting of releases from Lundy Dam to meet FERC license bypass flow requirements and to monitor and document deliveries to comply with state water rights requirements, SCE agreed to augment its gaging approach

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(Article 412 of the license). By order dated August 30, 2023 (Order Approving Revised Streamflow Gaging Plan Pursuant to Article 412, 184 FERC ¶ 62,117), FERC approved a revised plan and accompanying infrastructure to measure and record the rate of water flow at the (4) Lundy Powerhouse tailrace; (5) Upper Conway Ditch; (6) splitter box releases to the Wilson System; and (7) MCRD flows near the confluence with Mill Creek. These additional gages are now active. Another gage, (8) Top of the MCRD below the splitter box, was installed after the most recent amendment to the Streamflow Gaging Plan was approved, it was not addressed in that amendment. The gage was subsequently added to the Project's streamflow monitoring network to support ongoing flow monitoring efforts.

Table 4.2-3. SCE Gaging Stations

SCE Gage No.	USGS Gage No.	Location
362	10287060	Lundy Lake Level Monitoring Device
NA	NA	Mill Creek Below Lundy Dam Instream Flow Release
355	10287069	Mill Creek Below Lundy Lake Dam Stream Gaging Station
366	10287145	Upper Conway Ditch[a]
365	10287195	Lundy Powerhouse Tailrace[a]
NA	NA	Splitter box release to the Wilson System[b]
NA	NA	Top of Mill Creek Return Ditch (below Splitter Box)[c]
NA	NA	Mill Creek Return Ditch near the confluence with Mill Creek

NA = not applicable.
Notes:
[a] Flows are reported at two locations: within the tailrace below the powerhouse (flow to the splitter box) and in the Upper Conway ditch. The combined quantities at these two locations equal total Lundy Powerhouse flow.
[b] Flow releases from the splitter box to the Wilson System are provided using a Langemann gate that is installed at the concrete control structure; the Langemann gate has the capability to measure and provide an accurate flow rate to downstream users, as required.
[c] This gage was installed after the most recent amendment to the Streamflow Gaging Plan was approved.

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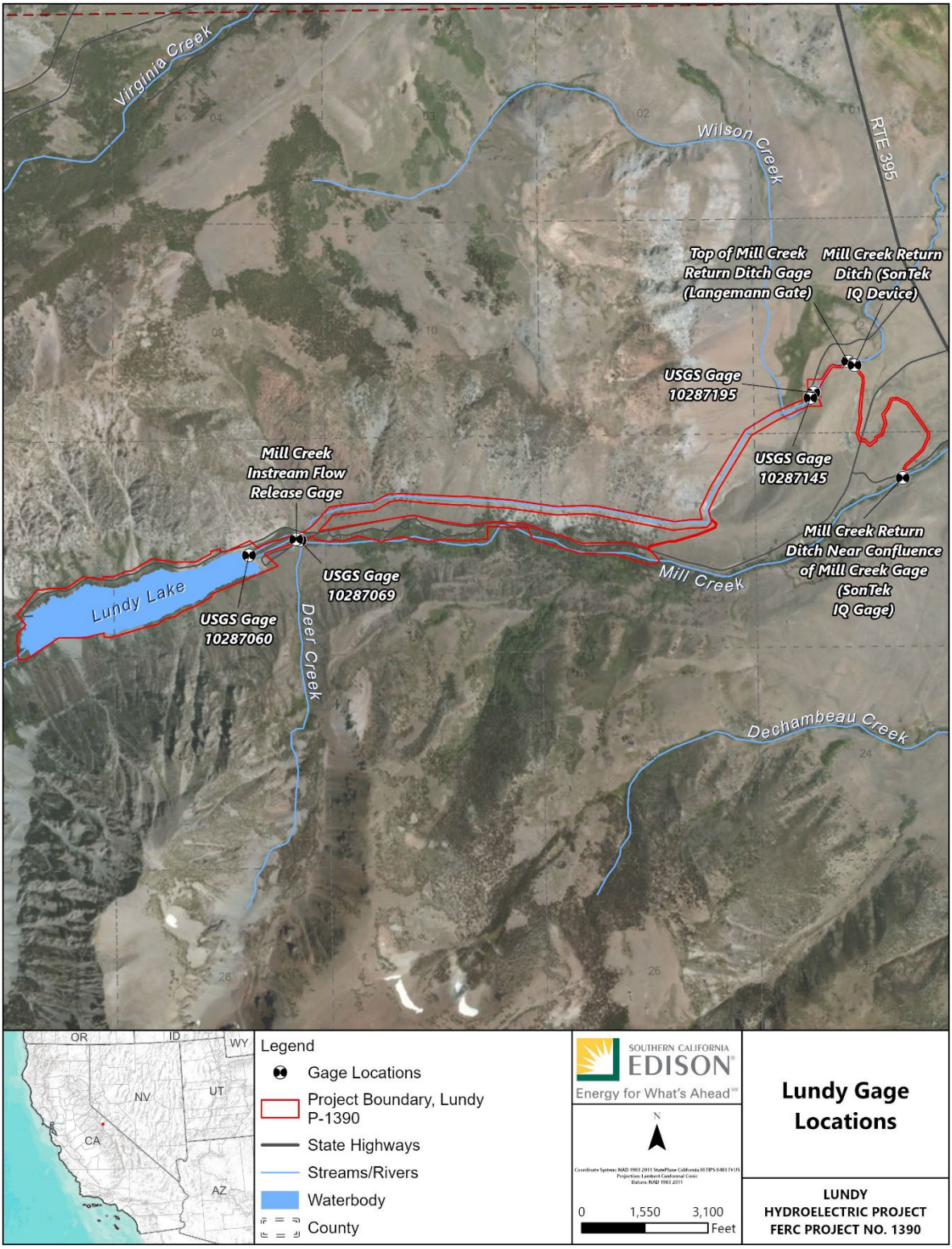


Figure 4.2-4. SCE Gage Locations at the Lundy Project.

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4.2.4. ACCESS ROADS AND TRAILS

The Lundy Project utilizes several roads to provide access to Project facilities. Only those road segments identified in Table 4.2-4 as Project access roads are proposed to be included as Project roads under a new license.

SCE also uses portions of public roads, including Lundy Lake Road, Lundy Dam Road, and Mill Creek Powerhouse Road, to access Project facilities. Except where specifically identified in Table 4.2-4 as Project roads, these public road segments are not proposed to be included as Project facilities or licensed Project roads. These roads serve broader public access purposes, including access to recreation destinations and other non-Project lands.

Table 4.2-4. Lundy Project Roads

Road Segment	Purpose	Included in FERC Project? (Yes/No)
Lundy Lake Road	Provides access to Project recreation sites and public recreation sites located outside of the Project boundary	No
Lundy Dam Road	Provides access to Lundy Dam and non-Project recreation park area	No
Lundy Dam Valve House Access Road	Provides access to the valve house	Yes
Weather Station Access Road	Provides access to the Project weather station	Yes
Penstock/Flowline Access Road	Provides access to the Project penstock/flowline	Yes
Sand Trap Access Road	Provides access to the Project sand trap	Yes
Mill Creek Powerhouse Road	Provides public access from route 395; Project access is limited to road provided beyond the gate to the Project Powerhouse	No/Yes
Lundy Campground Access Roads	Provides access to FERC Approved recreation site	Yes

4.2.5. LUNDY PROJECT TRANSMISSION FACILITIES

The primary transmission line is a 15-foot-long, 2.4 kV transmission line that extends from the Lundy Powerhouse to the No. 1 transformer located in the non-Project switchyard, where it joins the transmission and distribution system.

As required by 18 CFR § 6.61(c)(8), a single-line diagram showing the transfer of electricity from the Lundy Project to the transmission grid is included in Volume IV of this

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filing. This information is Critical Energy/Electric Infrastructure Information (CEII) and therefore has restricted availability.

4.3. FERC PROJECT BOUNDARY

A list of Project facilities necessary for O&M of the Project is provided in Table 4.2-1. Geographic information system (GIS) maps illustrating the location of existing Project facilities in relationship to the current FERC Project Boundary are provided in Figure 4.2-1. All Project facilities are within the FERC Project Boundary.

Under the No-Action Alternative, the FERC Project Boundary encompasses 329.3 acres, including 53.1 acres of public lands administered by USFS, 0.9 acres of BLM land, 1.1 acres of land owned by Mono County, 1.3 acres of privately owned land, and 272.9 acres of SCE-owned land. No Tribal lands are within the FERC Project Boundary.

4.4. PROJECT OPERATIONS

The Lundy Project is operated in compliance with existing regulatory requirements, water rights, and agreements to generate power. The following subsections describe operational constraints associated with the Lundy Project, followed by a description of water rights associated with the Lundy Project.

4.4.1. WATER MANAGEMENT

To understand how water is managed around the Lundy Project, this section identifies existing Mill Creek water rights, the procedures used to deliver those rights to water holders and the controlled release provisions adopted through the 2022 Amended Settlement Agreement and consistent with FERC's 2023 approval of the Revised Streamflow Gaging Plan.

4.4.1.1. Water Rights

Mill Creek water rights were adjudicated in Mono County Superior Court on November 30, 1914. SCE has a non-consumptive water right (pass-through) for hydropower generation on Mill Creek. SCE's operations must comply with adjudicated water rights (Table 4.4-1). SCE's operations rely on an Annual Operations Plan that utilizes the Mill Creek Accounting and Planning Tool (MCAPT) and forecast methodology that has been developed with the water rights holders and memorialized in a Settlement Agreement (SCE et al., 2004) and Amended Settlement Agreement (SCE et al., 2022). The MCAPT integrates forecasted and observed runoff quantities with the water rights priorities to develop a schedule for Mill Creek water diversions and deliveries. SCE communicates anticipated operational changes affecting water deliveries to all water rights holders and settlement parties, and performance standards govern how the system (including the MCRD) will meet water right obligations along with the commitments of the Amended Settlement Agreement.

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Table 4.4-1. Summary of Present-Day Mill Creek Adjudicated Water Rights

Priority Right	Right Holder[a]	Quantity of Right (cfs)[b]	Cumulative LADWP	Cumulative Conway (Mono Co.)	Cumulative Total
1st	LADWP	1	1	0	1
2nd	Mono Co.*	2	1	2	3
3rd	BLM*	2	1	2	5
4th	Mono Co.*	8	1	10	13
5th	LADWP	9.2	10.2	10	22.2
6th	Simis	1.8	10.2	10	24
7th	LADWP	14	24.2	10	38
8th	Mono Co.*	5	24.2	15	43
9th	USFS*	12.6	24.2	15	55.6
10th	LADWP	18	42.2	15	73.6
11th	Mono Co.*	1	42.2	16	74.6

Source: Adapted from North Mono Basin Watershed Analysis (USFS, 2001)

Notes:
An asterisk (*) indicates exercise of Mill Creek rights in the Wilson System when called on.
The rights holders identified are the present-day successors in interest to the parties identified in the Mill Creek Adjudication.
[a] Rights holders are identified as follows: LADWP = City of Los Angeles, Department of Water and Power; BLM = United States Department of the Interior, Bureau of Land Management; Simis = J.O. Simis, private landowner; USFS = United States Forest Service.
[b] Quantity of right is measured in cfs.

4.4.1.2. Controlled Release of Flows from Lundy Dam

SCE implements the controlled flow release provisions set forth in Section 7 of Appendix 2 of the Amended Settlement Agreement and consistent with the FERC approved Revised Streamflow Gaging Plan. These procedures establish the allowable rates at which releases are increased or decreased from Lundy Dam to Mill Creek and are intended to minimize potential adverse effects associated with rapid changes in streamflow. SCE has evaluated the existing controlled release guidelines and proposes to continue implementing these procedures under a new license as follows:

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(i) Increasing Flow

SCE may increase Controlled Releases to Mill Creek from Lundy Dam by a rate of no greater than 20 cfs in one step, with a minimum duration of 1 hour between each step.

(ii) Decreasing Flow

(A) When the Controlled Release is 40 cfs or more, SCE may decrease Controlled Releases to Mill Creek from Lundy Dam by a rate no greater than 20 cfs in one step, with a minimum duration of 1 hour between each step.

(B) When the Controlled Release is less than 40 cfs and greater than 25 cfs, SCE may decrease Controlled Releases to Mill Creek from Lundy Dam by a rate that results in a Controlled Release of no less than 20 cfs in one step, with a minimum duration of 1 hour between each step.

(C) When the Controlled Release is 25 cfs or less, SCE may decrease Controlled Releases to Mill Creek from Lundy Dam by a rate of no greater than 5 cfs in one step, with a minimum duration of 1 hour between each step.

4.4.1.3. Lundy Dam

Section 4.4.1.1 describes water rights that dictate how the Project is operated. When available for release, 74.6 cfs are accounted for daily to the water rights holders in order of priority. Inflows to Lundy Lake over 74.6 cfs may be stored in Lundy Lake for power generation, but subject to the operational constraints described below. Under the terms of the 1933 sales agreement with LADWP, the reservoir is drawn down to 11 percent of its capacity annually by April 1.

A 30-day maximum impedance of the daily inflow up to 74.6 cfs is utilized to ensure that record-keeping and inflow measurements are checked and calibrated. These calculations and subsequent operating rules are implemented via the aforementioned Annual Operations Plan and MCAPT tools. SCE provides water rights users with access to the MCAPT to facilitate delivery decisions or modifications to allocations.

SCE's minimum flow requirement is (a) 1.0 cfs on an average monthly basis, but not less than 0.75 cfs on an average daily basis, or (b) the inflow to the Lundy Project reservoir, whichever is less, as measured at either the existing Mill Creek Gage located just upstream of the mouth of Deer Creek (USGS Gage No. 10287069) and/or the release point on the Lundy Project flowline.

Additionally, SCE's minimum flow requirements below Lundy Dam were reduced to the extent that the seepage and accretion flow is greater than 3 cfs. If seepage and accretion

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flows are above 3 cfs, SCE must only release the water necessary to achieve a 4 cfs flow at the gage noted above.

The minimum flow release may be intentionally, temporarily modified, if required for safety reasons, by operating emergencies beyond the licensee's control, or upon agreement between the licensee, USFS, and the California Department of Fish and Wildlife (CDFW),[3] for short periods. If the flow is so modified or discontinued, the licensee shall notify FERC as soon as feasible but no later than 10 days after the licensee discovers each such intentional or unintentional incident.

4.4.1.4. Lundy Powerhouse

Aside from water-rights-driven releases directly below the dam of 1 cfs, subsequent water rights are directed through the Lundy Powerhouse and tailrace. At the beginning of the tailrace, a radial gate is available to divert water to the Upper Conway Ditch consistent with water right calls from water right holders. At the end of the tailrace, a "splitter box" directs water to either the Wilson System (extending generally north and northwest) or back to Mill Creek via the MCRD.[4] The powerhouse's hydraulic capacity is sized to handle 70 cfs of the adjudicated 74.6 cfs water rights; however, SCE does not utilize this full capacity except during wet water years. SCE limits power generation to the Wilson System allocation (how much water has been called for by water rights holders) plus a 25 cfs maximum release through the MCRD. This is because of potential conveyance losses in water through the MCRD. Higher quantities up to the full capacity of the MCRD of 44 cfs may be allowed as necessary.

4.5. PROJECT MAINTENANCE

This section describes routine inspection and maintenance activities conducted at the Lundy Project. A description of each activity related is provided in Table 4.5-1 and includes detailed information on the location and frequency of these activities. Maintenance and inspections are carried out by SCE staff except at Lundy Project recreation facilities, which are managed and maintained by Mono County under a license agreement with SCE. This agreement is described in more detail in Section 8.10 *Recreation Resources*.

[3] The agency's name at the time of the Settlement Agreement was California Department of Fish and Game in 2013.

[4] An additional conveyance of the Wilson System water rights is available through the Upper Conway Ditch. A radial gate at the upstream end of the tailrace diverts water when called for into this system.

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Table 4.5-1. Routine Lundy Project Inspection and Maintenance Activities

Maintenance Activity	Relevant Project Area	Frequency	Description
Maintenance of dirt/native roads and parking areas, including ditch and culvert maintenance	• All Project roads and parking areas (e.g., Flowline Access Road off from Lundy Lake Road) • *Recreation Access at Dam** • *Parking area at boat launch*	• Annually, and as needed	Minor Project road maintenance: • Grading approximately within the road prism • Debris removal and basic repairs, including filing of pothole • Maintenance of erosion control features such as drains, ditches, and water bars • Repair, replacement, or installation of access control structures such as posts, cables, and barrier rock • Cleaning and clearing debris and sediment from culverts with a backhoe or hand shovel • Repair and replacement of signage • Vegetation management may be conducted concurrently with road maintenance on an as-needed basis Major Project road maintenance: • Placement or replacement of culverts and other drainage features
Vegetation trimming and removal/clearing	• All Project roads • Project facilities: powerhouse, dams, water conveyance system, penstock, and stream gage sites • *Project Recreation Facilities, including camping and day use*	• Every other year • *Mono County as needed*	• Brush mow along the roadway to maintain the road as necessary for a safe line of sight and passage • Trimming performed both manually and with tools/equipment (i.e., weed whacker or chainsaw) • Maintain access and horizontal clearances
Hazard tree inspection and removal	• All Project roads • Project facilities: powerhouse, dams, water conveyance system, penstock, and stream gage sites • Recreation sites and day-use areas	• Weekly and monthly inspections • Removal as needed	• Remove hazardous brush and trees threatening roads, vehicles, and Project infrastructure. • Removal performed both manually and with tools/equipment

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Maintenance Activity	Relevant Project Area	Frequency	Description
Slide debris removal	• All Project roads	• As needed, typically following winter rains	• Remove slide debris with grader, loader, and dump truck • Spread material on road near debris slide as road base
Herbicide spraying	• *Recreation and day-use facilities*	• Annually	• Pre-emergent herbicide spraying followed by post-emergent, as necessary, on private land only • If necessary, weed-whack within flat areas prior to spraying, on private land only
Structural inspection and maintenance	• Powerhouse • Lundy Dam • Penstock • Water conveyance system	• Weekly and monthly inspections • Daily during spring/summer in peak runoff conditions • Maintenance work as needed	• Rake trashrack grids to ensure they are clean and free of debris • Fix minor concrete repairs/spalling • MCRD repairs including but not limited to: ○ Concrete repairs ○ Excavations ○ Recompacting soil
Material/slash burning	• Varies, depending upon source material location	• Annually, or as needed	• Obtain permit from USFS when needed • Burn brush, slash, or other vegetation accumulated from various Project operations
Manage access gates and security fencing	• Vicinity of powerhouse • Selected locations around access points at open flumes	• Inspect weekly and monthly during other facility inspections	• Repair as needed
Sediment management (physical removal)	• Intake areas • Splitter box and other ditches necessary for water deliveries	• As needed	• Hand shovels or backhoe used to remove sediment, if needed
Facility painting	• Powerhouse, handrails, maintenance buildings • Penstock	• Annually maintain, as needed (facilities on a rotation of every 10–20 years)	• Follow general aesthetic guidelines (e.g., painting in earth tones, landscaping with vegetation similar to surrounding areas)

*Italicized text indicates activities that are implemented by Mono County under its license agreement with SCE.

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Routine inspection and maintenance activities are conducted throughout the Lundy Project to maintain safe and reliable operation of Project facilities and to identify conditions that may affect operations, public safety, or facility integrity. These activities include routine facility inspections, dam inspections, road maintenance, vegetation management, structural maintenance, debris removal, sediment management, and other activities summarized in Table 4.5-1. Operators routinely inspect Project facilities throughout the week, and monthly Spill Prevention, Control, and Countermeasure (SPCC) and switchyard inspections are also conducted.

Additional information regarding specific inspection and maintenance activities at Project facilities is provided in the following sections.

Hydrographers perform weekly dam inspections of Lundy Dam in the summer months. Monthly inspections occur at Lundy Dam year-round; however, there is limited visibility in winter months.

4.5.1. Powerhouse Inspection and Maintenance

SCE conducts an annual maintenance outage at the powerhouse. The maintenance outage typically occurs in the fall and lasts up to 2 weeks. During the outage, SCE conducts comprehensive mechanical and electrical inspections, testing, and maintenance of the powerhouse appurtenances. In conjunction with the powerhouse maintenance outage, SCE also makes any repairs to the penstock, as appropriate.

SCE performs routine inspections of powerhouse appurtenances during regular site visits to ensure they are operating properly. Minor maintenance and repairs to powerhouse appurtenances are made on an as-needed basis.

4.5.2. Flowline/Penstock and Valve House Inspections and Maintenance

SCE conducts quarterly physical inspections (weather permitting) of the exterior of the flowline/penstock (including valves, air valves, releases, and standpipe) and valve houses. Minor repairs, including patching leaks and conducting valve house repairs (e.g., applying new paint, siding, and/or roofing) are made on an as-needed basis. Inspection of flowline/penstock interiors is conducted by either physical inspection and/or use of cameras, depending on the section length and location, during the annual maintenance outage when they are dewatered.

4.5.3. Dam Inspections, Testing and Maintenance

To identify routine maintenance needs, SCE visually inspects all dams and appurtenances monthly, including the following:

- Geomembrane liners
- Concrete
- Ancillary and support facilities

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- Handrails and gates
- Paint
- Gaging stations and houses (e.g., painting, roofing)

In addition, SCE conducts the following inspections and maintenance activities at Lundy Dam:

- Annually, when lake is drained, typically in the spring, intake grates are manually cleaned to remove accumulated material.
- Annually, valves/low-level outlets are inspected and tested by partially opening the valves.
- Every 5 years, valves/low-level outlets are fully opened for testing.

Refer to Section 4.8 for additional information on FERC inspections and Independent Consultant safety inspections completed for the Project.

4.5.4. VEGETATION MANAGEMENT

Vegetation management is conducted as needed to maintain facility access, reduce fire risk, support facility operation, and protect worker and public safety. Activities include vegetation trimming and hazard tree removal around Project facilities, roads, access trails, power and communication lines, flowlines, and the powerhouse complex.

Vegetation management may occur in the following areas:

- Within 5 feet on either side of Project access trails.
- Within 10 feet on either side of power and communication lines.
- Within 2 feet on either side of tram tracks.
- Within 5 feet on either side of exposed flowlines/penstocks.
- Within the powerhouse complex.

Hazard trees, generally defined as trees with defects that may result in property damage, personal injury, or impacts to Project facilities and infrastructure, are removed on an as-needed basis to maintain safe access and operation of Project facilities.

4.5.5. WOODY DEBRIS REMOVAL

Woody debris that accumulates at Lundy Dam is removed as needed to maintain the functionality of the spillway and low-level outlet works. Collected material is typically staged to dry and subsequently disposed of through on-site burning, as appropriate and in accordance with applicable permit requirements.

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4.5.6. PEST MANAGEMENT

Pest management is conducted as needed at Project facilities to prevent rodent infestations, maintain facility reliability, and protect worker health and safety. Management measures may include the use of traps and commercially available rodenticides within buildings at the powerhouse complex and other ancillary facilities.

4.6. PROJECT GENERATION AND OUTFLOW RECORDS

4.6.1. HISTORIC DEPENDABLE CAPACITY AND ANNUAL/MONTHLY ENERGY PRODUCTION

The historical Lundy Powerhouse dependable capacity is 3.0 MW. The powerhouse has an installed capacity of 3.0 MW. Project operations are described for two periods: (1) Historical Operations (water years 1975–2004), prior to implementation of the Settlement Agreement; and (2) Current Operations (water years 2005–2025), post-implementation of the Settlement Agreement. Under Historical Operations (water years 1975–2004), average annual energy production was 9,981 MWh. Under Current Operations (water years 2005–2025), average annual energy production was 7,780 MWh.

4.6.2. CURRENT DEPENDABLE CAPACITY AND ANNUAL/MONTHLY ENERGY PRODUCTION

SCE defines maximum dependable capacity to be the maximum load-carrying capacity of each generating unit, based upon single unit load tests during unrestricted conditions of maximum reservoir and/or forebay head and maximum manufacturer-rated capabilities of the turbines, generators, and other power plant components. Based on this approach, the Lundy Project has a dependable capacity of 3.0 MW.

4.6.3. SUMMARY OF PROJECT GENERATION AND OUTFLOW

Outflow data and average monthly energy production for current operations of the Lundy Project (2016–2025) are summarized in Table 4.6-1. During this period, annual generation ranged from 4,116 to 16,799 MWh (SCE, 2026).

Per FERC requirements, a summary of Lundy Project generation and outflow records for operations (annually and quarterly) for the 5 years preceding filing the Draft License Application (DLA) (2020–2024) is included in Table 4.6-2.

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Table 4.6-1. Average Annual and Monthly MWh Generation (2016–2025)

Year	Jan	Feb	Mar	April	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual Total
2016	3635	325	315	176	414	573	875	496	417	397	279	209	8,111
2017	1,944	188	326	381	440	475	495	491	444	435	251	(1,548)	4,322
2018	189	170	186	172	197	344	418	729	1,088	336	225	232	4,286
2019	234	222	215	1,278	754	1,397	1,321	935	499	315	270	283	7,723
2020	570	964	1,824	1,268	2,222	2,196	2,187	2,183	1,579	639	579	588	16,799
2021	577	531	868	610	547	1,407	1,238	1,115	694	489	473	486	9,035
2022	472	437	600	933	1,882	2,022	2,080	2,101	1,345	755	312	273	13,212
2023	255	211	201	248	886	761	607	300	322	183	329	230	4,533
2024	159	143	268	223	466	1,333	682	52	12	139	361	278	4,116
2025	315	283	312	309	936	1,157	1,162	545	264	42	179	211	5,715
Average	835	347	512	560	874	1167	1107	895	666	373	326	124	7,785

Source: SCE Hydro Net Generation Records, 2026

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Table 4.6-2. Summary of Project Generation and Outflows (2020–2024)

Year	Quarter	Average Flow (cfs)	Generation (MWh)
2020	1	9	667
	2	29	1,895
	3	14	1,229
	4	10	742
2020 Annual Total		15	4,533
2021	1	7	570
	2	22	2,022
	3	13	746
	4	10	778
2021 Annual Total		18	13
2022	1	11	909
	2	28	2,402
	3	24	1,971
	4	8	432
2022 Annual Total		63	18
2023	1	12	656
	2	96	3,218
	3	112	4,807
	4	30	2,662
2022 Annual Total		24	63
2024	1	11	1,063
	2	40	2,544
	3	34	2,842
	4	12	807
2024 Annual Total		22	24

Source: SCE Hydro Net Generation Records, 2026

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4.7. REGULATORY REQUIREMENTS

4.7.1. EXISTING FERC LICENSE ARTICLES

The current license includes requirements related to water resource management, environmental resource protection, cultural resources, recreation facilities, and coordination with the U.S. Forest Service (USFS). Throughout the license term, Southern California Edison (SCE) has developed and implemented the plans required by the license and subsequent amendments. Several license articles have been modified through FERC-approved license amendments to reflect updated operational requirements, monitoring approaches, and Project facilities.

4.7.1.1. Water Resources Management

The current license includes requirements related to erosion and sediment control, minimum instream flow releases, streamflow monitoring, sediment transport, and water management. These requirements are implemented through Commission-approved plans governing minimum flow releases to Mill Creek, streamflow and reservoir monitoring, annual water management based on hydrologic conditions, and measures intended to manage sediment and protect aquatic resources. Subsequent license amendments modified minimum flow release requirements and streamflow monitoring provisions.

4.7.1.2. Rare, Threatened, and Endangered Species

The current license requires protection of sensitive plant species and other special-status biological resources within the Project Area. SCE developed and implemented resource protection measures to avoid and minimize impacts associated with Project operation and maintenance activities and any ground-disturbing activities occurring within the Project Boundary.

4.7.1.3. Habitat Protection

The license includes provisions to protect and monitor riparian habitat and vegetation associated with Mill Creek. These requirements include measures to minimize disturbances to riparian vegetation and wildlife habitat, as well as long-term monitoring of riparian vegetation to evaluate habitat conditions over the license term.

4.7.1.4. Aesthetics

The license includes measures intended to minimize visual impacts of Project facilities and maintain consistency with the surrounding landscape. These measures include maintaining certain Project facilities in colors and conditions that blend with the surrounding environment and implementing visual resource protection measures for future ground-disturbing activities on National Forest System lands.

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4.7.1.5. Cultural Resources

The current license includes requirements to protect known cultural and historic resources and to address previously unidentified cultural resources that may be discovered during Project operation, maintenance, or construction activities. These requirements are implemented through consultation with appropriate agencies and adherence to applicable cultural resource protection procedures.

4.7.1.6. Recreation

The license includes requirements for providing and maintaining recreation facilities and public access opportunities associated with the Project. These requirements address campground facilities, day-use amenities, parking, boating access, and management of recreation resources within the Project Area. Recreation facilities and management measures have been modified periodically through license amendments.

4.7.1.7. USFS Ground-Disturbing Activity Requirements

For activities occurring on National Forest System lands, the license requires consultation with the USFS and implementation of applicable resource protection measures prior to conducting ground-disturbing activities. These requirements address hazardous materials management, erosion control, spoil disposal, visual resource protection, and protection of sensitive biological resources.

4.7.1.8. License Amendments

FERC has issued several license amendments during the current license term. Notable amendments addressed Project boundary revisions, modifications to minimum flow and streamflow monitoring requirements, recreation facility changes, coordination requirements with resource agencies, and additions or modifications to Project facilities. These amendments are reflected in current Project operations and compliance requirements.

4.7.1.9. Other Applicable Regulatory Requirements

In addition to the Project-specific license articles summarized above, the Lundy Project is subject to the standard terms and conditions contained in FERC Form L-1 (October 1975), *Terms and Conditions of License for Constructed Major Projects Affecting the Lands of the United States*.

Project operation and maintenance activities are also subject to applicable state and federal environmental requirements. Under the 2017 California State Water Resources Control Board (SWRCB) water quality certification for ongoing operation and maintenance activities, turbidity monitoring is required during activities that have the potential to affect water quality (SWRBC, 2017).

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For non-routine activities that may modify existing Project facilities or involve ground disturbance, SCE conducts environmental review through its internal environmental screening process. Appropriate resource specialists are consulted to identify potential environmental, biological, cultural, or land management considerations and to ensure compliance with applicable regulatory requirements. Where cultural resources may be affected, SCE implements the procedures identified in the Historic Properties Management Plan (HPMP), including agency consultation as appropriate.

4.7.2. Existing Environmental Measures

Pursuant to its existing license, SCE maintains several environmental Lundy Project-specific programs, plans, and measures. Where applicable, the license article and condition number are provided for reference.

- Pipeline Monitoring Plan (License Article 401)
- Erosion Control and Revegetation Plan (License Article 402)
- Minimum Flow Plan (License Article 403)
- Rare Plant Protection Plan (License Article 405)
- Riparian Disturbance Plan (License Article 406)
- Cultural Resource Management Plan (License Article 408)
- Recreation Plan (License Article 410)
- Streamflow Gaging Plan (License Article 412)
- Sediment Transport Plan (License Article 413)
- Riparian Vegetation Monitoring Plan (License Article 415)
- Plan for Annual Consultation on Water Monitoring and Summer Operation and Maintenance (License Article 417)
- Hazardous Substance Plan (USFS 4(e) Condition 7)
- Erosion Control Plan (USFS 4(e) Condition 8)
- Spoil Disposal Plan (USFS 4(e) Condition 9)
- Visual Resources Plan (USFS 4(e) Condition 10)
- Threatened, Endangered, and Sensitive Species Protection Plan (USFS 4(e) Condition 11)

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4.7.3. PROJECT SAFETY

4.7.3.1. Owner's Dam Safety Program

SCE maintains a Corporate Dam and Public Safety Program to ensure continued safe operations of its dams and hydroelectric facilities in a manner that complies with regulatory requirements and SCE's corporate safety policies. The Owner's Dam Safety Program protects life, property, lifelines, and the environment by ensuring the safety of dams. SCE conducts an annual internal review of the Owner's Dam Safety Program in addition to an external 5-year audit.

SCE files Dam Safety Surveillance and Monitoring Plans (DSSMPs) and Dam Safety Surveillance and Monitoring Reports (DSSMRs) for Lundy Dam. The DSSMP provides the details about how SCE monitors and evaluates the performance of the dam, and the DSSMR analyzes, evaluates, and interprets the dam safety surveillance and monitoring data and provides findings on the overall performance of the dam. On March 13, 2026, SCE filed its 2026 DSSMP and 2025 DSSMR for Lundy Dam.

4.7.3.2. Dam Inspections and Reporting

Dam inspections and reporting are conducted for the Project as described below. The Project dam is an unattended facility. The reservoir level and flows in Mill Creek downstream of the dam are remotely monitored by the Supervisory Control and Data Acquisition system from SCE's Bishop Control Center, which is staffed continuously. When the ground is not snow-covered, hydrographers visit the dam at least monthly to perform visual inspections and read the instrumentation.

FERC INSPECTIONS

FERC conducts two types of inspections of the Project to verify license compliance: (1) dam safety inspections and (2) environmental inspections. Because the Project dam is considered to have high hazard potential, dam safety inspections are conducted annually by FERC's Division of Dam Safety and Inspection to verify that (1) the Project is being properly maintained to ensure the continued safety of the structures, (2) no unauthorized modifications have been made to the Project, and (3) the Project is being operated efficiently and safely and in compliance with the terms and conditions of the license. FERC's most recent Dam Safety Inspection Report was filed on March 31, 2026.

FERC also conducts periodic environmental inspections to provide a thorough review of environmental requirements of the license, including those related to cultural resources, biological resources, public safety, recreation resources, and other environmental resources. FERC's most recent environmental inspection was conducted in August 2018, and the report was filed on September 7, 2018.

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PART 12D INDEPENDENT CONSULTANT SAFETY INSPECTIONS

An independent consultant under contract with SCE inspects the Lundy Dam every 5 years in compliance with 18 CFR § 12.40. The Part 12D safety inspections are intended to identify any actual or potential deficiencies of Project facilities or adequacy of Project maintenance, surveillance, or methods of operation that might endanger public safety. The most recent Part 12D Comprehensive Assessment Report for Lundy Dam was filed on December 22, 2023.

DAM SAFETY SURVEILLANCE AND MONITORING PROGRAM

SCE files the DSSMP and DSSMR for the Lundy Dam. The DSSMP provides the details about how SCE monitors and evaluates the performance of the dam, and the DSSMR analyzes, evaluates, and interprets the dam safety surveillance and monitoring data and provides findings on the overall performance of the dam. On March 16, 2026, SCE filed its 2026 DSSMP and 2-25 DSSMR for Lundy Dam.

4.7.4. EMERGENCY ACTION PLANS

Pursuant to 18 CFR § 12.20(a), SCE maintains an Emergency Action Plan (EAP) for Lundy Dam and operates the dam in accordance with the EAP. The purpose of the EAP is to reduce the risk of loss of human life or injury and to minimize property damage in the event of a dam safety emergency or flooding caused by large releases from the Project dam. The EAP defines procedures to aid in identifying unusual circumstances that may endanger the Project Dam, and responsibilities and procedures for mitigative actions, conducted by SCE. In addition, the EAP identifies the responsibilities of local, county, state, and federal public safety agencies and the processes of notifications in the event of potential, impending, or actual failure of the Project dam. The EAP may also be used to provide notification when release of naturally occurring high flows will create major flooding downstream of the Project reservoir.

SCE filed 5-year reprints of the Project EAP and Inundation Maps with FERC on December 29, 2021. The next FERC EAP reprint is due December 31, 2026. A revised Project EAP was filed with FERC on April 26, 2024, to reflect changes in contact information provided in the notification flowcharts. On December 19, 2025, SCE filed the EAP Status Report and Annual Update for the Project with FERC.

4.7.5. PUBLIC SAFETY PLAN

SCE maintains a Public Safety Plan for the Project that identifies the location of public safety measures and signage at Project facilities. The Public Safety Plan is reviewed and updated annually, as necessary. The following include Project features aimed at protecting public health and safety:

- **Signage**: SCE uses signs to warn the public of hazardous areas and potentially dangerous conditions. For example, danger and warning signs are located near facilities that may pose a danger to the public (e.g., powerhouses, switchyards, and water release points).

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- **Physical Restraining Devices**: SCE uses various devices to restrict public access to hazardous areas, including the following:
  - Fences and locked gates limiting access to the powerhouse complex; around the tailrace, substation, and transformer yards; and along Project dams.
  - Grates/trashracks on dam intakes structures.
  - Boat barriers along dam spillways.

4.8. REFERENCES

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5.0 PROPOSED ACTION

5.1. INTRODUCTION

The Proposed Action represents SCE's proposal for continued O&M of the Project under a new license issued by FERC, including new environmental measures and plans.

The current license for the Project expires on January 31, 2027.

Using the No-Action Alternative described in Section 4.0 *No-Action Alternative* as a baseline, this section identifies modifications that would occur to the Project under the Proposed Action, as described in the following subsections.

5.2. FERC PROJECT BOUNDARY MODIFICATIONS

Pursuant to 18 CFR § 4.41, the FERC Project Boundary must encompass all lands necessary for Project purposes, including Project O&M over the term of the FERC license. SCE has reviewed the existing FERC Project Boundary and identified locations where lands should be added or removed. Results of SCE's review are summarized in the Project Lands and Road Study (LAND-1) draft report (DLA Volume III). Proposed modifications include the following:

- Adding lands necessary for Project O&M activities (two MCRD access roads);
- Removal of areas that are not necessary for O&M activities;
- Slight adjustments where the existing FERC Project Boundary imperfectly captures the Project activity or facility (e.g., alignment with current MCRD centerline); and
- Correction of mapping errors arising from updated spatial data and tools.

SCE's proposed FERC Project Boundary modifications described above would result in the land ownership within the FERC Project Boundary as shown in Table 5.2-1 and further described in Section 8.11 *Land Use and Aesthetic Resources* of this Exhibit E.

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Table 5.2-1. Land Ownership within the Proposed FERC Project Boundary

Ownership	Existing Acreage	Proposed Acreage	Change in Acreage
U.S. Forest Service	53.1	45.0	-8.1
Bureau of Land Management	0.9	0.8	-0.1
Mono County	1.1	1.1	0
Private	1.3	0.4	−0.9
Southern California Edison	272.9	225.2	−47.7
Total Project Acreage	329.3	272.5	−56.8

5.3. PROJECT FACILITY MODIFICATIONS

SCE is not proposing changes to any Project facilities as part of the new license.

5.4. CHANGES IN PROJECT OPERATIONS

SCE is proposing no changes in Project operations as part of the new license. All flow-related measures, including controlled release operations as described in Section 7 of the Amended Settlement Agreement, Appendix 2 are unchanged.

5.5. CHANGES IN PROJECT MAINTENANCE

SCE is not proposing significant changes in Project maintenance as part of the new license. The Proposed Action includes continuation of routine maintenance to mechanical and structural elements, such as low-level outlets, gates, and intakes, in addition to general vegetation maintenance around Project facilities. To the extent that these maintenance activities may mobilize sediment or have other potential environmental consequences, they are implemented in compliance with existing best management practices and SCE-wide practices.

5.6. NEW OR MODIFIED ENVIRONMENTAL MEASURES, MANAGEMENT AND MONITORING PLANS, AND PROGRAMS

Table 5.6-1 summarizes the environmental measures and management plans proposed under the Proposed Action. These plans incorporate and continue applicable resource protection, monitoring, and management requirements established under the current license, including requirements related to water resource management, biological resource protection, recreation, cultural resources, and land management. Existing plans and measures that remain relevant to Project operations have been incorporated into the proposed plans, while one-time implementation measures from the current license that have been completed are not proposed for continuation under the new license.

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The Proposed Action includes updated management plans for water resources, natural resources, recreation resources, Project roads, and cultural resources. In several cases, existing management and monitoring requirements from the current license have been consolidated into a single plan (Resources Management Plan). With the exception of the Water Management Plan and the Historic Properties Management Plan (HPMP), these plans are provided in DLA Volume II, Appendices E.1 through E.5. The HPMP will be filed with FERC following completion of agency and Tribal consultation. The Water Management Plan will be filed with the Final License Application.

Table 5.6-1. Summary of Environmental Measures and Plans Under the Proposed Action

Plan Title	Resource Area	Existing License Requirements Addressed
Appendix E.1: Resources Management Plan	Geology and Soils, Botanical, and Terrestrial Resources	Incorporates applicable measures related to erosion and sediment control, rare plant protection, habitat protection, vegetation management, and other natural resource protection requirements.
Appendix E.2: Water Management Plan[a]	Water Resources	Incorporates requirements related to water management, reservoir operations, minimum flow releases, streamflow monitoring and measurement, streamflow gaging, compliance reporting, and other water resource management measures carried forward from the current license.
Appendix E.3: Recreation Resources Management Plan	Recreation Resources	Continues management, operation, maintenance, and monitoring of Project recreation facilities and public access opportunities.
Appendix E.4: Project Roads Management Plan	Geology and Soils, Land Resources	Provides measures for road maintenance, erosion prevention, drainage management, and protection of adjacent resources during road-related activities.
Appendix E.5: Historic Properties Management Plan[a]	Cultural and Tribal Resources	Continues procedures for protecting cultural resources, implementing cultural resource reviews, and consulting with Tribes and regulatory agencies regarding Project activities.

[a] To be filed with the Final License Application

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6.0 OTHER ALTERNATIVES

6.1. ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

6.1.1. FEDERAL GOVERNMENT TAKEOVER

Federal takeover is not a reasonable alternative. Federal takeover and operation of the Project would require Congressional approval. While that fact alone would not preclude further consideration of this alternative, there is no evidence to indicate that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed an interest in operating the Project.

6.1.2. ISSUING A NON-POWER LICENSE

A non-power license is a temporary license that FERC will terminate when it determines that another governmental agency will assume regulatory authority and supervision over the lands and facilities covered under the non-power license. No agency has suggested a willingness or ability to do so. No party has sought a non-power license, and there is no basis for concluding that the Project should no longer be used. Thus, issuance of a non-power license is not a reasonable alternative to relicensing the Project.

6.1.3. PROJECT DECOMMISSIONING

Project retirement could be accomplished with or without dam removal. Either alternative would involve denial of the relicense application and surrender or termination of the existing license with appropriate conditions. SCE is not proposing to decommission the Project, and the record to date does not demonstrate any serious resource concerns that cannot be mitigated if the Project is relicensed. As such, there is no reason to include decommissioning as a reasonable alternative to be evaluated and studied. The Project provides a viable, safe, and clean renewable source of power to the region and if decommissioned, the Project would no longer be authorized to generate power.

As of this DLA, no party has suggested that Project decommissioning would be appropriate.

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7.0 STATUTORY AND REGULATORY REQUIREMENTS

SCE, as licensee for the Project, is subject to the requirements of the FPA and other applicable statutes. The FPA gives FERC legal authority to issue licenses to non-federal hydropower projects. Major regulatory and statutory requirements are summarized below.

7.1. FEDERAL POWER ACT

FERC is the lead federal agency for regulating the licensing of the Project and evaluating the Proposed Action as outlined in this License Application. The FPA gives FERC legal authority to issue licenses to non-federal hydropower projects. The following sections of the FPA are applicable to the Project. Following FERC's issuance of the Notice of Acceptance and Notice of Ready for Environmental Analysis, FERC will request that resource agencies provide conditions and recommendations related to the following FPA sections.

7.1.1. SECTION 4(E) CONDITIONS

Section 4(e) of the FPA, 16 USC § 797(e), provides that any license issued by FERC for a project within a federal reservation shall be subject to and contain conditions as the secretary of the responsible federal land management agency deems necessary for the adequate protection and use of the reservation. The proposed Project occupies approximately 53.1 acres of federally owned lands within Inyo National Forest. FERC will solicit FPA Section 4(e) conditions from USFS after the Final License Application (FLA) is filed.

7.1.2. SECTION 10(J) RECOMMENDATIONS

Under Section 10(j) of the FPA, 16 USC § 803(j) each license issued by FERC shall include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, or enhancement (PME) of fish and wildlife resources affected by the Project. FERC is required to include these conditions unless it determines that they are inconsistent with the purposes and requirements of the FPA or other applicable laws. Before rejecting or modifying an agency recommendation, FERC is required to attempt to resolve any such inconsistency with the agency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency. FERC will solicit FPA Section 10(j) recommendations after the FLA is filed.

7.1.3. SECTION 18 FISHWAY PRESCRIPTIONS

Section 18 of the FPA, 16 USC § 811 states that FERC is to require construction, operation, and maintenance by a licensee of such fishways as may be prescribed by the Secretaries of Commerce or the Interior. FERC will solicit FPA Section 18 prescriptions after the FLA is filed.

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7.2. CLEAN WATER ACT—SECTION 401

Section 401(a)(1) of the Clean Water Act (CWA), 33 USC § 1341, states that a license applicant must obtain certification from the appropriate state water pollution control agency verifying compliance with the applicable provisions of the CWA, unless the certification is waived.

In accordance with 18 CFR § 5.23, SCE will request a water quality certification, including proof of the date on which the certifying agency received the request, no later than 60 days following FERC's issuance of the Notice of Ready for Environmental Analysis.

7.3. ENDANGERED SPECIES ACT – SECTION 7

Section 7 of the federal Endangered Species Act (ESA), 16 USC § 1536, requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.

FERC initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) under Section 7 of the ESA on April 17, 2024, and on that same date designated SCE as FERC's non-federal representative for informal consultation under Section 7. Since this designation, SCE has communicated vie email with agencies responsible for implementing ESA consultation to better evaluate possible effects to those species potentially impacted by the Proposed Action. Consultation documentation with USFWS and NMFS is included in Appendix E.6, DLA Volume II.

Discussion of the Project's potential effects to threatened and endangered species are provided in Section 8.9 *Rare, Threatened, and Endangered Species*.

7.4. MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), 6 USC § 1855(b)(2), requires federal agencies to consult with NMFS on all actions that may adversely affect Essential Fish Habitat (EFH).

On April 17, 2024, FERC designated SCE as the non-federal representative for execution of informal consultation under Section 305(b) of the Magnuson-Stevens Act. EFH is only applicable to federally managed commercial fish species that live at least one component of their life cycle in marine waters. The Project does not include marine fisheries, and no EFH has been designated in the Project Area, thus the Magnuson-Stevens Act is not applicable to the Project.

7.5. COASTAL ZONE MANAGEMENT ACT

Under Section 307 (c)(3)(A) of the Coastal Zone Management Act (CZMA), 16 USC § 1456(c)(3)(A), FERC cannot issue a license for a project within or affecting a states' coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence

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is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification. The California Coastal Commission is the agency responsible for implementing California's coastal management program.

The Project is not included within the state-designated Coastal Management Zone, and the Project would not affect California's coastal resources. Therefore, the Project is not subject to coastal zone management program review, and no consistency certification is needed for the action. By letter dated June 4, 2026, the California Coastal Commission concurred (Appendix E.6, DLA Volume II).

7.6. NATIONAL HISTORIC PRESERVATION ACT – SECTION 106

Section 106 of the National Historic Preservation Act (NHPA), 54 USC § 306108, and its implementing regulations in 36 CFR Part 800 require that federal agencies consider the effect of their undertakings on historic properties. Historic properties are districts, sites, buildings, structures, or objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places.

FERC initiated consultation with the California SHPO under Section 106 on April 17, 2024, and on that same date designated SCE as FERC's non-federal representative under Section 106 and its implementing regulations. In a letter dated November 5, 2025, SCE on behalf of FERC initiated consultation with the SHPO and requested concurrence on the Area of Potential Effects (APE). By letter dated November 25, 2025, the SHPO pursuant to 36 CFR § 800.4(a)(1), SCE received comments from the SHPO on the adequacy of the APE (SHPO Reference No. FERC_2025_ 1105_001). The SHPO recommended that additional information regarding the potential effects from O&M to historic properties present below the ground surface be provided. Therefore, SCE has expanded the APE to include a vertical APE ranging from 0 feet below current grade to a maximum depth of approximately 10 feet (3 meters) below current grade, where excavations due to O&M could take place. Discussion of potential Project effects to historic properties is provided in Section 8.13 *Cultural Resources* and Section 8.14 *Tribal Resources* of this Exhibit E. SCE anticipates that to meet the requirements of Section 106, FERC will execute a Programmatic Agreement for the protection of historic properties from the effects of the ongoing O&M of the Project under a new license issued by FERC. A Draft HPMP is in progress and will be filed as privileged and confidential with FERC. A record of non-confidential consultation will be provided with the Final License Application.

7.7. WILD AND SCENIC RIVERS ACT

Section 7(a) of the Wild and Scenic Rivers Act, 16 USC § 1278(a), requires federal agencies to decide as to whether the operation of the Project under a new license would invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the designated river corridor.

Mill Creek and its tributaries are not designated by Congress as Wild and Scenic Rivers.

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7.8. OTHER REGULATORY REQUIREMENTS

7.8.1. WILDERNESS ACT

Section 4(c) of the Wilderness Act of 1964 (16 USC 1133(c)), prohibits any commercial enterprise, structure, or installation within Congressionally designated wilderness areas, except for existing private rights or activities authorized by the President of the United States. No portion of the Lundy Project Boundary is within a Congressionally designated wilderness area.

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8.0 ENVIRONMENTAL ANALYSIS

As specified in 18 CFR § 5.18(b), this Exhibit E addresses the resources listed in the PAD provided for in 18 CFR § 5.6; follows FERC's guidelines in *Preparing Environmental Documents: Guidelines for Applicants, Contractors, and Staff* (FERC, 2008); and meets the format and content requirements specified by FERC.

SCE developed studies to address potential resource issues as noted in FERC's Scoping Document 1 (SD1),[5] which was then superseded by Scoping Document 2 (SD2).[6] SCE's study plans to address potential resource issues were filed with FERC as part of the Revised Study Plan filing on December 4, 2024. Those issues identified by FERC, the study plans developed to address them as well as the section of the DLA where that issue is discussed are all identified in Table 8.0-1. By order dated January 2, 2025, FERC issued a Study Plan Determination (SPD) Letter,[7] approving studies as proposed or with modifications.

This Exhibit E provides the necessary technical information and analyses to identify and evaluate potential impacts of continued O&M of the Project and disposition of select Project facilities under the Proposed Action compared to the No-Action Alternative. In addition, the Exhibit E specifies new measures under the Proposed Action to protect and enhance environmental and cultural resources. The Proposed Action in this Exhibit E considers input from state and federal resource agencies, Native American Tribes, non-governmental organizations, and members of the public (collectively referred to as stakeholders) acquired during consultation activities completed for the relicensing of the Project.

The resources sections that follow, examine the affected environment of the Lundy Project Area, those potential issues identified above, and any PME measures proposed to avoid or minimize potential effects. Unless otherwise noted in each resource section, the Lundy Project Area includes the FERC Project Boundary, as described in Section 4.3 *FERC Project Boundary* and shown in Figure 4.2-1.

[5] Accession No. 20240417-3019
[6] Accession No. 20240729-3029
[7] Accession No. 20250102-3061

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Table 8.0-1. Potential Issues Identified by FERC

Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Geologic and Soils	Effects of continued Project operation on shoreline erosion and sediment transport downstream Mill Creek.	FERC SD2	No Study	DLA Section 8.2.2.1 Effects of Project Operations and Maintenance on Shoreline Erosion and Sediment Transport Downstream in Mill Creek PME Measures: DLA Section 8.2.2.5 – SCE proposes to continue the penstock monitoring and erosion control measures from the current license (Appendix E.1, DLA Volume II).
Geologic and Soils	Potential effects of sediment movement from or within Deer Creek to the Project shorelines and streambanks along Mill Creek.	FERC SD2	No Study	DLA Section 8.2.2.2 Potential Effects of Sediment Movement from or within Deer Creek to Project Shorelines and Streambanks along Mill Creek PME Measures: DLA Section 8.2.2.5 – SCE proposes to continue the penstock monitoring and erosion control measures from the current license (Appendix E.1, DLA Volume II).
Geologic and Soils	Effects of hillslope erosion downstream of Lundy Lake and Deer Creek.	FERC SD2	No Study	DLA Section 8.2.2.3 Effects of Hillslope Erosion Downstream of Lundy Lake and Deer Creek PME Measures: DLA Section 8.2.2.5 – SCE proposes to continue the penstock monitoring and erosion control measures from the current license (Appendix E.1, DLA Volume II).

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Water Resources	Effects of continued Project operation on water quality downstream of the powerhouse.	FERC SD2	WQ-1; WQ-2	DLA Section 8.4.2.1 Effects of Project Operations and Maintenance on Water Quality in Project Reservoirs and Project-Affected Stream Reaches PME Measures: DLA Section 8.4.2.7 – SCE proposes to continue existing PME measures, including minimum flow releases and compliance with water rights requirements (Appendix E.2, DLA Volume II)
Water Resources	Effects of continued Project operation on water quality in Lundy Lake.	FERC SD2	WQ-1; WQ-2	DLA Section 8.4.2.2 Effects of Project Operations and Maintenance on Water Quality in Project Reservoirs and Project-Affected Stream Reaches PME Measures: DLA Section 8.4.2.7 – SCE proposes to continue existing PME measures, including minimum flow releases and compliance with water rights requirements (Appendix E.2, DLA Volume II).
Water Resources	Effects of continued Project operation on downstream water rights and users.	FERC SD2	No Study	DLA Section 8.3.2.1 Proposed Action – Effects of Continued Project Operation on Downstream Water Rights and Users DLA Section 8.4.2.3 Proposed Action – Effects of Continued Project Operation on Downstream Water Rights and Users PME Measures: DLA Section 8.3.2.4 – SCE proposes to maintain current operations at the Project and maintain current MIF requirements. Under the Proposed Action, this includes continued implementation of several existing PME measures (Appendix E.2, DLA Volume II)

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Water Resources	Effects of continued Project operation on water quality in the Project bypassed reach and downstream of the powerhouse.	FERC SD2	WQ-1; WQ-2	DLA Section 8.4.2.4 Effects of Continued Project Operation on Water Quality in the Project Bypassed Reach and Downstream of the Powerhouse. PME Measures: DLA Section 8.4.2.7 – SCE proposes to continue existing PME measures, including minimum flow releases and compliance with water rights requirements (Appendix E.2, DLA Volume II).
Water Resources	Bioaccumulation of Mercury in Fish Tissue and Potential Consumption Guidelines to Avoid Human Health Risks in Project Reservoirs		WQ-1	DLA Section 8.4.2.5 – Bioaccumulation of Mercury in Fish Tissue and Potential Consumption Guidelines to Avoid Human Health Risks in Project Reservoirs PME Measures: DLA Section 8.4.2.7 – No PME measures proposed.
Aquatic and Fishery Resources	Effects of continued Project operation on fish and aquatic habitat and fish and aquatic resources within the Project impoundment, bypassed reach, and downstream of the powerhouse.	FERC SD2	AQ-1; AQ-2	DLA Section 8.5.2.1 Effects of continued Project operation on fish and aquatic habitat and fish and aquatic resources within the Project impoundment, bypassed reach, and downstream of the powerhouse. PME Measures: DLA Section 8.5.2.6 – SCE proposes to continue existing PME measures, including controlled releases and minimum flow releases (Appendix E.2, DLA Volume II).

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Aquatic and Fishery Resources	Effects of fish entrainment at the Lundy powerhouse on fish resources in the Project Area. Effects of continued Project operation on fish stranding.	FERC SD2	AQ-1; AQ-2	DLA Section 8.5.2.3 Effects of Fish Entrainment at the Lundy Powerhouse and Fish Stranding on Fish Resources in the Project Area PME Measures: DLA Section 8.5.2.6 – No PME measures proposed
Aquatic and Fishery Resources	Effects of Project water diversions and instream flow on fish habitat in the Project bypassed reach.	FERC SD2	AQ-1	DLA Section 8.5.2.2 Effects of Project Water Diversions and Instream Flow on Fish Habitat in the Project Bypassed Reach. PME Measures: DLA Section 8.5.2.6 – SCE proposes to continue existing PME measures, including controlled releases and minimum flow releases (Appendix E.2, DLA Volume II).
Aquatic and Fishery Resources	Effects of continued operation on aquatic invertebrates downstream of the Lundy dam.	FERC SD2		DLA Section 8.5.2.4 Effects of continued operation on aquatic invertebrates downstream of the Lundy dam. PME Measures: DLA Section 8.5.2.6 – SCE proposes to continue existing PME measures, including controlled releases and minimum flow releases (Appendix E.2, DLA Volume II).
Terrestrial Resources	Effects of continued operations and maintenance on special-status botanical resources.	FERC SD2	TERR-1*	DLA Section 8.7.2.2 – Effects of Continued Project Operations and Maintenance Activities on Special Status Plant Species Within the Project Area PME Measures: DLA Section 8.7.2.5 –General protection and avoidance measures are included for botanical resources and to manage the potential introduction and spread of NNIP species (Appendix E.1, DLA Volume II).

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Terrestrial Resources	Effects of the introduction and/or spread of invasive plant populations potentially occurring due to maintenance activities.	FERC SD2	TERR-1*	DLA Section 8.7.2.3 – Effects of Continued Project Operations and Maintenance Activities on Non-Native Invasive Plants Within the Project Area PME Measures: DLA Section 8.7.2.5 –General protection and avoidance measures are included for botanical resources and to manage the potential introduction and spread of NNIP species (Appendix E.1, DLA Volume II).
Terrestrial Resources	Effects of continued operations and maintenance on special-status wildlife species.	FERC SD2	TERR-2*	DLA Section 8.6.2.1 – Effects of Project Operations and Maintenance on Terrestrial Wildlife Resources PME Measures: DLA Section 8.6.2.4 – SCE proposes to include protection and avoidance measures to protect wildlife resources and manage potential introduction and spread of invasive species (Appendix E.1, DLA Volume II).
Terrestrial Resources	Effects of continued Project O&M activities including vegetation management and herbicide use on native vegetation and wildlife, game species, and the special-status species identified in SCE's PAD, including Inyo National Forest Species of Conservation Concern and nesting migratory bird species.	FERC SD2	TERR-1*; TERR-2*	DLA Section 8.6.2.2 – Effects of Project Operations and Maintenance on Migratory Birds and Raptors PME Measures: DLA Section 8.6.2.4--SCE proposes to include protection and avoidance measures to protect wildlife resources and manage potential introduction and spread of invasive species (Appendix E.1, DLA Volume II).

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
RTE	Effects of continued Project O&M activities on species designated as federally threatened, endangered, proposed, or candidates for listing, and designated critical habitat (proposed and final), under the Endangered Species Act (ESA), including the species and critical habitat listed below. • **Endangered Species**: Sierra Nevada bighorn sheep, Sierra Nevada red fox, foothill yellow-legged frog, Sierra Nevada yellow-legged frog • Threatened Species: North American wolverine, yellow-billed cuckoo, whitebark pine • **Proposed Threatened Species**: greater sage-grouse, northwestern pond turtle • **Candidate Species**: Monarch butterfly • **Final Critical Habitat:** There is final critical habitat designated for Sierra Nevada bighorn sheep, yellow-billed cuckoo, and Sierra Nevada yellow-legged frog. Final critical habitat for the Sierra Nevada bighorn sheep is within the Project Boundary • **Proposed Critical Habitat:** There is proposed critical habitat for greater sage-grouse located within the Project Boundary	FERC SD2	TERR-2*	DLA Section 8.9.2 – Environmental Effects PME Measures: DLA Section 8.9.2.5 – As no significant effects are anticipated, SCE is not proposing specific PME measures for RTE species; however, protection and avoidance measures for general wildlife and botanical resources are described in Appendix E.1, DLA Volume II.

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Recreation Resources	Effects of continued Project O&M on recreation resources.	FERC SD2	REC-2	DLA Section 8.10.2.1. – Effects of Continued Project Operation and Maintenance on Recreation Resources PME Measures: DLA Section 8.10.2.4 – Under the Proposed Action, SCE proposes to continue to operate and maintain recreation facilities at the Lundy Project (Appendix E.3, DLA Volume II).
Recreation Resources	Adequacy of existing recreation facilities to meet current and future recreation demand.	FERC SD2	REC-1	DLA Section 8.10.2.2 – Adequacy of Existing Recreation Facilities to Meet Current and Future Recreation Demand PME Measures: DLA Section 8.10.2.4 – Under the Proposed Action, SCE proposes to continue to operate and maintain recreation facilities at the Lundy Project (Appendix E.3, DLA Volume II).
Land Use and Aesthetic Resources	Effects of continued Project O&M on land use	FERC SD2	LAND-1	DLA Section 8.11.2.1 – Land Use Resources PME Measures: DLA Section 8.11.2.4 – Under the Proposed Action, SCE proposes to continue to operate and maintain Project Roads (Appendix E.4, DLA Volume II).
Land Use and Aesthetic Resources	Effects of continued Project O&M on the aesthetic quality of the Project Area	FERC SD2	No Study	DLA Section 8.11.2.2 – Aesthetic Resources DLA Section 8.11.2.1 - Effects of Project Operations and Maintenance Activities on Scenic Resources PME Measures: DLA Sections 8.11.2.4 and 8.11.2.4 – No PME measures proposed

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Resource Area	Potential Issue	FERC Identified Issue	Study Plan Title	Location in this DLA and Associated PME Measures if any
Cultural and Tribal Resources	Effects of continued Project O&M on historic or archaeological resources, and traditional cultural properties that may be eligible for inclusion in the National Register of Historic Places, or on other areas or places or religious, cultural, and traditional importance to Indian tribes.	FERC SD2	CUL-1*; CUL-2*, TRI-1*	DLA Section 8.12 – Cultural Resources and Section 8.13 Tribal Resources PME Measure: Historic Properties Management Plan (Appendix E.5, DLA Volume II).
Socioeconomics	Effects of continued Project operations and flow diversions on agriculture and other consumptive uses in Mono City.	FERC SD2	No Study	DLA Section 8.14.2.2 Effects of continued Project operations and flow diversions on agriculture and other consumptive uses in Mono City PME Measures: DLA Sections 8.14.2.5 – No PME measures proposed
Socioeconomics	Effects of any reduction in the amount of water available for irrigation on agricultural production and pastureland for livestock in Mono Lake watershed	FERC SD2	No Study	DLA Section 8.14.2.3 Effects of any reduction in the amount of water available for irrigation on agricultural production and pastureland for livestock in Mono Lake watershed. PME Measures: DLA Sections 8.14.2.5 – No PME measures proposed
Environmental Justice	Effects of Project O&M on identified environmental justice communities.	FERC SD2	No Study	Pursuant to Executive Orders 14148, *Initial Recissions of Harmful Executive Orders and Actions*; 14173, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*; and 14151, *Ending Radical and Wasteful Government DEI Programs and Preferencing* (CRS 2025) the environmental justice discussion has not been included in this application.

[1] Details of each PME measure can be found in Volume II of this DLA

* These technical reports are still in progress. All other Final Technical Reports are included in Volume III of this DLA.

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8.1. GENERAL DESCRIPTION OF THE RIVER BASIN

This section provides a general description of the river basin containing SCE's Lundy Project located on Mill Creek in Mono County, California. The FERC requirements for this section are specified in 18 CFR § 5.18(b)(1). The following information is included: descriptions of the river subbasins and watersheds containing the Project facilities, including lengths of major stream reaches and tributary rivers and streams; affected streams; non-Project dams and diversion structures; and major land and water uses surrounding the Project.

This overview discusses the hydrologic region for the Project, drainage basins within the hydrologic region, and watersheds associated with each drainage basin. Hydrologic basin, subbasin, watershed, and subwatershed, as used below, refer to the geographic area drained by a river or stream in descending geographical scale.

8.1.1. INFORMATION SOURCES

This section was prepared using the following primary information sources:

- Inyo National Forest Land Management Plan (LMP) (USFS, 2019)
- Los Angeles Department of Water and Power's (LADWP) Mono Basin Geology and Hydrology Report (LADWP, 1987)
- The Mono Lake Committee's (MLC) description of Mono Basin (MLC, 2026)
- North Mono Basin Watershed/Landscape Analysis (USFS, 2001)

8.1.2. MONO LAKE SUBBASIN

The Lundy Project facilities are located within the "Northern Mojave-Mono Lake Subregion" (Hydrologic Unit Code [HUC] 1809) of the Eastern Sierra Nevada in Mono County, California. The Northern Mojave-Mono Lake Subregion is further subdivided into the basin "Mono-Owens Lake" (HUC 180901) and the subbasin "Mono Lake" (HUC 18090101).

The HUC10 classification for the Lundy Project is the "Lee Vining Creek-Frontal Mono Lake" Watershed (HUC 1809010104) (Figure 8.1-1), which encompasses 135.1 square miles. The watershed is then further divided into HUC12 subwatersheds. Of the area of the Lundy Project, 24.2 square miles are located in the "Mill Creek" subwatershed (HUC 180901010402), and 18.8 square miles are located in the "Wilson Creek" subwatershed (HUC 180901010403) (Figure 8.1-2).

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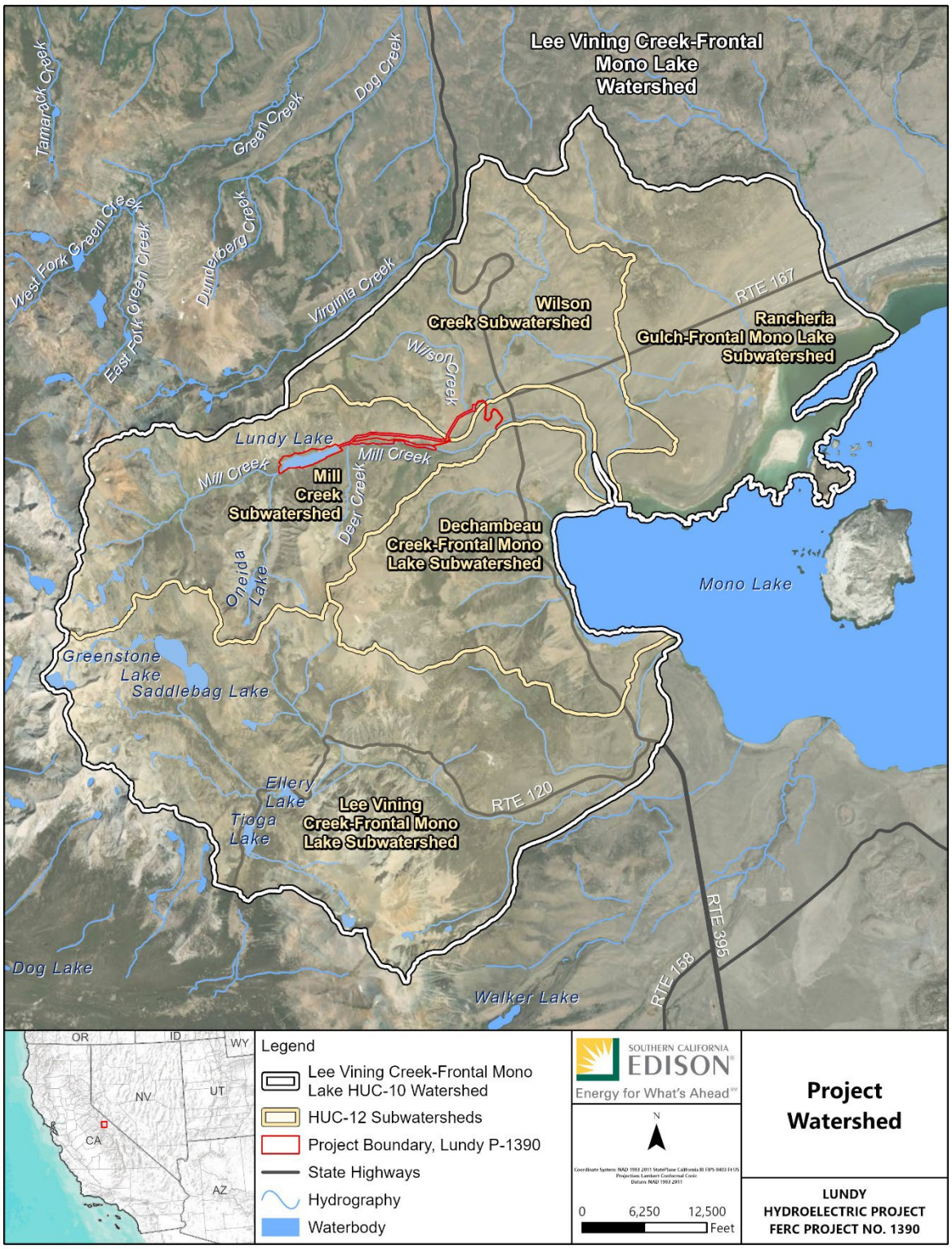


Figure 8.1-1. Lee Vining Creek-Frontal Mono Lake (HUC 1809010104) Watershed.

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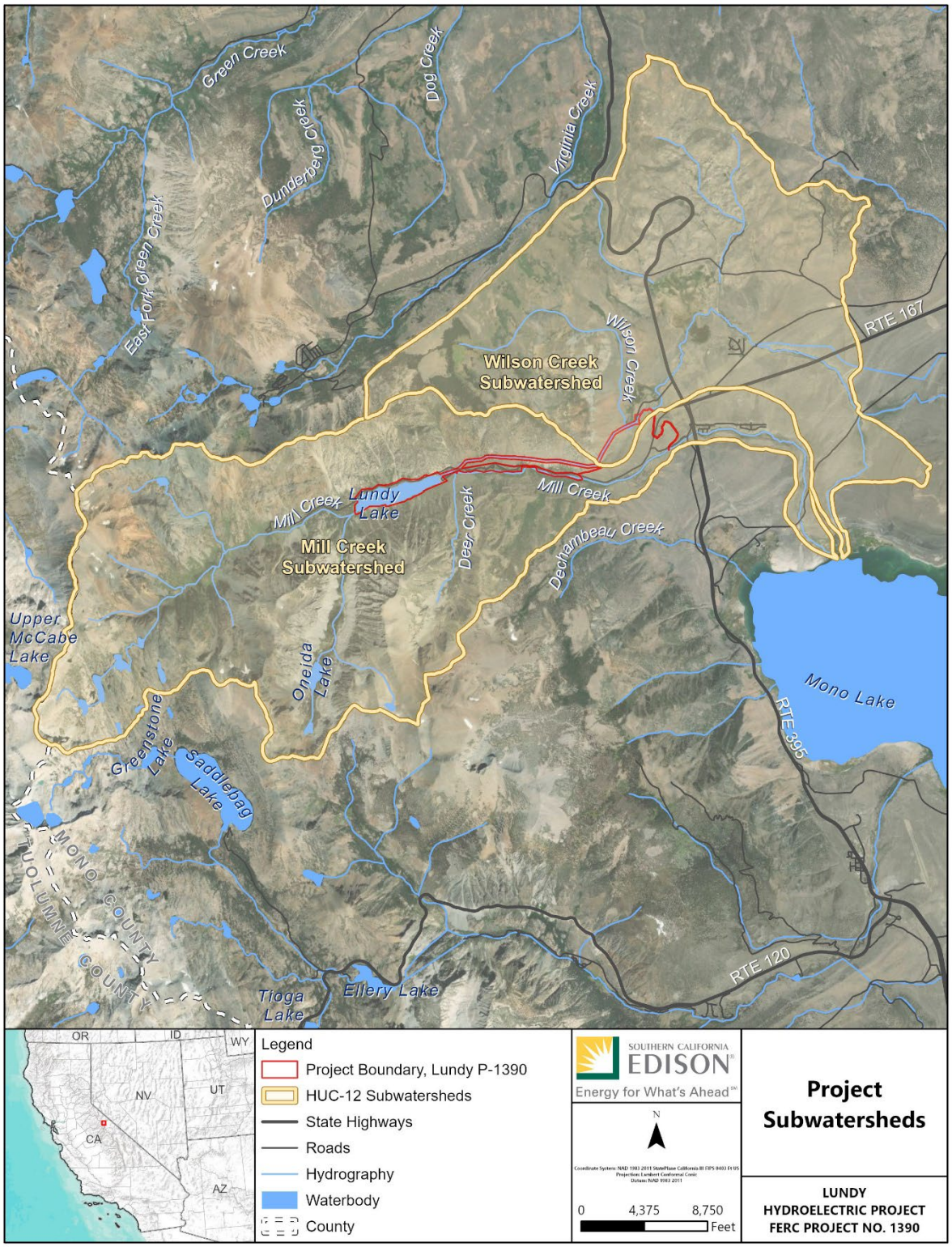


Figure 8.1-2. Mill Creek Subwatershed (HUC 180901010402) and Wilson Creek Subwatershed (HUC 180901010403).

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Mill Creek is within the Mono Lake subbasin and flows into Mono Lake. The Mono Lake watershed has a total drainage area of approximately 750 square miles (LADWP, 1987). Roughly half of the Mono Lake watershed is hills and mountains (365 square miles), and the other half is valley fill areas and Mono Lake itself (385 square miles) (LADWP, 1987). Elevations in the watershed range from 6,400 feet above mean sea level (amsl) to over 13,000 feet amsl (LADWP, 1987).

The surface of Mono Lake is approximately 70 square miles (MLC, 2026). During the Pleistocene (Ice Age), Mono Lake was more than 315 square miles (LADWP, 1987). Fifty percent of the Mono Basin is covered by a complex of sagebrush, bitterbrush, and rabbitbrush; stream channel riparian vegetation includes Jeffery pines (*Pinus jeffreyi*), black cottonwoods (*Populus trichocarpa*), and willows (*Salix* spp.) (USFS, 2001).

MLC described the watershed as:

Embracing 14 different ecological zones, over 1,000 plant species, and roughly 400 recorded vertebrate species within its watershed, Mono Lake and its surrounding basin encompass one of California's richest natural areas (MLC, 2026).

8.1.3. Mill Creek

The Lundy Project (Figure 8.1-3) includes Lundy Dam at River Mile (RM) 7.0 that impounds the natural Lundy Lake and manages releases into Mill Creek downstream. Mill Creek above Lundy Lake flows roughly 3 miles from its source to where it drains into the lake. Water diverted from Mill Creek at the dam is transported through a 12,000-foot-long pipeline and a 3,000-foot-long penstock to the Lundy Project powerhouse. The Lundy Powerhouse receives flow of up to approximately 70 cubic feet per second (cfs). Water discharged from the powerhouse tailrace may serve water rights on the existing, constructed ditch, referred to as the Wilson System or the Upper Conway System. Tailrace water can also be put back in Mill Creek (at roughly RM 4.0) through the Mill Creek Return Ditch (MCRD). Flows from the powerhouse are directed to either the Wilson System or Mill Creek as necessary to satisfy senior water rights.

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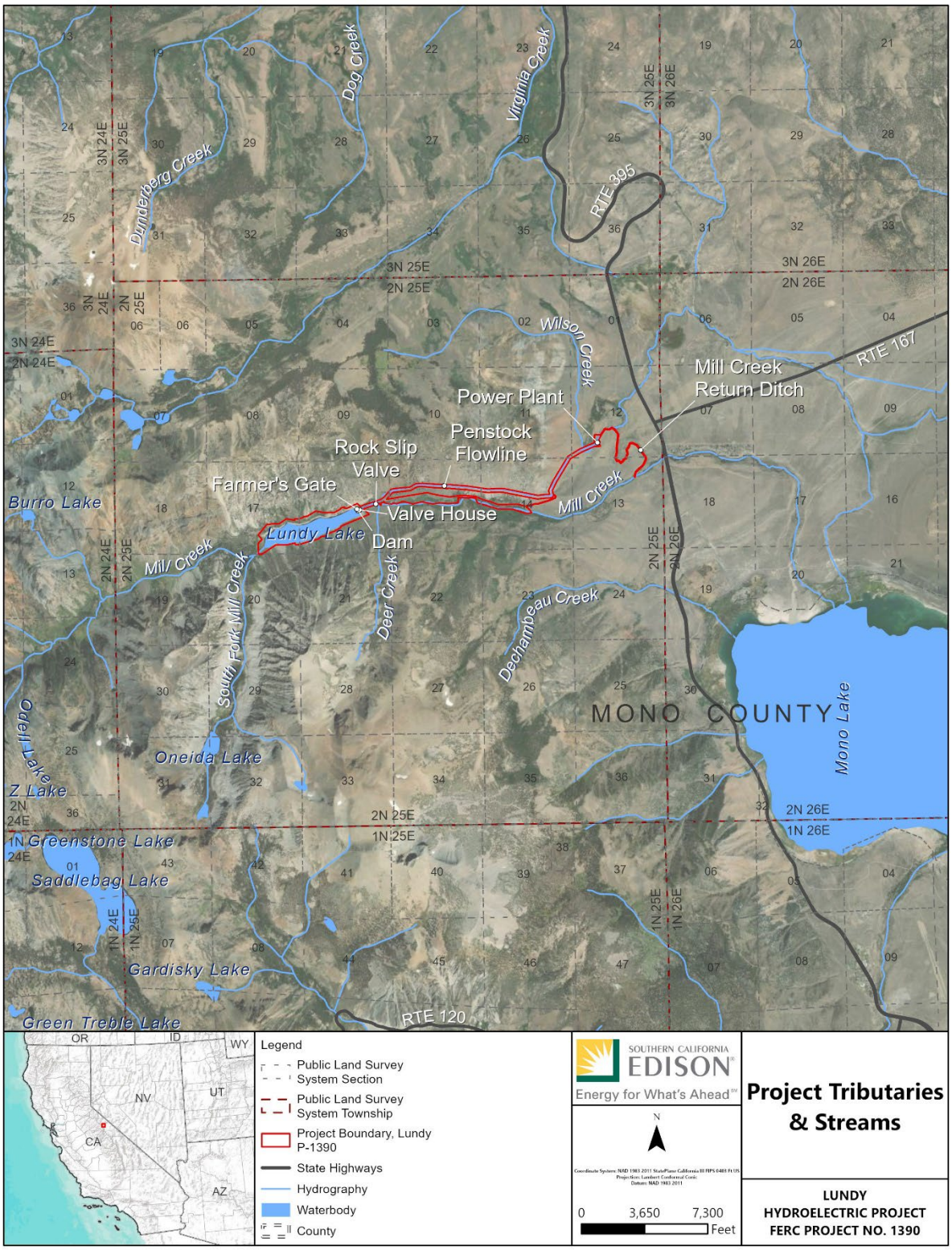


Figure 8.1-3. Lundy Project Tributaries and Streams.

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8.1.4. Non-Project Dams and Diversions

There are no impoundments on Mill Creek upstream of the Lundy Project. Downstream of the dam on Mill Creek, some irrigation diversions are unused except when needed to move water to the Wilson System when the powerhouse is offline. LADWP has typically requested that SCE maintain its water in Mill Creek.

8.1.5. Major Land Uses in the Project Vicinity

The Lundy Project is located partly within the Inyo National Forest and partly on private lands. Land along much of the creek is managed by USFS. The nearest community is the rural town of Mono City, approximately 5 miles east of the Lundy Project. Small parcels of land under the management of BLM are found along the penstock, and there is also a small parcel of land owned by Mono County.

Other than Mono City, the surrounding area has almost no development. Based on Multi-resolution Land Characteristics (MRLC) Consortium's 2025 National Land Cover Database (NLCD), the predominant land cover types in the Lee Vining Creek-Frontal Mono Lake subwatershed are shrub/scrub, deciduous forest, and evergreen forest (USGS, 2024) (see Figure 8.11-2 and Table 8.11-2 in Section 8.11 *Land Use and Aesthetic Resources*).

Under the Inyo National Forest LMP, USFS manages the forest for a variety of land uses, including recreation, wilderness use, maintenance and improvement of habitat, rangeland, timber production, and the exploration and development of mineral resources, particularly energy resources (USFS, 2019). Land use in the immediate area otherwise consists of recreational uses such as hiking, camping, fishing, and sightseeing. Mono Lake is a popular destination for sightseeing and on-water recreation. The lake is a popular recreation destination due to the lake's unique history, geology, and salinity.

The LMP identifies the Lundy Project Area as being included in the plan's Conservation Watershed management area, specifically under the Mono Lake Headwaters designation. Conservation Watershed management areas are a network of watersheds that: (1) have been determined by USFS to have a functioning or functioning-at-risk rating based on the Watershed Condition Framework; (2) provide for connectivity of Species of Conservation Concern (SCC); and (3) provide high-quality water for beneficial uses downstream. The management emphasis for Conservation Watershed management areas is to maintain or improve, where possible, the functional rating of these systems for the long-term and to provide for the persistence of SCC by maintaining connectivity and refugia for these species.

Mono County, BLM, and USFS manage some lands outside the Project Boundary that are supported by the Wilson System, principally the former Conway and DeChambeau ranches. Mono County and BLM own the former Conway Ranch lands, with the exception of a private residential development and the associated Mill Creek water rights. USFS

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owns the former DeChambeau Ranch lands and their associated water rights and manages these and adjacent lands for waterfowl habitat and irrigation (FERC, 2007).

A more detailed discussion of land use can be found in Section 8.11 *Land Use and Aesthetic Resources*.

8.1.6. Major Water Uses in the Project Vicinity

Within the Mono Lake watershed, water is used for irrigation, power generation, and recreation activities, including fishing. The primary uses of Mill Creek water include irrigation of pastureland for livestock and power generation. The Wilson System has historically been used for ephemeral drainage (USFS, 2001). Several ditches leading from the Wilson System enable Mono County, BLM, and USFS to divert water from the system for their uses, as mentioned above (FERC, 2007).

Water and recreation resources are further discussed in Section 8.4, *Water Quality Resources,* and Section 8.10, *Recreation Resources*.

8.1.7. Climate

On average, the Mono Lake watershed has received 30 to 40 inches of annual precipitation, mainly through snow (USFS, 2001). There are arctic-like winters in the high mountains and dry, warm summer conditions in the Mono Basin (LADWP, 1987), with temperatures ranging from -10 degrees Fahrenheit (°F) (-23 degrees Celsius [°C]) and 90°F (32°C), respectively (USFS, 2001).

Based on climate data from 2007 through 2019, the nearby town of Lee Vining has an average annual high temperature of 62°F (16°C) and an average annual low temperature of 36°F (2°C), and it receives an average of 15.1 inches of precipitation annually (U.S. Climate Data, 2026).

8.1.8. References

FERC (Federal Energy Regulatory Commission). 2007. Order Amending License and Dismissing Requests for Rehearing. Accession Number: 20071115-3019. November 15, 2007.

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

MLC (Mono Lake Committee). 2026. “About Mono Lake.” Accessed: May 2026. Available online: https://www.monolake.org/about/

U.S. Climate Data (United States Climate Data). 2026. Weather History Lee Vining, California. Accessed: May 2026. Available online: https://www.usclimatedata.com/climate/lee-vining/california/united-states/usca0601.

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USFS (United States Forest Service). 2001. *North Mono Basin Watershed/Landscape Analysis*.

_____. 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: May 2026. Available online: https://www.fs.usda.gov/sites/nfs/files/legacy-media/inyo/Inyo%20NF%20Land%20Management%20Plan%20Oct%202019.pdf .

USGS (U.S. Geological Survey). 2024. *Annual NCLD Collection 1.2 Land Cover for the Conterminous United States (1985-2025).* Multi-Resolution Land Characteristics Consortium (MLRC). Accessed: August 2026. Available online: https://www.mrlc.gov/data.

8.2. GEOLOGY AND SOILS

8.2.1. AFFECTED ENVIRONMENT

8.2.1.1. Mineral Resources

The California Department of Conservation's Division of Mine Reclamation compiles data on the mines and the commodities produced (including current statuses), while the California Geological Survey (CGS) produces Mineral Land Classification studies. No Mineral Land Classification studies have been completed for the vicinity of the Lundy Project (CGS, 2015).

The primary mineral resources in Mono County include gold, silver, lead, copper, and tungsten. Mono County has 12,400 mining claims and 331 records of mines. In the vicinity of the Lundy Project, there are approximately 40 claims, including gold, tungsten, and copper (The Diggings, 2026). In 1879, the May Lundy Mine was established upstream of Lundy Lake, along South Fork Mill Creek. This mine was mainly active from 1879–1915, with periodic activity in the 1930s and 1970s (USGS, 2008).

The most recent mining records in Mono County date from the 1960s and include calcium, gemstones, precious metals, and tungsten (CGS, 2022). The USGS Mineral Resources Data System does not provide detailed current status information for these historical mines (USGS, 2018). No active mineral extraction is known to occur within the Project Boundary or in areas influenced by Project operations. Based on available datasets and mapping sources, there is no evidence of ongoing mineral resource development in the Project vicinity nor do Project facilities affect access to or development of mineral resources.

8.2.1.2. Soils

Soils in the Project vicinity are generally thin and commonly overlie steep bedrock or colluvial slopes. Soil development at these high elevations has been limited by recent

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glaciation (Vorster, 1985). Soils in the Project vicinity can generally be classified into two categories based on source material:

- Soils derived from weathered granitic material tend to be coarse-grained, shallow to moderately deep, excessively to well-drained, and located in areas of steep slopes.
- Soils formed in alluvium from erosion of sedimentary and metasedimentary rocks are fine-grained, very deep, well-drained, and located on alluvial fans and terraces with gentle slopes.

The most common soil units in the Project vicinity are summarized in Table 8.2-1 and shown in Figure 8.2-1 using United States Department of Agriculture–Natural Resources Conservation Service (USDA-NRCS) Soil Survey mapping units (USDA-NRCS, 2026). The area is naturally susceptible to erosion, soil creep, and mass wasting due to a combination of steep slopes and shallow, coarse-grained soils. These processes are driven primarily by slope, geology, and climate rather than by Project operations.

Table 8.2-1. Overview of Soils in the Vicinity of the Lundy Project

Soil Complex/ Association	General Characteristics	Location
Rock Outcrop Rubble Land Complex	Comprises 60% rock outcrop and 20% rubble land and is classified as unweathered bedrock with widespread boulders.	This unit occurs on the north- and south-facing canyon walls along the perimeter of Lundy Lake.
Stecum Guiser Families Rock Outcrop Complex	Comprises 40% Stecum family, 20% Guiser family, 15% granitic rock outcrop, and 25% minor components. This unit is somewhat excessively drained and composed of very cobbly, loamy sand and weathered bedrock.	This unit occurs along the southern hillslope bounding Mill Creek, downstream of Lundy Lake.
Rock Outcrop Typic Cryothents Complex	Comprises 70% rock outcrop, 25% lithic cryothents and similar soils, and 5% minor components. This unit is characterized by unweathered bedrock, colluvium derived from granitic rock and/or till.	This unit occurs along the northern hillslope bounding Mill Creek, downstream of Lundy Lake.

Source: USDA-NRCS, 2026

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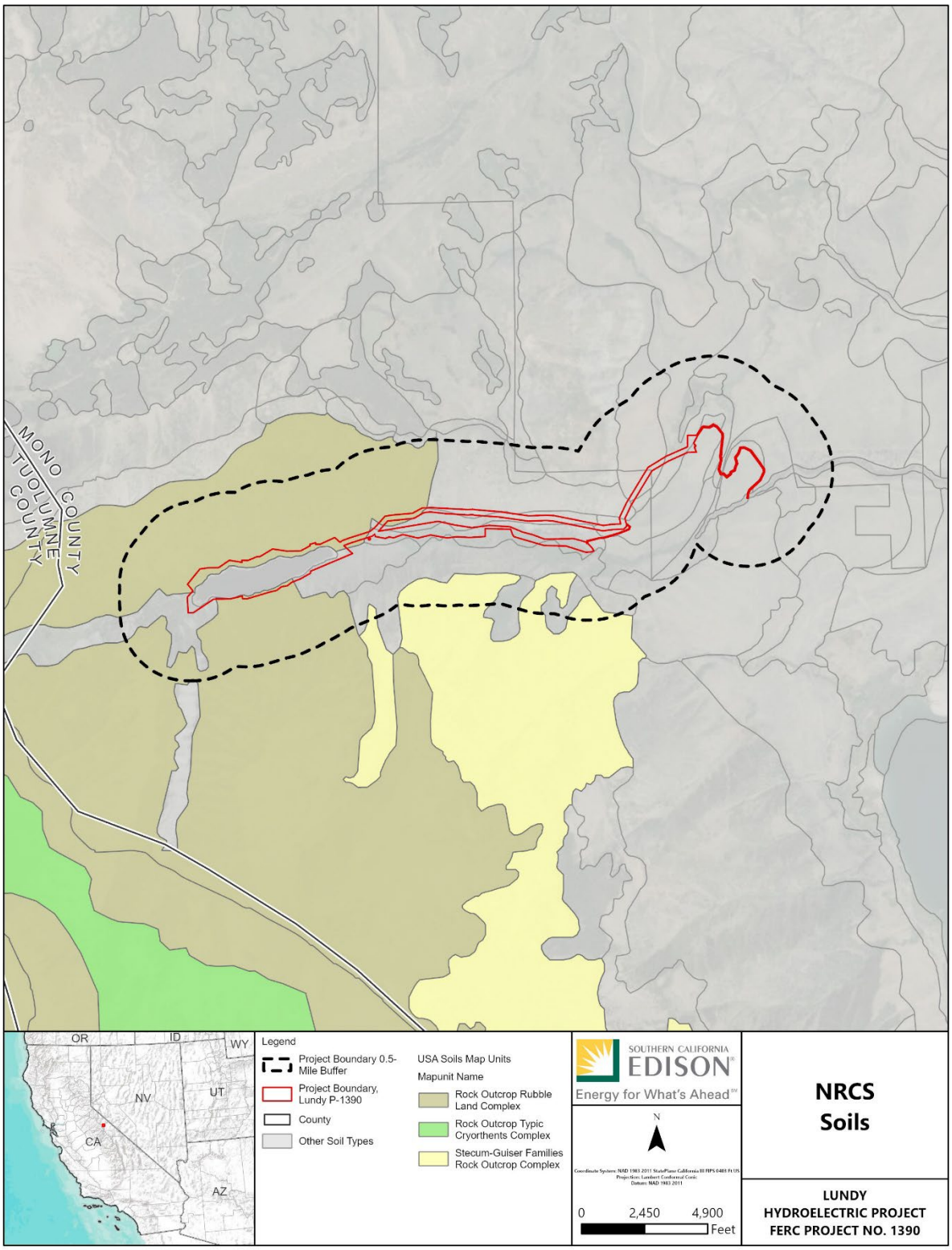


Figure 8.2-1. USDA-NRCS Soil Classifications in Lundy Project Vicinity.

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8.2.1.3. Glacial Features

Most sedimentary rocks in Mono Basin are Quaternary (LADWP, 1987). During the Last Glacial Maximum (21,000 to 18,000 years ago), the Sierra Nevada in California was covered by a 20,000-square-kilometer (7,722-square-mile) glacier or ice cap complex (Phillips, 2017). The Quaternary glacial record on the eastern side of the Sierra Nevada range cited by Wahrhaftig et al. (2019) is provided in Table 8.2-2.

Table 8.2-2. Glacial History of the Sierra Nevada

Glaciation	Age Range (ka)
McGee	2,600–1,500
Sherwin	900–790
Mono Basin	160–60
Tahoe	145–130
Tioga	27–15
Recess Peak	14–12.5
Matthes (Little Ice Age)	0.6–0.15

Source: Wahrhaftig et al., 2019

ka = thousand years ago

Additionally, there is evidence of several other (unnamed) advances and retreats on the eastern side of the Sierra Nevada range (Gillespie and Clark, 2011). The melting of these glaciations resulted in the accumulation of glacial debris that formed moraines (i.e., the mass of rocks and sediment deposited from a glacier), ridges, and coarse-grained alluvial deposits of glacial till that covered a broad piedmont slope at the base of the Sierra Nevada. Additionally, these glaciations sculpted depressions that are now the high alpine lakes of the Sierra Nevada. Soil creep, aeolian transport, rockfalls, debris flows, and slides continued to shape the slopes of the moraines. The Mono Basin moraines are typically covered with grus[8] (Bursik, 1991).

During the early to middle Pleistocene, glacial Lake Russell (the Pleistocene antecedent to Mono Lake) was much larger than present-day Mono Lake. Shoreline deposits and paleochannels suggest the lake was between 7,230 and 7,480 feet amsl during this period (Reheis et al., 2002). This is approximately 830–1,080 feet higher than the 1950 Mono Lake level. Lake Russell periodically spilled into the Owens Valley and the East Walker River when the lake was at its highest water surface elevations (Reheis et al., 2002).

Within the Project vicinity, Tahoe-age till occurs along Mill Creek from downstream of Lundy Lake to approximately 0.5 mile east of Highway 395 (Huber et al., 1989). This till was deposited by glaciers within the Mill Creek watershed, with erosion continuing

[8] Grus is angular and coarse-grained fragments of crystalline rock.

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upstream of the glacial deposits. The deposit forms sharp, slightly eroded lateral moraines with free-standing crests and includes granitic, volcanic, and metamorphic rocks (Chesterman and Gray, 1975). Tioga glaciations were also mapped within Lundy Canyon (e.g., Wahrhaftig et al., 2019), but they were less extensive than the Tahoe glaciations.

Post-glacial faulting is observed at the mouth of Lundy Canyon through displaced moraines. Additionally, fissures near the top of Black Point and the scarps and folds in uplifted lake sediments on Paoha Island provide further evidence of post-glacial faulting (Putnam, 1949, as cited in LADWP, 1987). The Mono Lake Fault extends about 14 miles from Mono Craters to Conway Summit and passes through the vicinity of the Lundy Project. This normal fault has been active in the Holocene (Sawyer and Bryant, 2002) and crosses Mill Creek approximately 2 miles east (i.e., downstream) of Lundy Lake. Additional faults and thrusts near the Lundy Project include the following:

- Quaternary Silver Lake Fault (also known as the Park Lake Fault) is 12.7 miles long, a high-angle normal fault comprised of two sub-parallel fault traces along the prominent eastern front of the central Sierra Nevada, approximately 2 miles southwest of Lundy Lake (Sawyer and Bryant, 2002).

- Tinemaha Fault (also known as the Birch Creek Fault) is part of the Southern Sierra Nevada fault zone, a zone of high-angle normal faults that bound the eastern front of the southern Sierra Nevada (Sawyer, 1995). This fault crosses the eastern side of Mono Lake, approximately 15 miles east of Lundy Lake.

8.2.1.4. Reservoir Shoreline and Streambank Conditions

The shoreline of Lundy Lake is rocky, consisting of weathered bedrock, glacial till, and talus (FERC, 1992). The banks of Mill Creek, from downstream of Lundy Lake to approximately 1 mile upstream of Highway 395, are composed of glacial till. Downstream of the till deposits, Mill Creek flows through Quaternary lacustrine sediments and alluvium until flowing into Mono Lake. (see Section 8.2.1.6 for details about these deposits).

8.2.1.5. Erosion and Sedimentation

A wooden stave penstock rupture in 1962 caused extensive erosion in the glacial till upstream of the Lundy Powerhouse (FERC, 1992). After the rupture, the wooden stave was replaced with a steel pipe, and Penstock Monitoring and Erosion Control plans were created and implemented to address potential penstock failure and gullying (SCE, 1999a). The Penstock Monitoring Plan requires inspection of the penstock pipe once per quarter or following any unexpected surges, flow events, or seismic events throughout the duration of the license. No significant erosion associated with Project operations has been documented since the penstock replacement in the early 1960s. Erosion along the penstock access road is visible through satellite imagery, but the degree to which this sediment reaches Mill Creek is unknown.

The removal of grazing livestock (USFS, 2001) and subsequent recruitment of riparian vegetation has reduced bank erosion and channel migration in Mill Creek between Lundy Lake and Highway 395. No bank erosion has been identified in Mill Creek between Lundy

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Lake and the Thompson Main Ditch (USFS, 2001). No erosion or areas of instability have been identified around Lundy Lake (FERC, 1992).

8.2.1.6. Fluvial Geomorphology

The fluvial geomorphology of Mill Creek is a function of sediment supply and flows from upstream and the history of lake level fluctuations, tectonics, and flow diversions. Upstream of Lundy Lake, Mill Creek flows about 6 miles through a steep, bedrock channel through glaciated granitic rocks and metasediments before discharging into Lundy Lake. Lundy Lake was originally a natural lake, and the construction of Lundy Dam in 1911 increased storage capacity and allowed the regulation of lake levels and outflows (FERC, 1992).

SEDIMENT SUPPLY

Lundy Dam is co-located at the site of a natural lake (created by a recessional moraine), resulting in the lake serving as a natural sediment trap for larger sized sediments (i.e., sand and coarser material). Therefore, tributaries that enter Mill Creek downstream of Lundy Lake serve as Mill Creek's primary sediment sources. Deer Creek, Mill Creek's largest tributary and most substantial sediment source (Stine, 1995), is comprised of an alluvial fan that terminates at Lundy Lake on its western edge and into Mill Creek downstream of the lake at its eastern extent. The historical dynamics of Deer Creek likely included periods when Deer Creek discharged into the lake interspersed with periods where Deer Creek discharged downstream of the lake into Mill Creek. Historical shifts in Deer Creek's connection to Lundy Lake and Mill Creek likely produced variable sediment supply to Mill Creek before dam construction, causing the channel to adjust over time to changing sediment loads. However, the magnitude and nature of those adjustments are unknown. Sediment transport studies conducted in the early 1990s calculated transport thresholds for Mill Creek from upstream of the MCRD (at a point historically called Upper Thompson Ditch) to Mono Lake (CDFG, 1996). CDFG (1996) found that the critical discharge for sediment transport of the median bed particle size ranged from 4.8 to 14.5 cfs at two cross sections between Lundy Dam and the MCRD (bypass reach).

At the USGS gage below Lundy Lake (Gage No. 10287069), a daily average flow of 14.5 cfs occurred about 4 days per year from water years 1989–2023 and has a peak flow recurrence interval of approximately 1.5 years. The gage data do not include flow contributions from Deer Creek. The frequency of flows capable of transporting the median particle size is similar to what would be expected in a natural system (Dunne and Leopold, 1978). Repeated measurements of bed sediment along Mill Creek (halfway between Lundy Dam and Highway 395) showed that sand and gravel were flushed downstream between 2015 and 2020, presumably during the 2017 wet water year (Read, 2021). These transport calculations and recent observations suggest the channel bed in the bypass reach is frequently mobile at relatively common flows under current conditions.

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CHANNEL MORPHOLOGY

To evaluate channel morphology and riparian habitat, Stine (1995) divided Mill Creek into three reaches: (1) the Bedrock Reach, which extends through Lundy Lake and downstream to the 7,200 feet amsl contour (near the eastern boundary of Inyo National Forest); (2) the Pleistocene Delta Reach, which extends downstream for 2.2 miles to near Mono City and is underlain by gravels and palustrine silts; and (3) the Holocene Delta Reach, which extends the remaining 2.45 miles downstream where it flows into Mono Lake, which is underlain by gravels and cobbles (Figure 8.2-2). The California Department of Fish and Game (CDFG, 1996) subsequently divided the Holocene Delta Reach into two sub-reaches, one upstream and one downstream of Cemetery Road. However, the underlying geology and hydrology of the sub-reaches in the Holocene Delta are similar.



Figure 8.2-2. Longitudinal Profile of Mill Creek below Lundy Dam – Derived from 2020 LiDAR.

The Bedrock Reach has a width of approximately 15 feet with a bed of boulders, cobbles, and extensive large wood (CDFG, 1996). The boulders are derived from the moraines and are likely not mobile (CDFG, 1996). CDFG (1996) noted that there was no evidence of lateral migration, but there was evidence of local bank erosion. The channel in this reach is densely vegetated, causing frequent log jams. More recent surveys conducted in a 300-foot length of Mill Creek about halfway between Lundy Dam and Highway 395 by Read (2021) noted that the channel slope was about 4 percent, wood and boulders were frequent, and channel bed material was a mix of gravel, cobbles, and boulders with some sand. Bankfull widths were not reported in this reach.

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The Pleistocene Delta Reach includes the confluence with the MCRD (located about 4,700 feet downstream of the Bedrock Reach), the Highway 395 crossing, and flows along the edge of Mono City. Downstream of the MCRD, Mill Creek has a slope of approximately 5 percent (CDFG, 1996). The bed in this reach is very coarse with boulders, cobbles, and some interstitial gravels. The width-to-depth ratio in this reach ranges from 5–7 (CDFG, 1996), which is typical of steep channels but below the threshold of 8–10 where alternate bar development typically begins (Parker, 1976). The bed is mainly composed of cobbles, with a median channel bed particle size (D50) of 75 millimeters and the 84th percentile particle size (D84) of 162 millimeters (CDFG, 1996).

The sub-reach of the Holocene Delta Reach upstream of Cemetery Road formerly supported multiple channel threads and has generally been simplified to a single channel as the channel incised and locally derived sediment blocked the secondary channels (Stine, 1995). The channel has incised into lake and alluvial deposits throughout the reach, and the active channel floor is much wider than upstream reaches. The channel is braided in places, with most sediment sourced from the terraces that bound the channel (CDFG, 1996). The slope in this reach declines to 2 percent (CDFG, 1996). The width-to-depth ratio between Mono City and Cemetery Road ranged from 13–32 (CDFG, 1996); the D50 of the channel bed ranged from 57–60 millimeters (coarse gravel), and the D84 ranged from 101–131 millimeters (cobble) (CDFG, 1996).

Flow paths in the sub-reach of the Holocene Delta Reach downstream of Cemetery Road are controlled by the Cemetery Road culvert, which limits channel migration and avulsion. The Cemetery Road culvert failed during the winter runoff of 1983, causing the road to wash out and eroding a second channel, which was subsequently isolated when the culvert was replaced (USFS, 2001). The width-to-depth ratio for the active channels in the reach downstream of Cemetery Road was 17–18 (CDFG, 1996). D50 was 36 millimeters (gravel) and D84 was 64 millimeters (gravel/cobble) (CDFG, 1996). The Holocene Delta downstream of Cemetery Road has also been simplified, with the western branch of the channel only reconnecting during high flows.

The downstream-most section of Mill Creek is affected by varying lake levels of Mono Lake. Over the past 3,800 years, the lake level fluctuated between 6,499 and 6,268 feet amsl, with lake level changes associated with varying climatic conditions (Stine, 1990). Starting in the 1940s, declining Mono Lake levels occurred due to water diversions from the lake's tributaries (Stine, 1995). The minimum twentieth-century lake elevation was 6,372 feet amsl in 1982, approximately 45 feet below the 1940s' elevation (Stine, 1995). Subsequently, Mono Lake's surface elevation has stabilized at higher water elevations. Monthly lake level data from January 1995 to May 2026 fluctuated between 6,374.5 feet and 6,385.1 feet amsl (MLC, 2026).

Recent geomorphic characterization completed for the AQ-2 Fish Stranding Study (AQ-2 draft report, DLA Volume III) provides a more spatially resolved description of Mill Creek downstream of Lundy Dam and is generally consistent with the broader geomorphic patterns described in the earlier surveys by CDFG (1996), Stine (1995), and USFS (2001). AQ-2 subdivided the approximately 8-mile-long study area into nine geomorphic reaches based on channel gradient, valley confinement, dominant geomorphic controls,

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and channel complexity. The four upstream reaches below Lundy Dam correspond generally with the previously described Bedrock Reach, where channel morphology is characterized by moderate to steep gradients, coarse bed material, boulders, large wood, limited lateral migration, and localized bank erosion. The newer survey further distinguishes this upstream area into reaches influenced by Project infrastructure, variable confinement, debris-flow or moraine-derived sediment, and a broad beaver-influenced valley-bottom complex. This beaver complex, identified as a low-gradient, multi-threaded area with active and relict beaver dams, ponds, runways, and complex flow paths, represents an important refinement to the earlier geomorphic descriptions by identifying a discrete area of enhanced valley-bottom and channel complexity. Downstream of the beaver complex, the AQ-2 study reaches generally align with the older description of Mill Creek as transitioning through confined, coarse-bedded, glacially influenced terrain near the Pleistocene Delta Reach, including reaches affected by a recessional moraine, the return ditch, Highway 395, and incision into glacial outwash deposits. Farther downstream, AQ-2 identifies a lower-gradient, less-confined, multi-threaded reach upstream of Cemetery Road, consistent with prior observations that the Holocene Delta Reach has a wider active channel floor, locally braided or multi-threaded morphology, lower slope, and sediment inputs from adjacent terraces. Overall, the more recent survey supports the earlier interpretation that Mill Creek's fluvial form varies longitudinally in response to valley confinement, glacial and alluvial landforms, sediment supply, infrastructure, and channel incision, while adding greater detail regarding reach-scale transitions, beaver-mediated complexity, and localized anthropogenic controls.

8.2.2. Environmental Effects

Under the Proposed Action, Project facilities and operations would continue as currently implemented, including reservoir management, flow regulation, water deliveries, and hydropower generation. This analysis addresses SD2[9] (FERC, 2024) geologic and soils resource issues, including: (1) effects of continued Project operation on shoreline erosion and sediment transport downstream in Mill Creek; (2) potential effects of sediment movement from or within Deer Creek to Project shorelines and streambanks along Mill Creek; and (3) effects of hillslope erosion downstream of Lundy Lake and Deer Creek. Each issue is addressed in a separate effects analysis subsection below.

8.2.2.1. Effects of Continued Project Operation on Shoreline Erosion and Sediment Transport Downstream in Mill Creek

No Action Alternative

Project operations have the potential to influence shoreline erosion and sediment transport downstream of Lundy Dam by altering the magnitude and timing of flows, trapping sediment within Lundy Lake, and causing limited ground disturbance associated with access road use and facility maintenance. However, Lundy Lake is a naturally occurring lake that predates Project development and has functioned as a sediment trap under both natural and regulated conditions. As a result, sediment retention within the

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reservoir represents a continuation of pre-Project conditions rather than a substantial change in sediment continuity. Downstream of Lundy Dam, sediment supply to Mill Creek is supplemented by Deer Creek, which enters below the dam and provides a continuing, unregulated sediment source, as well as by hillslope processes such as soil creep, localized bank erosion, and small-scale mass wasting.

Based on available information, there is no indication of measurable or persistent changes in erosion rates, sediment delivery, or downstream sediment transport conditions in Mill Creek due to Project O&M. The implementation of erosion control and monitoring measures and subsequent monitoring indicates that these features have stabilized and are not actively contributing sediment (SCE, 1999a, 1999b). Erosion associated with the 1962 penstock rupture was addressed through infrastructure replacement, limiting ongoing impacts. Although minor localized erosion may occur in disturbed areas, such as access roads or previously affected slopes, available information indicates that it does not meaningfully contribute sediment to Mill Creek or result in downstream shoreline erosion or sediment transport effects.

Field observations and monitoring data indicate that shoreline and streambank conditions in Mill Creek remain stable. No bank erosion has been identified in Mill Creek between Lundy Lake and the Thompson Main Ditch, and no erosion or areas of instability have been identified around Lundy Lake (FERC, 1992; USFS, 2001). Riparian vegetation downstream of Lundy Dam is well established and continues to supply large woody debris to the channel, which promotes sediment retention, maintains channel complexity, and limits localized erosion. Comparative observations between 1993 and 2020 (Read, 2021) indicated that riparian conditions and wood recruitment have remained generally consistent in the bedrock reach over time, with no evidence of substantial degradation attributable to Project operations.

Available measurements also indicate that observed shoreline, streambank, and sediment transport conditions are consistent with natural processes. Some localized changes, including sediment coarsening in upstream reaches, have been observed since 1993, but these changes have been attributed to natural variability rather than Project-related influences (Read, 2021). Across the identified reaches, sediment transport and localized erosion patterns are controlled primarily by valley confinement, glacial deposits, tributary sediment inputs, hillslope processes, and Mono Lake base-level conditions rather than by Project operations.

Although site-specific geomorphic datasets for Mill Creek are limited, the available information—including historical studies (CDFG, 1996; Stine, 1995), agency reports, and recent monitoring—provides a consistent weight of evidence indicating that channel processes remain within the expected range of natural variability. There is no indication of progressive channel instability, incision, or sediment imbalance attributable to Project O&M.

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Based on these considerations, Project operations under the No Action Alternative would not result in significant, ongoing, adverse effects on shoreline erosion and sediment transport downstream in Mill Creek.

PROPOSED ACTION

Under the Proposed Action, no changes to Project operations are proposed; therefore, flow regulation, sediment trapping, and geomorphic processes would remain the same as under the No Action Alternative. Proposed modifications are limited to administrative boundary adjustments and updated protection, mitigation, and enhancement (PME) measures would not affect geology, soils, or fluvial processes.

Accordingly, the effects of the Proposed Action on channel morphology, sediment transport, and geomorphic stability would be the same as those described under the No Action Alternative. No new or increased impacts are anticipated.

8.2.2.2. Potential Effects of Sediment Movement from or within Deer Creek to Project Shorelines and Streambanks along Mill Creek

NO ACTION ALTERNATIVE

Deer Creek enters Mill Creek downstream of Lundy Dam and provides an unregulated source of water and sediment to the Mill Creek channel. Sediment movement from or within Deer Creek has the potential to influence Project shorelines and streambanks along Mill Creek by contributing bed material, suspended sediment, and localized deposits that may affect channel stability, sediment storage, and bank conditions downstream of the confluence.

Under the No Action Alternative, existing Project operations would continue and no changes would be made to reservoir management, flow regulation, or water delivery practices. Because Deer Creek enters Mill Creek below Lundy Dam, sediment supplied by Deer Creek is not trapped by Lundy Lake and would continue to be routed through the downstream channel under existing hydrologic and geomorphic conditions. This sediment input partially offsets the natural and Project-related sediment retention that occurs within Lundy Lake and contributes to the downstream sediment regime of Mill Creek.

Available information does not indicate that sediment movement from or within Deer Creek has resulted in measurable or persistent adverse effects on Project shorelines or streambanks along Mill Creek. Downstream channel conditions are controlled by a combination of tributary sediment inputs, valley confinement, glacial deposits, hillslope processes, riparian vegetation, large wood, and infrastructure crossings. Within this setting, Deer Creek sediment represents one of several natural sediment sources rather than a Project-related disturbance.

Field observations and existing studies indicate that Mill Creek streambanks between Lundy Lake and the Thompson Main Ditch are stable, with no identified bank erosion in that reach and no documented erosion or instability around Lundy Lake (FERC, 1992;

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USFS, 2001). More recent geomorphic characterization also indicates that downstream channel form varies longitudinally in response to natural controls, including valley confinement, glacial and alluvial landforms, tributary sediment supply, beaver-mediated complexity, and channel incision, rather than a discrete adverse effect associated with Deer Creek sediment movement.

Based on these considerations, sediment movement from or within Deer Creek under the No Action Alternative is not expected to result in significant, ongoing, adverse effects on Project shorelines or streambanks along Mill Creek.

PROPOSED ACTION

Under the Proposed Action, no changes to Project operations are proposed that would alter Deer Creek sediment supply, routing, or transport processes. Existing reservoir operations and downstream flow regulation would continue, and proposed changes would be limited to administrative boundary adjustments and updated PME measures. These changes would not introduce new ground disturbance in Deer Creek or otherwise modify sediment delivery from Deer Creek to Mill Creek.

Accordingly, effects of the Proposed Action related to sediment movement from or within Deer Creek would be the same as those described under the No Action Alternative. No new or increased impacts on Project shorelines or streambanks along Mill Creek are anticipated.

8.2.2.3. Effects of Hillslope Erosion Downstream of Lundy Lake and Deer Creek

NO ACTION ALTERNATIVE

Hillslope erosion downstream of Lundy Lake and Deer Creek may occur through natural processes such as soil creep, rockfall, localized rilling, debris movement, and mass wasting. These processes are influenced by steep slopes, shallow and coarse-grained soils, glacial till, bedrock outcrops, freeze-thaw conditions, storm runoff, and vegetation cover. Project-related mechanisms that could influence hillslope erosion are limited primarily to ground disturbance associated with access road use, facility maintenance, and the continued presence of Project infrastructure.

Under the No Action Alternative, Project O&M would continue as currently implemented under the existing license. Historical erosion associated with the 1962 penstock rupture was addressed through replacement of the wooden stave penstock with steel pipe and the implementation of erosion control and penstock monitoring measures. Subsequent monitoring indicates that the affected gully channel is stable, with no evidence of active water flow, rill erosion on side slopes, or recent sediment transport to the fan site (SCE, 1999a, 1999b).

Although localized erosion is visible along the penstock access road and minor hillslope sediment movement may occur in disturbed or naturally unstable areas, available information does not indicate that these features meaningfully contribute sediment to Mill Creek or cause downstream geomorphic effects. No significant erosion associated with

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Project operations has been documented since the penstock replacement, and no areas of instability have been identified around Lundy Lake (FERC, 1992).

Existing hillslope erosion downstream of Lundy Lake and Deer Creek therefore appears to be driven primarily by natural terrain, soil, and geologic conditions rather than Project operations. The Project's existing monitoring and erosion control measures reduce the potential for Project-related hillslope disturbance to develop into a persistent sediment source, and these measures are expected to continue under the new license.

Based on these considerations, hillslope erosion downstream of Lundy Lake and Deer Creek under the No Action Alternative is not expected to result in significant, ongoing, adverse effects on geology and soils, Mill Creek sediment transport, or downstream channel stability.

PROPOSED ACTION

Under the Proposed Action, no operational changes are proposed that would increase hillslope disturbance or alter erosion processes downstream of Lundy Lake or Deer Creek. Proposed modifications are limited to administrative boundary adjustments and updated PME measures and would not introduce new erosion at the Project. SCE proposes to continue Project O&M practices that would reduce erosion, including penstock monitoring and erosion control measures, over the term of a new license.

Accordingly, effects of the Proposed Action related to hillslope erosion downstream of Lundy Lake and Deer Creek would be the same as those described for the No Action Alternative, and no new or increased impacts are anticipated.

8.2.2.4. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

SCE reviewed the applicable desired conditions in the Inyo National Forest LMP (USFS, 2019) to evaluate whether Project O&M is consistent with resource management objectives for geology, soils, and geomorphic processes. Relevant desired conditions outlined below include maintaining properly functioning watersheds, sustaining soil productivity, and keeping sediment regimes within the natural range of variation.

- WTR-FW-DC 03: Watersheds are fully functioning or trending toward fully functioning and resilient; recover from natural and human disturbances at a rate appropriate with the capability of the site; and have a high degree of hydrologic connectivity laterally across the floodplain and valley bottom and vertically between surface and subsurface flows. Physical (geomorphic, hydrologic) connectivity and associated surface processes (such as run-off, flooding, in-stream flow regime, erosion, and sedimentation) are maintained and restored. Watersheds provide important ecosystem services such as high-quality water, recharge of streams and shallow groundwater, and maintenance of riparian communities. Watersheds sustain long-term soil productivity.

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- WTR-FW-DC 06: The sediment regime within waterbodies is within the natural range of variation. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

Based on the analysis in Section 8.2.2.1., Project O&M is consistent with these objectives. Available information indicates that watershed processes in the Project vicinity remain functional and resilient, with no evidence that Project operations adversely affect hydrologic connectivity, sediment transport, or geomorphic stability. Channel conditions in Mill Creek are reflective of various controls, including watershed geology, glacial deposits, tributary inputs, and Mono Lake base level, and they do not exhibit trends indicative of Project-related disturbance.

Similarly, the sediment regime in Mill Creek likely remains within the natural range of variation based on available studies and monitoring. Sediment supply downstream of Lundy Dam is maintained by inputs from Deer Creek and hillslope processes, and there is no evidence of sediment deficit, excessive erosion, or channel instability attributable to Project operations. Observed channel characteristics, including substrate composition, channel form, and wood recruitment, are consistent with expected conditions for a high-gradient, glacially influenced Sierra Nevada stream system.

Finally, soil productivity and stability within the Project Boundary are maintained under existing O&M practices. Disturbances associated with Project facilities are limited in extent and are managed through existing monitoring and erosion control measures, and no ongoing or widespread soil impacts have been identified.

Accordingly, Project O&M is consistent with applicable Inyo National Forest LMP desired conditions related to watershed function, sediment regime, and soil productivity.

8.2.2.5. Proposed Protection, Mitigation, and Enhancement Measures

SCE proposes to continue the penstock monitoring and erosion control measures from the current license. In addition, SCE proposes the Project Road Management Plan described in Appendix E.4, DLA Volume II. General protection and avoidance measures are included in the Resources Management Plan Appendix E.1, DLA Volume II.

8.2.2.6. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Geology and Soils.

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8.3. WATER USE AND HYDROLOGY

The information presented in this section describes the water use and hydrological resources on and in the vicinity of the Lundy Project.

8.3.1. AFFECTED ENVIRONMENT

The Project is located on Mill Creek within the Mono Lake subbasin of the Eastern Sierra Nevada in Mono County, California. Mill Creek originates in high-elevation alpine terrain and flows eastward into Mono Lake. The Mono Lake watershed encompasses approximately 750 square miles, with elevations ranging from about 6,400 to over 13,000 feet amsl. Runoff is dominated by snowmelt, with most precipitation (approximately 30 to 40 inches annually) occurring as snowfall. The Project lies within the Mill Creek subwatershed (approximately 24.2 square miles), with adjacent contribution from the Wilson Creek subwatershed (SCE, 2024).

For purposes of this analysis, the geographic scope of water resources includes Lundy Lake, Mill Creek downstream to Mono Lake, the MCRD, and associated conveyance facilities (e.g., Wilson System). This geographic scope is consistent with FERC's SD2[10] definition of the Project Affected Area for water quantity and quality resources.

Hydrologic connectivity is maintained between Project facilities and downstream receiving waters, including Mono Lake, such that Project operations may influence hydrologic conditions and water availability throughout the full extent of Mill Creek and associated return flow pathways.

8.3.1.1. Project Hydrology and Facilities

The Project regulates flows in Mill Creek through Lundy Dam and Lundy Lake. Lundy Lake has a storage capacity of approximately 4,000 acre-feet and is operated seasonally,

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with drawdown in winter to create storage capacity for spring snowmelt runoff (SCE, 2024).

Water is diverted at Lundy Dam and conveyed approximately 12,000 feet via flowline and 3,500 feet via penstock to the powerhouse, with a hydraulic capacity of about 70 cfs.

Flows discharged from the powerhouse are routed to either the Wilson System (supporting irrigation and other downstream uses), or the MCRD, which returns flows to Mill Creek downstream (SCE, 2024).

8.3.1.2. Flow Regime and Runoff Patterns

Mill Creek flow is strongly seasonal, with peak flows during spring runoff and lower flows in late summer and winter. Mean annual flow is generally less than 30 cfs, though peak monthly flows can exceed 200 cfs during high snowmelt years. Downstream of the dam, flows are affected by the following:

- Project releases and diversions
- Tributary inflows (e.g., Deer Creek)
- Groundwater interactions
- Irrigation diversions and return flows

Controlled flow reductions (down-ramping) can result in localized changes in wetted perimeter and habitat availability, particularly in side-channels, low-gradient margins, and off-channel features. The magnitude of change in wetted habitat is generally greatest during reductions between approximately 110 and 30 cfs (AQ-2 draft report, DLA Volume III).

Lundy Lake was a naturally occurring body of water prior to the construction of Lundy Dam. Since construction of the Project, SCE has maintained flows in Mill Creek downstream of the Project to meet adjudicated water rights. SCE's operations rely on an Annual Operations Plan that utilizes the MCAPT and forecast methodology that has been developed with the water rights holders and memorialized in a Settlement Agreement (SCE et al., 2004) and Amended Settlement Agreement (SCE et al., 2022). The MCAPT integrates forecasted and observed runoff quantities with the water rights priorities to develop a schedule for Mill Creek water diversions and deliveries.

Under unregulated conditions, Mill Creek would function as a natural snowmelt-driven Sierra Nevada stream, with flows governed entirely by precipitation, seasonal snowpack accumulation, and tributary inputs such as Deer Creek. Flows would exhibit strong seasonal variability, characterized by high spring and early summer runoff peaks followed by declining flows into late summer and relatively low winter baseflows. The creek would flow continuously downstream from its headwaters to Mono Lake without storage, diversion, or operational control, maintaining natural timing, magnitude, and duration of flows as well as uninterrupted sediment transport and channel connectivity.

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Project operation alters the magnitude, timing, and duration of flows in Mill Creek relative to unregulated (natural) conditions by introducing storage, diversion, and controlled release mechanisms. Under natural conditions, Mill Creek would exhibit high spring snowmelt peaks, gradually declining flows through summer, and low winter baseflows. However, the Project reduces peak flow magnitudes by impounding runoff in Lundy Lake and routing a significant portion (up to about 70 cfs) through the hydropower system rather than the natural channel. At the same time, minimum instream flows (MIFs) downstream of the Project are constrained to relatively low, regulated levels (generally up to about 1.25 to 12 cfs), which alters both the magnitude and variability of flows in the bypassed reach (FERC, 2024).

8.3.1.3. Water Management and Operations

Project operation is governed by a combination of hydrologic conditions, reservoir operations, and adjudicated water rights. Lundy Lake is used to capture and regulate spring runoff, with releases timed to meet downstream demands and hydropower generation needs (SCE, 2024).

MIF releases are provided below Lundy Dam using controlled outlet structures:

- Approximately 1 cfs monthly average, subject to license requirements.
- Supplemental releases via valves and gates during higher flow periods.

MIF requirements from Article 404, as amended (FERC, 2007), and flow releases as described in Section 7 of the Amended Settlement Agreement (SCE et al., 2022) were evaluated as part of the Fish Stranding Study (AQ-2). The 2022 Amended Settlement Agreement governs high flow release requirements, and AQ-2 evaluated if there was a negative impact to fish as a result of down ramping. See section 8.5 *Fish and Aquatic Resources* for more information.

Project operations influence short-term water surface elevations and habitat connectivity during controlled flow releases. Travel times for controlled flow changes ranged from approximately 10 minutes near the dam to over 200 minutes in downstream reaches, with attenuation of peak flows observed (up to approximately 0.4-foot reduction in stage within the beaver pond complex). These results demonstrate that geomorphic features (e.g., beaver ponds, channel confinement) substantially mediate the hydrologic response to Project operations (AQ-2 draft report, DLA Volume III).

8.3.1.4. Water Rights and Use in the Project Area

SCE's operations must comply with adjudicated water rights (Table 8.3-1). Mill Creek water rights were adjudicated in 1914 and allocate up to approximately 74.6 cfs among multiple users, including LADWP, Mono County, BLM, USFS, and private users (SCE, 2024).

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Primary water uses in the Project Area include:

- Irrigation (pasturelands and managed lands associated with the Wilson System);
- Hydropower generation; and
- Recreation and environmental uses, including fisheries and riparian habitat support (SCE, 2024).

The Project operates a non-consumptive hydropower water right, passing flows through the system for generation before release downstream. SCE uses the MCAPT to communicate anticipated water changes to all water rights holders and settlement parties, and performance standards govern how the system (including the MCRD) will meet water right obligations along with the commitments of the Amended Settlement Agreement.

Table 8.3-1. Summary of Present-Day Mill Creek Adjudicated Water Rights

Priority Right	Right Holder[a]	Quantity of Right (cfs)[b]	Cumulative LADWP	Cumulative Conway (Mono Co.)	Cumulative Total
1st	LADWP	1	1	0	1
2nd	Mono Co.*	2	1	2	3
3rd	BLM*	2	1	2	5
4th	Mono Co.*	8	1	10	13
5th	LADWP	9.2	10.2	10	22.2
6th	Simis	1.8	10.2	10	24
7th	LADWP	14	24.2	10	38
8th	Mono Co.*	5	24.2	15	43
9th	USFS*	12.6	24.2	15	55.6
10th	LADWP	18	42.2	15	73.6
11th	Mono Co.*	1	42.2	16	74.6

Source: Adapted from North Mono Basin Watershed Analysis (USFS 2001)

Notes:
An asterisk (*) indicates exercise of Mill Creek rights in the Wilson System when called on.
The rights holders identified are the present-day successors in interest to the parties identified in the Mill Creek Adjudication.
[a] Rights holders are identified as follows: LADWP = City of Los Angeles, Department of Water and Power; BLM = United States Department of the Interior, Bureau of Land Management; Simis = J.O. Simis, private landowner; USFS = United States Forest Service.
[b] Quantity of right is measured in cubic feet per second (cfs).

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LUNDY DAM

When available for release, 74.6 cfs are accounted for daily to the water rights holders in order of priority. Inflows to Lundy Lake over 74.6 cfs may be stored in Lundy Lake for power generation, but not indefinitely. Under the terms of its 1933 sales agreement with LADWP, the reservoir is drawn down to 11 percent of its capacity annually by April 1. A 30-day maximum impedance of the daily inflow up to 74.6 cfs is utilized to ensure that record-keeping and inflow measurements are checked and calibrated. These calculations and subsequent operating rules are implemented via the aforementioned Annual Operations Plan and MCAPT tools. SCE provides water rights users with access to the MCAPT to facilitate delivery decisions or modifications to allocations.

LUNDY POWERHOUSE

Aside from water-rights-driven releases directly below the dam of 1 cfs, subsequent water rights are directed through the Lundy Powerhouse and tailrace. At the end of the tailrace, a “splitter box” directs water to either the Wilson System (extending generally north and northwest) or back to Mill Creek via the MCRD.[11] The powerhouse’s hydraulic capacity is sized to handle 70 cfs of the adjudicated 74.6 cfs water right; however, SCE does not utilize this full capacity except during wet water years. SCE limits power generation to the Wilson System allocation (how much water has been called for by water rights holders) plus a 25 cfs maximum release through the MCRD. This is because of perceived losses in water through the MCRD. Higher quantities up to the full capacity of the MCRD of 44 cfs may be allowed as necessary. The revised Streamflow Gaging Plan will help quantify the efficiency of this system relative to a performance specification of the MCRD, and future flows may be increased.

There are seven gages at the Lundy Project actively collecting data and owned by SCE. Four of the gages are published by USGS. USGS maintains a contract with SCE to review streamflow records at these gages to comply with the requirements of Article 404 (MIFs) and other FERC orders (e.g., FERC, 2007). SCE monitors and measures: (1) the minimum flow release to Mill Creek below Lundy Dam; (2) the total flow in Mill Creek below Lundy Dam; and (3) Lundy Lake elevations. The Amended Settlement Agreement (SCE et al., 2022) specifies that SCE will also measure and record the rate of water flow at the (4) Lundy Powerhouse tailrace; (5) Upper Conway Ditch; (6) splitter box release to the Wilson System; and (7) MCRD near the confluence with Mill Creek. The amended Streamflow Gaging Plan was approved by FERC on August 30, 2023. Another gage, (8) at the top of the MCRD below the splitter box, was added since the Streamflow Gaging Plan has been amended and will be added to the plan as part of the new license application. The eight gages at the Lundy Project are described in Table 8.3-2 and Figure 8.3-1.

[11] An additional conveyance of the Wilson System water rights is available through the Upper Conway Ditch. A radial gate at the upstream end of the tailrace diverts water when called for into this system.

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Table 8.3-2. SCE Gaging Stations

SCE Gage No.	USGS Gage No.	Location
362	10287060	Lundy Lake Level Monitoring Device
NA	NA	Mill Creek Below Lundy Dam Instream Flow Release
355	10287069	Mill Creek Below Lundy Lake Dam Stream Gaging Station
366	10287145	Upper Conway Ditch[a]
365	10287195	Lundy Powerhouse Tailrace[a]
NA	NA	Splitter box release to the Wilson System[b]
NA	NA	Top of Mill Creek Return Ditch (below Splitter Box)[c]
NA	NA	Mill Creek Return Ditch near the confluence with Mill Creek

NA = not applicable.
Notes:
[a] Flows are reported at two locations: within the tailrace below the powerhouse (flow to the splitter box) and in the Upper Conway ditch. The combined quantities at these two locations equal total Lundy Powerhouse flow.
[b:] Flow releases from the splitter box to the Wilson System are provided using a Langemann gate that is installed at the concrete control structure; the Langemann gate has the capability to measure and provide an accurate flow rate to downstream users, as required.
[c:] This gage has been added since the Streamflow Gaging Plan has been amended and will be added to the plan as part of the new license application.

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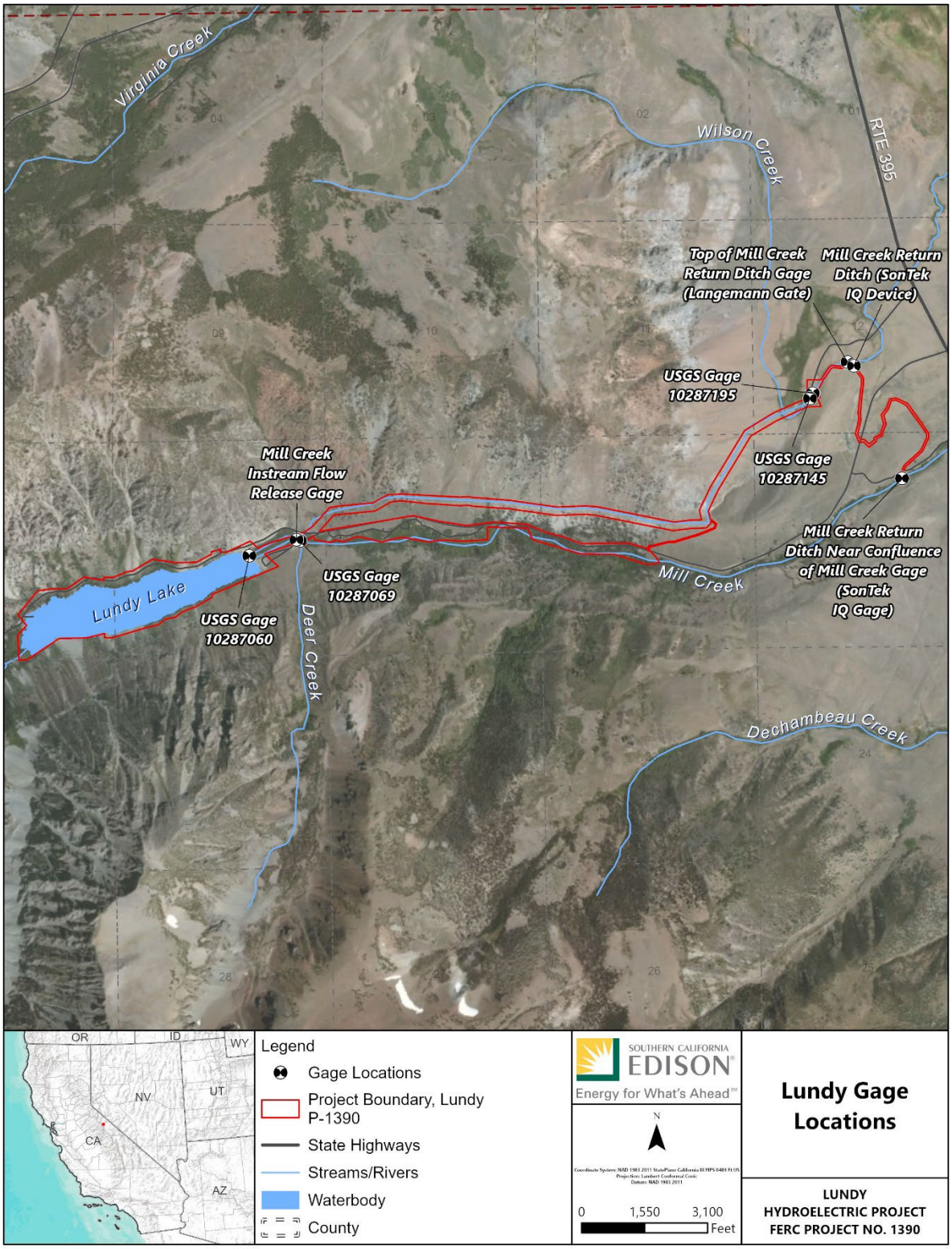


Figure 8.3-1. Lundy Lake Gage Locations.

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8.3.1.5. Water Use, Gages, and Hydrology

The Project gaging network provides the primary data source for evaluating compliance with FERC license requirements and for assessing hydrologic conditions relevant to SD2 resource issues, including downstream water availability and cumulative flow patterns. Any discrepancies between as-built gaging infrastructure and the currently approved FERC Gaging Plan will be evaluated and, if necessary, reconciled through updates to the Streamflow Gaging Plan to ensure consistency with FERC requirements and accurate accounting of Project flows.

LUNDY LAKE MONITORING DEVICE

Mill Creek originates on the eastern slopes of the Sierra Nevada and is free-flowing in an easterly direction. Mill Creek drains approximately 14 square miles of rugged mountains west of Mono Lake above the lake and has a mean annual flow of just under 30 cfs. Along Mill Creek, the Lundy Dam impounds Lundy Lake, the only reservoir on Mill Creek, which has a surface area of approximately 132 acres and a net storage capacity of 4,113 acre-feet.

There is an existing USGS-approved lake-level gage (USGS Gage No. 10287060) located on the crest of Lundy Dam at the south end of the spillway (see Figure 8.3-1). This gage monitors and records the level of water in Lundy Lake. The stage elevation reading is transmitted continuously but only updates every minute and is recorded once an hour and reported as daily midnight storage.

MILL CREEK BELOW LUNDY DAM INSTREAM FLOW RELEASE

FERC's Order Issuing the License, dated March 3, 1999, provided for a MIF of 4 cfs as measured at the Mill Creek Gage (USGS Gage No. 10287069), just upstream of Deer Creek (see Figure 8.3-1). This requirement was the subject of the original 2004 Settlement Agreement (SCE et al., 2004) with water rights holders, and a subsequent license amendment modified the flow to be consistent with the water rights. Since the 2007 Order Amending License and Dismissing Requests for Rehearing, SCE's minimum flow requirement is (a) 1.00 cfs on an average monthly basis, but not less than 0.75 cfs on an average daily basis.

Inflow to Lundy Lake is not directly measured at an upstream streamflow gage (see Figure 8.3-1). Rather, inflow is estimated through reservoir accounting methods that incorporate changes in reservoir storage (from the Lundy Lake level gage), measured Project releases and diversions, and operational water accounting maintained through the MCAPT and Annual Operations Plan. The Mill Creek Below Lundy Dam gage (USGS 10287069) measures downstream releases and is not a direct measure of reservoir inflow.

Additionally, SCE's minimum flow requirements below Lundy Dam were reduced to the extent that the seepage and accretion flow is greater than 3 cfs. If seepage and accretion

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flows are above 3 cfs, SCE must only release the water necessary to achieve a 4 cfs flow at the gage noted above.

The minimum flow release may be intentionally, temporarily modified, if required for safety reasons, by operating emergencies beyond the licensee's control, or upon agreement between the licensee, USFS, and the California Department of Fish and Wildlife (CDFW; CDFG at the time of the original Settlement Agreement), for short periods. If the flow is so modified or discontinued, the licensee shall notify FERC as soon as feasible but no later than 10 days after the licensee discovers each such intentional or unintentional incident.

Minimum Instream Releases

The MIF release from Lundy Dam is provided from the Lundy Project flowline immediately upstream from the sand trap (also known as the rock drop valve), approximately 1,000 feet downstream of the dam (see Figure 8.3-1). This location is equipped with an acoustic velocity meter (AVM), which measures and records the instream flow every 15 minutes. Measurements from the AVM help determine the flow release from the farmer's gate at Lundy Dam. Flow releases from the Lundy Project flowline through the 1) instream AVM release structure, 2) rock-drop valve; and 3) farmer's gate are measured at the flume gaging station. Fifteen-minute average flow measurements are recorded at the AVM and the flume and are used to monitor releases from the farmer's gate (when in use). The 15-minute data are used to compile data for USGS publication. The Mill Creek Below Lundy Dam Stream Gaging Station reports the official instream flow release from Lundy Dam.

Controlled Releases

In 2025, AQ-2and WQ-2 were conducted as part of the relicensing effort. Controlled releases from the farmer's gate are managed to meet the metrics of the 2022 Amended Settlement Agreement (SCE et al., 2022), and no changes are proposed as part of the new license.

AQ-2 was implemented to characterize the relationship between the flow-release guidance and downstream habitat conditions, including the potential for stranding fish because of Project operations. Goals of AQ-2 included compiling and summarizing hydrologic gage data, characterizing flow fluctuations from Project operations to evaluate the associated risk of fish stranding in Mill Creek, and assessing how operational changes in flow (i.e., controlled releases and down-ramping events) affect surface water elevation (see Section 8.5 *Fish and Aquatic Resources* for more information; AQ-2 draft report, DLA Volume III).

WQ-2 was implemented to collect water temperature data to characterize conditions in Lundy Lake and Project-affected stream reaches of Mill Creek. These data were also used to evaluate potential effects of the Project on water temperatures in Mill Creek and assess consistency with water temperature objectives included in the Basin Plan in the DLA (LRWQCB, 2019). Mill Creek has a designated beneficial use of Cold Freshwater

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Habitat (COLD) under the Basin Plan (LRWQCB, 2019), which requires that temperature must not adversely affect designated beneficial uses.

Water temperatures in Mill Creek followed expected seasonal patterns, with the coldest temperatures occurring in winter and the warmest in summer. The upstream site above Lundy Lake (UMC-1) consistently had the coolest temperatures, while downstream sites, particularly near Mono Lake (LMC-9), generally exhibited the warmest temperatures. The highest recorded water temperature in Mill Creek was 20.1°C at LMC-9 on September 3, 2025 (see WQ-2 draft report for more information; DLA Volume III).

During normal summer conditions, temperature differences among sites downstream of Lundy Lake were more pronounced. However, during the high-flow period associated with the Fish Stranding Study (July 22-28, 2025; approximately 50-150 cfs), it was observed that temperatures across downstream sites became more similar. The increased flows likely reduced warming and cooling differences between reaches by increasing water volume, travel rates, and mixing, resulting in a more uniform temperature regime.

Temperature monitoring is continuing beyond this reporting period through 2026 to further evaluate interannual variability, characterize temperature conditions under a broader range of hydrologic and operational conditions, and provide additional information to support assessment of Project effects on aquatic resources. This additional data collection will be integrated into the Final Technical Report and evaluated as part of the FLA.

Mill Creek Below Lundy Dam Stream Gaging Station

The existing USGS-approved Mill Creek Gage (USGS Gage No. 10287069) consists of a flume, measurement device, and a data logger (see Figure 8.3-1). This gage measures and records the total flow below the sand trap, including releases from the Project flowline (MIF and rock-drop valve), farmer's gate, spillway flows, and accretion flows between the dam and gaging station. This gage is 1,200 feet downstream from Lundy Dam (and immediately downstream of the sand trap) and 20 feet upstream from the Deer Creek confluence with Mill Creek. A stage reading is transmitted continuously (but only updates every minute and records every 15 minutes). The 15-minute average data are used to compute the USGS record.

In addition to the measuring locations described above, SCE measures and records the rate of water flow at four additional locations: (1) Lundy Powerhouse tailrace; (2) Upper Conway Ditch; (3) splitter box release to the Wilson System; and (4) MCRD near the confluence with Mill Creek. The measuring devices at these locations are described below. Figure 8.3-1 provides a map depicting the stream and reservoir level gaging locations.

Upper Conway Ditch and Lundy Powerhouse Tailrace

Flow released from Lundy Powerhouse is reported at two locations: (1) within the tailrace below the powerhouse (flow to the splitter box); and (2) in the Upper Conway Ditch (see Figure 8.3-1). The combined quantities at these two locations equal the total Lundy

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Powerhouse flow. Tailrace flows are measured using a Design Analysis H-500XL data logger attached to a Design Analysis float-driven H-3311 shaft encoder. Stage reading is transmitted continuously but only updates every 5 minutes. Stage is logged once every 15 minutes, and these values are used to compute the USGS record (USGS Gage No. 10287195).

A power curve is used to calculate total discharge from Lundy Powerhouse (SCE is in the process of installing and testing a penstock AVM to replace this power curve calculation). The Lundy Powerhouse tailrace gage (USGS Gage No. 10287195) is subtracted from the power curve computation to give the discharge into Upper Conway. A Design Analysis H-500XL attached to a H-3311 shaft encoder is used as a backup gage. Stage is logged once every 15 minutes, and these values are used to compute the USGS record (USGS Gage No. 10287145).

SPLITTER BOX RELEASE TO THE WILSON SYSTEM

Flow releases from the splitter box to the Wilson System are provided using a Langemann gate that is installed at the concrete control structure (historically, flashboards/stoplogs have been used to control flow releases into the Wilson System when the MCRD is being used) (see Figure 8.3-1). The Langemann gate has the capability to measure and provide an accurate flow rate to downstream users, as required. Flow information from the Langemann gate is transmitted every 15 minutes from a telemetry station located on the channel bank adjacent to the splitter box. The flow data are telemetered to an SCE Control Station that is staffed by operators 24 hours a day.

TOP OF MILL CREEK RETURN DITCH (BELOW SPLITTER BOX)

The MCRD gage consists of a SonTek IQ device that uses acoustic doppler technology to measure flow through a stable stream channel (SCE has added this gage since the Streamflow Gaging Plan has been amended, and it will be added to the plan as part of the new license application) (see Figure 8.3-1). The flow gage is installed immediately south of the Langemann gate within the MCRD. The SonTek device is installed in the center of the channel to measure flow within the MCRD. Flow information from the SonTek is transmitted every 15 minutes from a telemetry station located on the channel bank at the gage location. The flow data are telemetered via a third-party public site to an SCE Control Station that is staffed by operators 24 hours a day.

MILL CREEK RETURN DITCH NEAR THE CONFLUENCE WITH MILL CREEK

The gage consists of a SonTek IQ device that uses acoustic doppler technology to measure flow through a stable stream channel (see Figure 8.3-1). The flow gage is installed in a 20-foot-long section of the MCRD that has been graded and lined with a concrete composite mat to stabilize the channel. The SonTek device is installed in the center of the channel on the pad to measure flow within the MCRD. Flow information from the SonTek is transmitted every 15 minutes from a telemetry station located on the channel bank at the gage location. The flow data are telemetered via a third-party public site to an SCE Control Station that is staffed by operators 24 hours a day.

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DRAINAGE AREA

Lundy Dam provides storage for the Lundy Project generation and has a contributing drainage area of 16.3 square miles (USGS Gage No. 10287060) (see Figure 8.3-1). There are no upstream impoundments on Mill Creek. Downstream flows are influenced by irrigation diversions, return flows, and local groundwater interactions. The drainage area downstream of the Lundy Powerhouse includes the Wilson System and Mill Creek; the latter receives water through the MCRD.

FLOW STATISTICS

The total Lundy Project daily releases were summed based on USGS Gage Nos. 10287069 (Mill Creek Below Lundy Lake), 10287195 (Lundy Powerhouse Tailrace), and 10287145 (Upper Conway Ditch). Mean, minimum, and maximum values for these daily averages are tabulated based on the sum of those records (Table 8.3-3).

Table 8.3-3. Monthly Mean, Minimum, and Maximum Flows as Summed by USGS Gage Nos. 10287069, 10287195, and 10287145 from 1988–2022

Water Year	Monthly Mean Flow as summed by USGS Gage Nos. 1027069, 10287195, and 10287145 (cfs) from 1988 to 2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	12	14	17	19	37	61	94	36	20	13	11	11
Minimum	5	5	5	5	6	7	9	7	3	3	5	5
Maximum	73	46	52	66	113	257	234	149	76	35	27	20

cfs = cubic feet per second

FLOW DURATION CURVES

Flow duration curves were developed using the sum of USGS gage daily records described in Table 8.3-3, which represent total Lundy Project releases. Annual and monthly flow duration curves are provided in Appendix E.7, DLA Volume II.

EXISTING AND PROPOSED WATER USES

SCE has no existing or proposed consumptive uses of water at the Lundy Project other than minor domestic use at the powerhouse. Although water is stored by SCE in Lundy Lake for power generation at Lundy Powerhouse, SCE causes no long-term net water loss to downstream areas. There are consumptive uses, including irrigation and domestic, of water downstream of the Lundy Project. An average of more than 12,200 acre-feet is below Lundy Powerhouse each year.

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MORPHOMETRIC DATA FOR EXISTING IMPOUNDMENT

Morphometric data for Lundy Lake are noted on Exhibit G-1 of the existing license; the normal maximum pool storage capacity at 7,805.40 feet is 4,113 acre-feet. The reservoir surface area at maximum pool is about 110 acres.

GRADIENT OF MILL CREEK

Mill Creek below Lundy Dam has three distinct reaches summarized in Table 8.3-4.

Table 8.3-4. Approximate Stream Lengths and Gradients for Mill Creek.

Reach	Reach Length		Reach Elevation			Stream Gradient	
	(feet)	(miles)	Top of Reach (feet NGVD 29)	Bottom of Reach (feet NGVD 29)	Elevation Change (feet)	(feet/mile)	(%)
Bedrock Reach	12,739.33	2.41	7,799.88	7,219.52	580.36	240.81	1.89
Pleistocene Reach	11,769.49	2.23	7,219.52	6,662.28	557.23	249.88	2.12
Holocene Reach	12,047.91	2.28	6,662.28	6,376.76	285.53	125.23	1.04

Note: The datum in the WQ-2 draft technical report drafted by Stillwater Sciences uses NAVD88 and has been converted to the project datum of NGVD29 for this DLA.

8.3.2. ENVIRONMENTAL EFFECTS

Under the Proposed Action, Project facilities and operations would continue as currently implemented, including reservoir management, implementation and monitoring of flow releases, water deliveries, and hydropower generation. In SD2, FERC requested SCE study effects of continued Project operation and downstream water rights and users, which are described below.

This analysis addresses SD2 water resource issues, including: (1) effects of continued Project operation on downstream water rights and users; and (2) effects of Project operation on hydrologic conditions that influence water quality in Lundy Lake, the bypassed reach, and downstream of the powerhouse. Water quality-specific effects are further evaluated in Section 8.4 *Water Quality and Quantity*.

8.3.2.1. Effects of Continued Project Operation on Downstream Water Rights and Users

Under the No-Action Alternative, Project operations influence the timing and routing of water deliveries, including diversions to the Wilson System and return flows via the MCRD, which affect the spatial and temporal availability of water.

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Potential effects include localized changes in flow availability, conveyance efficiency, and delivery timing, particularly during low-flow periods or when flow routing between Mill Creek and the Wilson System varies. Under the Proposed Action, operations would continue to:

- Deliver water in accordance with adjudicated priorities,
- Provide irrigation supply via the Wilson System, and
- Maintain FERC-required MIFs.

The 2022 Amended Settlement Agreement (SCE et al., 2022) suggested that the results of the scientific studies completed as part of the relicensing of the Project may provide a basis for changing or eliminating the controlled releases under the Section 7 of the Settlement Agreement. As indicated by the technical studies, SCE has not identified a need to deviate from Section 7 of the Amended Settlement Agreement and therefore will continue to implement those controlled releases, as described.

The Project's non-consumptive use returns diverted water to the watershed, either to Mill Creek or downstream systems. Continued operation would maintain the existing regulated flow regime, including seasonal storage and release of snowmelt runoff, controlled instream releases, and redistribution of flows between Mill Creek and the Wilson System. There are no proposed changes to flow magnitude, timing, or variability. Consistent with SD2, continued operations represent an ongoing influence on hydrologic conditions. Key effects include reduced peak flows, maintained baseflows, altered flow routing, and localized intermittent flow conditions. These effects influence downstream hydraulics, water availability, and related water quality responses (FERC, 2024).

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue operating Lundy Lake and associated diversions under existing license conditions, with no changes to flow releases, storage management, or water use. Downstream hydrologic conditions would remain consistent with current regulated patterns, and no additional measures to improve water quality, instream flows, or aquatic habitat would be implemented.

Hydrologic conditions would continue to be influenced by natural variability and climate-driven changes in snowmelt runoff.

PROPOSED ACTION

Under the Proposed Action, Project operations would continue to meet water rights obligations and delivery requirements through existing infrastructure, including the powerhouse, Wilson System, and MCRD.

Potential effects to downstream users are related to flow timing and distribution. The Project would continue to operate as a non-consumptive use, continuing to convey water downstream.

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8.3.2.2. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

INYO NATIONAL FOREST LAND MANAGEMENT PLAN

The Project is consistent with the following water use and hydrology-related plan components of the Inyo National Forest LMP (USFS, 2019):

- WTR-FW-DC-01 (Flow Regime): Adequate quantity and timing of flows support ecological structure and function. Project operations maintain MIFs and regulated releases that support downstream aquatic habitat and seasonal hydrologic patterns.
- WTR-FW-DC-03 (Watershed Function and Connectivity): Watersheds are functioning or trending toward functioning condition, with maintained hydrologic connectivity. Project operations do not interrupt watershed-scale processes; diverted flows are returned downstream, maintaining overall hydrologic continuity.
- WTR-FW-DC-06 (Sediment Regime): Sediment transport processes remain within the natural range of variation. Although Lundy Lake traps some sediment, downstream sediment and turbidity conditions remain low and consistent with existing variability.
- WTR-FW-GDL-01 (Diversions and Instream Flows): Effects of stream diversions are minimized and instream flows are maintained to protect aquatic resources. Project operations include minimum flow requirements and flow routing that reduce diversion-related impacts.
- WTR-FW-STD-03 (Hydroelectric Facilities): Hydroelectric authorizations include instream flow provisions to maintain aquatic and riparian conditions. The Project operates consistent with these requirements through established flow releases and downstream conveyance.
- WTR-FW-DC-05 (Infrastructure Effects): Infrastructure has minimal adverse effects on aquatic and riparian resources. Monitoring data indicate no Project-related degradation of hydrologic or water quality conditions attributable to Project facilities.
- SPEC-FW-DC-01 (Aquatic Habitat Support): Healthy ecosystems support aquatic species. Existing flow regimes, temperatures, and water quality conditions support cold-water aquatic communities downstream of the Project.
- SPEC-FW-DC-02 (Habitat Conditions for At-Risk Species): Habitat conditions support the survival and persistence of at-risk species. Project-related hydrologic conditions maintain suitable aquatic habitat without evidence of impairment.

Overall, the Project maintains flow regime, hydrologic connectivity, and aquatic habitat conditions consistent with the Inyo National Forest LMP (USFS, 2019) direction, and its effects on water use and hydrology remain within the range of existing variability without degrading watershed processes.

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Under the No-Action Alternative, the Project would continue to operate Lundy Lake storage, releases to Mill Creek, and associated diversions under existing conditions. This alternative is generally consistent with the Inyo National Forest LMP direction because:

- It avoids new ground disturbance or infrastructure changes, thereby maintaining existing watershed and riparian conditions;
- It does not introduce new stressors that could degrade water quality or channel condition; and
- Ongoing operations would continue within the envelope of previously authorized uses on national forest lands.

However, the No-Action Alternative would not actively advance certain Inyo National Forest LMP (USFS, 2019) objectives, particularly those related to improving watershed condition, restoring more natural flow regimes, or enhancing aquatic and riparian habitat where current operations may constrain natural processes. As such, while consistent with maintaining baseline conditions, the No-Action Alternative may limit opportunities to achieve desired conditions identified in the Inyo National Forest LMP for hydrologic connectivity and ecosystem function.

LAHONTAN REGION WATER QUALITY CONTROL BOARD BASIN PLAN

The Project lies within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB), and Project operations must be consistent with the Water Quality Control Plan for the Lahontan Region (Basin Plan), which establishes water quality standards including beneficial uses, water quality objectives, and implementation measures (LRWQCB, 2021).

The Basin Plan defines water quality objectives as limits or conditions necessary to protect public health, maintain water quality, and support designated beneficial uses, including aquatic habitat, recreation, and municipal supply (LRWQCB, 2021).

Relevant objectives for Project waters (e.g., Lundy Lake and Mill Creek) typically include the following:

- Maintenance of temperature regimes suitable for cold-water fisheries.
- Adequate dissolved oxygen concentrations.
- Control of sediment and turbidity to prevent impairment of aquatic life.
- Protection against degradation of existing high-quality waters under the state's no degradation policy.

Under the No-Action Alternative, existing Project operations would continue without modification. This alternative is generally consistent with the Basin Plan because:

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- It maintains current operational conditions that are subject to existing regulatory requirements and water quality controls;
- No new discharges or alterations to flow regimes are proposed that would be expected to degrade water quality beyond existing conditions;
- Ongoing compliance with applicable permits and standards would continue to be required.

The No-Action Alternative would not provide additional measures that could enhance attainment of Basin Plan objectives, such as improved flow management to moderate stream temperatures or increase habitat suitability, operational adjustments to enhance flushing flows or sediment transport, and targeted actions to further support designated beneficial uses during low-flow or drought conditions.

Accordingly, while the No-Action Alternative would maintain compliance with existing water quality standards, it would not result in incremental improvements toward enhanced water quality conditions or beneficial use support that could be achieved under certain action alternatives.

8.3.2.3. Proposed Protection, Mitigation, and Enhancement Measures

SCE proposes to maintain current operations at the Project and maintain current MIF requirements. Under the Proposed Action, this includes continued implementation of existing PME measures (Appendix E.1, DLA Volume II) and the Water Management Plan (Appendix E.2, DLA Volume II).

8.3.2.4. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Water Use and Hydrology.

8.3.3. REFERENCES

FERC (Federal Energy Regulatory Commission). 2007. Order Amending License and Dismissing Requests for Rehearing. Accession Number: 20071115-3019. November 15, 2007.

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SCE; U.S. Department of Agriculture, Forest Service; U.S. Department of the Interior, Bureau of Land Management; California Department of Fish and Game; Mono Lake Committee; California Trout; and American Rivers. 2004. *Lundy Hydroelectric Project Settlement Agreement*. FERC eLibrary. Accessed June 2026. Available online: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20040809-5071&optimized=false&sid=3ff0f4b2-c446-4be8-85ff-bf8434f5d459.

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8.4. WATER QUALITY AND QUANTITY

8.4.1. AFFECTED ENVIRONMENT

The Lundy Hydroelectric Project is located on Mill Creek within the Mono Lake subbasin and includes Lundy Lake, which stores and regulates streamflow prior to downstream release or diversion. Project operations influence water quantity through storage, controlled releases, and conveyance to the powerhouse, followed by discharge to either Wilson Creek or return to Mill Creek via the MCRD.

For purposes of this analysis, the geographic scope of water resources includes Lundy Lake, Mill Creek downstream to Mono Lake, the MCRD, and associated conveyance facilities. This scope is consistent with FERC's SD2[12] definition of the Project Affected Area for water quantity and quality resources.

Hydrologic connectivity is maintained between Project facilities and downstream receiving waters, including Mono Lake, such that Project operations may influence

[12] Accession No. 20240729-3029

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hydrologic conditions and water availability throughout the full extent of Mill Creek and associated return flow pathways.

In 2025, a Lundy Lake and Mill Creek Water Quality Monitoring Study (WQ-1 draft report, DLA Volume III) and Lundy Lake and Mill Creek Water Temperature Monitoring Study (WQ-2 draft report, DLA Volume III) were conducted to evaluate current water quality conditions in Lundy Lake and Project-affected stream reaches.

- WQ-1 included (1) reservoir and stream water quality sampling, (2) bacteriological sampling, and (3) fish tissue mercury sampling. WQ-1 water quality data were collected between April and October 2025 (Year 1).

- WQ-2 focused on evaluating water temperatures in Project-affected streams. WQ-2 water temperature monitoring data were collected between April 2025 and April 2026 (Year 1).

Additional data collection as part of Year 2 (2026) for both WQ-1 and WQ-2 is intended to inform water quality and water temperature during a different water year type. Data collected during Year 1 are included with the WQ-1 and WQ-2 draft technical reports in Volume III of this DLA. Data collected during 2026 and 2027 will be included as part of the Updated Study Report and incorporated into the Final License Application (FLA).

8.4.1.1. Water Use in the Project Area

Flows in the Project Area are characteristic of a snowmelt-dominated hydrologic regime, with peak runoff typically occurring in spring and early summer and reduced flows during late summer and winter. The Project regulates flows in Mill Creek through Lundy Dam and Lundy Lake. Lundy Lake has a storage capacity of approximately 4,000 acre-feet and is operated seasonally, with drawdown in winter to create storage capacity for spring snowmelt runoff. Water is diverted at Lundy Dam and conveyed approximately 12,000 feet via flowline and 3,500 feet via penstock to the powerhouse, with a hydraulic capacity of about 70 cfs. Flows discharged from the powerhouse are routed to either the Wilson System (supporting irrigation and other downstream uses), or the MCRD, which returns flows to Mill Creek downstream (SCE, 2024). Historically, Project operations will reduce powerhouse generation when there is low demand, increasing flows to the bypass section of Mill Creek. The original license imposed no MIF requirements for the bypassed reach of Mill Creek, aside from 2 cfs in winter. On November 15, 2007, FERC issued an order amending the license, dismissed requests for rehearing, and required a Minimum Flow Release Plan in compliance with Article 403 of the new license and a Stream Gaging Plan in compliance with Article 412.[13] On June 27, 2008, SCE filed a Final Minimum Flow Release Plan and Final Streamflow Gaging Plan.[14] MIFs downstream of Lundy Dam are maintained through multiple outlet structures to meet water rights and resource

[13] Accession No. 20071115-3019
[14] Accession No. 20080707-0096

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requirements. These flows are monitored using a network of gaging stations in accordance with a FERC-approved stream gaging plan (FERC, 2023).

MILL CREEK UPSTREAM OF DEER CREEK MOUTH

SCE shall release a minimum flow of: (a) 1.00 cfs on an average monthly basis, but not less than 0.75 cfs on an average daily basis, or (b) the inflow to the Project reservoir, whichever is less, as measured at either the existing Mill Creek gage located just upstream of the mouth of Deer Creek (USGS Gage No. 10287069) and/or the release point on the Project flowline, as described in the Article 403 plan. The release is for the protection and enhancement of fish and wildlife resources, riparian vegetation, and aesthetic resources in the bypassed reach of Mill Creek.

SCE's minimum flow requirement below Lundy Dam will be reduced to the extent that the seepage and accretion flow is greater than 3 cfs. If seepage and accretion flows are above 3 cfs, SCE must only release that amount of water necessary to result in a 4-cfs flow at the gage. The water may be released from the existing penstock tap located at the sand trap just upstream of the existing stream gage on Mill Creek or from a new release facility between the stream gage and Lundy Dam, as described in the Article 403 plan. SCE is not required to operate the existing Mill Creek stream gage during the winter season if (i) the water turns to ice, (ii) the gage is covered in snow, or (iii) other factors beyond SCE's control preclude accurate streamflow measurements.

The minimum flow release may be intentionally, temporarily modified if required for safety reasons by operating emergencies beyond the control of SCE, or upon agreement between SCE, USFS, and CDFW for short periods. The minimum flow is not required if malfunctions or other circumstances beyond SCE's feasible control cause the flow release to be unintentionally discontinued or reduced. If the flow is so modified or discontinued, the licensee shall notify FERC as soon as feasible, but no later 10 days after SCE discovers each such intentional or unintentional incident.

MILL CREEK ABOVE RETURN DITCH

As part of the 2007 Settlement Agreement, SCE was required to monitor flows on Mill Creek above the return ditch in March, June, September, and December from March 1, 2008, to 2016. This was to determine if the combination of minimum flows and accretion provides 7 cfs of flow in Mill Creek. SCE submitted a report to FERC, along with USFWS, CDFW, California Trout, MLC, and American Rivers, at the end of the monitoring period on September 6, 2018.[15] On October 16, 2019, FERC concluded that the monitoring requirement had been satisfied, no further monitoring was required, and SCE did not need to install a permanent stream gage.[16] If needing to obtain an accurate streamflow measurement, SCE may use a handheld current meter, portable weir, or another suitable device.

[15] Accession No. 20180906-5065
[16] Accession No. 201910616-3032

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ABOVE LUNDY DAM – IN MILL CREEK BYPASS REACH

If the Deer Creek confluence with Mill Creek shifts above Lundy Dam, FERC may reopen the license to determine if an additional minimum flow release is necessary and appropriate for the protection and enhancement of fish and wildlife resources, riparian vegetation, and aesthetic resources in the bypassed reach of Mill Creek. FERC shall consider whether: (i) an entity other than the licensee is diverting flow from Mill Creek below Lundy Dam and upstream of the confluence with the return water conveyance facility and (ii) there is a reasonable potential to shift Deer Creek back to its current location, and the licensee has had a reasonable opportunity to accomplish this relocation.

8.4.1.2. Flow Statistics

Flows within the Project Area are regulated by storage and releases from Lundy Lake in combination with natural inflows from tributaries such as Deer Creek. Flow patterns are characterized by seasonal snowmelt runoff, with higher flows typically occurring in spring and early summer and reduced flows during late summer and winter. The flow regime in Mill Creek has seen a natural increase in discharge in all months since 2015 relative to the preceding 25 years (1990-2014) (Table 8.4-1; Table 8.4-2; Figure 8.4-1).

Project operations convey up to approximately 70 cfs through the flowline and penstock under optimal conditions, although actual usage varies annually depending on water availability and water rights obligations (FERC, 2024). Flow variability is influenced by hydrologic conditions (dry, normal, and wet years) and operational decisions informed by the MCAPT, which integrates runoff forecasts with water rights priorities (FERC, 2024).

Table 8.4-1. Mean, median, minimum, and maximum flows by month for the time period (1990-2014). Instantaneous (15-minute) discharge data recorded at SCE Gage No. 355 (USGS Gage No. 10287069).

	Instantaneous (15-minute) flow (cfs) statistics by month: 1990-2014											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Mean	0.96	0.59	0.58	0.73	1.17	12.40	23.30	6.44	3.52	1.98	1.27	0.76
Median	0.13	0	0	0	0	3.20	7.79	4.89	2.50	1.62	0.93	0.43
Minimum	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	55.7	4.60	10.5	35.1	42.3	141.0	163.0	97.5	32.0	21.5	17.1	4.16

cfs = cubic feet per second

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Table 8.4-2. Mean, median, minimum, and maximum flows by month for the (2015-2025). Instantaneous (15-minute) discharge data recorded at SCE Gage No. 355 (USGS Gage No. 10287069).

	Instantaneous (15-minute) flow (cfs) statistics by month: 2015-2025											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Mean	1.91	1.97	1.91	2.95	13.0	36.0	36.9	11.1	4.69	4.40	2.02	1.83
Median	1.53	1.53	1.53	1.45	1.89	11.2	9.52	5.67	3.03	2.43	1.70	1.53
Minimum	0.72	0.72	0	0	0.48	1.17	1.22	1.37	1.00	.093	1.00	0.64
Maximum	11.5	12.4	9.5	35.1	140.0	208.0	270.0	90.9	21.9	15.6	7.4	12.4

cfs = cubic feet per second

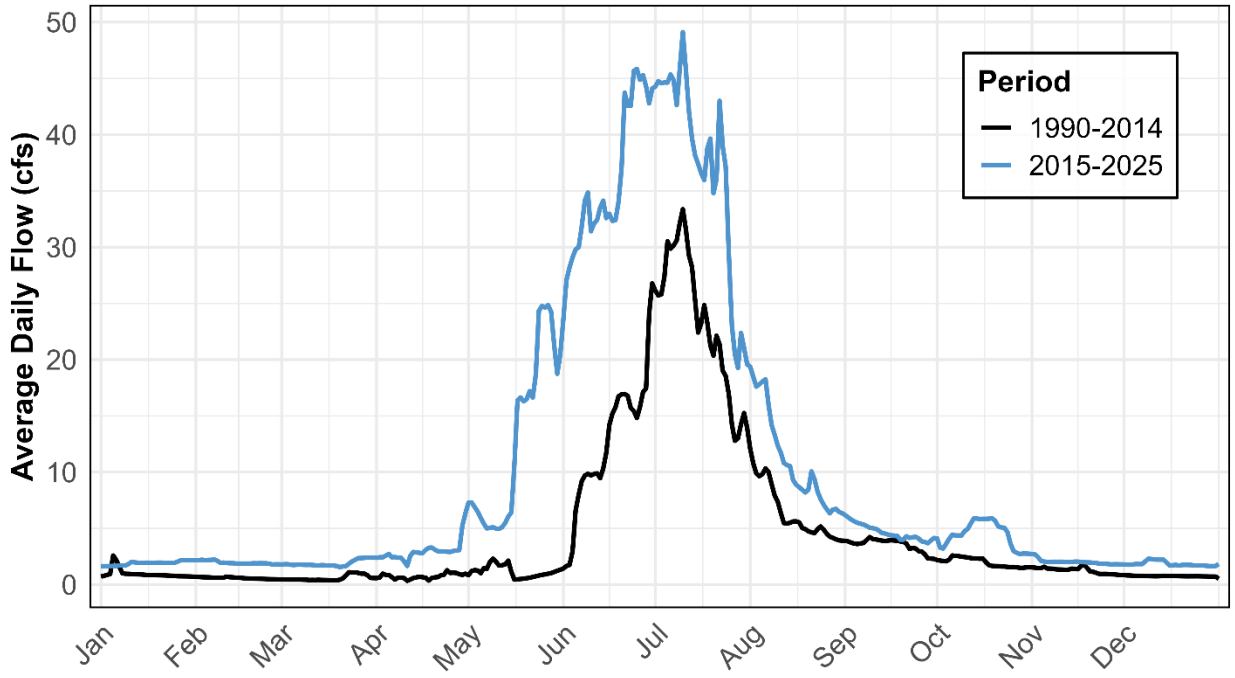


Figure 8.4-1. Mean Daily Flow in Mill Creek as Measured at SCE Gage No. 355 (USGS Gage No. 10287069) for the pre-operations change (1990–2014) and post operations change (2015–2025) time periods.

8.4.1.3. Flows Releases and Hydraulic Modeling

Operational adjustments are governed by system constraints, water availability, and downstream water delivery obligations. Fluctuations are generally limited by the relatively

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small storage capacity of Lundy Lake and continued compliance with minimum flow requirements. Table 8.4-3 shows the water year type of each year.

Table 8.4-3. Distribution of Water Year Type

Dry Years	Normal Years	Wet Years
2015	2016	2017
2020	2018	2019
2021	2024	2023
2022	N/A	N/A
2025	N/A	N/A

N/A = data not available

MIF requirements from Article 404 as amended (FERC, 2007), and flow releases as described in Section 7 of the Amended Settlement Agreement (SCE et al., 2022) were evaluated as part of the Fish Stranding Study (AQ-2). The intent of this study was to evaluate if there was a negative impact to fish because of down ramping. Further analysis is included in Section 8.2.1.6 Fluvial Geomorphology, Section 8.5.1.5 Aquatic Habitat, Section 8.5.1.7 Stranding, and in the AQ-2 Study Technical Report (DLA Volume III).

8.4.1.4. Monthly Flow Duration Curves

Monthly flow duration characteristics reflect a snowmelt-driven hydrologic regime typical of Eastern Sierra Nevada watersheds. Higher exceedance probabilities occur during spring runoff, while lower flows dominate winter and late summer periods. Project regulation moderates peak runoff and augments baseflows within the constraints of water rights and storage capacity. Flow duration curves can be found in Appendix E.7, DLA Volume II.

8.4.1.5. Water Rights

Water rights in the Project Area are governed by the Mill Creek adjudication (1914), which establishes multiple priority rights held by federal, state, local, and private entities (SCE, 2024). SCE operates the Lundy Project under a non-consumptive (pass-through) right for hydropower generation and must allocate flows in accordance with downstream priorities. Project operations are coordinated annually using the MCAPT and formal settlement agreements with water rights holders (SCE, 2024). Water rights are described further in Section 8.3 *Water Use and Hydrology*.

WATER QUALITY

Based on available data, water quality conditions in Lundy Lake and Project-affected stream reaches reflect a high-elevation, low-nutrient (oligotrophic) system influenced by cold water, low mineral content, and high dissolved oxygen (DO).

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Water quality information discussed in this section includes data collected in 2025 as a part of WQ-1 and WQ-2 to evaluate current water quality conditions in Lundy Lake and Project-affected stream reaches. Collected data include water temperature, DO, conductivity, pH, nutrients, total dissolved solids (TDS) and total suspended solids (TSS), turbidity, metals, bacteria, and mercury in fish.

RESERVOIR AND STREAM WATER QUALITY

For WQ-1, in situ and analytical data were collected at nine sites—including one reservoir and eight stream sites (Figure 8.4-2). Three seasonal sampling events were conducted at all sites with supplemental sampling occurring in Lundy Lake and around the MCRD. Tabulated reservoir in situ data and analytical laboratory reports and data are provided in the WQ-1 draft report (DLA Volume III). For WQ-2, continuous 15-minute temperature data were collected at nine stream sites and one air temperature monitoring site (Figure 8.4-2; WQ-2 draft report, DLA Volume III). Additional details for WQ-1 and WQ-2 can be found in the associated technical reports.

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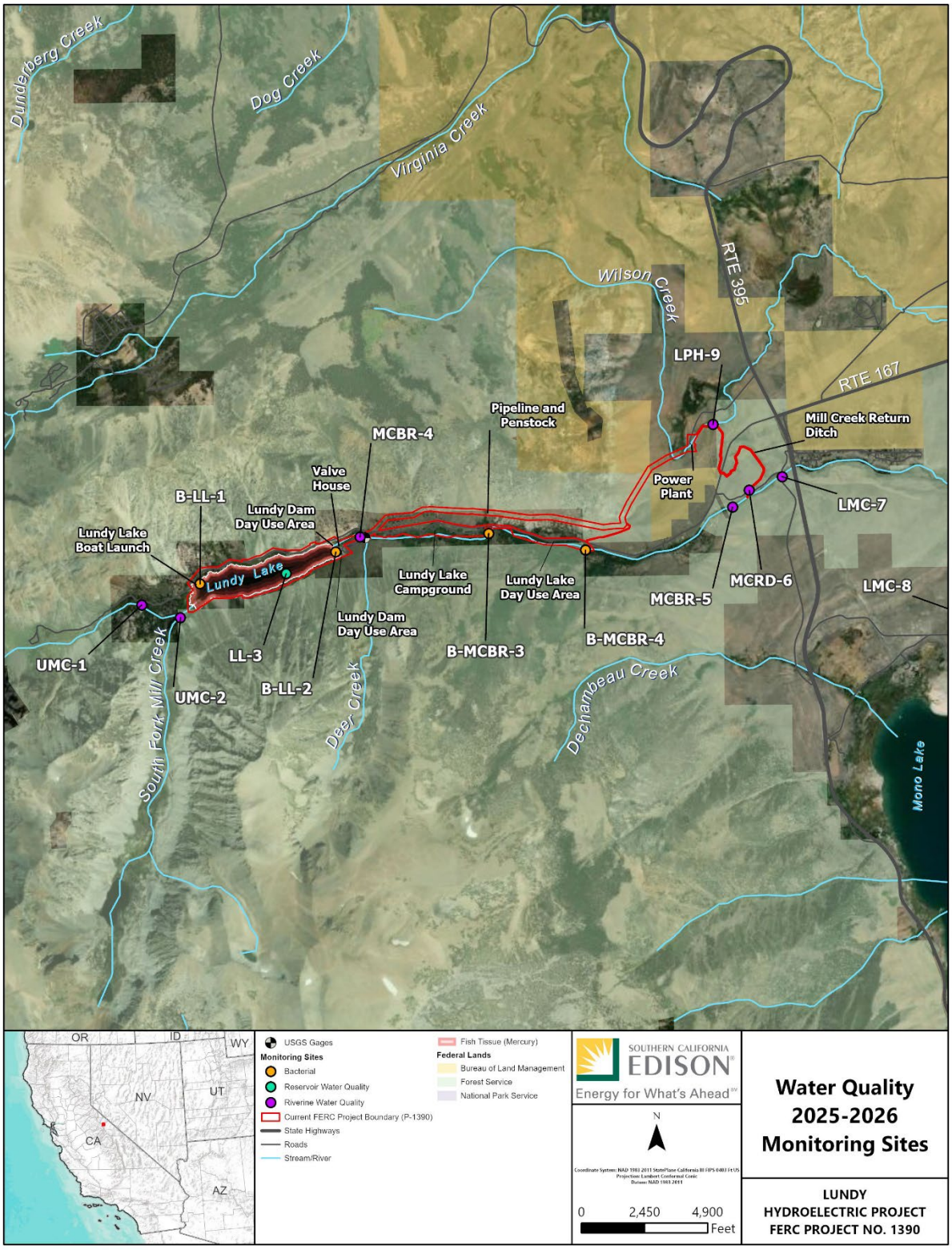


Figure 8.4-2. 2025-2026 Monitoring Sites.

Water Temperature

Water temperatures collected from April to October 2025 in Lundy Lake (*n* = 98) ranged from 7.5 to 18.1 degrees Celsius (°C) and exhibited natural variation associated with seasons (Figure 8.4-3 and Table 8.4-4). Little thermal variation was observed in Lundy Lake during spring and fall. Thermal stratification was observed in Lundy Lake during summer, with warmer temperatures in surface waters and cooler temperatures below the thermocline (Figure 8.4-3).

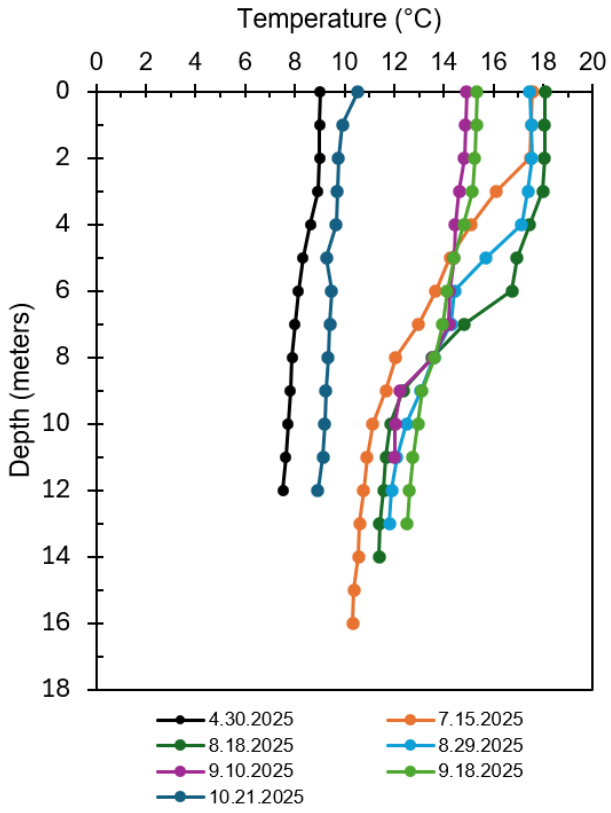


Figure 8.4-3. Vertical Temperature Profiles Collected in Lundy Lake in 2025.

All Mill Creek sites with continuous water temperature loggers displayed similar seasonal variation, with maximum and minimum temperatures observed in July/August and January/February, respectively. Temperature in Mill Creek ranged from 0°C to 12°C above Lundy Lake and 0°C to 16.5°C from Lundy Dam to Mono Lake. The MCRD temperature logger recorded a maximum temperature of 18°C in July but did not record data past August. Similarly, temperatures in the Lundy Powerhouse tailrace reached 18°C in August, but otherwise mirrored temperatures recorded in Mill Creek downstream of Lundy Dam (Figure 8.4-4). Mean daily maximum, minimum, and average water temperature plotted by site are provided in the WQ-2 draft report (DLA Volume III).

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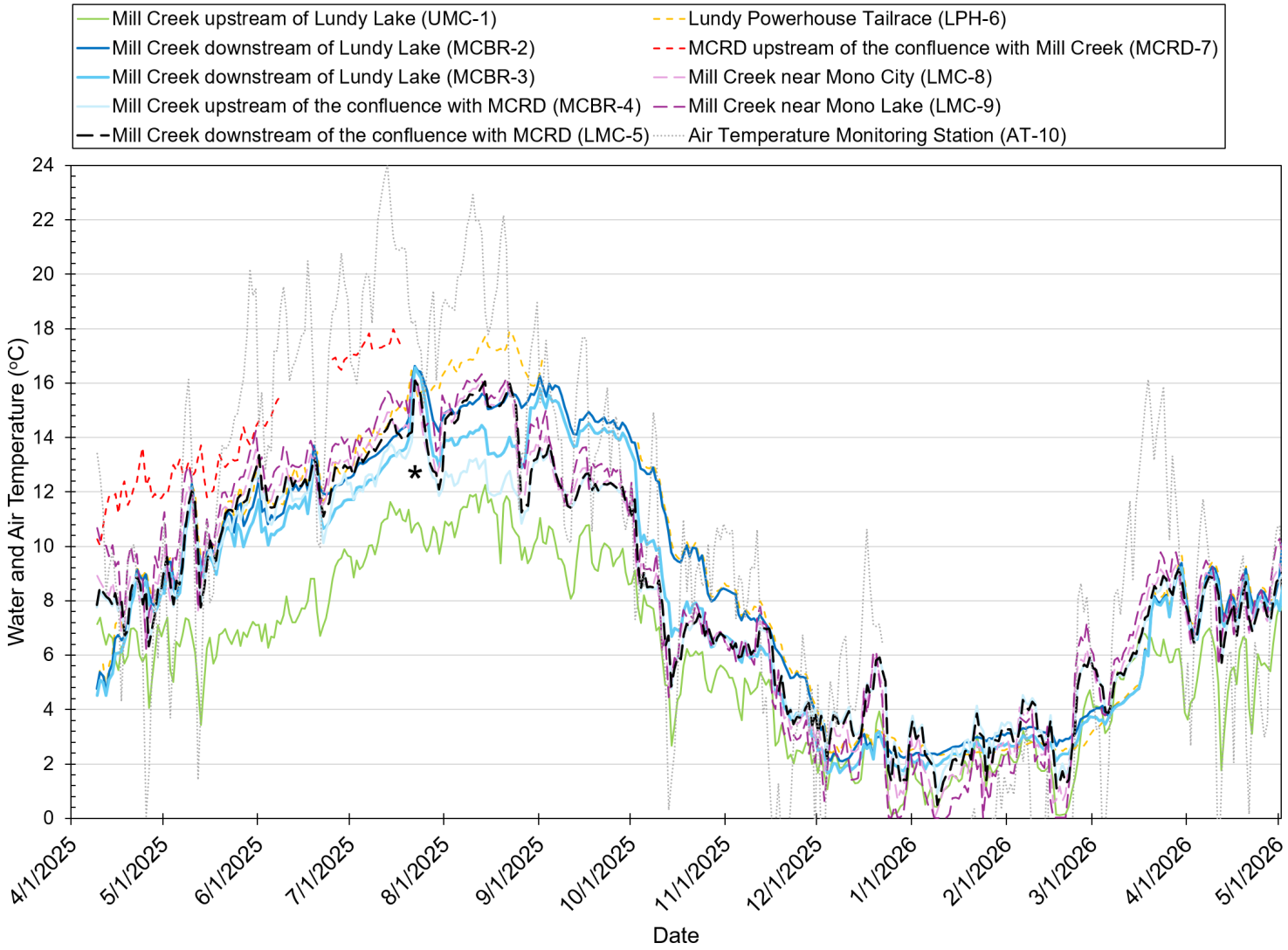
Table 8.4-4. Range (Count) of In Situ Data, 2025

Location (Site ID)	Stream Reach	Temperature (°C)[a]	DO (mg/L)	DO (% sat.)	Specific Conductance (µS/cm)	pH (s.u.)	Turbidity (NTU)
Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (UMC-1)	Mill Creek Unimpaired	5.8–10.0 (n=3)	8.5–9.4 (n=3)	99–101 (n=3)	76–80 (n=3)	7.3–7.7 (n=3)	1.2–2.2 (n=3)
South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (UMC-2)	South Fork Mill Creek Unimpaired	6.1–10.2 (n=3)	8.3–9.3 (n=3)	96–100 (n=3)	75–77 (n=3)	7.1–7.4 (n=3)	1.5–1.9 (n=3)
Lundy Lake (LL-3)	N/A	7.5–18.1 (n=98)	0.9–9.5 (n=98)	11–116 (n=98)	59–74 (n=98)	5.8–7.8 (n=98)	0.1–1.5 (n=84)
Mill Creek immediately downstream of Lundy Lake (MCBR-4)	Mill Creek Below Lundy Lake	7.9–16.3 (n=3)	7.4–9.2 (n=3)	98–103 (n=3)	66–76 (n=3)	7.6–7.8 (n=3)	0.2–1.5 (n=3)
Mill Creek upstream of the confluence with the Mill Creek Return Ditch (MCBR-5)	Mill Creek Below Lundy Lake	6.0–17.2 (n=5)	7.5–9.9 (n=5)	99–102 (n=5)	66–76 (n=5)	7.4–8.0 (n=5)	1.2–3.2 (n=5)
Mill Creek Return Ditch upstream of the confluence with Mill Creek (MCRD-6)	Mill Creek Return Ditch	12.7–19.3 (n=3)	7.6–8.5 (n=3)	103–107 (n=3)	60–65 (n=3)	7.5–7.8 (n=3)	0.2–1.6 (n=3)
Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old U.S. Highway 395 Bridge (LMC-7)	Lower Mill Creek	6.2–17.2 (n=4)	7.4–9.9 (n=4)	99–102 (n=4)	63–76 (n=4)	7.1–7.9 (n=4)	1.0–4.5 (n=4)
Mill Creek between U.S. Highway 395 and Mono Lake (LMC-8)	Lower Mill Creek	5.7–15.0 (n=3)	8.0–10.0 (n=3)	99–101 (n=3)	69–76 (n=3)	7.5–7.9 (n=3)	0.9–3.5 (n=3)
Lundy Powerhouse Tailrace (LPH-9)	Lundy Powerhouse Tailrace	7.9–17.6 (n=4)	7.4–9.5 (n=4)	98–103 (n=4)	59–74 (n=4)	7.5–8.1 (n=4)	0.2–1.6 (n=4)

% = percent; µS/cm = microsiemen per centimeter; °C = degree Celsius; mg/L = milligram per liter; NTU = Nephelometric Turbidity Unit; s.u. = standard unit

[a] Water temperature ranges are based on in situ readings from WQ-1 sampling and do not incorporate continuous data from WQ-2 temperature monitoring.

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Note: The asterisk on the plot denotes the period from July 22 to 28, 2025, when streamflows were elevated (approximately 5–150 cfs) during the field work for the Fish Stranding Study (AQ-2).

Figure 8.4-4. Mean Daily Water Temperatures at WQ-2 Water Temperature Sites April 2025–April 2026.

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Dissolved Oxygen

DO measurements collected during 2025 in Lundy Lake exhibited seasonal variations (Figure 8.4-5). During spring and fall, DO was high throughout the water column (8.0–9.5 milligrams per liter [mg/L]; 92–108 percent saturation). During summer, Lundy Lake exhibited chemical stratification at roughly 8 meters of depth, with higher DO (7.5–7.8 mg/L; 106–107 percent) in the epilimnion and lower DO (2.6–8.0 mg/L; 32–105 percent) in the hypolimnion (Figure 8.4-5).

DO measurements collected during 2025 in Mill Creek, MCRD, and the Lundy Powerhouse tailrace were similar throughout the watershed and high, and DO percent saturation was close to 100 percent (Table 8.4-4). DO levels in Mill Creek exhibited some seasonal variation, with DO concentrations and percent saturation being generally higher during the cool winter months and lower during the summer months when water temperatures were warmest.

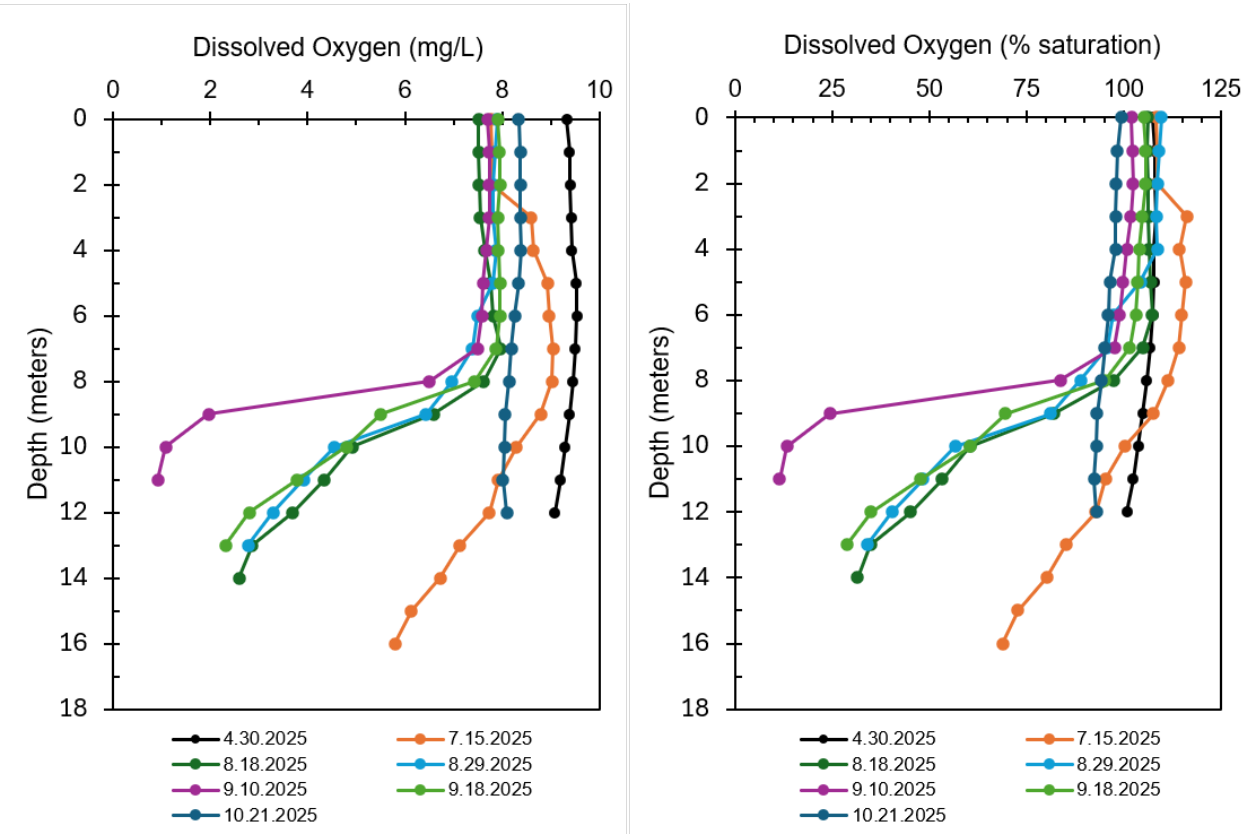


Figure 8.4-5. Dissolved Oxygen Concentration (left) and Percent Saturation (right) Profiles Collected in Lundy Lake in 2025.

Specific Conductivity

Specific conductance measurements collected in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were low (Table 8.4-4), indicative of low dissolved mineral content typical of granitic Sierra Nevada watersheds with limited anthropogenic inputs.

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pH

pH measurements collected in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were generally near neutral to slightly alkaline (Figure 8.4-6 and Table 8.4-4).

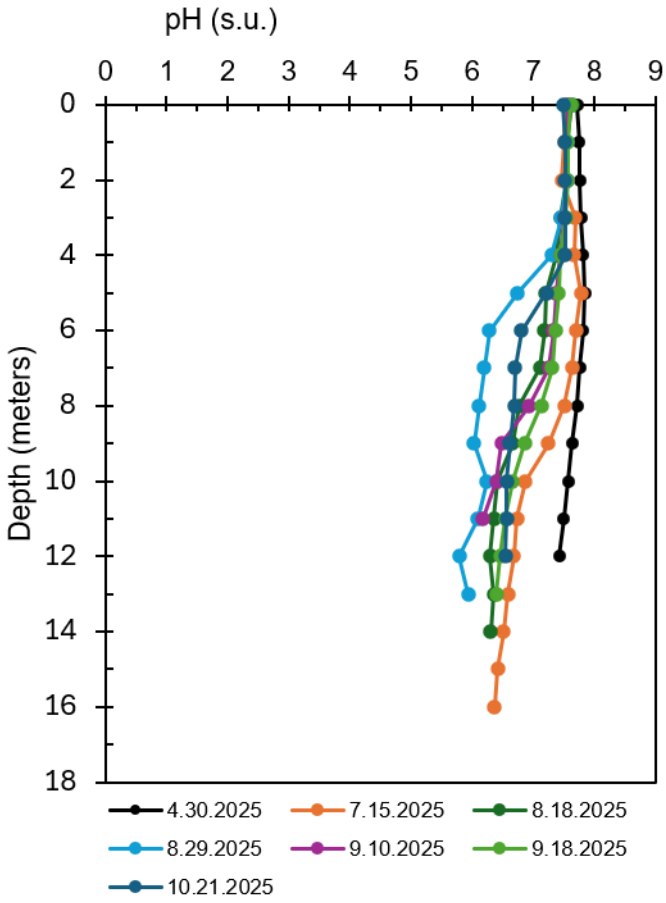


Figure 8.4-6. pH Profiles Collected in Lundy Lake in 2025.

Biostimulatory Substances

Algal nutrients including nitrogen (i.e., nitrate+nitrite, total ammonia, total Kjeldahl nitrogen) and phosphorus species (i.e., total phosphorus, orthophosphate) concentrations in water grab collected during 2025 in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were low (less than 1.0 mg/L) and frequently below laboratory detection limits during 2025 (Table 8.4-5). Chlorophyll-a, a proxy for algae biomass, was detected at low levels (less than 10 micrograms per liter [µg/L]) (Table 8.4-5).

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Table 8.4-5. Range (Count) of Nutrients in Grab Samples, 2025

Location (Site ID)	Stream Reach	Total Ammonia-N (mg/L)	Nitrate+Nitrite-N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Phosphorus (mg/L)	Orthophosphate (mg/L)	Chlorophyll-a (µg/L)
Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (UMC-1)	Mill Creek Unimpaired	<0.025–0.046 (n=3)	<0.055–0.069 (n=3)	0.077–0.16 (n=3)	<0.023–0.086 (n=3)	<0.0051–0.017 (n=3)	<5.0 (n=3)
South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (UMC-2)	South Fork Mill Creek Unimpaired	<0.025–0.071 (n=3)	0.057–0.090 (n=3)	0.11–0.17 (n=3)	<0.023–0.074 (n=3)	<0.0051–0.034 (n=3)	<5.0 (n=3)
Lundy Lake (LL-3)	N/A	<0.025–0.099 (n=6)	<0.055–0.055 (n=6)	0.084–0.32 (n=6)	<0.023 (n=6)	<0.0051–0.079 (n=6)	<5.0–10 (n=6)
Mill Creek immediately downstream of Lundy Lake (MCBR-4)	Mill Creek Below Lundy Lake	<0.025–0.063 (n=3)	<0.053–0.097 (n=3)	0.074–0.27 (n=3)	<0.023–0.12 (n=3)	<0.0051–0.059 (n=3)	<5.0–9.6 (n=3)
Mill Creek upstream of the confluence with the Mill Creek Return Ditch (MCBR-5)	Mill Creek Below Lundy Lake	<0.025–0.093 (n=5)	<0.053–0.054 (n=5)	0.097–0.14 (n=5)	<0.023–0.041 (n=5)	<0.0051–0.12 (n=5)	<5.0 (n=5)
Mill Creek Return Ditch upstream of the confluence with Mill Creek (MCRD-6)	Mill Creek Return Ditch	0.037–0.52 (n=3)	<0.053–<0.055 (n=3)	0.24–0.51 (n=3)	<0.023 (n=3)	<0.0051–0.064 (n=3)	<5.0–7.2 (n=3)
Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old U.S. Highway 395 Bridge (LMC-7)	Lower Mill Creek	<0.025–0.071 (n=3)	<0.053–<0.055 (n=3)	0.12–0.76 (n=3)	<0.023 (n=3)	<0.0051–0.082 (n=3)	<5.0–5.6 (n=3)

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Location (Site ID)	Stream Reach	Total Ammonia-N (mg/L)	Nitrate+Nitrite-N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Phosphorus (mg/L)	Orthophosphate (mg/L)	Chlorophyll-a (µg/L)
Mill Creek between U.S. Highway 395 and Mono Lake (LMC-8)	Lower Mill Creek	<0.025–0.094 (n=3)	<0.053–0.055 (n=3)	0.093–0.33 (n=3)	<0.023 (n=3)	<0.0051–0.079 (n=3)	<5.0 (n=3)
Lundy Powerhouse Tailrace (LPH-9)	Lundy Powerhouse Tailrace	0.027–0.097 (n=3)	<0.053–0.078 (n=3)	0.12–0.19 (n=3)	<0.023 (n=3)	<0.0051–0.038 (n=3)	<5.0–9.3 (n=3)

ID= identification number; mg/L= milligrams per liter; N= nitrogen; µg/L = microgram per liter

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Total Dissolved Solids and Total Suspended Solids

TDS and TSS in water grab collected during 2025 in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were low (Table 8.4-6). In Mill Creek, TDS levels were similar above and below Lundy Lake. While often measuring under the detection limit, TSS levels were generally higher in downstream reaches of Mill Creek.

Table 8.4-6. Range (Count) of Total Dissolved Solids and Total Suspended Solids in Grab Samples, 2025

Location (Site ID)	Stream Reach	TDS (mg/L)	TSS (mg/L)
Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (UMC-1)	Mill Creek Unimpaired	51–64 (n=3)	<2.5–7.1 (n=3)
South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (UMC-2)	Mill Creek Unimpaired	54–65 (n=3)	<2.5–3.9 (n=3)
Lundy Lake (LL-3)	N/A	49–58 (n=6)	<2.5 (n=6)
Mill Creek immediately downstream of Lundy Lake (MCBR-4)	Mill Creek Below Lundy Lake	47–57 (n=3)	<2.5 (n=3)
Mill Creek upstream of the confluence with the Mill Creek Return Ditch (MCBR-5)	Mill Creek Below Lundy Lake	49–64 (n=5)	<2.5–7.9 (n=5)
Mill Creek Return Ditch upstream of the confluence with Mill Creek (MCRD-6)	Mill Creek Return Ditch	42–46 (n=3)	<2.5 (n=3)
Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old U.S. Highway 395 Bridge (LMC-7)	Lower Mill Creek	46–53 (n=3)	4.4–12 (n=3)
Mill Creek between U.S. Highway 395 and Mono Lake (LMC-8)	Lower Mill Creek	53–65 (n=3)	<2.5–5.6 (n=3)
Lundy Powerhouse Tailrace (LPH-9)	Lundy Powerhouse Tailrace	45–57 (n=3)	<2.5 (n=3)

ID= identification number; mg/L= milligrams per liter; TDS= total dissolved solids; TSS= total suspended solids

Turbidity

Turbidity measurements collected during 2025 in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were low (Table 8.4-4).

Metals

Trace metal concentrations in water grab collected during 2025 in Lundy Lake, Mill Creek, MCRD, and the Lundy Powerhouse tailrace were low; concentrations were similar or less

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than laboratory reporting limits with a few exceptions (i.e., arsenic and chromium) (Table 8.4-7).

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Table 8.4-7. Range (Count) of Metals in Grab Samples, 2025

Location (Site ID)	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (UMC-1)	<0.34–0.41 n=3	0.81–3.0 n=3	9.4–12 n=3	<0.31 n=3	<0.17 n=3	<0.14–0.83 n=3	<0.060–0.25 n=3	<0.090–1.3 n=3	0.050–0.60 n=3	<0.15 n=3	1.0–2.0 n=3	<0.13–0.46 n=3	0.97–3.3 n=3	<0.070 n=3	<0.030–0.11 n=3	<0.070 n=3	0.31–2.8 n=3
South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (UMC-2)	<0.34 n=3	5.1–8.5 n=3	9.1–10 n=3	<0.31 n=3	<0.17 n=3	<0.14–0.64 n=3	<0.060–0.13 n=3	0.12–0.60 n=3	0.26–0.47 n=3	<0.15 n=3	1.4–2.0 n=3	<0.13–0.19 n=3	0.79–2.9 n=3	<0.070 n=3	<0.030–0.035 n=3	<0.070–0.085 n=3	0.64–1.9 n=3
Lundy Lake (LL-3)	<0.34–0.67 n=6	3.4–5.3 n=6	7.1–9.7 n=6	<0.31 n=6	<0.17–0.38 n=6	<0.14–6.3 n=6	<0.060–0.11 n=6	0.12–0.49 n=6	<0.020–0.22 n=6	<0.15 n=6	1.0–2.4 n=6	<0.13–2.2 n=6	<0.75–1.1 n=6	<0.070 n=6	<0.030–0.066 n=6	<0.070 n=6	<0.27–4.8 n=6
Mill Creek immediately downstream of Lundy Lake (MCBR-4)	<0.34–0.50 n=3	3.2–5.7 n=3	7.7–9.1 n=3	<0.31 n=3	<0.17 n=3	<0.14–0.48 n=3	<0.060 n=3	<0.090–0.25 n=3	<0.020–0.14 n=3	<0.15 n=3	1.5–2.4 n=3	<0.13–0.16 n=3	<0.75–2.6 n=3	<0.070 n=3	<0.030–0.10 n=3	<0.070 n=3	<0.27–0.66 n=3
Mill Creek upstream of the confluence with the Mill Creek Return Ditch (MCBR-5)	<0.34 n=5	1.8–3.0 n=5	23–27 n=5	<0.31 n=5	<0.17 n=5	<0.14–0.55 n=5	<0.060–0.091 n=5	<0.090–0.46 n=5	<0.020–0.33 n=5	<0.15 n=5	1.9–2.5 n=5	<0.13–0.17 n=5	<0.75–1.5 n=5	<0.070 n=5	<0.030–0.12 n=5	<0.070–0.46 n=5	0.65–4.0 n=5
Mill Creek Return Ditch upstream of the confluence with Mill Creek (MCRD-6)	<0.34 n=3	3.7–4.7 n=3	7.1–8.4 n=3	<0.31 n=3	<0.17 n=3	0.24–0.37 n=3	<0.060 n=3	0.27–0.44 n=3	<0.020–0.12 n=3	<0.15 n=3	1.2–1.3 n=3	<0.13–0.17 n=3	<0.75–1.3 n=3	<0.070 n=3	<0.030–0.059 n=3	<0.070 n=3	1.2–3.0 n=3
Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old U.S. Highway 395 Bridge (LMC-7)	<0.34 n=3	3.6–4.0 n=3	14–20 n=3	<0.31 n=3	<0.17 n=3	0.17–0.45 n=3	<0.060–0.074 n=3	0.30–0.60 n=3	<0.020–0.26 n=3	<0.15 n=3	1.6–1.8 n=3	<0.13–0.21 n=3	<0.75–1.3 n=3	<0.070 n=3	<0.030–0.054 n=3	<0.070 n=3	0.71–4.2 n=3
Mill Creek between U.S. Highway 395 and Mono Lake (LMC-8)	<0.34 n=3	1.4–3.3 n=3	16–25 n=3	<0.31 n=3	<0.17 n=3	<0.14–0.29 n=3	<0.060 n=3	<0.090–0.40 n=3	<0.020–0.19 n=3	<0.15 n=3	2.1–2.3 n=3	<0.13–0.15 n=3	<0.75–1.9 n=3	<0.070 n=3	<0.030–0.11 n=3	<0.070–0.40 n=3	0.67–1.2 n=3
Lundy Powerhouse Tailrace (LPH-9)	<0.34 n=3	3.6–5.2 n=3	7.3–10 n=3	<0.31 n=3	<0.17 n=3	<0.14–0.36 n=3	<0.060 n=3	<0.090–0.30 n=3	<0.020–0.13 n=3	<0.15 n=3	1.4–1.9 n=3	<0.13–0.19 n=3	<0.75–1.2 n=3	<0.070 n=3	<0.030–0.036 n=3	<0.070 n=3	<0.27–0.65 n=3

µg/L = microgram per liter; < indicates results were less than the method detection limit (i.e., results were reported as non-detect in laboratory reports); mg/L = milligram per liter

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BACTERIA

Indicator bacteria were sampled during 7 consecutive weeks surrounding Labor Day (August 7–September 19, 2025). Samples were collected at four sites—Lundy Lake near the boat launch (Site B-LL-1), at the Lundy Dam Day Use Area (Site B-LL-2), Lundy Campground (Site B-MCBR-3), and the Lundy Day Use Area 4 on Mill Creek (Site B-MCBR-4) (Figure 8.4-2).

Lundy Lake and Mill Creek showed low levels of *Escherichia coli* and fecal coliform (Table 8.4-8). Bacteria levels in Mill Creek were greater than Lundy Lake. At the Lundy Lake recreation sites, *E. coli* and fecal coliform levels were low and less than or equal to method reporting limits except in samples collected at the Lundy Dam Day Use Area on September 11, 2025. At Mill Creek recreation sites, *E. coli* and fecal coliform levels were higher during August than September.

Table 8.4-8. Summary of Bacteria Results in Lundy Lake and Mill Creek, 2025.

Analyte (units)		Lundy Lake		Mill Creek	
		B-LL-1	B-LL-2	B-MCBR-3	B-MCBR-4
Escherichia coli (MPN/100 mL)	Count	7	7	7	7
	Range	<1	<1–9.7	2.0–24.9	5.2–23.1
	Geometric mean	<1	<1	8	10
Fecal coliform (MPN/100 mL)	Count	6	6	6	6
	Range	<1.8–2.0	<1.8–33	2.0–11	6.8–130
	Geometric mean	<1.8	1.8	7	20

mL = milliliter; MPN = most probable number

MERCURY IN FISH TISSUE

Fish tissue sampling was conducted in Lundy Lake during August 2025 as part of WQ-1 (Figure 8.4-2). Two target fish species, rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*), were captured and analyzed for mercury in fish tissue.

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Mercury concentrations were lower in rainbow trout than brown trout. No individual fish tissue contained methylmercury[17] concentrations that exceed the U.S. Environmental Protection Agency's (USEPA's) tissue residue criterion, which is equivalent to 0.3 microgram per gram (µg/g; USEPA, 2001). Mercury concentrations in fish tissue and physical characteristics of fish captured are summarized in Table 8.4-9. More information on the methods and mercury concentrations and physical characteristics (i.e., total length, fork length, and weight) by individual fish are included in the WQ-1 draft report (DLA Volume III).

Table 8.4-9. Summary of Mercury in Fish Tissue and Physical Characteristics of Fish Captured in Lundy Lake, 2025

Species	Trophic Level[a,b]	Total Number of Fish	Total Mercury in Fish Tissue (µg/g ww)		Total Length (mm)	
			Mean	Range	Mean	Range
Rainbow trout	3	3	0.011	0.009–0.014	344	308–405
Brown trout	3	1	--	0.038	--	179
	4	8	0.147	0.080–0.249	275	215–317
	All	9	0.134	0.038–0.249	264	179–317
All Fish	--	12	0.104	0.009–0.249	284	179–405

-- = not applicable; µg/g ww = microgram per gram wet weight; mm = millimeter

Notes:

[a] Freshwater trophic level classifications as described by the State Water Resources Control Board (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.

[b] Trophic level classifications were based on the following total lengths: rainbow trout trophic level 3 fish were 150 to 500 mm, brown trout trophic level 4 fish were within 200 to 500 mm, and brown trout trophic level 3 fish were less than 200 mm (SWRCB, 2017).

AQUATIC INVASIVE SPECIES

In response to increasing CDFW concerns regarding the potential spread of invasive golden mussels (*Limnoperna fortunei*) throughout California, SCE collected additional water quality data—including continuous water temperature, in situ water quality measurements, calcium, alkalinity, environmental DNA (eDNA) samples, and visual survey data—from Lundy Lake and completed a vulnerability assessment. Results indicate that Lundy Lake may provide suitable conditions for golden mussel reproduction and larval development during summer months; however, prolonged cold winter temperatures and annual reservoir drawdowns that expose shoreline habitat to desiccation and freezing are expected to substantially reduce the likelihood of successful establishment. Based on available information, the overall vulnerability of Lundy Lake to golden mussel colonization was determined to be low to moderate.

[17] Total mercury concentrations in fish tissue are comparable to methylmercury.

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Although current findings suggest that the risk of establishment is limited, the ability of golden mussels to colonize and persist in cold, high-elevation Sierra Nevada reservoirs remains incompletely understood. Details regarding methods, results, and analysis are provided in the Lundy Lake Golden Mussel Vulnerability Assessment. Details on methods, results, and analysis associated with this study variance are provided in the WQ-1 draft report (DLA Volume III).

Didymosphenia geminata (Didymo), an invasive diatomaceous alga, was observed during 2025 field work at five water temperature monitoring sites (Table 8.4-10 and Figure 8.4-2). Samples were collected at a subset of sites and examined under a compound microscope to confirm identification.

Table 8.4-10. Incidental *Didymosphenia geminata* Observations Within the Lundy Lake Study Area, 2025

Site Description (Site ID)	Date Observed (2025)
Mill Creek upstream of Lundy Lake (UMC-1)	4/8, 8/19
Mill Creek downstream of Lundy Lake (MCBR-2)	6/9, 7/15
Lundy Powerhouse Tailrace (LPH-6)	4/8, 6/9, 7/15, 8/19
MCRD upstream of the confluence with Mill Creek (MCRD-7)	8/19
Mill Creek near Mono Lake (LMC-9)	4/8, 8/19

8.4.2. Environmental Effects

8.4.2.1. Effects of Continued Project Operation on Water Downstream of the Powerhouse

No-Action Alternative

Under the No-Action Alternative, Project facilities and operations would continue as currently licensed. Existing flow regulation, reservoir operations, and water conveyance would continue to influence water temperature, sediment transport, and other water quality parameters.

Water downstream of the powerhouse would continue to reflect the combined influence of releases from Lundy Lake, routing through the powerhouse, and distribution to the Wilson System and Mill Creek via the MCRD. As described in Section 8.4.1, water quality conditions in these downstream receiving waters are characterized by cold temperatures, high DO, low nutrient concentrations, and low turbidity, consistent with an oligotrophic, high-elevation system.

Under continued operations, localized effects on temperature and DO may occur due to flow timing and routing; however, these effects would remain within the range of seasonal and longitudinal variability observed in 2025 monitoring data. No new sources of

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contaminants would be introduced, and water quality would continue to reflect natural watershed conditions and upstream reservoir processes.

From a cumulative perspective, downstream water quality would continue to be influenced primarily by regional hydrology, upstream inputs, and natural watershed processes, with the Project contributing incrementally through flow routing and timing rather than water quality degradation.

PROPOSED ACTION

Under the Proposed Action (continuation of existing operations), effects on water downstream of the Powerhouse would remain similar to current conditions. Potential influence mechanisms include the following:

- Flow regulation affecting temperature and DO dynamics.
- Reservoir storage influencing thermal stratification and nutrient cycling.
- Diversions and return flows altering flow regimes in Mill Creek and Wilson Creek.
- Sediment transport processes influenced by watershed inputs and reservoir trapping.

Consistent with available WQ-1 and WQ-2 data, downstream water quality would continue to be characterized by cold water temperatures, high DO saturation, low concentrations of nutrients and metals, and low turbidity, indicating minimal Project-related degradation.

Mixing of powerhouse discharge with receiving waters and intermittent contributions from the MCRD may result in localized, short-term variability in temperature and flow, but these effects are not expected to result in exceedances of Basin Plan objectives or adverse impacts to beneficial uses.

Given the long operational history, compliance with minimum flow requirements, and absence of proposed operational changes, Project contributions to cumulative water quality effects downstream of the powerhouse would remain minor and incremental relative to watershed-scale drivers, and conditions are expected to remain stable and within the range of existing variability.

8.4.2.2. Effects of Continued Project Operation on Water Quality in Lundy Lake

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, Lundy Lake would continue to be operated for seasonal storage and flow regulation, resulting in water quality conditions that reflect a combination of natural inputs and reservoir processes.

As described in Section 8.4.1, Lundy Lake exhibits seasonal thermal stratification, high DO in surface waters, and low nutrient concentrations, consistent with oligotrophic

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conditions. Stratification during summer may result in reduced DO in deeper waters; however, these conditions are natural for high-elevation reservoirs and do not persist downstream.

Nutrient levels, chlorophyll-a, and turbidity would remain low, indicating limited primary productivity and absence of nuisance algal blooms. Mercury cycling and bioaccumulation in fish tissue would continue to reflect regional atmospheric deposition and reservoir biogeochemical conditions rather than Project-specific inputs.

Cumulatively, water quality in Lundy Lake would continue to be influenced primarily by watershed inputs, climate-driven hydrology, and natural limnological processes, with the Project maintaining existing conditions through storage and release operations.

PROPOSED ACTION

Under the Proposed Action, continued operation of Lundy Lake would maintain existing reservoir dynamics, including seasonal stratification, nutrient cycling, and sediment retention.

Water quality conditions would remain consistent with those documented in 2025 monitoring, including:

- Cold surface water temperatures with seasonal variation;
- High DO in the epilimnion and variable conditions in deeper waters during stratification;
- Low nutrient and chlorophyll-a concentrations; and
- Low turbidity and low concentrations of dissolved constituents and metals.

Project operations may influence residence time and vertical mixing, but these effects are inherent to reservoir systems and are not expected to degrade water quality or impair beneficial uses.

Within the context of cumulative effects, Lundy Lake would continue to function as a headwater storage reservoir, with its contribution to cumulative water quality effects limited to maintaining existing limnological conditions and trapping sediment, rather than contributing to pollutant loading or degradation.

8.4.2.3. Effects of Continued Project Operation on Downstream Water Rights and Users

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, Project operations would continue to be conducted in accordance with existing water rights, adjudication requirements, and FERC license

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conditions. Flows would continue to be allocated between the Wilson System and Mill Creek based on operational requirements and water rights obligations.

Downstream water users rely on the timing, quantity, and routing of flows rather than changes in water quality. As described in Section 8.4.1, water quality in Project-affected waters is consistently high and suitable for established beneficial uses, including municipal supply, recreation, and aquatic habitat.

Accordingly, continued operations would not adversely affect downstream users through degradation of water quality. Any existing effects are associated with flow distribution and availability, rather than changes in chemical or physical water quality parameters.

Cumulatively, downstream water users would continue to experience the combined effects of watershed hydrology, upstream diversions, and regional water management, with the Project's contribution limited to its existing role in the Mill Creek system.

PROPOSED ACTION

Under the Proposed Action, Project operations would continue to meet water rights obligations and delivery requirements through existing infrastructure, including the powerhouse, Wilson System, and MCRD.

Water quality delivered to downstream users would remain consistent with current conditions and would continue to support designated beneficial uses. There would be no introduction of pollutants or degradation of water quality attributable to Project operations.

Potential effects to downstream users would continue to be related to flow timing and distribution, rather than water quality. The Project would continue to operate as a non-consumptive use, with water conveyed downstream following power generation.

Within a cumulative context, the Project would remain one of several factors influencing downstream water availability and routing, but its contribution to cumulative water quality effects on downstream users would remain negligible.

8.4.2.4. Effects of Continued Project Operation on Water Quality in the Project Bypassed Reach and Downstream of the Powerhouse

As indicated by WQ-2, Mill Creek water temperatures followed expected seasonal patterns, with the coolest conditions occurring upstream of Lundy Lake (UMC-1) and the warmest at downstream sites near Mono Lake (LMC-9), where the maximum temperature recorded was 20.1°C on September 3, 2025. During the July 22-28, 2025, high-flow period (approximately 50-150 cfs), temperature differences among downstream sites became less pronounced, likely due to increased flow volume, travel rates, and mixing that created a more uniform temperature regime. Temperature monitoring will continue through 2026 to evaluate interannual variability and conditions under a broader range of hydrologic and operational scenarios, with results incorporated into the Final Technical Report and considered as part of the FLA.

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NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the bypassed reach of Mill Creek would continue to receive flows in accordance with minimum flow requirements and natural accretions. These flows, combined with seepage and tributary inputs, would sustain water quality conditions in the bypassed reach.

Water quality in the bypassed reach is expected to remain consistent with upstream conditions, characterized by cold temperatures, high DO, and low constituent concentrations. Monitoring data indicate that water quality conditions are similar across upstream and downstream sites, reflecting limited Project-related degradation.

Potential effects include minor reductions in flow volume relative to unimpaired conditions; however, these do not correspond to measurable degradation in water quality.

Cumulatively, water quality in the bypassed reach would continue to reflect a combination of Project operations, natural inflows, and regional hydrologic conditions, with the Project contributing incrementally through flow regulation rather than water quality impairment.

PROPOSED ACTION

Under the Proposed Action, continued compliance with MIF requirements would maintain existing hydraulic and water quality conditions in the bypassed reach.

Potential Project-related effects in the bypassed reach and downstream include:

- Minor changes in temperature due to reduced flow volumes and increased solar exposure;
- Localized variation in DO related to flow depth and velocity; and
- Limited sediment transport due to upstream reservoir trapping.

However, available data indicate that water quality parameters in the bypassed reach and downstream remain within natural variability and are comparable to upstream reference conditions.

Downstream of the powerhouse, mixing with powerhouse discharges and MCRD inflows may introduce localized variability in flow and temperature, but these effects are short-term and spatially limited.

From a cumulative perspective, the Project's contribution to water quality conditions in the bypassed reach and downstream is minor relative to natural watershed processes, and continued operation is not expected to result in cumulative degradation of water quality or impairment of beneficial uses.

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8.4.2.5. Bioaccumulation of Mercury in Fish Tissue and Potential Consumption Guidelines to Avoid Human Health Risks in Project Reservoirs

NO-ACTION ALTERNATIVE

Mercury bioaccumulation in fish is expected to continue under existing environmental conditions (see Figure 8.4-7). Consumption advisories based on fish tissue sampling would remain applicable to protect human health.

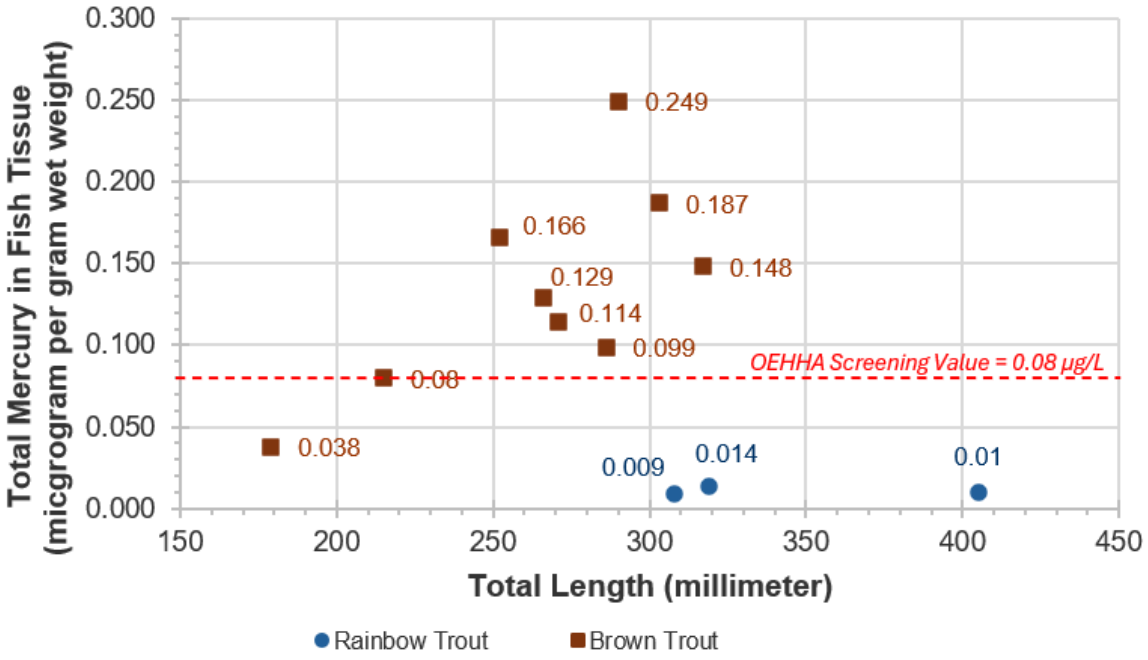


Figure 8.4-7. Mercury in Individual Fish Tissue by Total Length Compared to the Office of Environmental Health Hazard Assessment Screening Value.

PROPOSED ACTION

Continuation of existing operations is not expected to alter mercury cycling or bioaccumulation patterns in a measurable way, as these are largely driven by regional atmospheric deposition and reservoir biogeochemical conditions rather than Project-specific operations.

8.4.2.6. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

INYO NATIONAL FOREST LAND MANAGEMENT PLAN

The Project is consistent with the Inyo National Forest LMP (USFS, 2019), including watershed and aquatic resource plan components WTR-FW-DC-01, -02, -03, -04, -05, and -06; WTR-FW-STD-01; and WTR-FW-GDL-01, which address maintenance of water

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quality, natural flow regimes, sediment processes, and functioning watersheds, as well as SPEC-FW-DC-01 and -02 and SPEC-FW-STD-01, which provide for aquatic habitat conditions that support native and at-risk species (USFS, 2019). The following include desired conditions relating to water quality resources, with which the Project is consistent:

- WTR-FW-DC-02: Water quality supports state-designated beneficial uses and maintains biological, physical, and chemical integrity.
- WTR-FW-DC-01: Adequate quantity and timing of flows support ecological structure and aquatic species.
- WTR-FW-DC-03: Watersheds are functioning or trending toward function, with maintained hydrologic connectivity and resilience.
- WTR-FW-DC-06: Sediment timing, volume, and transport remain within natural variability.
- WTR-FW-DC-04: Soil and vegetation functions sustain water quality and aquatic habitat.
- WTR-FW-DC-05: Infrastructure has minimal adverse effects on aquatic and riparian resources.
- WTR-FW-STD-01: Require best management practices to mitigate impacts to water and soil resources.
- WTR-FW-GDL-01: Minimize effects of diversions and recommend instream flows to protect aquatic species and channel integrity.
- SPEC-FW-DC-01: Healthy ecosystems support sustainable aquatic species populations.
- SPEC-FW-DC-02: Habitat conditions support survival and persistence of at-risk species.
- SPEC-FW-STD-01: Projects incorporate mitigation to protect habitat for at-risk species.

LAHONTAN REGION WATER QUALITY CONTROL BOARD BASIN PLAN

Federal water quality standards required by the Clean Water Act are implemented under the authority of the California State Water Resources Control Board (SWRCB) and the Lahontan Region Water Quality Control Board (LRWQCB). The Lahontan Region Water Quality Control Plan (Basin Plan) was revised in 2021 and establishes water quality standards applicable to the Project Area. Although no site-specific water quality standards are established for Mill Creek or Lundy Lake, the Basin Plan provides regional standards that apply to Project waters (LRWQCB, 2021).

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Available monitoring data as of April 2026 indicate that water quality in Lundy Lake, Mill Creek, and downstream receiving waters generally meets or is consistent with Basin Plan objectives, with any exceedances expected to be limited, site-specific, and within the range of natural variability.

Basin Plan water quality standards consist of designated beneficial uses and water quality objectives. Beneficial uses established for Project waters include municipal and domestic supply (MUN); water contact recreation (REC-1); hydropower generation (POW); navigation (NAV); non-contact recreation (REC-2); cold freshwater habitat (COLD); commercial sportfishing (COMM); wildlife habitat (WILD); and spawning, reproduction, and/or early development (SPWN). Additional uses include agricultural supply (AGR), groundwater recharge (GWR), and freshwater replenishment (FRSH).

The Basin Plan includes both narrative and numeric surface water quality objectives to protect these beneficial uses, as summarized in Table 8.4-11.

Table 8.4-11. Lahontan Region Water Quality Basin Plan Objectives

Objective (or Constituent)	Criteria with Applicable Threshold Values
Ammonia	One-hour and 4-day unionized ammonia criteria are temperature- and pH-dependent.
Bacteria	Six-week rolling geometric mean of *E. coli* <100 cfu/100 mL and Statistical Threshold Value of 320 cfu/100 mL not exceeded by more than 10% of samples per month.
Biostimulatory Substances	Shall not promote nuisance aquatic growth or adversely affect beneficial uses.
Chemical Constituents	Waters designated MUN shall not exceed MCLs or SMCLs and shall not adversely affect beneficial uses.
Chlorine	Median ≤0.002 mg/L and maximum ≤0.003 mg/L.
Color	Shall not cause nuisance or adversely affect beneficial uses.
Dissolved Oxygen	≥80% saturation; COLD and SPWN waters ≥9.5 mg/L (7-day mean) and ≥8.0 mg/L (1-day minimum).
Floating Materials	Shall not be altered beyond 10% significance level for natural high-quality waters.
Oil and Grease	Shall not be present in concentrations that alter natural conditions.
Non-degradation of Aquatic Communities	Waters shall be free from substances that cause adverse biological effects or nuisance aquatic life.
pH	Shall not deviate more than 0.5 units from natural conditions.
Radioactivity	Shall not exceed Title 22 standards or harm aquatic or human health.
Sediment	Suspended sediment shall not be altered to the extent that beneficial uses are affected.
Settleable Materials	Shall not exceed 0.1 mL/L above natural conditions.
Suspended Materials	Shall not exceed natural levels by more than 10%.
Taste and Odor	Shall not be altered from natural conditions.

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Objective (or Constituent)	Criteria with Applicable Threshold Values
Temperature	Shall not be altered in waters designated COLD.
Toxicity	Waters shall be free of toxic substances; California Toxics Rule (40 CFR 131.38) applies.
Turbidity	Shall not increase more than 10% above natural levels.

Source: LRWQCB, 2021; SWRCB, 2017

cfu = colony forming units; mL = milliliter; MCL = Maximum Contaminant Level; SMCL = Secondary Maximum Contaminant Level

Additionally, under the State of California Antidegradation Policy, where existing water quality exceeds Basin Plan objectives, that higher quality must be maintained unless specific regulatory findings are made. Limited degradation may be allowed if (1) it does not unreasonably affect beneficial uses or aquatic life, (2) it is necessary to accommodate important economic or social development, and (3) it does not result in long-term or permanent degradation of Outstanding Natural Resource Waters, such as Mono Lake.

Overall, based on available monitoring data, Project waters are consistent with Basin Plan objectives and antidegradation requirements, and continued operation is not expected to result in degradation of water quality or impairment of beneficial uses.

Additionally, under the State of California Antidegradation Policy, whenever the existing water quality is better than the objectives established in the Basin Plan (both narrative and numerical), such existing quality must be maintained (unless appropriate findings are made under the policy). Some increase in pollutant levels may be allowable if (1) a reduction in water quality would not seriously harm any species found in the water; (2) lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located, and existing beneficial uses are protected; and (3) long-term or permanent water quality in Outstanding Natural Resource Waters (including Mono Lake) is not reduced.

Ammonia

Total ammonia concentrations measured in Lundy Lake, Mill Creek, the Lundy Powerhouse tailrace, and the MCRD during 2025 were low, ranging from less than 0.025 mg/L to 0.52 mg/L total ammonia-nitrogen (Table 8.4-5). The highest concentration was measured in the MCRD (0.52 mg/L), while concentrations at all other locations were less than 0.10 mg/L. These concentrations are well below applicable acute and chronic ammonia toxicity thresholds associated with the water temperature and pH conditions measured during the study period (USEPA, 2013). Therefore, no exceedances of ammonia toxicity criteria were identified, and the results demonstrate consistency with Basin Plan objectives for the protection of aquatic life (Table 8.4-11; LRWQCB, 2021). See Table 8.4-5 for more information.

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Bacteria

Lundy Lake and Mill Creek near recreation sites showed low levels of *E. coli* (<1–24.9 most probable number [MPN]/100 milliliter [mL]) during sampling between August 7 and September 19, 2025 (Table 8.4-8). Concentrations were within numerical water quality objectives for bacteria (Table 8.4-11; SWRCB, 2017).

Biostimulatory Substances

Nutrient concentrations (nitrogen species and phosphorus) are consistently low and often near laboratory detection limits. Evidence of nuisance algal growth from Didymo was observed. See Aquatic Invasive Species for more information. These conditions are consistent with oligotrophic system characteristics and demonstrate compliance with Basin Plan objectives prohibiting excessive aquatic growth. See Table 8.4-5 for more information.

Chemical Constituents

Measured inorganic and dissolved constituents (e.g., nitrate, TDS, specific conductance) are well below applicable Maximum Contaminant Levels (MCLs) and do not adversely affect beneficial uses. Metals are generally not detected or present at trace levels, indicating compliance with Basin Plan requirements for chemical constituents.

Chlorine

Chlorine is included as part of the Basin Plan water quality objectives; however, chlorine is not identified as a constituent of concern or measured parameter in Project waters. Available water quality information reflects general inorganic chemistry (which may include chloride as a naturally occurring constituent), but no Project-related sources or effects associated with chlorine are identified.

Color

Waters in the Project Area exhibit high clarity and natural coloration, with no evidence of discoloration or nuisance conditions. This condition is consistent with Basin Plan objectives.

Dissolved Oxygen

DO levels in streams are generally high and near saturation (~7.4–10 mg/L), supporting cold-water fisheries. Localized reductions in DO may occur in reservoir hypolimnia under stratified summer conditions; however, these are natural seasonal conditions and do not adversely affect aquatic communities or compliance downstream. Overall, DO conditions are consistent with Basin Plan objectives. See Table 8.4-6 for more information.

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Floating Material

There are no observable accumulations of floating material attributable to Project operations, and waters remain free of nuisance conditions. Basin Plan objectives are met.

Oil and Grease

Project operations do not introduce oil or grease to surface waters, and no oil sheen or film has been observed. This is consistent with Basin Plan objectives for natural high-quality waters.

Non-degradation of Aquatic Communities and Populations

Biological data, including healthy fish populations and good water quality, indicate that aquatic communities are not adversely affected by Project operations.

Existing water quality conditions support designated uses (e.g., COLD, SPWN), demonstrating consistency with non-degradation requirements.

pH

Measured pH values are generally near neutral to slightly alkaline (approximately 6.3–8.1). Minor variability or localized deviations are attributable to natural geochemical and stratification processes and remain consistent with Basin Plan allowances.

Radioactivity

There are no known sources of radionuclides associated with Project facilities, and no evidence of radioactivity affecting water quality. Basin Plan objectives are met.

Sediment

Sediment transport reflects natural watershed processes, with occasional increases during runoff events. There is no evidence of Project-related increases in sediment loading, and conditions do not adversely affect beneficial uses.

Sport Fish

Fish tissue mercury concentrations are below the Basin Plan objective for waters designated for COMM, WILD, and COLD beneficial uses, which specifies that mean methylmercury concentrations in the highest trophic level fish shall not exceed 0.2 µg/g within a calendar year. Measured concentrations are also comparable to or below applicable USEPA human health criteria (0.3 µg/g). These results, together with observations of healthy and self-sustaining fish populations, indicate consistency with Basin Plan objectives related to sport fish and human consumption.

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Settleable Materials

No measurable increases in settleable materials attributable to Project operations have been observed. Conditions meet Basin Plan objectives.

Suspended Materials

The Project does not explicitly contribute to increased suspended materials or turbidity in Project waters from runoff events. While natural hydrologic variability is acknowledged, the only documented short-term increases in turbidity are associated with Project-related O&M activities (SWRCB, 2017), rather than stormwater or watershed runoff processes.

Tastes and Odors

Waters are free from objectionable taste or odor, consistent with natural high-quality mountain systems. Basin Plan objectives are met.

Temperature

The Lahontan Basin Plan specifies that, for waters designated as COLD, temperature shall not be altered. Water temperatures are consistent with cold-water habitat requirements, generally less than 20°C, and reflect natural longitudinal warming patterns. Continuous temperature monitoring conducted from April 2025 through April 2026 indicates that water temperatures throughout the Project Area remain characteristic of a cold, high-elevation stream and generally support designated COLD and SPWN beneficial uses. Monitoring results demonstrate expected seasonal and longitudinal temperature patterns, with the coldest conditions occurring in reaches upstream above Lundy Lake and gradual warming occurring downstream.

Comparison of water temperatures upstream and downstream of Lundy Lake indicate differences are small and generally consistent with natural reservoir and stream processes. Maximum temperatures recorded upstream of Lundy Lake were approximately 12°C, while temperatures in Mill Creek immediately downstream of Lundy Dam remained relatively cool and generally less than 16.5°C. Temperature monitoring also indicates that inflows from the Mill Creek Return Ditch (MCRD) and Lundy Powerhouse tailrace can be slightly warmer during summer months, with maximum temperatures approaching 18°C. However, these warmer inflows are localized and rapidly mix with cooler waters in Mill Creek. Downstream monitoring locations did not show evidence of persistent temperature increases attributable to Project operations. Temperature patterns remained consistent with natural seasonal variability and longitudinal warming expected in eastern Sierra Nevada watersheds. Based on Year 1 monitoring results, no evidence was identified indicating that Project operations are causing measurable alterations to water temperature beyond natural spatial and seasonal variability observed within the Mill Creek watershed.

Aquatic resource information collected as part of the AQ-2 Study further supports the conclusion that temperature conditions are protective of designated beneficial uses. Cold-water aquatic communities, including trout populations within Lundy Lake and Mill Creek,

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remain present and appear healthy based on fisheries observations and supporting water quality metrics. Dissolved oxygen concentrations remained generally high and near saturation throughout stream reaches, indicating that temperature conditions continue to support cold-water habitat functions, aquatic life reproduction, growth, and survival. See section 8.5 Fish and Aquatic Resources for more information.

Based on available Year 1 monitoring data from the WQ-1 Study and WQ-2 Study, Project operations do not appear to be causing measurable temperature alterations that would adversely affect beneficial uses or result in Basin Plan objective exceedances. Instead, observed temperature patterns are consistent with naturally occurring seasonal variability, hydrologic conditions, and watershed processes. Temperature monitoring will continue through 2026 to evaluate interannual variability and conditions under a broader range of hydrologic and operational scenarios. Results from the ongoing monitoring effort will be incorporated into the Final Technical Report and considered as part of the Final License Application (FLA), where a more comprehensive assessment of Project-related temperature effects relative to Basin Plan objectives will be completed.

Toxicity

No evidence of toxic substances at concentrations harmful to aquatic life has been detected in Project waters. Observed concentrations of ammonia, metals, and other constituents remain below applicable toxicity thresholds, consistent with Basin Plan objectives, including criteria for protection from toxic substances, ammonia toxicity (which varies with temperature and pH), and the California Toxics Rule (40 CFR 131.38) for priority pollutants. These findings are further supported by compliance with Project-specific environmental protection measures, including implementation of a Hazardous Substance Plan (USFS 4(e) Condition No. 7), which minimizes the risk of chemical releases, and best management practices applied during O&M activities. Collectively, these controls ensure that waters remain free of toxic substances in concentrations that would produce detrimental physiological effects to aquatic life, consistent with Basin Plan narrative toxicity objectives and applicable state and federal standards.

8.4.2.7. Proposed Protection, Mitigation, and Enhancement Measures

Because the Proposed Action consists of continued operation without modification, no new water quality mitigation or enhancement measures are proposed.

Existing measures—including minimum flow releases and compliance with water rights requirements as described in the Water Management Plan (Appendix E.2, DLA Volume II)—will ensure continued protection of water quality and beneficial uses.

8.4.2.8. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Water Quality.

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8.4.3. REFERENCES

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8.5. FISH AND AQUATIC RESOURCES

This section describes the aquatic habitat, fish, and aquatic resources that occur or have the potential to occur in the vicinity of the Lundy Project (FERC Project No. 1390), including Lundy Lake and Mill Creek downstream of Lundy Lake to the confluence with Mono Lake.

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8.5.1. AFFECTED ENVIRONMENT

Historically, Mill Creek and other tributaries to Mono Lake were fishless (FERC, 1992; Moyle, 2002). Rainbow (*Oncorhynchus mykiss)*, Lahontan cutthroat (*O. clarkii henshawi*), brown (*Salmo trutta)*, and brook (*Salvelinus fontinalis)* trout were all introduced to the Mono Basin as early as the 1880s, and, with the exception of Lahontan cutthroat trout, their populations have since become established throughout. Tui chub (*Siphateles bicolor*) are also present in the watershed (AQ-1 draft report, DLA Volume III), but it is unclear when they were introduced, as there is no stocking record of this species. Various subspecies are native in adjacent watersheds both directly north (East Walker River) and south (Owens River) of the Mill Creek/Mono Lake watershed (USGS, 2026).

8.5.1.1. Fishery Management

The initial introduction of trout to the Mill Creek watershed is unknown but may have occurred around 1880 (Vestal, 1954). Lahontan cutthroat and rainbow trout were among the first trout species stocked in the Mono Basin, with populations becoming established in nearby watersheds by the early 1900s (Vestal, 1954). Brown trout were introduced to the basin in 1919, and brook trout were introduced into the Mono Basin in 1931. Annual plantings of brown and rainbow trout ranging from approximately 50–100 millimeters total length (TL) were made in the early 1900s to support recreational fishing opportunities (Vestal, 1954).

Catchable rainbow and brown trout have been planted in Lundy Lake and Mill Creek to support a put-and-take fishery (CDFG, 1996). From 1980 to 1985, up to 60,000 catchable-sized (i.e., greater than 152 millimeters TL) rainbow trout were planted in Lundy Lake (CDFW, data files 1980–1985, as cited in FERC, 1992). Prior to 1996, Lundy Lake was stocked with 30,000–40,000 catchable rainbow trout and 3,500–5,000 sub-catchable (i.e., fingerlings less than 0.5 pound) brown trout annually, and Mill Creek was stocked with approximately 2,000 catchable rainbow trout annually (CDFG, 1996).

Stocking records from 1996 to 2016 are limited. From 2017 to 2025, CDFW Fish Springs Hatchery released sterile rainbow trout in Lundy Lake and Mill Creek downstream of Lundy Dam up to 14 times a year (personal communication, Graham Meese, Senior Environmental Scientist, CDFW, March 13, 2026) for a put-and-take fishery (Table 8.5-1).

Table 8.5-1. Rainbow Trout Stocking Information for Mill Creek and Lundy Lake, 2017–2025

Year	Waterbody	Number	Pounds	Average Weight per Fish (Pounds)
2017	Mill Creek	1,400	700	2.00
	Lundy Lake	15,785	8,105	1.95
2018	Mill Creek	1,235	600	2.06
	Lundy Lake	15,860	7,650	2.07

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Year	Waterbody	Number	Pounds	Average Weight per Fish (Pounds)
2019	Mill Creek	1,400	700	0.50
	Lundy Lake	9,400	4,700	0.50
2020	Mill Creek	100	50	0.50
	Lundy Lake	1,700	850	0.50
2021	Mill Creek	0	0	--
	Lundy Lake	8,460	1,800	0.20
2022	Mill Creek	0[a]	0[a]	--
	Lundy Lake	0[a]	0[a]	--
2023	Mill Creek	2,950	1,400	0.47
	Lundy Lake	10,160	4,700	0.46
2024	Mill Creek	740	400	0.54
	Lundy Lake	6,040	825	
2025	Mill Creek	0[b]	0[b]	--
	Lundy Lake	5,680	4,000	0.70

Source: CDFW, unpublished data

Notes:
[a] Fish stocking by CDFW did not occur in Lundy Lake or Mill Creek in 2022 due to disease outbreak at CDFW hatcheries (personal communication, Graham Meese, Senior Environmental Scientist, CDFW, July 22, 2024).
[b] Fish stocking by CDFW did not occur in Mill Creek in 2025 due to limited capacity and high demand to stock waterbodies throughout the Eastern Sierra (personal communication, Graham Meese, Senior Environmental Scientist, CDFW, March 13, 2026).

8.5.1.2. Fish Life Histories

Fish assemblages in the Project Area are dominated by non-native introduced trout species and tui chub. The timing of major life history events for fish species documented in Lundy Lake and Mill Creek downstream of Lundy Dam is included in based on data reported by Moyle (2002) and CalFish (2023) (Table 8.5-2).

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Table 8.5-2. Life History Periodicity of Fish Species Likely to Occur in Lundy Lake and Mill Creek downstream of Lundy Dam

Life Stage	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Brown Trout												
Spawning	Potential Use	Potential Use	Peak period	Peak period	Peak period	Peak period	Potential Use	Potential Use				
Incubation	Potential Use	Potential Use	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Potential Use	Potential Use		
Fry/YOY	Peak period	Peak period					Potential Use	Potential Use	Potential Use	Peak period	Peak period	Peak period
Juvenile	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Adult	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Brook Trout												
Spawning	Peak period	Peak period	Peak period	Potential Use	Potential Use							Potential Use
Incubation	Potential Use	Potential Use	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Potential Use	Potential Use		Potential Use
Fry/YOY	Peak period	Peak period			Potential Use	Potential Use	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Juvenile	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Adult	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Rainbow Trout												
Spawning						Potential Use	Peak period	Peak period	Peak period	Potential Use		
Incubation					Potential Use	Peak period	Peak period	Peak period	Peak period	Peak period	Potential Use	
Fry/YOY	Peak period	Peak period	Peak period			Potential Use	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Juvenile	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Adult	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Tui Chub												
Spawning								Potential Use	Peak period	Peak period	Potential Use	
Incubation								Potential Use	Peak period	Peak period	Peak period	Potential Use
Fry/YOY	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period			Potential Use	Peak period	Peak period
Juvenile	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period
Adult	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period	Peak period

Peak period Potential Use

Source: Moyle, 2002; CalFish, 2023

YOY = young-of-year

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BROWN TROUT

Brown trout are native to Europe, North Africa, and western Asia and were introduced to North America in the late nineteenth century. Since their introduction, they have been reared in hatcheries and planted throughout the state of California (Moyle, 2002).

Optimal habitats for brown trout are medium to large, slightly alkaline, clear streams with riffles and large, deep pools. Adults tend to occupy the bottom of pools while younger trout can be found in pools and riffles (Moyle, 2002). Brown trout prefer water temperatures from 12–20°C, and optimal growth occurs at 17–18°C. Brown trout fry, juveniles, and adults have been observed in streams with winter water temperatures as low as 0.1–1.5°C and can survive brief periods of time at temperatures up to 28–30°C (Calkins, 1989). Brown trout have a variable diet that changes with body length and season; smaller trout prey upon drift organisms, while medium-sized trout selectively feed on benthic aquatic invertebrates. Brown trout between 9.8 and 15.7 inches (25 and 40 centimeters) TL pursue larger prey, such as fish, crayfish, and dragonfly larvae. Brown trout over 15.7 inches (40 centimeters) TL almost exclusively feed on fish. Feeding is most intense at dawn and dusk; however, active feeding can occur at any time (Moyle, 2002). If the waterbody freezes during the winter, ice cover provides shelter from terrestrial predators and reduces the amount of light reaching the water, which has been found to reduce stress responses and increase swimming activity in brown trout (Watz et al., 2015).

Brown trout reach sexual maturity in their second to third year. Spawning takes place in the fall and winter, most commonly in November and December in California (Moyle, 2002). Streams containing riffles with gravel size between 0.4 and 1.6 inches (1–4 centimeters) in diameter are preferred for spawning, and the most suitable spawning locations within a stream are pool tails with deeper water, less turbulent current, and nearby cover. Spawning sites are selected by the female once water temperatures drop to 6–10°C (Moyle, 2002). Eggs are fertilized and buried in redds to incubate through the winter months and typically hatch within 7 to 8 weeks, depending on water temperatures (Moyle, 2002). During the winter, egg survival has been observed at redd temperatures as low as 0–8°C (Calkins, 1989). Fry emergence typically occurs from March through April.

BROOK TROUT

Brook trout are native to the northeastern United States and eastern Canada. They were first introduced to California in 1871, and by 1872 they were being distributed throughout the state by the California Fish Commission (Moyle, 2002). Within the West Coast states, they have become established in mountain streams and lakes ranging from the San Bernardino Mountains in the south to the U.S.–Canada border in the north and are abundant in the Sierra Nevada.

Brook trout in California are primarily found in isolated mountain lakes and headwater streams. Preferred temperatures range from 14–19°C; however, brook trout can survive at temperatures as low as 1°C and can acclimate to temperatures as high as 26°C (Moyle,

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2002). Brook trout tend to feed on whichever organisms are most abundant; prey items typically include terrestrial insects, aquatic insect larvae, zooplankton, and occasionally benthic organisms or other fish. Feeding is most intensive in the evening and early morning; however, feeding will occur whenever there is sufficient light to see prey.

Maturity occurs at an early age. Some brook trout males spawn as soon as the end of their first summer and females at the end of their second summer; however, it is more common for males to mature in their second or third year and females in their third or fourth year (Moyle, 2002). Brook trout can spawn in both stream and lake habitats. Spawning occurs in the fall, but the timing is dependent on water temperature (4–11°C). Spawning sites are selected by females, with site characteristics including water depths greater than 1.3 feet (40 centimeters), water temperatures colder than the surrounding waters associated with groundwater upwelling, gravel size between 0.4 and 1.6 inches (1–4 centimeters) diameter, and nearby cover (Moyle, 2002). Eggs are fertilized and buried in redds to incubate through the winter months. Fry emerge in the early spring. This ability to spawn in lakes has allowed brook trout to maintain populations in mountain lakes without accessible inlets or outlets, a requirement for most other salmonids (Moyle, 2002).

RAINBOW TROUT

Rainbow trout typically occupy coldwater habitats, including lakes, reservoirs, streams, and rivers. Optimal growth occurs in water temperatures of 15–18°C with near-saturation levels of dissolved oxygen (Moyle, 2002). Stream-resident rainbow trout typically remain within a few hundred meters of stream throughout their entire lives, although some individuals will disperse further due to food availability, competition, and habitat quality (Moyle, 2002). For their first few years, naturally produced (i.e., not hatchery produced) rainbow trout occupy cool, clear, permanent streams of fast-flowing waters with ample riffle habitat, cover provided by undercut banks and riparian vegetation, and abundant invertebrate resources. Older trout (natural or hatchery produced) occupy a variety of deeper habitats including pockets behind rocks, runs, and pools, and stay near areas such as pool inlets where fast water delivers drifting prey (Moyle, 2002). They are highly successful competitors and aggressively defend feeding territories from both other species and conspecifics. Prey items include drifting aquatic organisms, terrestrial insects, benthic invertebrates, and on occasion small fish (Moyle, 2002). During high instream flows, juvenile stream-resident rainbow trout use log jams, upturned roots, and debris piles as cover, whereas adults seek out boulder habitat. Rainbow trout adults are less active in the winter and may remain in one place during this period (Calkins, 1989).

Resident rainbow trout typically mature in their second or third year after reaching sizes greater than 5 inches (13 centimeters). Spawning can occur from February to June; however, low temperatures may extend spawning into July or August. During spawning, females dig redds in coarse gravel at the tail of a pool or in a riffle and deposit between 200–12,000 eggs, with females less than 11.8 inches (30 centimeters) TL typically depositing fewer than 1,000 (Moyle, 2002). Spawning may occur on an annual or biennial interval. During the winter, eggs have remained viable at temperatures as low as 0.3–2.0°C (Calkins, 1989).

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TUI CHUB

Tui chub are native to various Great Basin watersheds, portions of the Columbia River drainage, and the Mojave, Klamath, and upper Pit rivers (USGS, 2026), where they occupy a wide range of freshwater habitats, including lakes, reservoirs, ponds, springs, and slow-moving streams and rivers. They are most commonly associated with low-velocity environments such as pools, backwaters, and areas with abundant aquatic vegetation and fine substrates (sand and silt), which provide cover and foraging habitat (Moyle, 2002; USFWS, 2009). Unlike salmonids, tui chub are highly tolerant of environmental variability, including relatively warm water temperatures, fluctuating flows, elevated salinity, and low dissolved oxygen conditions, enabling them to persist in habitats unsuitable for many other fishes (Archbold, 1996; Moyle, 2002). In stream systems, tui chub are generally restricted to slow, depositional habitats, where they use submerged vegetation, undercut banks, and debris for refuge (Jenkins, 1990; Moyle, 2002). In lake environments, they frequently form schools in nearshore and open-water habitats, with juveniles occupying shallow vegetated margins and adults using a broader range of depths (Moyle, 2002). Younger individuals rely heavily on shallow habitats rich in food and cover, while older fish expand into deeper water habitats.

Tui chub are generalist omnivores, feeding primarily on algae, detritus, zooplankton, and aquatic invertebrates such as chironomid larvae and other benthic organisms, with occasional consumption of small fish in larger individuals (Kucera, 1978; Cooper, 1985; Moyle, 2002). Feeding strategies vary among populations, with some lake populations specializing on plankton in open water, while others forage along the bottom or within vegetation (Moyle, 2002). This trophic flexibility allows tui chub to achieve high abundances and often dominate fish assemblages where they occur.

Tui chub reach sexual maturity within 1–3 years, with males often maturing earlier than females. Spawning occurs from spring through summer (approximately April–August), depending on local temperature regimes and hydrologic conditions (Kucera, 1978; Moyle, 2002). Spawning takes place in shallow, nearshore areas with aquatic vegetation, where adults aggregate and broadcast adhesive eggs over plants or substrates without constructing nests (Moyle, 2002). Females are highly fecund, with reported fecundities ranging from several thousand to more than 60,000 eggs per individual, depending on size and condition (Kucera, 1978; Moyle, 2002). Spawning may occur multiple times during a season (i.e., fractional spawning). Incubation extends for 1 to 2 weeks depending on water temperature. Larvae and juveniles develop in warm, shallow, food-rich habitats, where growth can be rapid under favorable conditions (Cooper, 1985). Tui chub commonly reach 10 or more years of age, with some populations exhibiting even greater longevity (Moyle, 2002).

Listing status varies depending on the subspecies of tui chub, with the Owens tui chub (*Siphateles bicolor snyderi*) and Mohave tui chub (*Siphateles bicolor mohavensis*) listed as both federally and state endangered. The Lahontan tui chub (*Siphateles bicolor obesa*), which is native to the Walker Creek watershed directly north of the Mill Creek watershed, is neither listed under the Endangered Species Act (ESA) nor as a California species of special concern (CDFW, 2026a). Hybrids of Owens and Lahontan tui chub

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have been documented in other lakes in the Mono Lake Basin (June Lake) and in the Owens River (Chen et al. 2007).

8.5.1.3. Reservoir Fish Assemblage

While Lundy Lake was not formally surveyed as part of the early 1980s relicensing studies, USFS biologists noted the movement of brook and brown trout between upper Mill Creek above Lundy Lake and the lake itself (FERC, 1992). Based on stocking records, CDFW was stocking rainbow trout annually during this time period, so it is assumed that these three trout species all existed in the reservoir at that time. Reservoir fish surveys conducted in Lundy Lake in 1986 captured 112 fish representing three species: brown trout dominated catch (81 percent), followed by rainbow trout (13 percent), and brook trout (6 percent) (EA, 1987). Surveys conducted by SCE in 2025 using boat electrofishing and gillnetting documented brown and rainbow trout and tui chub (AQ-1 draft report, DLA Volume III). Species composition and age-class distribution are outlined below; for more detailed methods and results, see the AQ-1 report (DLA Volume III).

COMPOSITION

A total of 91 fish representing three species were captured during the 2025 reservoir fish surveys. Catch was dominated by brown trout (*n* = 51; 56 percent of catch), followed by tui chub (*n* = 35; 38.5 percent), and few rainbow trout (*n* = 5; 5.5 percent). Most captured rainbow trout showed signs of hatchery origin (e.g., worn fins). The high relative abundance of brown trout and tui chub despite a lack of stocking suggests self-sustaining populations of these species persist in Lundy Lake (AQ-1 draft report, DLA Volume III).

AGE-CLASS DISTRIBUTION

Length-frequency and scale-aging results determined by SCE (AQ-1 draft report, DLA Volume III) indicate multiple age classes of trout species are present in Lundy Lake. These age estimates are supported by breaks and modalities observed in the length frequency histograms and length-at-age values reported in Moyle (2002) (Table 8.5-3).

Table 8.5-3. Estimated Trout Age in Lundy Lake Based on Scale Analysis and Literature Values

Fish Species	Age	Fork Length Range Based on 2025 Scale Analysis (mm)	Length Range Reported in Moyle (2002) (mm)[a]
Brown trout	YOY	NA	< 80
	1+	120	70–160
	2+	146–220	130–280
	3+	249–276	190–410
	4+	281–380	230–450
	5+	290–490	NA

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Fish Species	Age	Fork Length Range Based on 2025 Scale Analysis (mm)	Length Range Reported in Moyle (2002) (mm)[a]
Rainbow trout	YOY	NA	<100
	1+	NA	100–160
	2+	NA	130–200
	3+	NA	190–220
	4+	296–359	NA
	5+	388–402	--

Source: Moyle, 2002

NA = no data; mm = millimeter; YOY = young-of-year
Notes:
[a] Moyle (2002) presented growth information for brown trout and brook trout based on total length and rainbow trout based on fork length.

Brown trout ranged in size from 120–490 millimeters fork length (FL) and age from age 1+ to age 5+ based on scale analysis. Rainbow trout captured ranged from 294–402 millimeters FL, and fish ages ranged between age 4+ and age 5+ based on scale analysis. The lack of lower age-class rainbow trout further supports the notion that the population is comprised of stocked fish with no evidence of reproduction. Tui chub ranged from 78–260 millimeters FL, which includes young-of-year (YOY) to adult life-stages (Cooper, 1985).

8.5.1.4. Stream Fish Populations

SPECIES COMPOSITION AND DISTRIBUTION

Sampling from 1986 to 2025 in Mill Creek generally occurred in the areas upstream of the U.S. Highway 395 crossing (Reaches 1, 2, and 3; Figure 8.5-1), though CDFW (CDFG, 1996) did extend its 1990 surveying into the area from the U.S. Highway 395 crossing downstream to Mono Lake (Reach 4; Figure 8.5-1).

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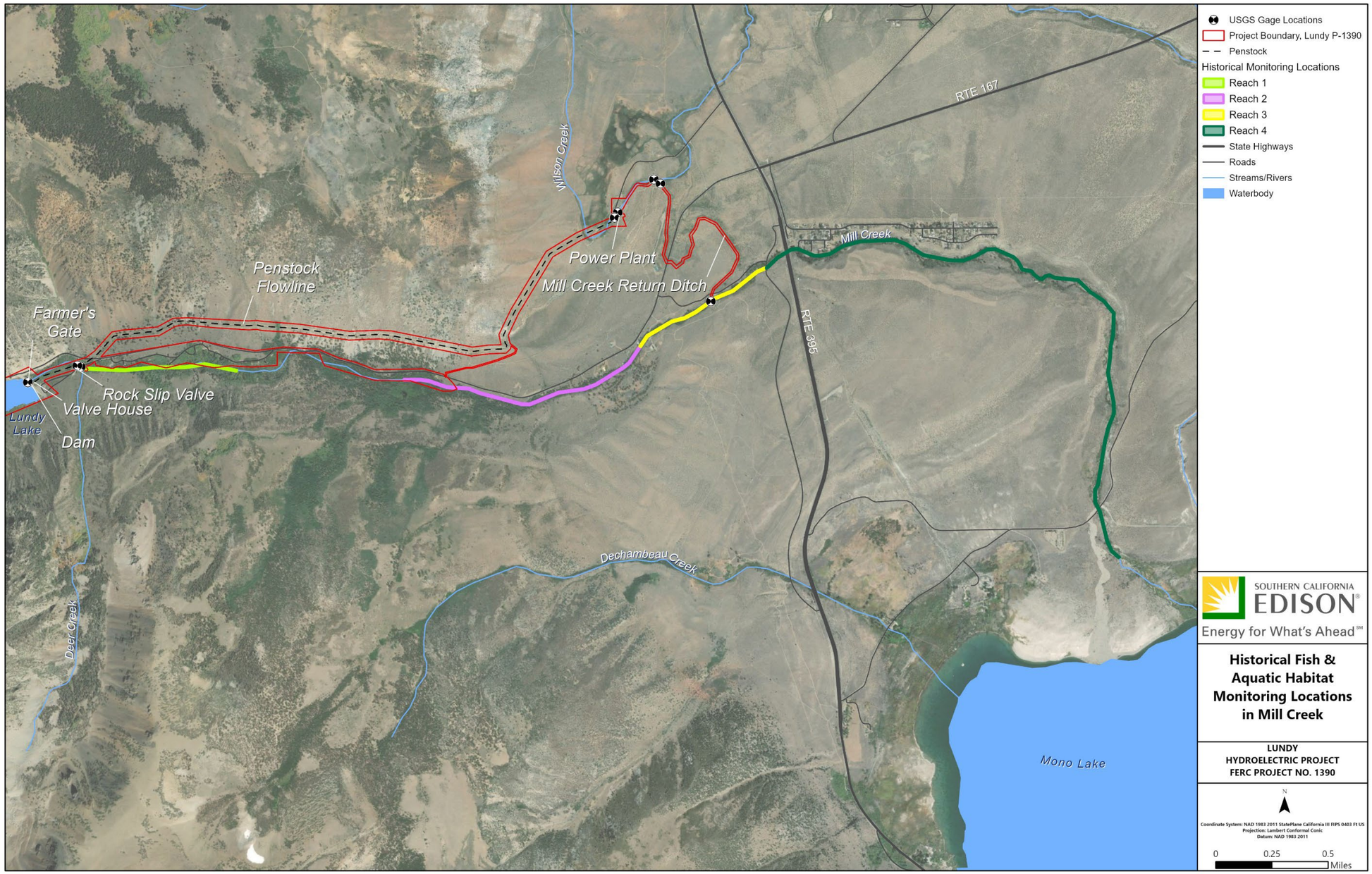


Figure 8.5-1. Fish Sampling and Aquatic Habitat Monitoring Locations in Mill Creek Downstream of Lundy Dam.

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Brown trout dominated catch in all surveys (99.7 percent of total catch; *n* = 3,816). Other species captured throughout the sampling efforts included nine brook trout, a single rainbow trout, and a single "tiger trout" (*Salmo trutta* × *Salvelinus fontinalis*; a hybrid offspring of a brown trout and brook trout) (EA, 1988; Sada, 2000; CDFG, 1996; AQ-1 draft report, DLA Volume III). Brown trout were spatially distributed throughout the sampling sites, while the few brook and rainbow trout were generally captured at further upstream sites. While not formally sampled, upper Mill Creek (above Lundy Lake) has been noted to host brook trout in high densities (FERC, 1992).

DENSITY AND BIOMASS

Estimates of brown trout abundance, density, and biomass in Mill Creek during the period of record (detailed in Table 8.5-4) were relatively high compared to other Eastern Sierra streams (e.g., Lee Vining Creek, Bishop Creek; EA, 1988).

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Table 8.5-4. Average Brown Trout Abundance, Density, and Biomass Estimates in Mill Creek During Historical Fish Sampling Efforts

Year (season)	Survey Reach	Abundance (trout/mile)	Density (trout/acre)	Biomass (lb/acre)
1985 (fall)	Reach 1	4,798	3,211	285
1985 (fall)	Reach 2	2,142	1,131	111
1986 (fall)	Reach 1	3,076	2,114	241
1986 (fall)	Reach 2	2,435	1,255	186
1987 (fall)	Reach 1	5,231	3,596	226
1987 (fall)	Reach 2	4,508	2,324	180
1990 (summer)	Reach 3	NA	1,292	116
1990 (summer)	Reach 4	NA	1,125	106
1991–1992	Reach 2	1,311–3,406	NA	NA
1993 (spring)	Reach 2	NA	1,457[a]	89[a]
1993 (summer)	Reach 2	NA	1,659[a]	98[a]
1993 (fall)	Reach 2	NA	2,104[a]	120[a]
1994 (summer)	Reach 2	NA	2,145[a]	152[a]
1995 (summer)	Reach 2	NA	1,659[a]	134[a]
1996 (summer)	Reach 2	NA	2,226[a]	98[a]
2025 (summer)	Reach 1 (MC-1)	2,176	1,414	175
2025 (summer)	Reach 2 (MC-2)	4,179	2,041	118
2025 (summer)	Reach 3 (MC-3)	4,624	2,703	171

Sources: EA, 1986, 1988; Sada, 2000; CDFG, 1996

lb = pounds; NA = no data

Notes:
[a] Data were not reported in tabular format; graphical plots were digitized and outputs rounded to the nearest appropriate decimal.

In the 1980s when both Reaches 1 and 2 were sampled, brown trout abundance, density, and biomass tended to be higher in Reach 1 than in Reach 2. However, the reverse was true during 2025 sampling (Table 8.5-4). Brown trout abundance, density, and biomass in Reach 3 and Reach 4 during summer 1990 were comparable to equivalent population metrics for Reaches 1 and 2 throughout the period of record. The density of brown trout

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fluctuated over the period of record and is likely a function of varied climatic conditions (e.g., drought) (CDFG, 1996). While biomass estimates decreased over the period of record, they were comparable to or greater than reported estimates for communities of mixed trout species, including brown and rainbow trout, from other Sierra Nevada streams (CDFG, 1996). Gerstung (1973) reported a mean biomass of 37.03 pounds per acre (lb/acre) (4.15 grams per square meter [g/m^2]) for 65 southern Sierra Nevada streams, which is less than the 153 lb/acre (16.30 g/m^2) average biomass approximated from 1985 to the 2025 Mill Creek sampling.

AGE-CLASS DISTRIBUTION

CDFG (1996) conducted an analysis of growth annuli in scales that indicated that age 0 (YOY) brown trout ranged from approximately 1.5–3.5 inches (38–90 millimeters) TL, age 1 fish ranged from approximately 4.7–6.1 inches (119–155 millimeters) TL, and age 2 fish ranged from approximately 7.2–10.2 inches (193–259 millimeters) TL. Based on these length-at-age relationships and a visual analysis of distinct modes in length-frequency histograms, there appeared to be at least four age classes (age 0 to age 3+) present in Mill Creek during most sampling efforts.

Length-frequency and scale aging results from SCE's 2025 surveys also concluded that multiple ages of trout species are present across study sites in Mill Creek. Brook trout ages ranged between age 1+ and age 2+, and brown trout ages ranged from age 0 (YOY) to age 4+ (Table 8.5-5). These age estimates are supported by breaks and modalities observed in the length frequency histograms and length-at-age values reported in the literature (Moyle, 2002) (Table 8.5-5).

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Table 8.5-5. 2025 Estimated Trout Age in Mill Creek Based on Length Frequency Histograms, Scale Analysis, and Literature Values

Species	Age	Fork Length Range Based on 2025 Scale Analysis (mm)			Fork Length Range Based on Length-Frequency Nodes (mm)	Total Length Range Reported in Moyle (2002) (mm)[a]
		Site MC-1	Site MC-2	Site MC-3		
Brook Trout	0	NA	NA	NA	NA	< 150
	1+	118–154	NA	NA	NA[b]	150–200
	2+	160–177	NA	NA	NA[b]	180–250
	3+	NA	NA	NA	NA	230–300
Brown Trout	0	62–80	45–74	61–70	50–90	< 80
	1+	129–176	95–119	110–124	100–170	70–160
	2+	159–201	126–200	141–175	160–210	130–280
	3+	220–266	190–314	194–274	180–270	190–410
	4+	283	NA	NA	>280	230–450

Source: Moyle, 2002

NA = no data; mm = millimeter
Notes:
[a] Moyle (2002) presents growth information for brown trout and brook trout based on total length.
[b] Distinct nodes were not apparent on the length frequency distribution for brook trout due to low numbers captured.

While it is not clear precisely when brown trout were introduced to Mill Creek, the consistent presence of age 0 brown trout—representing between 9 percent and 60 percent of total captures (Table 8.5-6)—suggests that the population was self-sustaining by at least 1985 (EA, 1988; CDFG, 1996). Fish condition[18] (k) was generally high relative to other Eastern Sierra streams (EA, 1988), ranging from 0.70–2.67, with an average consistently near or above 1.00 (Table 8.5-6Table).

[18] Condition factors in western Sierra Nevada streams typically range from 0.8 to 2.0, with a mean condition factor generally 1.2 or below (Beak, 1991; Ebasco Environmental, 1993; Wilcox, 1994; Hanson Environmental, 2005), while Rabe (1967) reported the condition factor to be between 0.9 and 1.1 for rainbow trout in Alpine lakes. Arismendi et al. (2011) cited broader ranges (0.5 to 2.0); however, condition is dependent on the sampling season, species, strain of trout, state of sexual maturity, and the way fish length is defined (i.e., fork length, total length, or standard length), which is not often documented with the results.

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Table 8.5-6. Brown Trout Maximum Size, Average Condition Factor, and Percent Young-of-Year in Mill Creek During Historical Fish Sampling Efforts

Year (season)	Reach	Total Catch (No. of Trout)	Brown Trout		
			% YOY [a]	Maximum FL (mm)	Condition Factor (k)
1985 (fall)	Reach 1	265	16%	260	1.15
	Reach 2	87	34%	280[b]	1.12
1986 (fall)	Reach 1	182	12%	270[b]	1.11
	Reach 2	92	12%	330[b]	1.13
1987 (fall)	Reach 1	301	59%	260[b]	1.18
	Reach 2	174	60%	240[b]	1.22
1990 (summer)	Reach 3	199	15%[c,d]	300[b,c,d]	0.79–1.24
1990 (summer)	Reach 4	195	27%[c,d]	280[b,c,d]	0.8–1.23
1991 (fall)	Reach 2	80	23%	230	NA
1992 (spring)	Reach 2	111	9%	225	NA
1992 (summer)	Reach 2	241	33%	222	NA
1992 (fall)	Reach 2	211	36%	228	NA
1993 (spring)	Reach 2	151	19%	210[b]	NA
1993 (summer)	Reach 2	209	32%	230[b]	NA
1993 (fall)	Reach 2	244	36%	220[b]	NA
1994 (summer)	Reach 2	238	38%	230[b]	NA
1996 (summer)	Reach 2	279	58%	210[b]	NA
2025 (summer)	Reach 1 (MC-1)	120	11%	283	0.94–1.34
2025 (summer)	Reach 2 (MC-2)	196	32%	314	0.82–1.52
2025 (summer)	Reach 3 (MC-3)	241	34%	294	0.88–1.84

Sources: EA, 1986, 1988; Sada, 2000; CDFG, 1996; AQ-1 draft report, DLA Volume III

FL = fork length; mm = millimeter; NA = no data; YOY = young-of-year

Notes:

[a] YOY defined as an individual less than 100 millimeters in FL.

[b] Comprehensive length data were not provided; maximum length reported herein represents the lower bound of the largest 10 mm size bin reported in the source.

[c] Value was converted from inches.

[d] Results were reported in total length.

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8.5.1.5. Aquatic Habitat

The Lundy Project regulates stream flows downstream of Lundy Lake in Mill Creek. Water stored in Lundy Lake is diverted to the Lundy Powerhouse (through the penstock), discharged to a water conveyance system (that routes some water into the Wilson System), then released back into Mill Creek through the MCRD. The MCRD enters Mill Creek approximately 3.5 miles (5.6 kilometers) downstream of Lundy Dam. From the MCRD, Mill Creek flows for approximately 3 miles (4.8 kilometers) before entering Mono Lake (Figure 8.5-1). It should be noted that MIF requirements have varied during the current license, the details of which are outlined in Section 8.4 *Water Quality*. Prior to 2007, flow often ceased directly below Lundy Dam, with approximately 30 percent of the streamflow record between 1991 and 2015 indicating no flow. Therefore, interpretation of all pre-2010 analyses of habitat should take this into consideration. Since 2007, there has been a MIF of 1 cfs measured at the Mill Creek USGS gage above the Deer Creek confluence. Further detail on stream flows can be found in Section 8.4 *Water Quality*.

GEOMORPHIC REACHES

Geomorphic characterization occurred in SCE's Fish Stranding Study (AQ-2) (DLA Volume III). Based on this study, Mill Creek downstream of Lundy Dam can be subdivided into nine reaches that reflect longitudinal changes in channel gradient, valley confinement, dominant geomorphic controls, and habitat complexity (Table 8.5-7).

Table 8.5-7. Mill Creek Geomorphic Reaches and Stranding Risk Study Sites

Reach #	Upstream Reach Boundary Station	Downstream Reach Boundary Station	Reach Average Gradient (%)	Reach Description	Study Sites Within Reach
1	0 ft (0 mi)	1,444 ft (0.3 mi)	1.3	Lundy Dam to Deer Creek confluence, Lundy Dam outfall reach, channel morphology and aquatic habitat are controlled by Project infrastructure; upstream of controlled flow release and compliance point	None
2	1,444 ft (0.3 mi)	3,855 ft (0.7 mi)	4.7	Deer Creek confluence to river station 3,855 feet, moderately complex channel with variable channel confinement	Site 1
3	3,855 ft (0.7 mi)	5,906 ft (1.1 mi)	3.3	River station 3,855 feet to upstream extent of beaver pond complex; increased channel complexity; less-confined, multi-threaded channel; debris flow deposit mantled channel margin	Site 2
4a	5,906 ft (1.1 mi)	7,382 ft (1.4 mi)	1.5	Beaver pond complex, valley bottom dominated by numerous beaver dams and ponds, highly complex flow paths and beaver runways	Site 3 and Site 4

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Reach #	Upstream Reach Boundary Station	Downstream Reach Boundary Station	Reach Average Gradient (%)	Reach Description	Study Sites Within Reach
4b	7,382 ft (1.4 mi)	8,448 ft (1.6 mi)	1.5	Downstream extent of beaver pond complex and altered valley bottom morphology, channel valley dissected by numerous active and relict beaver dams and runways	None
5	8,448 ft (1.6 mi)	16,683 ft (3.2 mi)	3.9	Downstream of beaver pond complex to prominent recessional moraine crossing valley floor, confined channel, relatively simple channel planform	Site 5
6	16,683 ft (3.2 mi)	22,835 ft (4.3 mi)	4.0	Downstream of prominent recessional moraine to return ditch confluence, less channel confinement, increased planform complexity	Site 6
7	22,835 ft (4.3 mi)	25,279 ft (4.8 mi)	4.6	Return ditch to U.S. Highway 395 crossing, disturbed reach that is highly influenced by U.S. Highway 395 alteration	None
8	25,279 ft (4.8 mi)	29,396 ft (5.6 mi)	3.3	U.S. Highway 395 crossing to river station 29,396 feet, channel valley bottom confined into incised glacial outwash plain, steep channel gradient	None
9	29,396 ft (5.6 mi)	42,323 ft (8.0 mi)	1.9	River station 29,396 feet to Cemetery Road crossing; lower gradient and less-confined, complex planform channel; multi-thread channel	Site 7

ft = feet; mi = mile

The geomorphic reaches immediately below Lundy Dam reflect a transition from strong Project and infrastructure control to increasing channel complexity. Reach 1, from Lundy Dam to Deer Creek, is a short, low-gradient outfall reach where channel form and aquatic habitat are strongly influenced by Lundy Dam, Project infrastructure, and regulated releases. Reaches 2 and 3 become steeper and more hydraulically diverse, with Reach 2 showing variable confinement and Reach 3 transitioning into a less-confined, multi-threaded channel with greater planform complexity. These first three reaches provide some stream habitat for fish, but habitat quality and availability are shaped by flow regulation, localized infrastructure controls, and the degree of channel confinement.

The central portion of the study area contains the most complex habitat, particularly Reaches 4a and 4b, where active and relict beaver dams, ponds, runways, and multi-threaded flow paths create a broad, low-gradient valley-bottom wetland complex. These beaver-influenced reaches likely provide some of the most diverse and persistent fish habitat in Mill Creek by increasing hydraulic complexity, cover, low-velocity refuge, and habitat area relative to more confined reaches. Downstream of the beaver complex, Reaches 5 through 8 generally return to steeper or more confined conditions, with

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localized increases in complexity in Reach 6 and disturbance or confinement associated with the return ditch, U.S. Highway 395, and the incised glacial outwash plain. Farther downstream, Reach 9 transitions to a lower gradient, less-confined, multi-threaded planform that support more laterally distributed flow paths and depositional habitat features where surface flow is present. Overall, habitat availability and quality vary longitudinally with infrastructure control, valley confinement, beaver activity, and flow permanence, creating a mosaic of stream and ponded habitats available to fish.

WEIGHTED USABLE AREA

CDFG (1996) identified weighted usable area (WUA) for brown trout, which peaks for adults and juveniles at higher flows and decrease at lower flows, while WUA for fry peaks at lower flows and decreases at higher flows. Additionally, the relationship between WUA and flow for brown trout spawning varies by stream section (Table). WUA is maximized for juvenile and adult brown trout at lower flows in the upper section of Mill Creek, with increasing flows required to maximize WUA in downstream sections of Mill Creek.

Table 8.5-8. Percentage of Weighted Usable Area for Brown Trout and Corresponding Flows by Stream Section for the Lundy Project Area

Brown Trout Life Stage	Stream Flow (cfs) for Three WUA (ft^2) Levels		
	Maximum (Max) WUA	90% of Max WUA	80% of Max WUA
Lundy Dam to Upper Thompson Ditch[a]			
Adult	12	6	4
Juvenile	8	4	2
Upper Thompson Ditch to Thompson Main Ditch[b]			
Adult	24	20	16
Juvenile	22	13	9
Spawning	22	15	13–14
Fry	2	1–2	3–4
Thompson Main Ditch to Mono Lake[b]			
Adult	24	16	10
Juvenile	24	10	5-6
Spawning	14	9–10 and 19	7 and 23
Fry	2	1–2 and 5–6	1–2 and 12

Source: CDFG, 1996; FERC, 1992

cfs = cubic feet per second; ft^2 = square feet; WUA = weighted usable area

Notes:
[a] Data were compiled and sourced from FERC, 1992
[b] Data were compiled and sourced from CDFG, 1996

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SPAWNING GRAVEL

Studies in the 1980s and 1990s suggested that spawning habitat in Mill Creek increased in suitability and availability from Lundy Dam to the U.S. Highway 395 crossing. Spawning habitat may be limited in the upper sections of Mill Creek (EA, 1986), with dominant substrates much larger than those preferred by trout (Moyle, 2002; AQ-1 draft report, DLA Volume III). The most abundant spawning habitat is found between the Thompson Main Ditch and Mono Lake. Surveys conducted for the CDFW estimated 2,873 square feet of potential brown trout spawning area between the Upper Thompson Ditch and the Thompson Main Ditch and 11,445 square feet in the section of Mill Creek between the Thompson Main Ditch and Mono Lake (CDFG, 1996).

Observations made during AQ-2 in 2025 at representative sites in each reach suggest that dominant sediment sizes vary in a non-linear manner by reach, including gravel and cobble in the upper and mid-study reaches, fine sediment with localized gravel in the beaver pond complex, and mixed fine sediment, gravel, and cobble farther downstream (AQ-2 draft report, DLA Volume III). Overall, suitable brown trout spawning sediment does not appear to increase linearly through Mill Creek, but rather is largely dependent on local hydraulics, which can result in patchy availability, especially in the beaver dam complex and downstream reaches.

FISH PASSAGE BARRIERS

In the 1996 CDFG Instream Flow Study report, a total of eight fish migration barriers were identified for adult brown trout in Mill Creek below Lundy Dam to Mono Lake: (1) the Upper Thompson Ditch diversion dam that is 3.5 feet tall; (2) a 3.5-foot beaver dam 0.3 mile downstream of the Upper Thompson Ditch; (3) a culvert beneath a dirt road 0.7 mile downstream of Upper Thompson Ditch; (4) a natural 2-foot bedrock fall approximately 0.9 mile downstream of Upper Thompson Ditch; (5) the Thompson Main Ditch Diversion Dam with a 3-foot height, (6) a natural bedrock outcropping 0.15 mile downstream of Thompson Main Ditch with a 5.5-foot fall; (7) a culvert under the U.S. Highway 395 road crossing with a high water velocity barrier at all flows (flows sufficient to provide suitable depths result in velocities greater than 6 feet per second, which exceed maximum passable velocities based on criteria from Bovee, 1982, as cited in CDFG, 1996); and (8) a culvert under the Cemetery Road crossing with a high water velocity barrier (flows sufficient to provide suitable depths result in velocities greater than 4.6 feet per second, which exceed the maximum passable velocity calculated for this culvert based on its length and gradient (criteria from Bovee, 1982, and Belford and Gould, 1989, as cited in CDFG, 1996).

AQUATIC INVASIVE SPECIES

Three aquatic species have been identified by USFS as potential invasive species in the Inyo National Forest (USFS, 2013): quagga mussel (*Dreissena bugensis*), zebra mussel (*Dreissena polymorpha*), and New Zealand mudsnail (*Potamopyrgus antipodarum*). Additionally, in October 2024, the invasive golden mussel (*Limnoperna fortunei*) was documented in the Sacramento-San Joaquin Delta (Port of Stockton, California) and

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O'Neill Forebay (part of the San Luis Joint-Use Complex) (CDFW, 2026b) and has prompted a statewide response to understand current distribution and vulnerability to invasion in regional watersheds. While none of the above species have been documented in the Mill Creek watershed, the New Zealand mudsnail is known to occur in the Owens River at the mouth of and below McLaughlin Creek, approximately 28 miles southeast of the Project (USFS, 2013).

SCE conducted a vulnerability assessment for quagga and zebra mussel establishment in 2017 and determined that water quality conditions in Lundy Lake indicate a low likelihood of invasion based on the published calcium levels needed to support growth and reproduction for these species (SCE, 2017). This assessment is consistent with an evaluation of water quality data collected in 2025. Upon establishment of golden mussels in California waters, SCE conducted another vulnerability assessment given the golden mussel's less stringent water quality requirements for establishment (primarily a lower threshold for calcium levels). SCE concluded that Lundy Lake is low to moderately suitable for their establishment (WQ-1 draft report, DLA Volume III). Further detail on golden mussels can be found in SCE's *Lundy Lake Golden Mussel Vulnerability Assessment Draft Technical Report* (WQ-1 draft report, DLA Volume III).

Didymosphenia geminata (Didymo), an invasive diatomaceous alga, was observed during 2025 field work at five water temperature monitoring sites. These observations are discussed in more detail in Section 8.4 *Water Quality and Quantity* and in the *Lundy Lake and Mill Creek Water Temperature Monitoring (WQ-2) Draft Technical Report* (DLA Volume III).

LARGE WOODY DEBRIS

Log jams are reported to be prevalent in Mill Creek between Lundy Dam and the Upper Thompson Ditch (CDFG, 1996; Read, 2021). Information about large woody debris in other sections of Mill Creek was not found.

8.5.1.6. Entrainment

The intake structure at Lundy Lake is unscreened and has the potential to entrain fish from Lundy Lake into the diversion ditch and ultimately into the Lundy Powerhouse. Fish entrainment at the intake was studied during the last relicensing effort for the Lundy Project, and results suggested the average rate of entrainment is about 0.5 fish per month for brown trout and 1.6 fish per month for rainbow trout (EA, 1988, as cited in FERC, 1992). Voluntary entrainment of fish at the intake structure was not reported but was expected to be minor (FERC, 1992).

8.5.1.7. Stranding

SCE completed Study AQ-2 in summer 2025 to identify areas of higher fish-stranding risk in Mill Creek between Lundy Dam and the Mill Creek Return Ditch (MCRD) and to evaluate stranding potential associated with controlled releases under Project operations (see Section 8.3.1.5, *Water Use, Gages, and Hydrology*). Results indicate that stranding risk varies by reach and is driven primarily by local channel morphology and habitat

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conditions rather than discharge magnitude alone. Representative sites in confined, steeper, single-thread, or high-gradient reaches—such as portions of Reaches 2, 5, 6, and 9—generally had the lowest stranding risk because dewatered margins were relatively steep and provided limited low-gradient habitat where fish could become isolated.

Localized higher risk was observed in the Reach 4 beaver pond complex, where failure of a series of older, abandoned beaver dams rapidly dewatered previously inundated habitat and resulted in observed trout entrapment. However, the sequence of flow changes during AQ-2, which may have contributed to the beaver dam failure, is not typical of the Mill Creek hydrograph and is not expected to occur regularly or annually. Beaver dam failure also occurs naturally in stream systems (Butler and Malanson, 2005; Scamardo et al., 2022) and remaining intact beaver ponds in Reach 4 buffered water-surface elevation changes, reducing overall stranding potential at that site.

Across representative sites, the primary factors influencing stranding risk were low-gradient banks and floodplain surfaces, side channels and off-channel depressions that disconnected as flows declined, complex beaver-dam and pond topography, vegetation and wood that created low-velocity margin habitat, and the rate and magnitude of wetted-perimeter dewatering during down-ramping. No single target flow within the evaluated range of 150 to 5 cfs consistently produced the greatest stranding risk across all sites, indicating that stranding potential is controlled more by site-specific geomorphic and habitat conditions than by flow magnitude alone (AQ-2 draft report, DLA Volume III).

8.5.1.8. Benthic Macroinvertebrates

Historical benthic macroinvertebrate (BMI) data are available for Mill Creek from both relicensing-era investigations (1990s) and more recent statewide monitoring efforts. BMIs were first sampled by CDFW during July and August 1990 to characterize the aquatic invertebrate community and evaluate its role as a food resource for brown trout (CDFG, 1996). Sampling included Surber (benthic) collections in riffle habitats and drift net sampling in flatwater/run habitats at three locations: near the Upper Thompson Ditch, near the MCRD, and downstream of U.S. Highway 395. Surber samples indicated benthic densities ranging from approximately 136 to 399 organisms per square foot, while drift samples yielded between 105 and 1,422 organisms per 4-hour sample (approximately 52 to 65 organisms per 1,000 cubic feet of water). Community composition was dominated by taxa typical of cold, high-gradient Sierra Nevada streams, including Ephemeroptera (mayflies), Plecoptera (stoneflies), Trichoptera (caddisflies) (EPT), and Diptera (chironomids), with annelids and mollusks present in lower abundance. Diversity indices ranged from 1.82 to 3.16 (mean approximately 2.6), indicating moderate to high taxa diversity comparable to relatively undisturbed Eastern Sierra stream systems. Functional feeding group analysis indicated a dominance of collector-gatherers and filterers (greater than 60 percent), reflecting a food web supported primarily by fine particulate organic

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matter and drift inputs (CDFG, 1996). California Stream Condition Index (CSCI)[19] scoring had yet to be developed at the time of this study.

More recent BMI data were collected by the CDFW Aquatic Bioassessment Laboratory on August 7, 2012, at a site approximately 2.2 miles downstream of Lundy Lake under the Surface Water Ambient Monitoring Program (SWAMP) Perennial Streams Assessment. The 2012 sample was evaluated using the CSCI and received a score of 1.15, placing it within the highest condition category and indicating that biological condition and habitat quality in this reach are comparable to reference conditions (Rehn et al., 2015; SWRCB, 2023). Taxonomic results from the 2012 sampling indicate a diverse assemblage dominated by pollution-sensitive EPT taxa, including multiple mayfly genera (e.g., *Baetis*, *Epeorus*, *Caudatella*, *Paraleptophlebia*), stoneflies (e.g., *Yoraperla*, *Malenka*, *Sweltsa*), and caddisflies (e.g., *Arctopsyche*, *Hydropsyche*, *Micrasema*, *Glossosoma*, *Rhyacophila*). Chironomid midges (e.g., *Eukiefferiella*, *Orthocladius*, *Cricotopus*, *Micropsectra*) and black flies (*Simulium*) were also abundant, along with lesser contributions from annelids (Oligochaeta), flatworms (Turbellaria), and mollusks (e.g., *Pisidium*). Several taxa occurred at relatively high abundances, including *Yoraperla nigrisoma*, *Baetis tricaudatus*, and chironomid taxa, indicating a well-established and productive benthic community.

Comparison of the 1990 and 2012 datasets indicates that the overall structure and composition of the BMI community in Mill Creek has remained broadly consistent over time. Both sampling efforts document a community dominated by coldwater, lotic taxa typical of Sierra Nevada streams, with strong representation of EPT taxa and functional feeding groups associated with high-quality habitats. While differences in sampling methods and metrics limit direct quantitative comparison, the persistence of diverse and abundant sensitive taxa in 2012, coupled with a CSCI score in the highest condition category, suggests that benthic community condition has remained stable or improved relative to the already moderate-to-high diversity observed during earlier studies.

Historical data from adjacent watersheds are also available through the Perennial Streams Assessment Program (SWRCB, 2023), including one site approximately 2 miles north of the Project on Virginia Creek (CSCI=1.01; SWRCB Station Code 630PS0005), and three sites in the Lee Vining Creek watershed approximately 5 miles south of the Project (Warren Fork [CSCI=1.13; SWRCB Station Code 601WRN001], Lee Vining Creek downstream of Warren Fork [CSCI=1.17; SWRCB Station Code 601PS0065], and Lee Vining Creek at Moraine Campground [CSCI = 1.09; SWRCB Station Code 601LVC001]).

8.5.1.9. Synthesis of the Affected Environment for Fish and Aquatic Resources

Waters within the Project Area were historically fishless but now support a self-sustaining, non-native fish assemblage dominated by salmonids. Brown trout are the dominant species in both Mill Creek and Lundy Lake and exhibit multiple age classes, including

[19] **California Stream Condition Index (CSCI):** A multimetric, predictive index developed by SWRCB to assess the biological condition of wadeable streams based on BMI assemblages. The index compares observed communities to those expected under minimally disturbed reference conditions, producing scores that generally range from 0 to >1, where higher values indicate better biological condition (Mazor et al., 2016).

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YOY, juveniles, and adults, indicating consistent recruitment and successful reproduction under existing environmental conditions. In contrast, rainbow trout occur primarily due to stocking and show limited evidence of natural reproduction, suggesting that their persistence is management dependent. Tui chub are also established within Lundy Lake and may influence trophic dynamics through competition for food resources while also serving as a prey source for larger trout. Overall, the presence of self-sustaining brown trout populations across Project-affected stream reaches and within the reservoir indicates that the system currently supports a stable and resilient fish community under existing conditions.

Aquatic habitat conditions in Mill Creek are shaped by the Project's regulated flow regime, current MIF requirements, and geomorphic variability along the stream corridor. Although historical information documented periods of intermittent flow before implementation of minimum flow requirements, the establishment of a MIF resulted in Mill Creek being a continuously wetted but spatially heterogeneous stream system. Differences in channel gradient, confinement, substrate, beaver activity, infrastructure influence, and valley-bottom form create a longitudinal habitat mosaic. Habitat is most constrained where channel confinement, coarse substrates, infrastructure controls, or passage barriers limit habitat diversity or fish movement, but these constraints are offset in part by areas of greater structural complexity, including the beaver-influenced reaches, reaches with large woody debris and boulder cover, and lower gradient, multi-threaded sections. Hydraulic habitat modeling indicates that brown trout habitat availability varies with flow and life stage; however, the continued presence of multiple age classes indicates that the current mosaic of wetted stream, ponded, and low-velocity refuge habitats is sufficient to support population persistence under existing conditions.

BMI data further indicate that Mill Creek supports a robust aquatic community, characterized by high biological condition, relatively high taxa richness, and the presence of pollution-sensitive taxa. These conditions suggest that water quality and habitat characteristics are suitable for sustaining a diverse and productive benthic community that provides an important food base for trout and contributes to overall ecosystem productivity. Taken together, the available information indicates that the Project Area represents a hydrologically modified and spatially heterogeneous system that nonetheless functions effectively to support both BMI and fish populations. Under current conditions, continuous minimum flows, downstream habitat availability, structural complexity, beaver-created pond and wetland habitats, and groundwater influences provide sufficient habitat diversity, water quality, and connectivity to sustain stable, reproducing fish populations.

8.5.2. Environmental Effects

Under the Proposed Action, Project facilities and operations would continue as currently implemented, including reservoir management, flow regulation, water deliveries, and hydropower generation. In SD2, FERC requested SCE study the effects of continued Project operation on aquatic resources, which are described below.

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This analysis addresses SD2 aquatic and fishery resource issues, including: (1) effects of continued Project operation on fish and aquatic habitat and fish and aquatic resources within the Project impoundment, bypassed reach, and downstream of the powerhouse; (2) effects of Project water diversions and instream flow on fish habitat in the Project bypassed reach; (3) effects of fish entrainment at the Lundy Powerhouse and fish stranding on fish resources in the Project Area; and (4) effects of continued operation on aquatic invertebrates downstream of Lundy Dam.

8.5.2.1. Effects of Continued Project Operations on Fish and Aquatic Habitat and Fish and Aquatic Resources within the Project Impoundment, Bypassed Reach, and Downstream of the Powerhouse.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Lundy Project would continue to operate under existing license conditions, including current diversion practices, minimum flow requirements, and water management operations. Project operations would continue to influence hydrology in Mill Creek through regulation of flows from Lundy Lake, diversion to the powerhouse, and subsequent return flows via the MCRD.

Available information indicates that aquatic habitat conditions in Project-affected areas continue to support fish and aquatic resources under existing operations. Lundy Lake supports a fish assemblage dominated by brown trout, with rainbow trout maintained primarily through stocking and tui chub also present. In Mill Creek, habitat conditions vary longitudinally with Project infrastructure control, channel gradient and confinement, substrate composition, beaver activity, groundwater influence, and localized passage constraints. This spatially heterogeneous habitat mosaic provides habitat opportunities for multiple trout life stages under existing operations.

In both Mill Creek and Lundy Lake, brown trout dominate the fish assemblage and exhibit multiple age classes, including YOY, juveniles, and adults, indicating consistent recruitment and successful reproduction over time. Population metrics, including density, abundance, and biomass, as well as fish condition factors, have remained relatively high through the 40-year sampling record in Mill Creek (Table 8.5-4; Table 8.5-6). The presence of diverse age classes in repeated sampling efforts also indicates that life-stage-specific habitat requirements are being met on an annual basis under existing conditions.

Based on the long-term persistence of brown trout populations, consistent evidence of recruitment, and relatively high habitat quality indicators (e.g., BMI condition and habitat diversity), continued Project operations under the No-Action Alternative are expected to result in no effect on the current state of fish and aquatic habitat and fish and aquatic resources within the Project impoundment, bypassed reach, and downstream of the powerhouse.

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PROPOSED ACTION

Under the Proposed Action, the Lundy Project would continue to operate in a manner consistent with existing operations, with no proposed changes to flow management, diversion rates, or reservoir operations. As a result, the hydrologic regime, habitat availability, and ecological conditions within Project-affected stream reaches would be expected to remain unchanged from those described under the No-Action Alternative.

Therefore, continued Project operations under the Proposed Action are expected to have no effect on the current state of fish and aquatic habitat and fish and aquatic resources within the Project impoundment, bypassed reach, and downstream of the powerhouse.

8.5.2.2. Effects of Project Water Diversions and Instream Flow on Fish Habitat in the Project Bypassed Reach

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Lundy Project would continue to divert water from Lundy Lake through the powerhouse while maintaining existing MIF requirements and returning flows to Mill Creek through the MCRD. As described in Section 8.5.2.1, the Project bypassed reach would remain continuously wetted under current minimum flow requirements and would continue to support a spatially heterogeneous mosaic of aquatic habitat. Habitat conditions in the bypassed reach are influenced by regulated releases, Deer Creek and groundwater accretion, localized channel losses, channel gradient and confinement, substrate composition, infrastructure controls, and beaver activity.

Within the bypassed reach, fish habitat availability and suitability would continue to vary by location and life stage. Hydraulic habitat modeling indicates that brown trout WUA varies with flow, with different flow ranges providing higher suitability for adult, juvenile, spawning, and fry habitats. However, the long-term persistence of multiple brown trout age classes, including YOY, juveniles, and adults, indicates that existing flow and habitat conditions in the bypassed reach are sufficient to support recruitment and population persistence. The bypassed reach includes some of the higher quality habitat in Mill Creek, particularly the Reach 4a and 4b beaver pond complex, where ponded habitats, multi-threaded flow paths, low-velocity refuge, cover, and expanded wetted area provide diverse habitat opportunities for trout life stages.

Project water diversions would continue to reduce flow in the bypassed reach compared to an unimpaired hydrograph and may limit the extent of suitable habitat under some conditions, particularly for later life stages that generally benefit from greater depths, velocities, and wetted area. Still, current MIFs, tributary and groundwater inputs, beaver-created pond and wetland habitat, and localized structural complexity provide sufficient wetted habitat and refugia to maintain the self-sustaining brown trout population. Existing passage constraints and patchy spawning substrate availability would continue to influence local habitat use and fish movement, but these conditions have co-occurred with persistent recruitment and relatively high fish abundance, density, biomass, and condition in Mill Creek.

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Therefore, continued Project water diversions and existing instream flow requirements under the No-Action Alternative are expected to maintain fish habitat in the Project bypassed reach at current levels, which are sufficient to support existing fish populations. Because the current fish assemblage has persisted under existing operations and multiple lines of evidence indicate continued recruitment and habitat use throughout the bypassed reach, there would be no effect of Project water diversions and instream flow on fish habitat in the Project bypassed reach relative to current conditions.

PROPOSED ACTION

Under the Proposed Action, Project operations would remain unchanged from existing conditions, with no proposed changes to diversion practices, reservoir operations, MIF requirements, or water return through the MCRD. Accordingly, flow conditions and fish habitat availability in the Project bypassed reach would be expected to remain the same as those described under the No-Action Alternative.

Therefore, because current operations support self-sustaining brown trout populations in Mill Creek, there is no effect relative to current conditions of Project water diversions and instream flow on fish habitat in the Project bypassed.

8.5.2.3. Effects of Fish Entrainment at the Lundy Powerhouse and Fish Stranding on Fish Resources in the Project Area

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Lundy Project would continue to operate under existing license conditions, including continued diversion of water from Lundy Lake through the unscreened intake to the Lundy Powerhouse. Because the intake is unscreened, fish present in Lundy Lake would continue to have some potential to be entrained into the diversion system. However, available relicensing-era entrainment information indicates that entrainment rates at the intake were low, with estimated average entrainment of approximately 0.5 brown trout per month and 1.6 rainbow trout per month. Voluntary entrainment was not reported and was expected to be minor. These levels of entrainment have occurred in the context of the existing reservoir fish community, which continues to support a self-sustaining brown trout population and hatchery-supported rainbow trout fishery.

Fish stranding potential under the No-Action Alternative would continue to reflect the interaction of the existing hydrologic regime, local channel form, and habitat complexity in Mill Creek. Project operations include ramp-down measures intended to reduce the potential for rapid dewatering and associated fish stranding. AQ-2 found that stranding risk varied among surveyed reaches and local habitat settings, and that no single flow or flow range consistently produced the highest stranding risk across the surveyed sites. Instead, stranding potential was driven primarily by local conditions such as low-gradient margins, floodplain surfaces, side channels, off-channel depressions, beaver-dam and pond topography, vegetation and wood that create low-velocity margin habitat, and the rate and magnitude of wetted-perimeter change during down-ramping. Although these

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localized conditions can create potential for fish stranding or isolation, like the intermittent failure of beaver dams in response to controlled releases, these are not outside the norm of natural phenomena during high-flow events and therefore not considered a Project effect. Additionally, the implementation of existing ramp-down procedures are intended to reduce the likelihood of rapid dewatering due to Project operations.

Based on the low entrainment rates and stranding risk potential, and the persistence of self-sustaining brown trout populations in Lundy Lake and Mill Creek, continuation of current operations under the No-Action Alternative is expected to have a less-than-significant effect related to fish entrainment at the Lundy Powerhouse and fish stranding in Mill Creek.

PROPOSED ACTION

Under the Proposed Action, Project operations would remain unchanged from existing conditions, with no proposed changes to flow management, diversion rates, reservoir operations, or intake configuration. Therefore, the potential for fish entrainment at the Lundy Powerhouse and stranding risk in Mill Creek would be expected to remain similar to existing conditions.

8.5.2.4. Effects of Continued Operation on Aquatic Invertebrates Downstream of Lundy Dam

NO-ACTION ALTERNATIVE

BMI communities are an important indicator of aquatic ecosystem health and water quality. Available data for Mill Creek indicate high biological condition, as reflected by a CSCI score within the highest condition category. Sampling spread across multiple decades documented consistently high densities, moderate to high diversity, and the presence of pollution-sensitive taxa (e.g., EPT), indicating a maintenance of BMI populations and high-quality habitat through time.

Project operations influence flow regimes in Mill Creek. Due to varying MIF requirements throughout the current license, some upstream reaches saw intermittently low flows prior to 2007. Based on CFDG's 1990s studies, BMI communities appeared functional and diverse under these conditions. Following the establishment of a MIF of 1 cfs, BMI metrics collected by CDFW in 2012 suggested a healthy BMI community has persisted through time and hydrologic variation.

The observed diversity and density of BMIs in Mill Creek suggest that aquatic ecosystem processes in Mill Creek remain intact and that Project operations have not resulted in measurable impairment of BMI communities. Additionally, self-sustaining populations composed of predominantly insectivorous species (i.e., trout) indicate that BMIs in Project-affected reaches are sufficiently abundant to support fish condition. Accordingly, continued Project operations under the No-Action Alternative are expected to have no effect on aquatic invertebrates downstream of Lundy Dam relative to current conditions.

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PROPOSED ACTION

Because the Proposed Action does not include changes to Project operations that would alter flow regimes or water quality conditions, the effects on BMI communities would be the same as those described under the No-Action Alternative. Existing BMI community structure and function are expected to persist, and no adverse effects are anticipated.

8.5.2.5. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

SCE has reviewed the desired conditions in the Inyo National Forest LMP (USFS, 2019) to assess if the Project is consistent with management objectives. The following are desired conditions relating to fish and aquatic resources with which the Project is consistent:

- SPEC-FW-DC 01: Sustainable populations of native and desirable non-native plant and animal species are supported by healthy ecosystems, essential ecological processes, and land stewardship activities; and reflect the diversity, quantity, quality, and capability of natural habitats on the Inyo National Forest. These ecosystems are resilient to uncharacteristic fire, climate change, and other stressors, and this resilience supports the long-term sustainability of plant and animal communities.

- SPEC-FW-DC 05: The Inyo National Forest provides high-quality hunting and fishing opportunities. Habitat for non-native fish and game species is managed in locations and ways that do not pose substantial risk to native species while still contributing to economies of local communities.

Results from AQ-1 suggest there are healthy, naturally reproducing populations of brown trout within Project-affected stream reaches and lakes, which is consistent with the desired conditions described in the Inyo National Forest LMP (USFS, 2019). Because no native fish species historically occurred in the watershed, and current fish populations are composed of introduced species managed for recreational purposes, Project operations do not conflict with native species conservation objectives. Overall, the Project is consistent with current resource management goals and does not impede their achievement.

SCE has reviewed the desired conditions in the 2019 Basin Plan (LRWQCB, 2021) to assess if the Project is consistent with management objectives. The following are desired conditions relating to invasive aquatic plant species with which the Project is consistent:

- Biostimulatory Substances: The 2019 Basin Plan (LRWQCB, 2021) specifies waterbodies shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

Results from AQ-1 suggest there is a healthy, naturally reproducing population of brown trout and a consistently stocked population of rainbow trout within Lundy Lake that offers the beneficial use of recreation and tourism. Additionally, sampling of BMI by CDFW in

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1990 and 2012 showed that Mill Creek supports BMI communities indicative of a healthy system with good water quality. Together, these conditions are consistent with those described in the 2019 Basin Plan (LRWQCB, 2021).

8.5.2.6. Proposed Protection, Mitigation, and Enhancement Measures

SCE proposes the Project Road Management Plan, which is in part designed to reduce any potential impacts to nearby water bodies from the use of roads within the Project Area (Appendix E.4, DLA Volume II).

8.5.2.7. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Fish and Aquatics.

8.5.3. REFERENCES

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8.6. TERRESTRIAL WILDLIFE RESOURCES

This section describes general terrestrial wildlife resources in the vicinity of the Project. The discussion provided here is intended to inform an evaluation of potential issues relating to the Proposed Action and how the completed studies inform the understanding of Project effects.

During the study planning process, SCE identified the need to conduct a wildlife resources study to evaluate the terrestrial wildlife species that are present in the Lundy Project Area. Terrestrial wildlife species listed under the federal Endangered Species Act (ESA) and the California ESA are discussed in detail in Section 8.9 *Rare, Threatened, and Endangered Species*. Aquatic wildlife and associated resources are discussed in Section 8.5 *Fish and Aquatic Resources*.

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8.6.1. AFFECTED ENVIRONMENT

The area surrounding the FERC Project Boundary is within the Cascade-Sierra Mountains physiographic province, sculpted by glaciers and characterized by rounded granite outcrops, U-shaped valleys, glacial lakes within glacial till deposits, and talus slopes. Within Mono Basin, elevations range from over 13,000 feet amsl along the Sierra Nevada peaks to approximately 6,400 feet amsl at the shoreline of Mono Lake (Millar and Woolfenden, 1999), with the basin floor generally below 7,000 feet (Vorster, 1985).

Mill Creek is within the Mono Lake subbasin and flows into Mono Lake. Roughly half of the Mono Lake watershed is hills and mountains (365 square miles), and the other half is valley fill areas and Mono Lake itself (385 square miles) (LADWP, 1987). Elevations in the watershed range from 6,400 feet amsl to over 13,000 feet amsl (LADWP, 1987).

On average, the Mono Lake watershed received 30 to 40 inches of annual precipitation, mainly through snow (USFS, 2001). There are arctic-like winters in the high mountains and dry, warm summer conditions in the Mono Basin (LADWP, 1987), with temperatures ranging from -10°F and 90°F, respectively (USFS, 2001).

The nearby town of Lee Vining has an average annual high temperature of 61°F, an average annual low temperature of 35°F, and receives an average of 15.7 inches of precipitation annually (U.S. Climate Data, 2020).

Eight vegetation types and four other landcovers associated with the Project were identified in the 2025 Botanical Resources Study (SCE, 2026): Big Sagebrush Alliance, Great Basin Mixed Scrub Alliance, Upper Montane Mixed Shrub Alliance, Wet Meadows Alliance, Quaking Aspen Alliance, Shrub Willow Alliance, Curlleaf Mountain Mahogany Alliance, Eastside Pine Alliance, Water, Barren, Disturbed, and Developed. Vegetation communities are further discussed in Section 8.7 *Botanical Resources* and can be grouped into four categories: herbs, scrub, forest, and other. The four broad categories intergrade and mix with each other throughout the study area. Consequently, other than those wildlife species with very specific habitat requirements, most common wildlife species would be expected to occur within each of the four broad categories.

Botanical and wildlife survey data collected in 2026 will be provided with the FLA. The TERR-1 Botanical Resources Study and the TERR-2 Wildlife Study final reports will be filed with the USR in January 2027.

8.6.1.1. Definitions

SPECIAL-STATUS SPECIES

A special-status species is defined as a species considered by one or more branches of the federal government (e.g., USDA, USFS, or BLM) or by the State of California to merit regulatory consideration in association with prosecution of a Project. “Special-status species” is a catchall term that refers to any species given protection through federal, state, or local legislation. This would include designations of endangered, threatened, fully protected (California only), Species of Special Concern (SSC; California only),

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Species of Conservation Concern (SCC), and other species formally designated as sensitive by relevant government agencies. As noted above, wildlife species listed under the federal ESA and the California ESA are discussed in detail in Section 8.9 *Rare, Threatened, and Endangered Species*, as are bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*), which are protected under the federal Bald and Golden Eagle Protection Act (BGEPA). Other designations considered special-status are described below.

Species of Conservation Concern

SCC is a rank assigned by the Inyo National Forest. Under the 2012 Planning Rule (36 CFR § 219.7(c)(3)), the Regional Forester determined the terrestrial wildlife, aquatic wildlife, and plant species that meet the criteria for SCC for the Inyo National Forest's LMP. The definition of SCC is found at 36 CFR § 219.9(c), and criteria for identifying them are outlined in the Forest Service Handbook 1909.12 Chapter 10, Section 12.52c. An SCC is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the Regional Forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long term in the plan area (36 CFR § 219.9) (USFS, 2019).

Species of Special Concern

An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

1. Is extirpated from the state or, in the case of birds, is extirpated in its primary season or breeding role.

2. Is listed as federally, but not state-, threatened or endangered; meets the state definition of threatened or endangered but has not formally been listed.

3. Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.

4. Has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.

Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act (16 USC §§ 2901–2911) mandates USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." The overall goal of the Birds of Conservation Concern is to accurately identify the migratory and non-migratory

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bird species (beyond those already designated as federally threatened or endangered) that represent the Nation's highest conservation priorities. Bird species considered for inclusion as a Bird of Conservation Concern include nongame birds, gamebirds without hunting seasons, subsistence-hunted nongame birds in Alaska, federal ESA candidates, proposed endangered or threatened species, and recently delisted species (USFWS, 2021).

8.6.1.2. Wildlife Habitats and Associated Common Species

The habitats identified as occurring within the Project vicinity are derived from the vegetation discussion in Section 8.7 *Botanical Resources*. The eight vegetation types and four landcovers found in the Project vicinity support a wide variety of common wildlife. These habitats interdigitate with the surrounding upland plant communities and provide habitat for numerous wildlife species. The common wildlife species observed during the 2025 wildlife surveys are consistent with the species expected to occur in these habitats, including Sierra treefrog (*Pseudacris sierra*), western fence lizard (*Sceloporus occidentalis*), northern sagebrush lizard (*Sceloporus graciosus graciosus*), Great Basin rattlesnake (*Crotalus oreganus lutosus*), California quail (*Callipepla californica*), red-tailed hawk (*Buteo jamaicensis*), northern flicker (*Colaptes auratus*), Clark's nutcracker (*Nucifraga columbiana*), mountain chickadee (*Poecile gambeli*), western wood-peewee (*Contopus sordidulus*), white-crowned sparrow (*Zonotrichia leucophrys*), fox sparrow (*Passerella iliaca*), Douglas' squirrel (*Tamiasciurus douglasii*), yellow-bellied marmot (*Marmota flaviventris*), chipmunk (*Neotamias* sp.), bobcat (*Lynx rufus*), mountain lion (*Puma concolor*), coyote (*Canis latrans*), common grey fox (*Urocyon cinereoargenteus*), mule deer (*Odocoileus hemionus*), Mexican free-tailed bat (*Tadarida brasiliensis*), little brown bat (*Myotis lucifugus*), and silver-haired bat (*Lasionycteris noctivagans*). All the wildlife species observed or otherwise documented during the 2025 wildlife surveys are listed in Table 8.6-1. Data from 2026 surveys will be provided in the FLA.

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Table 8.6-1. Wildlife observed or otherwise documented during the 2025 TERR-2 surveys

Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
LIZARDS						
PHRYNOSOMATIDAE – SPINY LIZARD FAMILY						
Sceloporus graciosus graciosus	northern sagebrush lizard				X	X
Sceloporus occidentalis	western fence lizard		X	X		
SNAKES						
BOIDAE – BOA FAMILY						
Charina bottae	northern rubber boa			X		
VIPERIDAE – VIPER AND PITVIPER FAMILY						
Crotalus oreganus lutosus	Great Basin rattlesnake			X		X
BIRDS						
ANATIDAE – SWAN, GOOSE, AND DUCK FAMILY						
Mergus merganser	common merganser		X			
ODONTOPHORIDAE – NEW WORLD QUAIL FAMILY						
Callipepla californica	California quail				X	X
PHASIANIDAE – PARTRIDGE AND TURKEY FAMILY						
*Lagopus leucura**	white-tailed ptarmigan		X			
COLUMBIDAE – PIGEON AND DOVE FAMILY						
Zenaida macroura	mourning dove					X

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
CAPRIMULGIDAE – NIGHTJAR FAMILY						
Phalaenoptilus nuttallii	common poorwill			X		X
APODIDAE – SWIFT FAMILY						
Aeronautes saxatalis	white-throated swift		X	X		
CATHARTIDAE – NEW WORLD VULTURE FAMILY						
Cathartes aura	turkey vulture			X	X	X
ACCIPITRIDAE – HAWK FAMILY						
Accipiter cooperii	Cooper's hawk	WL		X		
Buteo jamaicensis	red-tailed hawk		X	X	X	X
STRIGIDAE – TYPICAL OWL FAMILY						
Bubo virginianus	great horned owl			X		X
PICIDAE – WOODPECKER FAMILY						
Sphyrapicus ruber	red-breasted sapsucker		X			
Dryobates villosus	hairy woodpecker		X			
Colaptes auratus	northern flicker		X	X	X	
FALCONIDAE – FALCON FAMILY						
Falco sparverius	American kestrel		X			X
TYRANNIDAE – TYRANT FLYCATCHER FAMILY						
Contopus sordidulus	western wood-pewee		X	X		
Sayornis nigricans	black phoebe		X	X	X	X

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
Sayornis saya	Say's phoebe					X
VIREONIDAE – VIREO FAMILY						
Vireo huttoni	Hutton's vireo			X		
Vireo gilvus	warbling vireo			X		
CORVIDAE – JAY AND CROW FAMILY						
Cyanocitta stelleri	Steller's jay		X	X	X	
Nucifraga columbiana	Clark’s nutcracker		X	X	X	
Pica hudsonia	black-billed magpie					X
Corvus corax	common raven		X	X	X	X
PARIDAE – TITMOUSE FAMILY						
Poecile gambeli	mountain chickadee		X	X	X	
HIRUNDINIDAE – SWALLOW FAMILY						
Tachycineta bicolor	tree swallow		X	X		
Tachycineta thalassina	violet-green swallow		X	X		
Stelgidopteryx serripennis	northern rough-winged swallow		X	X		
Petrochelidon pyrrhonota	cliff swallow		X	X		
AEGITHALIDAE – BUSHTIT FAMILY						
Psaltriparus minimus	bushtit		X	X		X

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
TROGLODYTIDAE – WREN FAMILY						
Salpinctes obsoletus	rock wren			X		
Troglodytes aedon	northern house wren		X	X		
CINCLIDAE – DIPPER FAMILY						
Cinclus mexicanus	American dipper		X	X		
TURDIDAE – THRUSH FAMILY						
Myadestes townsendi	townsend's solitaire		X	X	X	
Turdus migratorius	American robin		X	X	X	
FRINGILLIDAE – FINCH FAMILY						
Haemorhous mexicanus	house finch		X	X	X	X
Haemorhous cassinii	Cassin's finch		X	X		
PASSERELLIDAE – NEW WORLD SPARROW FAMILY						
Amphispiza bilineata	black-throated sparrow					X
Spizella breweri	Brewer's sparrow			X		X
Passerella iliaca	fox sparrow			X		X
Junco hyemalis	dark-eyed junco		X	X	X	
Artemisiospiza nevadensis	sagebrush sparrow					X
Passerculus sandwichensis	savannah sparrow					X
Pooecetes gramineus	vesper sparrow			X		X
Melospiza melodia	song sparrow			X	X	

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
Pipilo chlorurus	green-tailed towhee			X	X	X
ICTERIDAE – BLACKBIRDS AND ORIOLES						
Sturnella neglecta	western meadowlark					X
Icterus bullockii	Bullock's oriole		X	X		
Agelaius phoeniceus	red-winged blackbird					X
Euphagus cyanocephalus	Brewer's blackbird					X
Molothrus ater	brown-headed cowbird					X
PARULIDAE – WOOD-WARBLER FAMILY						
Geothlypis tolmiei	MacGillivray's warbler		X	X	X	
Setophaga petechia	yellow warbler	SSC		X		
CARDINALIDAE – CARDINALS AND ALLIES						
Piranga ludoviciana	western tanager		X	X		
Pheucticus melanocephalus	black-headed grosbeak		X	X	X	
Passerina amoena	lazuli bunting		X	X		
MAMMALS						
SCIURIDAE – SQUIRREL FAMILY						
Otospermophilus beecheyi	California ground squirrel			X	X	X
Tamiasciurus douglasii	Douglas' squirrel		X	X		
Neotamias sp.	chipmunk		X	X		

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
DIDELPHIDAE – AMERICAN OPPOSSUM FAMILY						
Marmota flaviventris +	yellow-bellied marmot		X			
Callospermophilus lateralis	golden-mantled ground squirrel		X	X	X	
APLODONTIIDAE – MOUNTAIN BEAVER FAMILY						
Aplodontia rufa californica +	Sierra Nevada mountain beaver	SSC	X			
CASTORIDAE – BEAVER FAMILY						
Castor canadensis	American beaver		X			
CRICETIDAE – NEW WORLD RATS AND MICE FAMILY						
Neotoma cinerea	bushy-tailed woodrat		X			
LEPORIDAE – HARE AND RABBIT FAMILY						
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	SSC		X		X
Lepus townsendii townsendii	western white-tailed jackrabbit	SSC		X		X
Sylvilagus audubonii	desert cottontail			X		X
MOLOSSIDAE – MOLOSSID BAT FAMILY						
Tadarida brasiliensis	Mexican free-tailed bat			X		X
VESPERTILIONIDAE – VESPERTILIONID BAT FAMILY						
Eptesicus fuscus	big brown bat		X	X		

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
Euderma maculatum	spotted bat	SSC				X
Antrozous pallidus	pallid bat	SSC				X
Lasionycteris noctivagans	silver-haired bat		X	X		
Myotis ciliolabrum	small-footed bat		X	X		X
Myotis lucifugus	little brown bat		X	X		
Myotis volans	long-legged bat			X		
Myotis evotis	long-eared bat		X	X		
FELIDAE – CAT FAMILY						
Lynx rufus	bobcat		X			X
Puma concolor +	mountain lion		X			
CANIDAE – CANID FAMILY						
Canis latrans	coyote		X	X		X
Urocyon cinereoargenteus	common gray fox			X	X	X
URSIDAE – BEAR FAMILY						
Ursus americanus	black bear		X		X	
MUSTELIDAE – MUSTELID FAMILY						
Martes caurina +	Pacific marten		X			
MEPHITIDAE – SKUNK FAMILY						
Spilogale gracilis	western spotted skunk		X			

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Scientific Name	Common Name	Status	Lundy Lake and Dam area	Mill Creek / Lundy Lake Road	Lundy Penstock and Flowline	Lundy Powerhouse and Mill Creek Return Ditch
CERVIDAE – CERVID FAMILY						
Odocoileus hemionus	southern mule deer		X	X	X	X
BOVIDAE – BOVID FAMILY						
Ovis canadensis sierrae +	Sierra Nevada bighorn sheep	FE, SE	X			

* introduced species
+ verified public observations
USFWS = U.S. Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife
Species Status (CDFW, 2025b; INF, 2020)
Federal (USFWS): FE = Endangered
State (CDFW): SE = Endangered; FP = Fully Protected; SSC = Species of Special Concern WL Watch List

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TERRESTRIAL WILDLIFE RESOURCES SURVEYS

Wildlife surveys were conducted in 2025 and 2026. These surveys included daytime and nighttime pedestrian surveys, trail cameras to capture photos of wildlife, a willow flycatcher (*Empidonax traillii*) habitat survey, inspections of Project facilities for evidence of bat roosting, and acoustic monitoring devices for recording bat vocalizations. The surveys occurred at the following locations, including a 100-foot buffer (Figure 8.6-1):

- 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 U.S. Highway 395

As a result of 2025 surveys for terrestrial wildlife, a total of 78 wildlife species were observed including one state and federally listed endangered species (Sierra Nevada bighorn sheep [*Ovis canadensis sierrae*]), and 7 other special-status wildlife species (6 California SSC: yellow warbler [*Setophaga petechia*], Sierra Nevada mountain beaver [*Aplodontia rufa californica*], Sierra Nevada snowshoe hare [*Lepus americanus tahoensis*], western white-tailed jackrabbit [*Lepus townsendii townsendii*], spotted bat [*Euderma maculatum*], and pallid bat [*Antrozous pallidus*]; and 1 Watchlist species: Cooper's hawk [*Astur cooperii*]). No USFS at-risk wildlife species nor species of conservation concern were observed. Data from 2026 surveys will be provided in the FLA.

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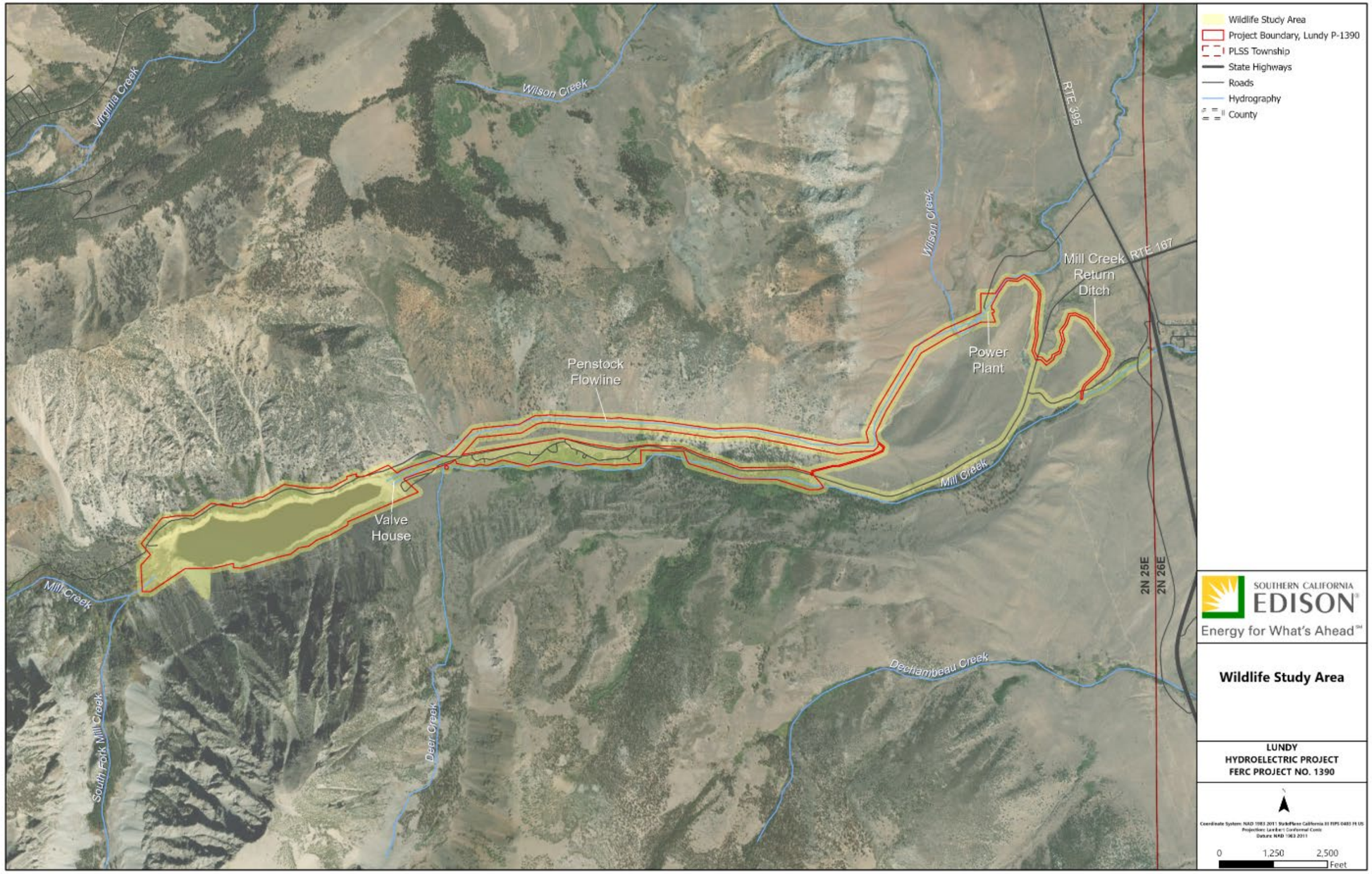


Figure 8.6-1. Terrestrial Wildlife Study Areas.

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TRAIL CAMERA SURVEYS

Trail camera surveys were conducted in 2026; results of the trail camera surveys will be provided in the FLA.

BAT OCCUPANCY

In 2025, no evidence of bat roosting was observed in any of the Project facilities, and none of the facilities are expected to support any colonies of roosting bats.

The following bat species were confirmed to be foraging in the recordings collected within the study area: Mexican free-tailed bat (*Tadarida brasiliensis*), spotted bat (*Euderma maculatum*), big brown bat (*Eptesicus fuscus*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*), long-eared bat (*Myotis evotis*), little brown bat (*Myotis lucifugus*), small-footed bat (*Myotis ciliolabrum*), and long-legged bat (*Myotis volans*).

Data from 2026 surveys will be provided in the FLA.

WILLOW FLYCATCHER HABITAT ASSESSMENT

The literature search and field survey efforts associated with willow flycatcher were completed in 2025. The literature search results informed the field survey effort. Detailed results from the literature search and the field survey are presented in the TERR-2 report (SCE, 2026). Habitat was assessed using habitat parameters described in USGS Techniques and Methods 2A-10 (Sogge et al., 2010).

Tree and shrub species associated with suitable willow flycatcher habitat, including willow (*Salix* spp.), cottonwood (*Populus* spp.), and alders (*Alnus* sp.), are present throughout Mill Creek. Habitat suitable for willow flycatcher nesting also requires expansive, continuous stands of these plant species with dense vegetative cover in the overstory, subcanopy, and understory layers. The majority of the vegetative cover within the Wildlife Study Area does not provide this type of vegetative density; however, scattered stands with marginally sufficient density occur in Mill Creek within 0.75 mile of U.S. Highway 395. These stands are not sufficiently expansive to support nesting activities, but the stands have potential to contain habitat suitable for temporary occupation by migrating willow flycatcher.

8.6.2. ENVIRONMENTAL EFFECTS

No potential adverse effects to terrestrial wildlife were identified as part of this relicensing, though some potential issues were analyzed as described below.

8.6.2.1. Effects of Project Operations and Maintenance on Terrestrial Wildlife Resources

Terrestrial wildlife habitat in the Project Area is widespread and generally consists of the upland vegetation types within and surrounding the FERC Project Boundary.

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Maintenance of Project facilities within the FERC Project Boundary occurs on previously disturbed land, roads, or within previously disturbed and maintained areas, such as the areas surrounding valve houses and gaging stations.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing license. No adverse effects to terrestrial wildlife habitat and associated wildlife resources from the continued Project O&M were identified relative to baseline conditions and are therefore not anticipated under No Action.

PROPOSED ACTION

Under the Proposed Action, minimum instream flows (MIFs) from Lundy Lake through the powerhouse would remain unchanged; therefore, no adverse environmental effects to terrestrial wildlife resources are anticipated from continued operations. Therefore, no adverse environmental effects to terrestrial wildlife resources are anticipated from implementation of the Proposed Action.

Based on the analysis of results of TERR-2 (SCE, 2026), maintenance activities, which are anticipated to be located in developed areas or areas that are disturbed and routinely maintained, would have minimal to no effect on terrestrial wildlife.

FERC SD2 noted that the DLA should analyze Project maintenance effects on wildlife including herbicide use. Within the Project Boundary, herbicides are only used at the powerhouse complex; SCE sprays annually inside the fence line and around the margins of SCE land. As herbicide usage at the Project is limited to the powerhouse area, on already disturbed lands, herbicides are expected to have minimal to no effect on terrestrial wildlife.

The adjustment of the existing FERC Project Boundary under the Proposed Action is limited to areas currently being used for O&M activities but not previously included in the boundary. No adverse effects are anticipated as a result of the Proposed Action, as all the newly incorporated areas have been subject to ongoing disturbance.

8.6.2.2. Effects of Project Operations and Maintenance on Migratory Birds and Raptors

The primary transmission line runs from the Lundy Powerhouse to the non-Project switchyard, a distance of 15 feet. No deaths of migratory birds or raptors have been reported in the FERC Project Boundary due to powerline encounters.

FERC SD2 noted that the DLA should analyze Project maintenance effects on wildlife including herbicide use. Within the Project Boundary, herbicides are only used at the powerhouse complex; SCE sprays annually inside the fence line and around the margins of SCE land. Because herbicide usage at the Project is limited to the powerhouse area,

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on already disturbed lands, herbicides are expected to have minimal to no effect on terrestrial wildlife, including migratory birds and raptors.

SCE protects avian resources through implementation of the Avian Protection Plan and the Nesting Bird Management Guidelines for Small Projects. SCE implements the procedures described in those documents as needed for each project and for routine O&M. Avian mortality related to SCE facilities would be discovered when SCE patrols its transmission lines and substations for cause of a relay or outage on a line. Other mortality discoveries would be made while performing inspections of facilities or while environmental surveys are occurring. Coordination with SCE's Corporate Avian Compliance Manager confirmed that there have been no reported instances of avian mortality within the FERC Project Boundary. SCE reports fatalities on an annual basis with records logged into a Microsoft Excel database. SCE has no records of eagles or other special-status avian species being impacted by any Project facilities.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing FERC Project license. No adverse effects to migratory birds and raptors from O&M of the Project have been identified.

PROPOSED ACTION

No changes in Project operations or maintenance are proposed as part of the Proposed Action; therefore, no adverse effects to migratory birds or raptors are anticipated from continued maintenance.

The adjustment of the existing FERC Project Boundary under the Proposed Action is limited to areas currently being used for O&M activities but not previously included in the boundary. No adverse effects are anticipated as a result of the Proposed Action, as all the newly incorporated areas have been subject to ongoing disturbance. Findings of the TERR-2 (SCE, 2026) indicated no adverse effects to migratory birds or raptors due to the presence of Project facilities or non-Project power transmission lines in the Project Area.

Maintenance activities continue to be located in developed areas or areas that are disturbed and routinely maintained and would continue to have minimal to no adverse effect to migratory birds and raptors.

8.6.2.3. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

Chapter 2 of the Inyo National Forest's LMP (USFS, 2019) describes forest-wide conditions and management direction for wildlife resources. This direction applies across all lands of the Inyo National Forest, including desired conditions, objectives, goals, standards, guidelines, and potential management approaches. Using the results obtained

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from Project technical reports, SCE assessed wildlife resources and their habitat, against the desired future conditions stated in Chapter 2.

The Proposed Action is consistent with the below-listed desired conditions because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. Desired conditions for wildlife resources include the following:

- SPEC-FW-DC 01: Sustainable populations of native and desirable non-native plant and animal species are supported by healthy ecosystems, essential ecological processes, and land stewardship activities, and reflect the diversity, quantity, quality, and capability of natural habitats in the Inyo National Forest. These ecosystems are resilient to uncharacteristic fire, climate change, and other stressors, and this resilience supports the long-term sustainability of plant and animal communities.

- SPEC-FW-DC 02: Habitats for at-risk species support self-sustaining populations within the inherent capabilities of the plan area. Ecological conditions provide habitat conditions that contribute to the survival, recovery, and delisting of species under the Endangered Species Act; preclude the need for listing new species; improve conditions for SCCs including addressing threats (e.g., minimal effects from disease); and sustain both common and uncommon native species.

- SPEC-FW-DC 05: The Inyo National Forest provides high quality hunting and fishing opportunities. Habitat for non-native fish and game species is managed in locations and ways that do not pose substantial risk to native species, while still contributing to economies of local communities.

- SPEC-FW-DC 06: Residents and visitors have ample opportunities to experience, appreciate, and learn about the Inyo National Forest's wildlife, fish, and plant resources.

- TERR-FW-DC 01: Each vegetation type contains a mosaic of vegetation conditions, densities and structures. This mosaic, which occurs at a variety of scales across landscapes and watersheds, reflects conditions that provide for ecosystem integrity and ecosystem diversity given the inherent capabilities of the landscape that is shaped by site conditions and disturbance regimes.

- TERR-FW-DC 06: The landscape contains a mosaic of vegetation types and structures that provide habitat, movement and connectivity for a variety of species including wide-ranging generalists such as bear, mountain lion, and deer; more localized, semi-specialists such as ground-nesting, shrub-nesting, and cavity-nesting birds and various bats; and specialists such as old forest and sagebrush-associated species.

- WTR-FW-DC 04: Soil and vegetation functions in upland and riparian areas are sustained and resilient. Healthy soils provide the base for resilient landscapes and nutritive forage for browsing and grazing animals, and support timber production.

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Healthy upland and riparian areas support healthy fish and wildlife populations, enhance recreation opportunities, and maintain water quality.

The Project as described under the Proposed Action proposes minor changes to the FERC Project Boundary, and no changes to operations or maintenance. Therefore, the Project would not have an adverse effect on the current terrestrial habitat (soils, vegetation, or movement and connectivity for wildlife), nor would it affect current habitats that support at-risk species or species protected under the federal ESA and Migratory Bird Treaty Act.

8.6.2.4. Proposed Protection, Mitigation, and Enhancement Measures

As no effects are anticipated, SCE is not proposing specific wildlife mitigation measures; however, guidance language to protect wildlife resources and manage the potential introduction and spread of invasive species is included in the Resources Management Plan, Appendix E.1, DLA Volume II. SCE will also continue to adhere to the Avian Protection Plan and Nesting Bird Management Guidelines for Small Projects as outlined in the Resources Management Plan.

8.6.2.5. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Terrestrial Wildlife resources.

8.6.3. REFERENCES

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8.7. BOTANICAL RESOURCES

This section describes general botanical resources in the vicinity of the Project. The discussion provided here is intended to inform an evaluation of potential issues relating to the Proposed Action and how the completed studies inform the understanding of Project effects.

During the study planning process, SCE identified the need to conduct a botanical resources study to document vegetation communities in the vicinity of the Project. Terrestrial botanical resources include vegetation communities, special-status plants, common plants, and non-native invasive plant (NNIP) species. Special-status plant species listed under the federal and state ESAs are discussed in detail in Section 8.9 *Rare, Threatened, and Endangered Species*. Aquatic botanical, wildlife, and associated resources are discussed in Section 8.5 *Fish and Aquatic Resources*.

8.7.1. AFFECTED ENVIRONMENT

8.7.1.1. Definitions

For the purposes of this document, sensitive natural communities are documented by CDFW’s California Natural Communities List (CDFW, 2025). This document provides a list of vegetation alliances, associations, and special stands and their rarity ranking. For the purposes of this document, a special-status plant is defined as a plant species considered by USFS (Inyo National Forest) or by the State of California to merit regulatory consideration in association with prosecution of a project.

NNIP species are not native to a given area and, once introduced, will establish, reproduce, and spread (Cal-IPC, 2023). For the purposes of this document, NNIP species are identified by the Inyo National Forest Invasive Plant Inventory Database (NRM–TESP/IS, 2018) and the California Invasive Plant Council (Cal-IPC).

SENSITIVE NATURAL COMMUNITY

Natural communities are evaluated using NatureServe’s Heritage Methodology for rarity and threat parameters. For rarity, the ranking involves the knowledge of range and distribution of a given type of vegetation and the proportion of occurrences that are of good ecological integrity. Threats and trends are considered in categories such as residential and commercial development, agriculture, energy production and mining, and invasive and other problematic species and genes (among others). Ranks range from S1

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(very rare and threatened) to S5 (demonstrably secure) and are done at both the global and state levels. Natural communities with ranks of S1 to S3 are considered sensitive natural communities to be addressed in the environmental review processes of the California Environmental Quality Act (CEQA) and its equivalents.

California Rare Plant Rank

The California Rare Plant Rank (CRPR) is a ranking system by the Rare Plant Status Review group, which consists of over 300 botanical experts from the government, academia, non-governmental organizations (NGOs), and the private sector, and it is managed by the California Native Plant Society (CNPS) and CDFW. CEQA requires consideration of plant species with the following CRPR rankings:

- 1A—presumed extirpated in California and either rare or extinct elsewhere
- 1B—rare or endangered in California and elsewhere
- 2A—presumed extirpated in California, but more common elsewhere
- 2B—rare or endangered in California, but common elsewhere

Species with a CRPR of 3 are part of a review list, which requires more information; species with a CRPR of 4 are part of a watch list, which are of limited distribution. Consideration of these species is not typically required by CEQA.

The CRPR also employs a Threat Rank extension that further clarifies the level of endangerment of a plant species. An extension of .1 is assigned to plants considered to be “seriously threatened” in California (i.e., over 80 percent of occurrences are threatened or have a high degree and immediacy of threat). Extension .2 indicates the plant is “moderately threatened” in California (i.e., between 20 and 80 percent of the occurrences are threatened or have a moderate degree and immediacy of threat). Extension .3 is assigned to plants that are considered “not very threatened” in California (i.e., less than 20 percent of occurrences are threatened or have a low degree and immediacy of threat or no current threats are known). The absence of a threat code extension indicates that this information is lacking for the plant(s) in question.

United States Forest Service Species of Conservation Concern

SCC is a rank assigned by the Inyo National Forest. Under the 2012 Planning Rule (36 CFR 219.7(c)(3)), the Regional Forester determined the terrestrial wildlife, aquatic wildlife, and plant species that meet the criteria for SCC for the Inyo National Forest’s LMP. The definition of SCC is found at 36 CFR 219.9(c), and criteria for identifying them are outlined in the Forest Service Handbook 1909.12 Chapter 10, Section 12.52c. An SCC is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the Regional Forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long term in the plan area (36 CFR 219.9) (USFS, 2019).

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NON-NATIVE INVASIVE PLANTS

Cal-IPC (2023) defines NNIP species as plants that (1) are not native to, yet can spread into, wildland ecosystems, and that (2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes. They may also cause harm to the environment, economy, or human health.

Cal-IPC (2023) categorizes plants as High, Moderate, or Limited, according to the degree of ecological effect in California:

- High: Severe ecological effects to physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

- Moderate: Substantial and apparent—but generally not severe—ecological effects to physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

- Limited: Invasive but ecological effects are minor on a statewide level (or there is not enough information to justify a higher score). Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

USFS has categorized NNIP species into various treatment strategies: (1) eradicate, (2) control, (3) contain, and (4) limited or no treatment (NRM-TESP/IS, 2018).

8.7.1.2. Botanical Resources Surveys

Botanical surveys were conducted in 2025 and 2026. These surveys included vegetation mapping, special-status plant surveys, and non-native invasive species surveys. The surveys occurred at the following locations, including a 100-foot buffer (Figure 8.7-1):

- Lundy Dam and associated infrastructure to the intersection of Lundy Dam Road and Lundy Lake Road

- Lundy Lake Boat Launch

- Lundy Campground

- Day Use Areas at Lundy Dam and downstream of Lundy Campground

- Lundy Lake Road from the boat launch to the downstream end of the Lundy Day Use Areas

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- Penstock Flowline
- Lundy Powerhouse
- Mill Creek Return Ditch (MCRD)

The surveyed area encompassed areas that may be hydrologically influenced by proposed activities or that may be subject to proposed activities related to Project routine O&M.

Data from 2026 surveys will be provided in the FLA.

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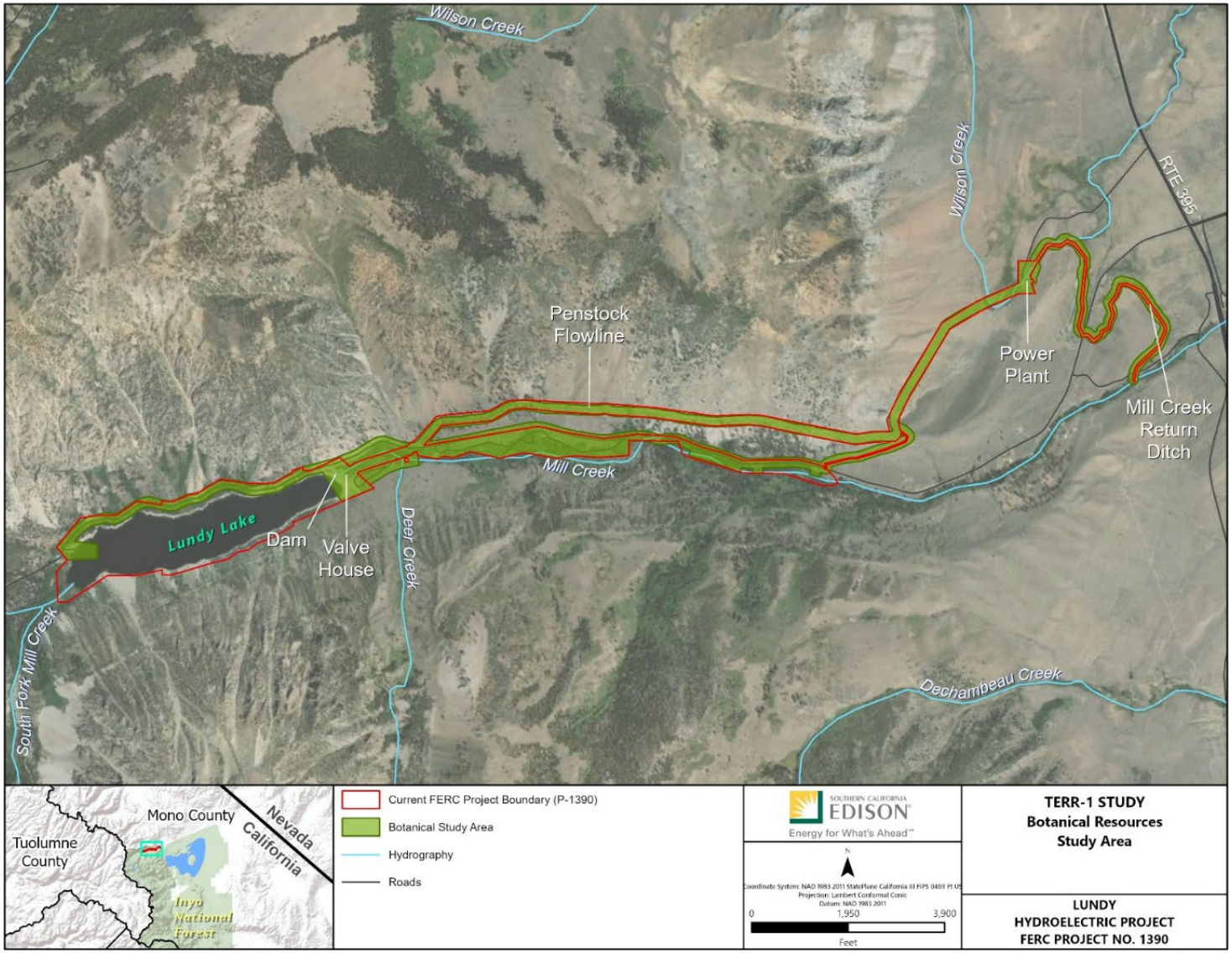


Figure 8.7-1. Botanical Resources Study Area.

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8.7.1.3. Vegetation Mapping Results

Eight vegetation types and four other landcovers were mapped in the study area: Big Sagebrush Alliance, Great Basin Mixed Scrub Alliance, Upper Montane Mixed Shrub Alliance, Wet Meadows Alliance, Quaking Aspen Alliance, Shrub Willow Alliance, Curlleaf Mountain Mahogany Alliance, Eastside Pine Alliance, Water, Barren, Disturbed, and Developed.

Figures in the TERR-1 (SCE, 2026) show the locations of vegetation types mapped in the study area during the 2025 and 2026 surveys.

BIG SAGEBRUSH

The Big Sagebrush Alliance occurs on a slope along the Penstock Flowline near the Lundy Powerhouse. This vegetation type is dominated by big sagebrush (*Artemisia tridentata*), with scattered bitterbrush (*Purshia tridentata* var. *tridentata*) and rubber rabbitbrush (*Ericameria nauseosa*). This vegetation type corresponds most closely to the *Artemisia tridentata* Association in *A Manual of California Vegetation* (CNPS, 2025). It is not considered a sensitive natural community by CDFW (2025).

GREAT BASIN MIXED SHRUB

Great Basin Mixed Scrub Alliance occurs on slopes throughout the study area. This vegetation type contains a mix of multiple shrub species, with no clear dominant. This includes big sagebrush, bitterbrush, rubber rabbitbrush, curl-leaf mountain-mahogany (*Cercocarpus ledifolius*), and wax current (*Ribes cereum*), The herbaceous layer contains species such as sulphur flower (*Eriogonum ubmellatum*) and Great Basin wild-rye (*Elymus cinereus*). Scattered Jeffrey pine (*Pinus jeffreyi*) is present where there is adjacent woodland, and yellow rabbitbrush (*Chrysothamnus viscidiflorus*) is more prevalent at lower elevations. This vegetation type corresponds most closely to the *Purshia tridentata – Artemisia tridentata* Association in *A Manual of California Vegetation* (CNPS, 2025). It is considered a sensitive natural community by CDFW (2025).

UPPER MONTANE MIXED SHRUB

Upper Montane Mixed Shrub Alliance occurs on the slopes north of Lundy Lake. This vegetation type is dominated by bitter cherry (*Prunus emarginata*) with lesser amounts of big sagebrush and velvety California-lilac (*Ceanothus velutinus*). This vegetation type corresponds most closely to the *Prunus emarginata* Sierran Association in *A Manual of California Vegetation* (CNPS, 2025). It is not considered a sensitive natural community by the CDFW (2025).

WET MEADOWS

Wet Meadows Alliance occurs along the edge of Lundy Lake near the boat launch, in openings along the Lundy Campground, in a low-lying area near the Lundy Powerhouse, and along the MCRD. Species composition varies among these areas but is characterized by various sedges (*Carex* spp.) and bulrushes (*Scirpus* spp.) and a mesic environment.

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Dominant species in most areas include southern beaked sedge (*Carex utriculata*), woolly sedge (*Carex pellita*), small fruit bulrush (*Scirpus microcarpus*), and smooth scouring rush (*Equisetum laevigatum*). The area along the Penstock Flowline is approximately 5 feet on either side of the channel (flowing water mapped in the channel was not mapped separately) and, in addition to sedges, contains species such as silver wormwood (*Artemisia ludoviciana*), silvery lupine (*Lupinus argenteus*), and slender wheat grass (*Elymus trachycaulus* ssp. *trachycaulus*); this area is also periodically trimmed of vegetation. This vegetation type corresponds most closely to various Associations in the *Carex urtriculata – Calamagrostis canadensis* Herbaceous Alliance, including the *Scirpus microcarpus* Montane Association and the *Carex utriculata* Meadow Association in *A Manual of California Vegetation* (CNPS, 2025). The overall alliance and the *Scirpus microcarpus* Montane Association are considered sensitive natural communities by CDFW (2025); however, the *Carex utriculata* Meadow Association is not considered a sensitive natural community by CDFW (2025).

QUAKING ASPEN

Quaking Aspen Alliance occurs primarily along Mill Creek, but also on slopes north of Lundy Lake. This vegetation type is dominated by quaking aspen (*Populus tremuloides*) in the tree strata with scattered Jeffrey pine, lodgepole pine (*Pinus contorta* ssp. *murrayana*), and white fir (*Abies concolor*). The understory in mesic areas has species found in the Wet Meadows Alliance (e.g., sedges and bulrushes) and the understory and margins in drier areas includes shrubs, such as Woods' rose (*Rosa woodsia*) and roundleaf snowberry (*Symphoricarpos rotundifolius* var. *rotundifolius*). This vegetation type corresponds most closely to the *Populus tremuloides* Association in *A Manual of California Vegetation* (CNPS, 2025). It is considered a sensitive natural community by CDFW (2025).

SHRUB WILLOW

Shrub Willow Alliance occurs in patches associated with the lakeshore, creeks, or mesic areas throughout the study area. This vegetation type is dominated by shrubby willows such as Pacific willow (*Salix lasiandra*; formerly *Salix lucida* ssp. *lasiandra*) with some areas containing narrow-leaved willow (*Salix exigua*). This vegetation type corresponds most closely to the *Salix lucida* ssp. *lasiandra* Association in *A Manual of California Vegetation* (CNPS, 2025). It is considered a sensitive natural community by CDFW (2025).

CURLLEAF MOUNTAIN MAHOGANY

Curlleaf Mountain Mahogany Alliance occurs in an upland area east of Lundy Lake. This vegetation type is dominated by curl-leaf mountain-mahogany and contains species found in the Great Basin Mixed Scrub Alliance. This vegetation type corresponds most closely to the *Cercocarpus ledifolius – Artemisia tridentata* Association in *A Manual of California Vegetation* (CNPS, 2025). It is not considered a sensitive natural community by CDFW (2025).

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EASTSIDE PINE

Eastside Pine Alliance occurs on slopes along Lundy Lake and Mill Creek. This vegetation type is dominated by Jeffrey pine in the tree canopy, with the species having at least 5 percent absolute cover. Areas with scattered trees growing among shrubs are mapped as a shrub alliance. Other scattered trees include lodgepole pine and quaking aspen. The understory contains litter or species found in the Great Basin Mixed Scrub Alliance, such as big sagebrush, bitterbrush, and wax current, or other species such as Woods' rose and roundleaf snowberry. This vegetation type corresponds most closely to the *Pinus jeffreyi* Association in *A Manual of California Vegetation* (CNPS, 2025). It is not considered a sensitive natural community by CDFW (2025).

WATER

Water occurs in Lundy Lake. The extent of open water is expected to vary within and between years, with drier periods having more exposed shoreline and wetter periods experiencing higher lake levels. As an unvegetated landcover, this area is not included in CNPS (2025) and is not considered a "sensitive natural community," though it would be a jurisdictional water resource and would provide habitat for aquatic species. Water was also present in Mill Creek and the MCRD during the 2025 plant surveys. Mill Creek was mapped according to the overhanging vegetation and the MCRD was too narrow to be mapped separately.

BARREN

Barren land in the study area consists of scree slopes. These are natural, relatively unvegetated areas with cobbles and boulders. Sparse shrubs and herbs may occur, but do not characterize the area. As an unvegetated landcover, this area is not included in CNPS (2025).

DISTURBED

Disturbed areas consist of graded areas with sparse or no vegetation. This includes parking areas along Lundy Lake, larger dirt roads, and a graded slope adjacent to the Lundy Powerhouse. As an unvegetated landcover, this area is not included in CNPS (2025).

DEVELOPED

Developed areas consist of paved roads and structures such as the boat launch and the Lundy Powerhouse. As an unvegetated landcover, this area is not included in CNPS (2025).

8.7.1.4. Special-Status Plant Species

Special-status plant species reported to occur in the Project region based on the results of the literature review are listed in Appendix J of the TERR-1 report, Special-status Plant

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Species Reported from the Project Region (SCE, 2026).[20] A complete list of plant species observed in 2025 is included in Appendix K of the TERR-1 report, 2025 Plant Compendium (SCE, 2026). Data from 2026 surveys will be provided in the FLA.

No special-status species were observed in 2025 in the study area. However, golden violet (*Viola purpurea* ssp. *aurea*) was incidentally observed during the FERC Environmental Site Review on May 15, 2024, by the SCE Project Botanist; it was not relocated during the 2025 survey. This species has a CRPR of 2B.2. One individual was observed adjacent to a dirt access road along the MCRD. Habitat information was not collected during 2024 because annual species had not germinated at that time; information on habitat was collected during the 2025 survey. The individual was growing in a flat, upland area in the Great Basin Mixed Scrub Alliance. Associated species include bitterbrush, desert peach (*Prunus andersonii*), big sagebrush, tall wild buckwheat (*Eriogonum elatum* var. *elatum*), taper-tipped hawksbeard (*Crepis acuminata*), cheat grass, and squirreltail (*Elymus elymoides*). A survey form was submitted to CDFW for this species and is included as Appendix L of the TERR-1 report, Golden Violet CNDDB Form (SCE, 2026).

The TERR-1 report (SCE, 2026) shows the location of special-status plant species in the study area during the 2025 surveys, including the incidental observation of golden violet in 2024.

8.7.1.5. Non-Native Invasive Plant Species

Four non-native, invasive plant species of concern designated for mapping were observed in 2025 in the study area: cheat grass, Russian thistle (*Salsola tragus*), bouncing-bet (*Saponaria officinalis*), and woolly mullein (*Verbascum thapsus*). Populations were mapped in 2025 and rechecked in 2026; substantial changes in population size between years are noted and new populations were added. Data from 2026 surveys will be provided in the FLA.

Cheat grass is an annual grass that occurs in open, disturbed areas at elevations below approximately 11,155 feet amsl (Jepson Flora Project, 2025). It is native to northern Africa, Europe, and western Asia (Kelch, 2015). It was introduced to North America independently via ship ballast, contaminated crop seed, and packing material. It is found throughout California except the driest deserts in the southeast of the state (Jepson Flora Project, 2025; Kelch, 2015). It has a USFS treatment strategy of 3 (contain) and a Cal-IPC rating of “high.” This species was scattered to abundant throughout all disturbed portions of the study area. This includes along paved roadsides, along unpaved access roads and trails, along the Penstock Flowline, in graded areas, and around the Lundy Powerhouse. In general, this species did not penetrate very far into intact native vegetation types. However, it was observed in high densities (10,000s of individuals) on a slope above the Penstock Flowline that had a low density of native vegetation. Because this species was so prevalent, individual populations were not mapped.

[20] The Project region includes a greater geographic extent than does the study area.

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Russian thistle is an annual herb/subshrub that occurs in disturbed places, including agricultural areas, deserts, and roadsides at elevations below approximately 9,186 feet amsl (Jepson Flora Project, 2025; Cal-IPC, 2023). It is native to Eurasia and found throughout California. Russian thistle has a USFS treatment strategy of 3 (contain) and a Cal-IPC rating of "limited." A population of 25 individuals was observed on the graded slope adjacent to the Lundy Powerhouse in 2025.

Woolly mullein is a biennial (occasionally annual) forb that occurs in disturbed areas and along roadsides and streambanks at elevations below approximately 8,104 feet amsl (Jepson Flora Project, 2025). It is native to Eurasia and found throughout California except the driest deserts in the southeast of the state. Woolly mullein is particularly abundant in dry valleys on the eastern side of the Sierra Nevada, with high densities in moist meadows and creek drainages near Mono Lake and Owens Valley (Cal-IPC, 2023). It is a host for insects that are also economic pests. Woolly mullein has a USFS treatment strategy of 4 (limited or no treatment) and a Cal-IPC rating of "limited." Approximately 6,978 individuals were mapped at 63 locations in 2025.

No other invasive plant species of concern were observed in the Botanical Resources Study Area during the surveys. Other non-native plant species observed are reported in Appendix K of the TERR-1 report, 2025 Plant Compendium (SCE, 2026).

Figures in the TERR-1 report (SCE, 2026) show the locations of NNIP species mapped in the study area during the 2025 surveys. Data from 2026 surveys will be provided in the FLA.

8.7.2. Environmental Effects

8.7.2.1. Effects of Continued Project Operations and Maintenance on Vegetation Communities Within the Project Area

Of the eight vegetation types mapped in the study area, Great Basin mixed scrub, quaking aspen, wet meadow, and shrub willow may be considered sensitive natural communities by CDFW (2025). Project facilities consist of existing developed structures in areas that are already disturbed or within previously disturbed and maintained areas. Therefore, there would be no effects to the existing plant communities identified in the Project Area.

FERC SD2 noted that the DLA should analyze Project maintenance effects on botanical resources including herbicide use. Within the Project Boundary, herbicides are only used in the powerhouse complex; SCE sprays annually inside the fence line and around the margins of SCE land. Because herbicide usage at the Project is limited to the powerhouse area, on already disturbed lands, herbicides are expected to have minimal to no effects to terrestrial botanical resources.

No-Action Alternative

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing FERC license. No effects to

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vegetation communities as a result of Project O&M have been identified relative to baseline conditions.

The No-Action Alternative is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to vegetation communities because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. SCE is not proposing to change its operations or maintenance practices for the Project under the new license. Project operations would not affect vegetation communities within and surrounding the Project because routine O&M activities do not involve expanding maintenance sites into native habitats.

PROPOSED ACTION

The Proposed Action does not include changes to operations or maintenance activities. Therefore, no adverse environmental effects to vegetation communities are anticipated from continued operations of the Project.

Expansion of the FERC Project Boundary would include areas currently being used for O&M activities but not previously included in the existing boundary. Although the size of the Project-affected area within the proposed FERC Project Boundary would technically increase, no effects to the surrounding environment would occur because all the newly incorporated areas have been subject to ongoing O&M activities.

The Project Proposed Action is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to vegetation communities because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. Project operations would not affect vegetation communities within and surrounding the Project.

8.7.2.2. Effects of Continued Project Operations and Maintenance Activities on Special-Status Plant Species Within the Project Area

Project facilities consist of existing developed structures in areas that are already disturbed or within previously disturbed and maintained areas.

One special-status plant species, golden violet, was incidentally observed adjacent to a dirt access road along the MCRD but was not observed during the 2025 field surveys.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing FERC license. No effects to special-status plants as a result of Project O&M have been identified, relative to baseline conditions.

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The No-Action Alternative is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to special-status plant species because the golden violet was observed in an area adjacent to, but not within, routine maintenance areas (dirt access road along the MCRD).

PROPOSED ACTION

No changes in Project operations or maintenance activities are proposed as part of the Proposed Action; therefore, no adverse environmental effects to special-status plant species are anticipated from continued maintenance activities.

Expansion of the FERC Project Boundary would include areas currently being used for O&M activities but not previously included in the existing boundary. Although the size of the Project-affected area within the proposed FERC Project Boundary would technically increase, no effects to surrounding environment would occur because all the newly incorporated areas have been subject to ongoing O&M activities.

The Project Proposed Action is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to special-status plant species because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. With proposed PME measures, Project O&M activities would not affect special-status plant species within and surrounding the Project. Project O&M would not decrease forest-wide special-status plant species populations below self-sustaining levels.

8.7.2.3. Effects of Continued Project Operations and Maintenance Activities on Non-Native Invasive Plants Within the Project Area

Project facilities consist of existing developed structures in areas that are already disturbed or within previously disturbed and maintained areas.

Four existing NNIP species were documented (i.e., cheatgrass, Russian thistle, bouncing-bet, and wooly mullein) in the study area. SCE uses herbicides to treat NNIP species annually within the fenced powerhouse complex area.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing FERC license. No increase in population size or spread of NNIP species would be anticipated relative to baseline conditions.

The No-Action Alternative is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to NNIP species because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis.

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Project operations would not affect the spread or increase the population size of NNIP species within and surrounding the Project. Routine maintenance activities that involve movement of equipment into and between Project facilities have the capacity to introduce the seed of new NNIP species into work areas. These activities may also increase the size of the population of existing NNIP species by bringing in additional seed or transporting seed around the Project.

PROPOSED ACTION

No changes in Project operation or maintenance activities are proposed as part of the Proposed Action; therefore, no adverse environmental effects resulting from the introduction or spread of NNIP species are anticipated from continued maintenance activities. As identified in the proposed Resources Management Plan, SCE provides guidance to reduce the spread of existing populations and introduction of NNIP through the use of best management practices.

Expansion of the FERC Project Boundary would include areas currently being used for O&M activities but not previously included in the existing boundary. Although the size of the Project-affected area within the proposed FERC Project Boundary would technically increase, no new effects to the surrounding environment would occur because all the newly incorporated areas have been subject to ongoing O&M activities.

The Project Proposed Action is consistent with the USFS desired conditions described in Section 8.7.2.4 *Consistency with Current Resource Management Objectives* relative to NNIP species because the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. With proposed PME measures, Project O&M would not affect the spread of or increase the population size of NNIP species. In addition, SCE is not proposing to change its maintenance practices for the Project under the new license.

8.7.2.4. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

SCE has reviewed the desired conditions in the Inyo National Forest LMP (USFS, 2019) to assess whether the Project is consistent with management objectives. The Project is consistent with the following desired conditions relating to vegetation communities, botanical resources, and invasive plant species:

- INV-FW-DC 01: Terrestrial invasive species are controlled or eradicated when possible, and establishment of new populations is prevented.
- INV-FW-DC 02: The area affected by invasive species and introduction of new invasive species is minimized.
- MA-CW-DC 01: Conservation watersheds provide high-quality habitat and functionally intact ecosystems that contribute to the persistence of SCC and the recovery of threatened, endangered, proposed, or candidate species.

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- MA-CW-DC 02: Conservation watersheds exhibit long-term (multiple planning cycles) high watershed integrity and have aquatic, riparian, and terrestrial ecosystems resilient to stochastic disturbance events such as wildfires, floods, and landslides.

- MA-RCA-DC 02: Riparian conservation areas have ecological conditions that contribute to the recovery of threatened and endangered species and support persistence of SCC as well as native and desired non-native aquatic and riparian-dependent plant and animal species.

- MA-RCA-DC 08: The condition of riparian vegetation, including riparian species composition, stand density, and fuel loading, is consistent with healthy riparian systems and reduces risks from high-intensity wildfire in the watershed.

- SPEC-FW-DC 02: Habitats for at-risk species support self-sustaining populations within the inherent capabilities of the LMP area. Ecological conditions provide habitat conditions that contribute to the survival, recovery, and delisting of species under the ESA; preclude the need for listing new species; improve conditions for SCC including addressing threats (e.g., minimal effects from disease); and sustain both common and uncommon native species.

- SPEC-FW-DC 03: Land management activities are designed to maintain or enhance self-sustaining populations of at-risk species within the inherent capabilities of the plan area by considering the relationship of threats (including site-specific threats) and activities to species survival and reproduction.

- SPEC-FW-DC 04: The structure and function of the vegetation, aquatic, and riparian system and associated microclimate and smaller scale elements (like special features such as carbonate rock outcrops, fens, or pumice flats) exist in adequate quantities within the capability of the plan area to provide habitat and refugia for at-risk species with restricted distributions.

- TERR-FW-DC 01: Each vegetation type contains a mosaic of vegetation conditions, densities and structures. This mosaic, which occurs at a variety of scales across landscapes and watersheds, reflects conditions that provide for ecosystem integrity and ecosystem diversity given the inherent capabilities of the landscape that is shaped by site conditions and disturbance regimes.

- TERR-FW-DC 02: Vegetation structure and composition provide ecosystem resilience to climate change and other stressors including altered fire regimes, drought, and flooding in riparian systems.

- TERR-FW-DC 03: Functioning ecosystems retain their essential components, processes, and functions.

- TERR-FW-DC 05: Ecological conditions contribute to the recovery of threatened and endangered species, conserve proposed and candidate species, and support the persistence of SCC.

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- TERR-MONT-DC 01: At the landscape scale, the Sierra Nevada montane landscape is a heterogeneous mosaic of patches of red fir forest, mixed conifer, lodgepole pine forests, Jeffrey pine forests, meadows, and riparian areas. These ecosystem types occur in a complex mosaic of different densities, sizes, and species mix across large landscapes that vary with topography, soils, and snow accumulation. The composition, structure, and function of vegetation make them resilient to fire, drought, insects and pathogens, and climate change. The mix of seral stage patches, and open versus closed canopied areas, varies by forest type as described in Table 1 and Table 2 of the Inyo National Forest LMP. Large and old trees are common in most seral stages throughout the landscape and in varying densities (see “Old Forest Habitats” section on page 19 of the Inyo National Forest LMP).

8.7.2.5. Proposed Protection, Mitigation, and Enhancement Measures

General protection and avoidance measures are included for botanical resources and to manage the potential introduction and spread of NNIP species in the Resources Management Plan, Appendix E.1, DLA Volume II.

8.7.2.6. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Botanical resources.

8.7.3. REFERENCES

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8.8. Floodplain, Wetland, Riparian, and Littoral Resources

This section describes floodplain, wetland, riparian, and littoral habitats in the vicinity of the Project.

Floodplain, wetland, riparian, and littoral habitats occur throughout the vicinity of the Project bordering the creeks, lakes, and impoundments. Habitat types change gradually with elevation and distance from water sources, but the vegetation communities interdigitate at the various elevations. For example, riparian habitat is present throughout the Project Boundary and mixes with the various upland vegetation communities —either as an understory or as a canopy with an upland understory. Wetland, riparian, and littoral vegetation communities, including common plant species, are summarized here and described in detail in Section 8.7 *Botanical Resources*. These areas provide habitat for various wildlife species, including amphibian species dependent upon moisture and water. Wildlife utilizing these areas is described in detail in Section 8.6 *Wildlife Resources*.

The Inyo National Forest LMP (USFS, 2019) defines Riparian Conservation Areas (RCAs) as one of the applicable management areas for the Inyo National Forest. RCAs are defined by type, including: (i) perennial streams; (ii) seasonally flowing streams; (iii) streams in inner gorge; (iv) those with special aquatic features (including lakes, wet meadows, bogs, fens, wetlands, vernal pools, and springs); and (v) other hydrologic or topographic depressions without a defined channel. Project waters are within a designated RCA.

8.8.1. Affected Environment

Wetland, riparian, and littoral resources in the Project Boundary have been mapped by USFWS and compiled in the National Wetland Inventory's (NWI) Wetland Mapper available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure

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(USFWS, 2026). The NWI provides the classification of mapped wetlands following the Classification of Wetlands and Deepwater Habitats of the United States (FGDC, 2013). This classification system is arranged in a hierarchy of the following: (1) systems, which share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., marine estuarine, riverine, lacustrine, and palustrine); (2) subsystems (i.e., subtidal and intertidal; tidal, lower perennial, upper perennial, and intermittent; or littoral and limnetic); (3) classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) subclasses; and (5) dominance types, which are named for the dominant plant or wildlife forms. In addition, there are modifying terms applied to classes or subclasses.

Many common wetland plant species were observed during the TERR-1 Botanical Resources Study (SCE, 2026). Strongly associated wetland species include *Carex utriculate*, *Carex pellita*, *Scirpus microcarpus*, and *Equisetum laevigatum*. Riparian and floodplain species include *Salix lasiandra*, *Salix exigua*, and *Populus tremuloides*. Riparian or wet meadow species include *Rosa woodsia*, *Symphoricarpos rotundifolius*, and *Elymus trachycaulus*. One invasive species is also frequently found in wetland habitats, *Verbascum thapsus*.

Several wildlife species observed during the TERR-2 Wildlife Survey (SCE, 2026) frequently use wetland and riparian habitats. The Sierra treefrog (*Pseudacris sierra*) breeds in ponds, marshes, and slow water. The Western wood-peewee (*Contopus sordidulus*) is often found near streams and wet meadows where insect prey is abundant. The white-crowned sparrow (*Zonotrichia leucophrys*) frequently uses riparian shrubs and wet meadow edges. The fox sparrow (*Passerella iliaca*) has a strong association with dense riparian thickets and moist understory. Mule deer (*Odocoileus hemionus*) commonly forage in riparian zones and wetlands, especially in dry regions. The Mexican free-tailed bat (*Tadarida brasiliensis*), little brown bat (*Myotis lucifugus*), and silver-haired bat (*Lasionycteris noctivagans*) all utilize wetlands and riparian areas for foraging.

8.8.1.1. North Mono Basin Watershed

The two principal drainages associated with the Lundy Project are Mill Creek and the Wilson System. These two drainages are part of the North Mono Basin watershed. The North Mono Basin watershed area is located on the eastern slope of the Sierra Nevada in the northwest corner of the Inyo National Forest in California. The western boundary of the North Mono Basin watershed is the crest of the Sierra Nevada mountain range with peak elevations in excess of 11,975 feet NGVD. This Sierra Nevada geologic province is characterized by steep, rugged mountains and stream or glacier-cut canyons. The province is separated from Mono Basin by two major faults, and at least three periods of glaciation have created a transition between otherwise distinct rock types of the Sierra and Mono Basin zones (USFS, 2001).

MILL CREEK

Mill Creek begins at Cascade Lake in the Sierra Nevada at an elevation of just over 10,000 feet. It is a 14.5-mile (23.3-kilometer) perennial stream that flows east from the

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Sierra Nevada into Mono Lake. Prior to entering Mono Lake, it passes through Lundy Canyon and Lundy Lake. The stream environment of Mill Creek reflects prolonged periods of erosion and deposition, which were prompted by extensive faulting, glacial activity, and fluctuations of Mono Lake over the past 20,000 years (USFS, 2001). Under natural conditions, streamflow in Mill Creek would typically reach a maximum between late May and early July and then decline to base flow levels, which persist through the winter until the following snowmelt season. Due to diversion from Lundy Lake to the powerhouse, there is reduced flow in Mill Creek immediately from Lundy Dam to Mono Lake. Flow released from Lundy Powerhouse is reported at two locations: (1) within the tailrace below the powerhouse (flow to the splitter box that releases to the Wilson System); and (2) in the Upper Conway ditch.

Water diverted from Lundy Lake for power generation is returned to Mill Creek via the MCRD to provide seasonal irrigation and flow into the Wilson System. Flow releases from the splitter box to the Wilson System are provided using a Langemann gate that is installed at the concrete control structure (historically, flash boards/stoplogs have been used to control flow releases into the Wilson System when the MCRD is being used). The Langemann gate has the capability to measure and provide an accurate flow rate to downstream users, as required. Flow information from the Langemann gate is transmitted every 15 minutes from a telemetry station located on the channel bank adjacent to the splitter box. The flow data are telemetered to SCE Control Station, which is staffed by operators 24 hours a day.

WILSON SYSTEM

The modern-day Wilson System is a recent (in the last 60 to 120 years), human-made feature (USFS, 2001). Although an artificially maintained diversion, the Wilson System has acquired properties of a natural stream and is paralleled by riparian vegetation. The Wilson System begins at the MCRD diversion, below the Lundy Powerhouse at an elevation of 7,218 feet and extends approximately 8.5 miles downstream (13.6 kilometers) to Mono Lake. Flows into the Wilson System from the diversion are restricted to those necessary to meet the water rights needs of end-users as described in Section 4.4.1.1 *Water Rights*. The Project operates a non-consumptive hydropower water right, passing flows through the system for generation before release downstream. The remaining flows (cfs), to meet the needs of other water right holders, continue back to Mill Creek and are stored in Mono Lake. SCE's operations rely on an Annual Operations Plan that utilizes the MCAPT and forecast methodology that has been developed with the water rights holders and memorialized in a Settlement Agreement (SCE et al., 2004) and Amended Settlement Agreement (SCE et al., 2022).

8.8.1.2. Floodplain

The Mill Creek floodplain is a confined, montane riparian system with a mosaic of willow-dominated active channel margins, sedge–bulrush wet meadow backwaters, and aspen-lined riparian terraces, supported by seasonal snowmelt flows and persistent shallow groundwater. It functions as a riparian corridor, a seasonally inundated wetland complex,

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and a hydrologically supported mesic refuge within an otherwise upland-dominated landscape.

8.8.1.3. Wetland and Water Habitat Types

Habitat types change gradually with elevation and distance from water sources. Vegetation alliances, including common plant species, and wildlife using these areas are described in detail in Section 8.6 *Terrestrial Wildlife Resources* and Section 8.7 *Botanical Resources*. The Wet Meadows Alliance, Shrub Willow Alliance, and Quaking Aspen Alliance predominantly comprise the wetland, riparian, or littoral resources within the Botanical Resources Study Area.

A variety of wetland, riparian, and littoral resources are mapped by the NWI in the vicinity of the Project. Figure 8.8-1 shows wetland features at a broad scale, though this mapping is not meant to replace an onsite analysis. Table 8.8-1 lists the wetland, riparian, and littoral habitats that are identified in the NWI. Eight Cowardin classification codes are identified by the NWI. Each code is a combination of various acronyms that are described in detail in the subsections below.

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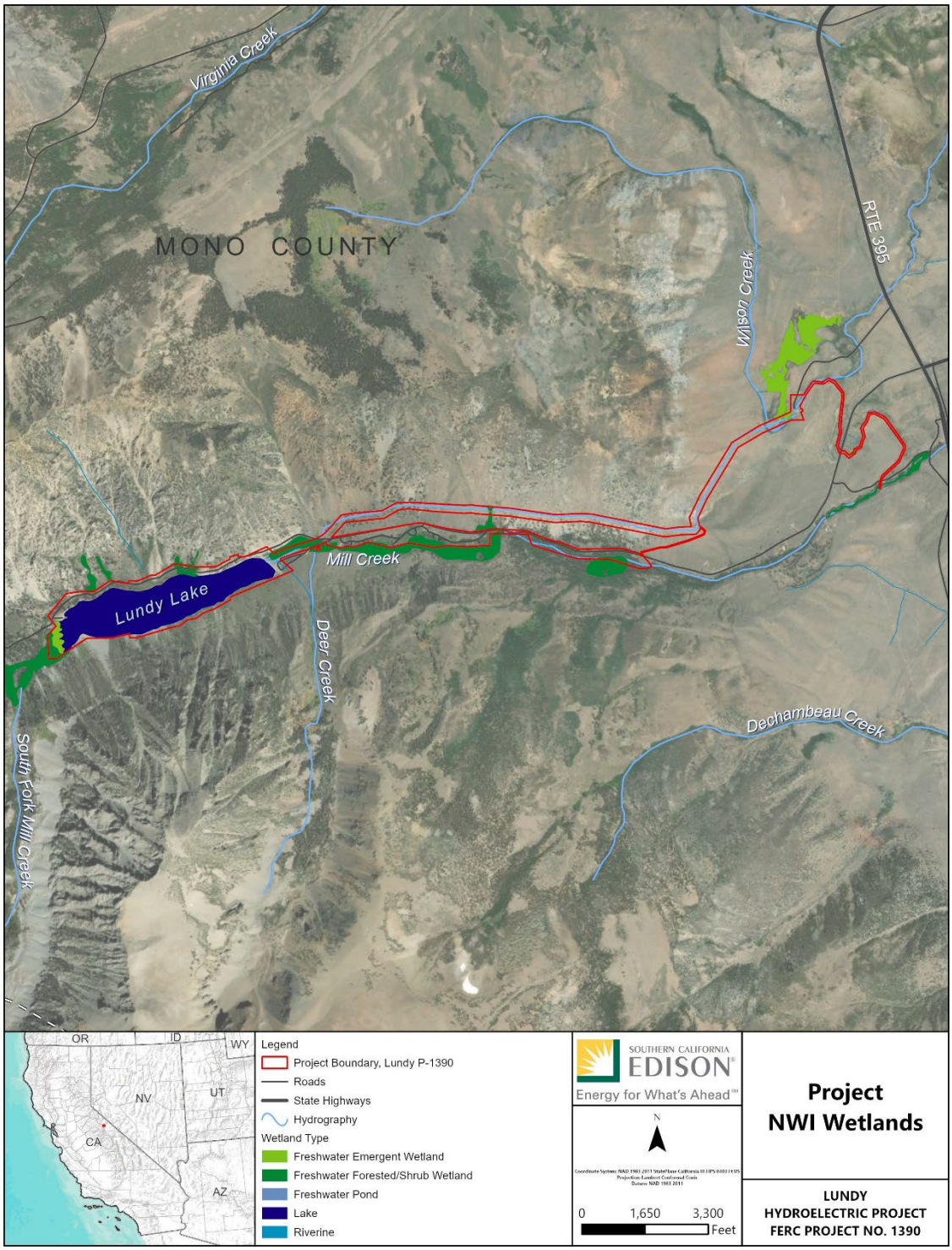


Figure 8.8-1. National Wetlands Inventory Features in the FERC Project Boundary.

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Table 8.8-1. Summary of Wetland, Riparian, or Littoral Resource in the FERC Project Boundary

Wetland Resource Type	Cowardin Code	Number of Polygons	Acres
Freshwater Emergent Wetlands	PEM1Cx	1	4.38
Freshwater Forested/Shrub Wetland: Type 1	PSS1C	9	77.35
Freshwater Forested/Shrub Wetland: Type 2	PFO1C	1	7.85
Freshwater Forested/Shrub Wetland: Type 3	PSS1F	1	13.21
Lake	L1UBHh	1	128.02
Lake Habitat	L2UBFh	1	4.19
Riverine: Type 1	R5UBF	4	3.26
Riverine: Type 2	R4SBCx	3	9.15
Total		**21**	**247.4**

PALUSTRINE SYSTEM (CODES PEM1CX, PSS1C, PFO1C, AND PSS1F)

Palustrine (P) wetlands are found in the following wetland resource types: Freshwater Emergent Wetland, Freshwater Forested/Shrub Wetland: Type 1, Freshwater Forested/Shrub Wetland: Type 2, and Freshwater Forested/Shrub Wetland: Type 3. They include Emergent (EM), Scrub-Shrub (SS), and Forested (FO) classes; Persistent (1 for EM class) or Broad-leaved Deciduous (1 for SS and FO classes) subclasses; seasonally flooded (C) water regime; and excavated (x) special modifier. Descriptions of these codes are included below:

System Palustrine (P): the Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand (ppt). It also includes wetlands lacking such vegetation, but with all the following four characteristics: (1) area less than 8 hectares (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 8.2 feet at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt. There are three classes mapped in the vicinity of the Project:

- Class Emergent (EM): characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

- Subclass Persistent (1): dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.

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- Class Scrub-Shrub (SS): includes areas dominated by woody vegetation less than 20 feet tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.

- Class Forested (FO): Characterized by woody vegetation that is 20 feet tall or taller.

- Subclass Broad-Leaved Deciduous (1): woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

  - Water Regime Seasonally Flooded (C): surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

  - Water Regime Semipermanently Flooded (F): surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

Special Modifier Excavated (x): this modifier is used to identify wetland basins or channels that were excavated by humans.

LACUSTRINE SYSTEM (CODES L1UBHH AND L2UBFH)

Lacustrine wetlands are found in the following wetland resource types: Lake and Lake Habitat. They include Limnetic (1) and Littoral (2) subsystems; Unconsolidated Bottom (UB) class; Permanently Flooded (H) and Semipermanently Flooded (F) water regimes; and Diked/Impounded (h) special modifier. Descriptions of these codes are included below:

System Lacustrine (L): The Lacustrine System includes wetlands and deepwater habitats with the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, and emergent mosses or lichens with 30 percent or greater areal coverage; and (3) total area of at least 8 hectares (20 acres). Similar wetlands and deepwater habitats totaling less than 8 hectares are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin equals or exceeds 8.2 feet at low water. Lacustrine waters may be tidal or nontidal, but ocean-derived salinity is less than 0.5 ppt.

- Subsystem Limnetic (1): This subsystem includes deepwater habitats (i.e., areas > 8.2 feet deep below low water) in the Lacustrine System. Many small Lacustrine Systems have no Limnetic Subsystem.

- Subsystem Littoral (2): This subsystem includes wetland habitats in the Lacustrine System. It extends from the shoreward boundary of the system to a depth of 8.2 feet

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below low water, or to the maximum extent of nonpersistent emergents if these grow at depths greater than 8.2 feet.

- Class Unconsolidated Bottom (UB): Includes wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6-7 centimeters in diameter), and a vegetative cover less than 30 percent.

- Water Regime Permanently Flooded (H): Water covers the substrate throughout the year in all years.

- Water Regime Semipermanently Flooded (F): Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

Special Modifier Diked/Impounded (h): These wetlands have been created or modified by a human-made barrier or dam that obstructs the inflow or outflow of water.

RIVERINE SYSTEM (CODES R5UBF AND R4SBCX)

Riverine wetlands are found in the following wetland resource types: Riverine: Type 1 and Riverine: Type 2. They include Intermittent (4) and Unknown Perennial (5) subsystems; Unconsolidated Bottom (UB) and Streambed (SB) classes; Semipermanently Flooded (F) and Seasonally Flooded (C) water regimes; and Excavated (x) special modifier. Descriptions of these codes are included below:

System Riverine (R): The Riverine System includes wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created that periodically or continuously contains moving water, or that forms a connecting link between two bodies of standing water.

- Subsystem Intermittent (4): This subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

  - Class Streambed (SB): Includes wetlands contained within the Intermittent Subsystem of the Riverine System and channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.

  - Water Regime Seasonally Flooded (C): Surface water is present for extended periods, especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

    - Special Modifier Excavated (x): This modifier is used to identify wetland basins or channels that were excavated by humans.

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- Subsystem Unknown Perennial (5): This subsystem designation was created specifically for use when the distinction between lower perennial, upper perennial, and tidal cannot be made from aerial photography and no data are available.

  - Class Unconsolidated Bottom (UB): Includes all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6-7 centimeters), and a vegetative cover less than 30 percent.

Water Regime Semipermanently Flooded (F): Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

8.8.2. Environmental Effects

8.8.2.1. Effects of Project Operations and Maintenance on Floodplain, Wetland, Riparian, and Littoral Resources

Project facilities consist of existing developed structures in areas that are already disturbed or within previously disturbed and maintained areas. Floodplain, wetland, riparian, and littoral resources occur in the surrounding areas within the FERC Project Boundary. SCE operations have not affected floodplain, wetland, riparian, and littoral resources.

No-Action Alternative

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the existing FERC license. No adverse effects to floodplain, wetland, riparian, and littoral habitat resources under current Project O&M have been identified.

Proposed Action

Under the Proposed Action, no changes to Project operations are proposed; therefore, flow regulation and vegetation management would remain the same as under the No-Action Alternative. Proposed modifications are limited to administrative boundary adjustments and updated PME measures and would not affect floodplains, wetlands, riparian, or littoral resources. Land additions to the FERC Project Boundary would include areas currently being used for O&M activities but not previously included in the boundary. No new effects are anticipated, as the lands proposed to be added to the FERC Project Boundary have been previously developed and are disturbed.

O&M activities would continue to be located in developed areas or areas that are disturbed and routinely maintained. Project operations would not affect the surrounding riparian areas, wetlands, or littoral areas because SCE is not proposing to change O&M for the Project under the new license. No adverse effects to floodplain, wetland, riparian, and littoral habitat resources under the proposed action have been identified.

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8.8.2.2. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

SCE reviewed the desired conditions in the Inyo National Forest LMP (USFS, 2019) to assess whether the Project is consistent with management objectives. Both the No-Action Alternative and the Proposed Action are consistent with the USFS desired conditions described below, as the Project facilities are sited at locations that are currently disturbed or developed or in areas that are maintained on a consistent routine basis. Maintenance practices are restricted to disturbed or developed areas, and operations with regard to water management would remain consistent with existing conditions. The desired conditions relating to floodplain, wetland, riparian, and littoral resources, with which the Project is consistent, include the following (USFS, 2019):

- MA-CW-DC 01: Conservation watersheds provide high-quality habitat and functionally intact ecosystems that contribute to the persistence of species of conservation concern and the recovery of threatened, endangered, proposed, or candidate species.

- MA-RCA-DC 02: RCAs have ecological conditions that contribute to the recovery of threatened and endangered species and support persistence of species of conservation concern, as well as native and desired nonnative aquatic and riparian-dependent plant and animal species.

- MA-RCA-DC 08: The condition of riparian vegetation (including riparian species composition, stand density, and fuel loading) is consistent with healthy riparian systems and reduces risks from high-intensity wildfire in the watershed.

- RCA-MEAD-DC 02: Wetlands and groundwater-dependent ecosystems (including springs, seeps, fens, wet meadows, and associated wetlands or riparian systems) support stable herbaceous and woody vegetation communities that are resilient to drought, climate change, and other stressors. Root masses stabilize stream channels, shorelines, and soil surfaces. The natural hydrologic, hydraulic, and geomorphic processes in these ecosystems sustain their unique functions and biological diversity.

- RCA-MEAD-DC 05: Meadows have substantive ground cover and a rich and diverse species composition, especially of grasses and forbs. Meadows have high plant functional diversity with multiple successional functional types represented. Perennial streams in meadows contain a diversity of age classes of shrubs along the streambank, where the potential exists for these plants.

- RCA-MEAD-DC 06: A complexity of meadow habitat types and successional patterns support native plant and animal communities. Meadow species composition is predominantly native, where graminoid (grass-like) species are well represented and vigorous and regeneration occurs naturally. Healthy stands of willow, alder, and aspen are present within and adjacent to meadows with suitable physical conditions for these species. Natural disturbances and management activities are sufficient to maintain desired vegetation structure, species diversity, and nutrient cycling.

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- RCA-RIV-DC 03: Instream flows are sufficient to sustain desired conditions of riparian, aquatic, wetland, and meadow habitats and retain patterns of sediment nutrients and wood routing as close as possible to those with which aquatic and riparian biota evolved. The physical structure and condition of streambanks and shorelines minimize erosion and sustain desired habitat diversity.

8.8.2.3. Proposed Protection, Mitigation, and Enhancement Measures

The Resource Management Plan (Appendix E.1, DLA Volume II) will be implemented under the Proposed Action to support and enhance floodplain, wetland, riparian, and littoral resources. As no adverse effects have been identified for these resources, no additional PME measures are proposed at this time.

8.8.2.4. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Wetland, Riparian, and Littoral resources.

8.8.3. REFERENCES

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8.9. RARE, THREATENED, AND ENDANGERED SPECIES

This section describes species listed as special status or rare, threatened, and endangered (RTE) with potential to occur in the vicinity of the Project. The terms "threatened" and "endangered" are specific to species listed or formally proposed to be listed under the federal ESA and the California ESA. The term "rare" is specific to the designation associated with only plant species under the California ESA, as listed in CDFW's State and Federally Listed Endangered, Threatened, and Rare Plants of California, April 2026 (CDFW, 2026d). This section also describes species listed in the federal Bald and Golden Eagle Protection Act (BGEPA) and species listed as Fully Protected under the California Fish and Game Code (CDFW and California Fish and Game Commission, 2021). Collectively, the species discussed in this section are referred to as RTE species.

8.9.1. AFFECTED ENVIRONMENT

8.9.1.1. Information Sources

A literature review was performed to identify common and RTE wildlife known to occur (or that historically occurred) in equivalent habitats in the vicinity of the Project. The literature review included the following:

- A search of the CDFW California Natural Diversity Database (CNDDB) (CDFW, 2026c) and CNPS's Rare Plant Inventory (CNPS, 2026) for the USGS's 7.5-minute quadrangles for Tioga Pass, Mount Dana, Lee Vining, Falls Ridge, Lundy, Dunderberg Peak, Vogelsang Peak, Koip Peak, and Negit Island.

- Results from the USFWS Information for Planning and Consultation (IPaC) System (USFWS, 2026b).

- The unpublished *At-Risk Aquatic and Terrestrial Species in Inyo National Forest* (Inyo National Forest, 2020), which further expanded the list of RTE species with the potential to occur in the vicinity of the Project.

- Common terrestrial wildlife species anticipated to occur in the vicinity of the Project, compiled following a review of previous survey reporting by SCE and their consulting biologists (FERC, 1992; Psomas, 1999, 2006, 2008a, 2008b, 2008c, 2009, 2017).

- Results from SCE's 2025 Fish Community Study (AQ-1), General Botanical Resources Study (TERR-1), and the General Wildlife Resources Study (TERR-2) (Initial Study Report; SCE, 2026).[21]

[21] Results from 2026 studies will be included in the FLA.

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8.9.1.2. RTE Species in the Project Vicinity

A list of RTE species known or with potential to occur in the vicinity of the Project was compiled, and each species was assessed for its potential to occur in the FERC Project Boundary. The potential for an RTE species to occur is categorized as follows:

- Known to Occur: The species was recorded as occurring in the vicinity of the Project, as determined by SCE reporting or as shown in CNDDB records.
- May Occur: The species has the potential to occur in the vicinity of the Project because the species' habitat is present, the vicinity of the Project is within the elevation range appropriate for the species, and the species has been previously recorded in the vicinity of the Project.
- Unlikely to Occur: The species is unlikely to occur because the vicinity of the Project is outside the known species range, or the vicinity of the Project does not support any habitat suitable for the species.

Table 8.9-1 lists the RTE plants, terrestrial wildlife, and aquatic wildlife identified during the literature search for the Project, listing status, and summary of pertinent habitat information. The list of RTE species known or with potential to occur in the vicinity of the Project was used to identify study needs during the study planning process. SCE conducted AQ-1, TERR-1, and TERR-2 (SCE, 2026) in 2025 and 2026 for the Project. The AQ-1, TERR-1, and TERR-2 study results are summarized in Section 8.9.2 and were used to inform potential presence of species outlined in Table 8.9-1. Figure 8.9-1 shows the CNDDB locations of the nearest RTE species to the Project.

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Table 8.9-1. RTE Species Identified in Literature Search

Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Plants				
Astragalus monoensis	Mono milk-vetch	Perennial herb found in Great Basin scrub and upper montane coniferous forest, sometimes in gravelly or sandy soil; 7,000 to 11,000 feet. Blooms June–August.	SCC; SR, CRPR: 1B.2	May occur. Suitable habitat is present. Most populations are located over 20 miles to the south; however, the nearest known occurrence is located approximately 3 miles north of the Project Boundary along Virginia Lakes Road (CNDDB occurrence 33). Not observed during the TERR-1 botanical surveys.
Pinus albicaulis	Whitebark pine	Evergreen monoecious tree. Occurs in upper red fir forest to the timberline, especially in subalpine forests elevations between 6,562 and 12,139 feet. It grows with other conifers under a wide range of annual precipitation amounts and is considered relatively drought tolerant. A variety of soil types support whitebark pine; soils are generally well-drained, poorly developed, coarse, rocky, and shallow over bedrock. It requires a variety of ectomycorrhizal fungi in the soil. The species tolerates poor soils, steep slopes, and windy exposures. Trees typically grow from 16 to 66 feet tall with a rounded or irregularly spreading crown. Above the tree line, they grow in a krummholz form (i.e., stunted and shrub-like).	FT, SCC	May occur. Suitable habitat is present within the Project Boundary. This species was not observed during the TERR-1 botanical surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Terrestrial Wildlife				
Actinemys marmorata	Northwestern pond turtle	Marshes, streams, rivers, ponds, and lakes. Turtles prefer waterbodies with muddy bottoms and sunny basking sites. They dig nests in sparsely vegetated ground near the waterbodies and spend winters in wet shrub or forested areas. They range from Puget Sound, Washington, through western Oregon and California and south to Baja California.	FCT	Unlikely to occur; outside of range. Not observed during the TERR-2 wildlife surveys.
Anaxyrus canorus	Yosemite toad	A high-elevation endemic, found in high montane and subalpine associations in meadows surrounded by forests. Overwintering sites are rodent burrows. The Yosemite toad is restricted to the vicinities of wet meadows in the central high Sierra at about 6,400 to 11,320 feet.	FT; SSC	Unlikely to occur. Suitable wet meadow habitat does not occur in the Project Boundary. Not observed during the TERR-2 wildlife surveys.
Aquila chrysaetos	Golden eagle	Golden eagles occur locally in open country such as open coniferous forest, sage-juniper flats, desert, and barren areas, especially in rolling foothills and mountainous regions. Within southern California, the species favors grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nesting is primarily restricted to rugged, mountainous country. Cliff-walled canyons provide nesting habitat in most parts of their range; also, large trees in open areas.	BGEPA, BLMS; FP	May occur. The vicinity of the Project supports suitable nesting and foraging habitat. The nearest CNDDB record is south of the Project Boundary near Bishop, California. Not observed during the TERR-2 wildlife surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Buteo swainsoni	Swainson's hawk	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent populations. Nesting is confined to the Central Valley, Klamath Basin, and parts of the Great Basin. Several pairs have nested in southern Mono County and the Owens Valley in Inyo County. Typically nests below 5,000 feet.	ST (nesting)	Unlikely to occur. The Project Boundary is above normal nesting elevation; however, it may use the area for foraging. Not observed during the TERR-2 wildlife surveys.
Canis lupus	Gray wolf	Habitat generalists, historically occupying diverse habitats including tundra, forests, grasslands, and deserts. Primary habitat requirements are the presence of adequate ungulate prey, water, and low human contact.	FE; SE	Unlikely for packs to occur; outside of range. The gray wolf populations within California are well studied and closely tracked by CDFW. The Project Boundary and vicinity of the Project are located far outside of any pack territory: the closest pack locations are on the west side of the Sierra Nevada and are approximately 100 miles to the north and 100 miles to the south. None of the packs have potential to expand their territory into the vicinity of the Project. Not observed during the TERR-2 wildlife surveys.
Centrocercus urophasianus	Greater sage-grouse – bi-state DPS	Occurs in large, interconnected expanses of sagebrush, with a native grass and forb understory. Occurs in elevations between 3,500 and 12,000 feet. Found in greatest abundance in a combination of sagebrush, perennial grassland or wet meadow, and water. Northern Inyo County. Lassen and Mono counties have the most stable populations.	FCT; SC	May occur (low likelihood). Suitable habitat and proposed critical habitat are present in the vicinity of the Project; however, the Project Boundary is outside of the 95% grouse habitat utilization distribution identified in the 2025 Draft Bi-State Action Plan for greater sage-grouse (Bi-State Partnership, 2025). Not observed during the TERR-2 wildlife surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Coccyzus americanus	Yellow-billed cuckoo	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian willow thickets, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	FT; SE	Unlikely to occur, no suitable habitat and outside of range. Not observed during the TERR-2 wildlife surveys.
Danaus plexippus	Monarch butterfly	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	FCT	Unlikely to occur; outside of range. Not observed during the TERR-2 wildlife surveys.
Empidonax traillii	Willow flycatcher	A rare to locally uncommon summer resident in wet meadow and montane riparian habitats. They require dense willow thickets for nesting and roosting. Willow flycatchers are common throughout the state in migration, especially in fall migration from mid-August to early September. Spring migration peaks in mid-May.	SE (nesting)	May occur. The nearest observation in CNDDB is near the Mono Lake Visitor Center, approximately 8 miles to the southeast. Not observed during the TERR-2 wildlife surveys.
Empidonax traillii extimus	Southwestern willow flycatcher	A rare to locally uncommon summer resident in wet meadow and montane riparian habitats. They require dense willow thickets for nesting and roosting.	FE; SE	Unlikely to occur. The Project Boundary is outside of the known range for nesting. Not observed during the TERR-2 wildlife surveys.
Gulo gulo luscus	North American wolverine	Needs a water source. Uses caves, logs, and burrows for cover and den area. Hunts in more open areas. Can travel long distances. Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high-elevation habitats, including alpine, meadow and seep, north coast coniferous forest, riparian forest, subalpine coniferous forest, and upper montane coniferous forest.	FT; ST, FP	May occur. Recent sighting by CDFW in eastern Sierra Nevada in Yosemite National Park and near the town of Mammoth. Not observed during the TERR-2 wildlife surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Haliaeetus leucocephalus	Bald eagle	Nesting and wintering habitat include ocean shores, lakes, and river margins. Nests are usually within 1 mile of water. Not found in the high Sierra Nevada. Nests in large old-growth trees, especially tall snags. Requires large bodies of water or free-flowing rivers with abundant fish. Roosts communally in winter in dense, sheltered, and remote conifer stands. Forested stands with large, old dominant or co-dominant trees in the vicinity of lakes, reservoirs, rivers, or large streams that support an adequate food supply.	BGEPA, BLMS; SE, FP	Known to occur. Reported at Lundy Lake in iNaturalist in 2022. Not observed during the TERR-2 wildlife surveys.
Ovis canadensis sierrae	Sierra Nevada bighorn sheep	Alpine and subalpine zones, with open slopes where the land is rocky, sparsely vegetated, and characterized by steep slopes and canyons. Available water and steep, open terrain free of competition from other grazing ungulates within alpine, alpine dwarf scrub, chaparral, chenopod scrub, Great Basin scrub, Mojavean desert scrub, montane dwarf scrub, pinon and juniper woodlands, riparian woodland, and Sonoran Desert scrub habitats. Optimal bighorn sheep habitat is visually open and has steep, generally rocky slopes. Forests and thick brush usually are avoided. Bighorn sheep in the Sierra Nevada utilize a wide range of elevations, from alpine peaks over 13,100 feet to winter ranges at the base of the eastern escarpment as low as 4,700 feet.	FE; SE, FP	Known to occur. Species prefer steep slopes such as those surrounding the Project Boundary. The Project Boundary occupies approximately 197 acres of designated critical habitat for this species. A bighorn sheep was observed at the Lundy Lake and dam area by a member of the public. The observation was verified by SCE biologists. Not observed during the TERR-2 wildlife surveys.
Pekania pennanti pacifica	Fisher – West Coast DPS	Prefers heavy stands of mixed species of mature timber, but they range widely in forested regions. In California, they primarily inhabit mixed conifer forests composed of Douglas fir and associated conifers. An uncommon, permanent resident of the Sierra Nevada, Cascades, and Klamath mountains.	FE, BLMS; ST	Unlikely to occur. No suitable habitat in the Project Boundary. Not observed during the TERR-2 wildlife surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Rana boylii	Foothill yellow-legged frog – South Sierra DPS	Lives in foothill and mountain streams from the Pacific Coast to the western slopes of the Sierra Nevada and Cascades mountains. The foothill yellow-legged frog occurs in a wide variety of vegetation types including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral and wet meadows. The frog is closely associated with streams and is rarely observed far from the water's edge. Breeding stream habitat is typically shallow, rocky and at least partially exposed to direct sunlight. The species elevation range extends from near sea level to 1,940 meters in the Sierra.	FE; SE	Unlikely to occur; outside of range. No records of the species are documented in any portion of the Project Boundary or vicinity of the Project, and the elevation of the Project Boundary is outside of the known elevation range of the species. Not observed during the TERR-2 wildlife surveys.
Rana sierrae	Sierra Nevada yellow-legged frog	Encountered within a few feet of water. Tadpoles may require 2 to 4 years to complete their aquatic development. Found in streams, lakes, and ponds in montane riparian and a variety of other habitats from 4,495 to 11,975 feet amsl. Ranges throughout the northern Sierra Nevada in high elevation, deep lakes (Sierra Nevada between north end of Mt. Whitney Ranger District to north end of Mono Lake Ranger District).	FE; ST	Unlikely to occur. Previously outside of species range; however, recently reintroduced by CDFW into Maul Lake approximately 5 miles southwest of the Project Boundary. Habitat within the Project Boundary is not expected to be suitable for the species due to the presence of non-native fish. Not observed during the TERR-2 wildlife surveys.
Strix nebulosa	Great gray owl	Mixed coniferous forest where such forests occur in combination with large meadows or other vegetated openings 2,395 to 7,500 feet in elevation. With migration outside of breeding elevation up to 9,000 feet.	SE	Unlikely to occur. It may occur as a migrant outside of breeding elevation. Not observed during the TERR-2 wildlife surveys.

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Scientific Name	Common Name	Habitat	Status [a]	Potential To Occur in Vicinity of the Project and Relicensing Study Observation Notes
Vulpes vulpes necator	Sierra Nevada red fox	Uses dense vegetation and rocky areas for cover and den sites. Found in a variety of habitats, including alpine, alpine dwarf scrub, broadleaved upland forest, meadow and seep, riparian scrub, subalpine coniferous forest, upper montane coniferous forest, and wetland; at elevations above 2,500 feet amsl. Forested areas (red fir and lodgepole pine) and subalpine and alpine habitats in proximity to meadows, riparian areas, and brush fields above 5,000 feet amsl. Limited occurrence information on Mammoth Ranger District but known to occur on adjacent national forests.	FE; ST	May occur (low likelihood); within current known range but no recent observations. Not observed during the TERR-2 wildlife surveys.
Aquatic Wildlife				
Siphateles bicolor snyderi	Owens tui chub	Associated primarily with spring-fed ponds, marshes, sloughs, and low-gradient stream habitats within the Owens Valley of eastern California. Existing populations occur predominantly in isolated spring systems and managed refuge habitats characterized by low water velocities, abundant aquatic vegetation, and fine substrates that provide cover, spawning habitat, and foraging opportunities. Similar to other tui chub taxa, exhibits a relatively high tolerance for environmental variability, including elevated water temperatures, low DO concentrations, and moderate fluctuations in water quality, allowing it to persist in habitats that may be unsuitable for many native and introduced fishes. Within occupied habitats, individuals are commonly associated with densely vegetated shoreline areas, emergent marsh habitats, and shallow backwater environments where aquatic macrophytes provide refuge from predators and support abundant invertebrate prey resources. Juveniles generally occupy shallow vegetated margins, while adults utilize a broader range of depths within ponds and spring systems, often forming loose schools in open-water habitats.	FE; SE	May occur (low likelihood); species is native to watershed south of the Mill Creek watershed, approximately 25 miles from the Project Boundary.

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Sources: Jepson Flora Project, 2025; CDFW, 2019, 2024b, 2026a; Innes, 2016; USFS, 2001, 2015; Moyle, 2002; Archbold, 1996; Inyo National Forest, 2019; Brown et al., 2014; USFWS, 2009, 2025b; Jennings and Hayes, 1994

amsl = above mean sea level; BLM = Bureau of Land Management; CDFW = California Department of Fish and Wildlife; DPS = distinct population segment; ESA = Endangered Species Act; FERC = Federal Energy Regulatory Commission; USFWS = U.S. Fish and Wildlife Service; USFS = U.S. Forest Service

[a] Federal (USFWS, USFS, BLM)
BLMS = BLM designated sensitive species
FCE = Candidate as Federally Endangered
FCT = Candidate as Federally Threatened
FE = Federally Endangered
FT = Federally Threatened
SCC = Species of Conservation Concern
State (CDFW)
FP = Fully Protected
SC = State Candidate for Listing
SE = State Endangered
SSC = Species of Special Concern
ST = State Threatened
BGEPA = The species is listed under the federal Bald and Golden Eagle Protection Act
California Native Plant Society Rare Plant Rank (CRPR)
Rank 1B.2 = Rare or endangered in California and elsewhere with the majority being endemic to California.
Rank 2B.2 = Rare, threatened, or endangered in California; common elsewhere.
SR = State Rare

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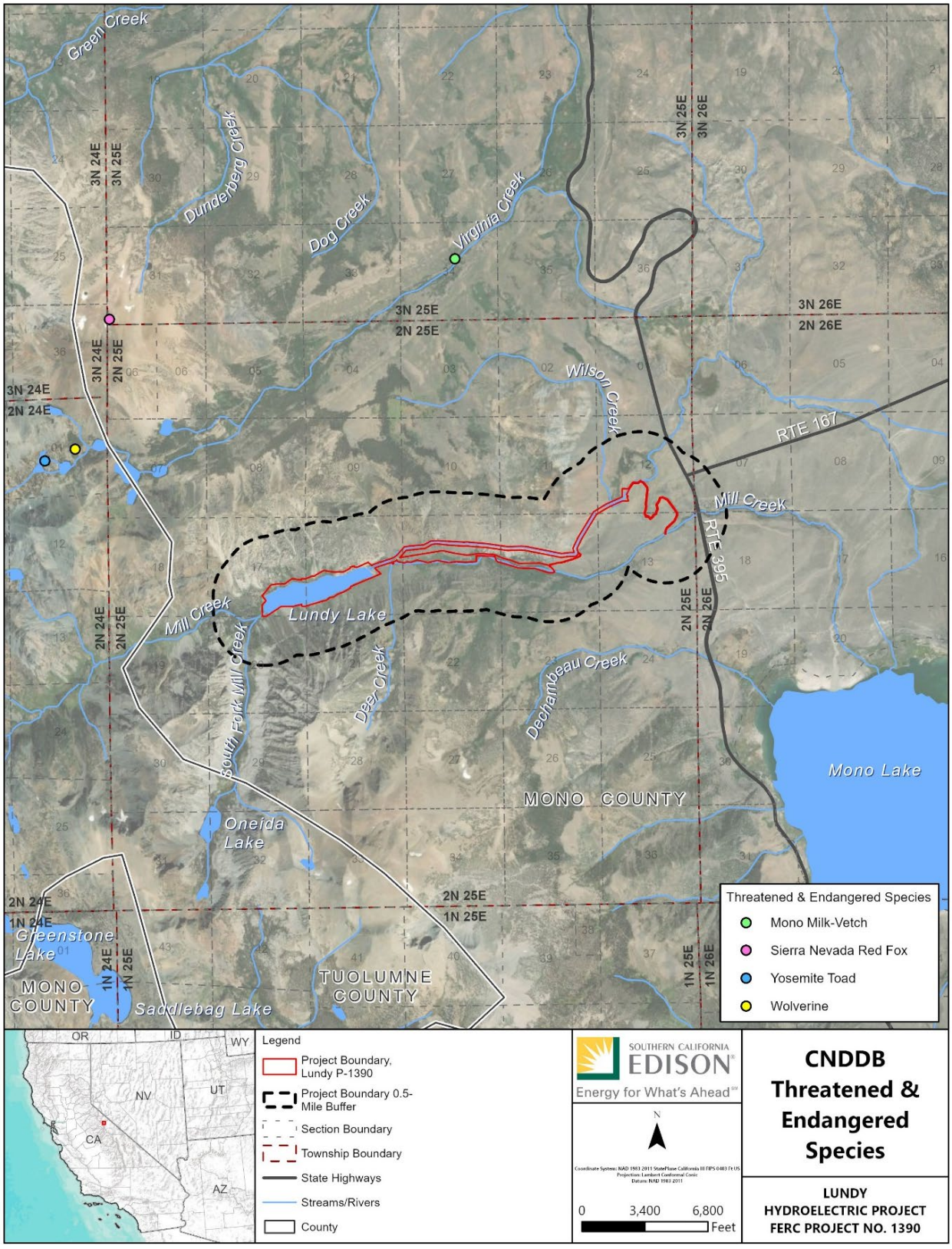


Figure 8.9-1. CNDDB Threatened and Endangered Species Locations Nearest to the Project.

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8.9.1.3. Relicensing RTE Studies

During the study planning process, SCE identified the need to conduct fish surveys, terrestrial wildlife surveys, and botanical resources surveys to determine the presence of RTE species and their habitats in the FERC Project Boundary. AQ-1, TERR-1, and TERR-2 were conducted in 2025 and 2026 for the Project. The Initial Study Report (SCE, 2026) includes results of the 2025 studies; results from the 2026 studies will be included in the FLA.

The area assessed for aquatic RTE species included Lundy Lake and Mill Creek from Lundy Dam downstream to U.S. Highway 395. Fish population sampling was conducted at three stream electrofishing sites in Mill Creek (Figure 8.5-1 in Section 8.5 *Fish and Aquatic Resources*), within two sites in the bypass reach between Lundy Dam and the MCRD (Site MC-1 and Site MC-2), and one site between MCRD and U.S. Highway 395 (Site MC-3). Fish population sampling in Lundy Lake was conducted at three gill netting locations, including both littoral and deep-water habitats, and three shoreline boat electrofishing sites.

The area assessed for wildlife RTE species (Figure 8.6-1 in Section 8.6 *Terrestrial Wildlife Resources*) included the following locations with 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
- MCRD
- Lundy Lake Road from intersection with MCRD to Resort
- Lundy Pipeline and Penstock alignment
- Lundy Lake and Mill Creek Delta
- Mill Creek between MCRD and U.S. Highway 395

The area assessed for plant RTE species (Figure 8.7-1 in Section 8.7 *Botanical Resources*) included the following locations with a 100-foot buffer:

- Lundy Dam and associated infrastructure to the intersection of Lundy Dam Road and Lundy Lake Road
- Lundy Lake Boat Launch
- Lundy Campground

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- Day Use Areas at Lundy Dam and 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
- MCRD

8.9.1.4. Rare, Threatened, and Endangered Plant Species

Only one plant species listed under the federal ESA may occur within the vicinity of the Project: whitebark pine (*Pinus albicaulis*), which is listed as a threatened species under the federal ESA as of December 2022 (87 Federal Register 240 [December 15, 2022]) and is designated as SCC by the Inyo National Forest. No critical habitat is designated for the species as part of the listing, as habitat loss is not a threat to the continued survival of the species (USFWS, 2022). No observations of whitebark pine occurred during TERR-1.

No RTE species were observed in the 2025 botanical study; results of the 2026 survey will be provided in the FLA.

8.9.1.5. Threatened and Endangered Terrestrial Wildlife

The USFWS IPaC report identified several federally listed wildlife species that are known or expected to be on or near the Project Boundary: Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), gray wolf (*Canis lupus*), North American wolverine (*Gulo gulo luscus*), Sierra Nevada red fox (*Vulpes vulpes necator*), greater sage-grouse (*Centrocercus urophasianus*), yellow-billed cuckoo (*Coccyzus americanus*), northwestern pond turtle (*Actinemys marmorata*), foothill yellow-legged frog (*Rana boylii*), Sierra Nevada yellow-legged frog (*Rana sierrae*), and monarch butterfly (*Danaus plexippus*) (USFWS, 2026b). With the exception of the Sierra Nevada bighorn sheep, wolverine, Sierra Nevada red fox, and greater sage-grouse, the Project Boundary is well outside the current range of these species, or the Project Boundary and immediate vicinity do not contain the habitat elements necessary to support these species. These species have been added to Table 8.9-1, but because they are unlikely to occur, they are not discussed further in this section.

One state and federally listed endangered species of terrestrial wildlife (Sierra Nevada bighorn sheep) has recently been observed in the Project Boundary. Sierra Nevada bighorn sheep has designated critical habitat within or directly adjacent to the FERC Project Boundary. The Sierra Nevada bighorn sheep and its critical habitat are discussed in greater detail in sections below. Wolverine may occur in the vicinity of the Project; there have been recent sightings by CDFW in the eastern Sierra Nevada in Yosemite National Park and near the town of Mammoth. This species was not observed during the TERR-2 wildlife surveys. This species is not discussed further in this section.

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The Sierra Nevada red fox may occur in the vicinity of the Project, but with a low likelihood. The Project Boundary is within the current known range of the species but there have been no recent observations, and it was not observed during the TERR-2 wildlife surveys. This species is not discussed further in this section.

As discussed below, suitable habitat and proposed critical habitat for the greater sage-grouse do occur in the Project Boundary; however, the Project Boundary is outside of the 95 percent grouse habitat utilization distribution identified in the 2025 Draft Bi-State Action Plan for greater sage-grouse (Bi-State Partnership, 2025), and this species was not observed during the TERR-2 wildlife surveys.

SIERRA NEVADA BIGHORN SHEEP

The Sierra Nevada bighorn sheep is both a federally and state endangered species. The distribution of bighorn sheep is determined by topography, visibility, water availability, and forage quality and quantity. Typical Sierra Nevada bighorn sheep terrain is rough, rocky, and steep. It also encompasses alpine meadows, summit plateaus, and meadows fed by springs within escape terrain. The sheep tend to prefer open uncluttered areas where they can use their keen eyesight to detect and avoid predators, such as mountain lion (*Puma concolor*) (CDFW, 2024a).

The Sierra Nevada bighorn sheep information below is summarized from the final rule listing the species and the final rule designating critical habitat published in the Federal Register (USFWS, 2008) and Blood (2024).

The bighorn sheep is a large mammal in the family Bovidae described by Shaw in 1804. Males and females have permanent horns. Adult male sheep stand up to 3 feet (1 meter) tall at the shoulder; males and females weigh up to 220 pounds (99 kilograms) and 140 pounds (63 kilograms), respectively. It has cloven, sharp-edged hooves that allow the bighorn to easily negotiate the rocky steep terrain of its habitat. Sierra Nevada bighorn sheep graze and browse on a wide variety of plant species that include green grasses and forbs. The sheep is usually found in close proximity to water, and it uses travel routes between feeding and watering sites.

The Sierra Nevada bighorn sheep is diurnal and active year-round. It is gregarious and sometimes gathers in herds of over 100 individuals, but smaller groups of 8 to 10 are more common. Mature males usually stay in separate bachelor herds for most of the year. The younger females generally stay in their maternal herd.

Males establish dominance before the rutting season through a series of clashes. The clashes are the characteristic head-butting for which the bighorn sheep is well-known. Breeding occurs in the winter. The rut occurs in November and December in northern populations. Lambing occurs from mid-April to early June, depending on conditions.

The Sierra Nevada bighorn sheep is found in mesic to xeric grasslands of mountains, foothills, or major river canyons and from high alpine habitats to lower elevation foothills. The home range of the bighorn sheep includes both a summer and winter range. It uses historic travel routes between its ranges. The Sierra Nevada bighorn sheep spends the

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summer in high-elevation alpine habitats and moves down to the lower elevation canyon habitats in the winter where the snow is shallow and grazing is possible. The winter range is generally smaller than the summer range.

The Project Boundary is located predominantly within the established Warren Mountain herd, within the Northern Recovery Unit (CDFW, 2026b). Bighorn sheep generally avoid areas with moderate to high levels of human activity (such as public recreational activities common in the Project boundaries). Additionally, bighorn sheep generally retreat to higher elevations during lambing season (generally April through June). Although the Project is located within an established herd range, bighorn sheep occurrence within the Project boundaries is uncommon outside of the winter months.

A single bighorn sheep was observed at the Lundy Lake and dam area by a member of the public in 2024 during the late fall months. The observation was verified by Project team biologists following an interview with the observer.

GREATER SAGE-GROUSE

The Bi-State distinct population segment (DPS) of the greater sage-grouse is a candidate species for both federal and state listing. The greater sage-grouse occurs between elevations of 3,500 and 12,000 feet in large, interconnected expanses of sagebrush, with a native grass and forb understory (Innes, 2016). It is found in the greatest abundance in a combination of sagebrush, perennial grassland or wet meadow, and water.

The greater sage-grouse is the largest species of North American grouse; males can weigh between 3.5 and 7 pounds, with a wingspan of approximately 3 feet, while females are slightly lighter and smaller. It has a chunky round body, a small head, and a many-pointed tail. Females are speckled brown and gray. Males have a speckled brown and grey body, a white breast, and a black belly and throat. Males also have two inflatable yellow air sacs on their necks that puff out during their courtship displays.

Sage-grouse are considered obligate users of sagebrush (e.g., *Artemisia tridentata*), and they exhibit strong site fidelity to seasonal habitats (USFWS, 2013). In the breeding season (spring), males perform courtship displays in leks. Leks are bare areas surrounded by sagebrush-grassland, near abundant nesting habitat (USFWS, 2013). Nesting locations are sagebrush with a native grass and forb understory, which provides foraging and cover for hens (USFWS, 2013). In the dry summer months, most sage-grouse move into riparian areas or wet meadows.

The Bi-State DPS is subdivided into population management units (PMUs). The Project Boundary is sited within the Bodie Hills PMU, which consists of 349,630 acres (Bi-State Partnership, 2025). This PMU is less arid than other PMUs due to its elevation and proximity to the Sierra Nevada (Bi-State Partnership, 2025). The Bi-State Partnership (2025) mapped greater sage-grouse core areas (50 percent utilization distributions) and home ranges (95 percent utilization distributions); the Project Boundary is outside of these areas.

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Greater sage-grouse were not observed during the TERR-2 general wildlife surveys conducted in 2025; results of the 2026 survey will be provided in the FLA.

8.9.1.6. Threatened and Endangered Aquatic Species

Waters within the Project Boundary were historically fishless. Multiple species of fish have been introduced, including the tui chub (*Siphateles bicolor*), which is native to adjacent watersheds. Listing status varies depending on the subspecies of tui chub, with the Owens tui chub (*Siphateles bicolor snyderi*) and Mohave tui chub (*Siphateles bicolor mohavensis*) listed as both federally and state endangered. Both of these species are native to watersheds south of the Mill Creek watershed. The Lahontan tui chub (*Siphateles bicolor obesa*), which is native to the Walker Creek watershed directly north of the Mill Creek watershed, is neither listed under the ESA nor as a California species of special concern (CDFW, 2026c).

Tui chub were captured during 2025 fish sampling efforts in Lundy Lake (SCE, 2026). Lahontan tui chub have successfully established watersheds, and hybrid Owens/Lahontan tui chub have been documented in June Lake (within the Mono Lake Basin) and the Owens River (Chen et al., 2006). Given Lundy Lake's proximity to documented populations of Lahontan tui chub and Owens/Lahontan hybrid tui chub, it is likely the tui chub captured in Lundy Lake represent one of these two taxa.

8.9.1.7. Biological Opinions, Status Reports, or Recovery Plans Pertaining to RTE Species

USFWS released the Sierra Nevada Bighorn Sheep Recovery Plan in 2007 (USFWS, 2007) and a 5-Year Review in 2024 (USFWS, 2024). USFWS also released a Biological Opinion for a similar SCE project in 2026, the Rush Creek Hydroelectric Project, approximately 15 miles south of the Lundy Project (USFWS, 2026a).

In 2016, USFS issued the *Greater Sage-grouse Bi-state Distinct Population Segment Forest Plan Amendment Record of Decision* (USFS, 2016). USGS released the *Status of Greater Sage-Grouse in the Bi-State Distinct Population Segment* in 2024 (USGS, 2024). CDFW is currently developing a status review for the greater sage-grouse, and the species is a candidate for listing under the ESA.

USFWS issued the *Owens Basin Wetland Aquatic Species Recovery Plan, Inyo and Mono Counties, California* in 1998, which includes the Owens tui chub (USFWS, 1998). USFWS has also issued a 5-Year Status Review for the Owens tui chub (USFWS, 2021). The Mohave tui chub has a USFWS Recovery Plan (USFWS, 1984) and a more recent 5-Year Status Review (USFWS, 2025a). The Lahontan tui chub is not federally or state-listed and has no status reports or recovery plans.

Based on the aquatic species and wildlife studies performed for this relicensing and a review of SCE's proposed operations under the new license, relicensing and operation of the Project as proposed by SCE is consistent with the status reports' recommended conservation measures for RTE species at the Project.

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8.9.1.8. Critical Habitat

There is no designated or proposed critical habitat for botanical species occurring in the vicinity of the Project.

On August 5, 2008, USFWS published the current Final Rule designating 417,577 acres of land as critical habitat for the Sierra Nevada bighorn sheep in Tuolumne, Mono, Fresno, Inyo, and Tulare counties, California (73 Federal Register 151 [August 5, 2008]). The critical habitat area overlaps the Project Boundary.

On April 27, 2023, USFWS published a proposed rule to list the Bi-State DPS of greater sage-grouse as threatened and designate critical habitat (88 Federal Register 81 [April 27, 2023]). The proposed critical habitat overlaps the Project Boundary.

Owens tui chub has had designated critical habitat since 1984; however, it is located outside of the Mill Creek drainage, south of Mono Lake. There is no critical habitat designated for the Mohave tui chub.

Figure 8.9-2 shows the bighorn sheep designated critical habitat and greater sage-grouse proposed critical habitat in relation to the Project Boundary.

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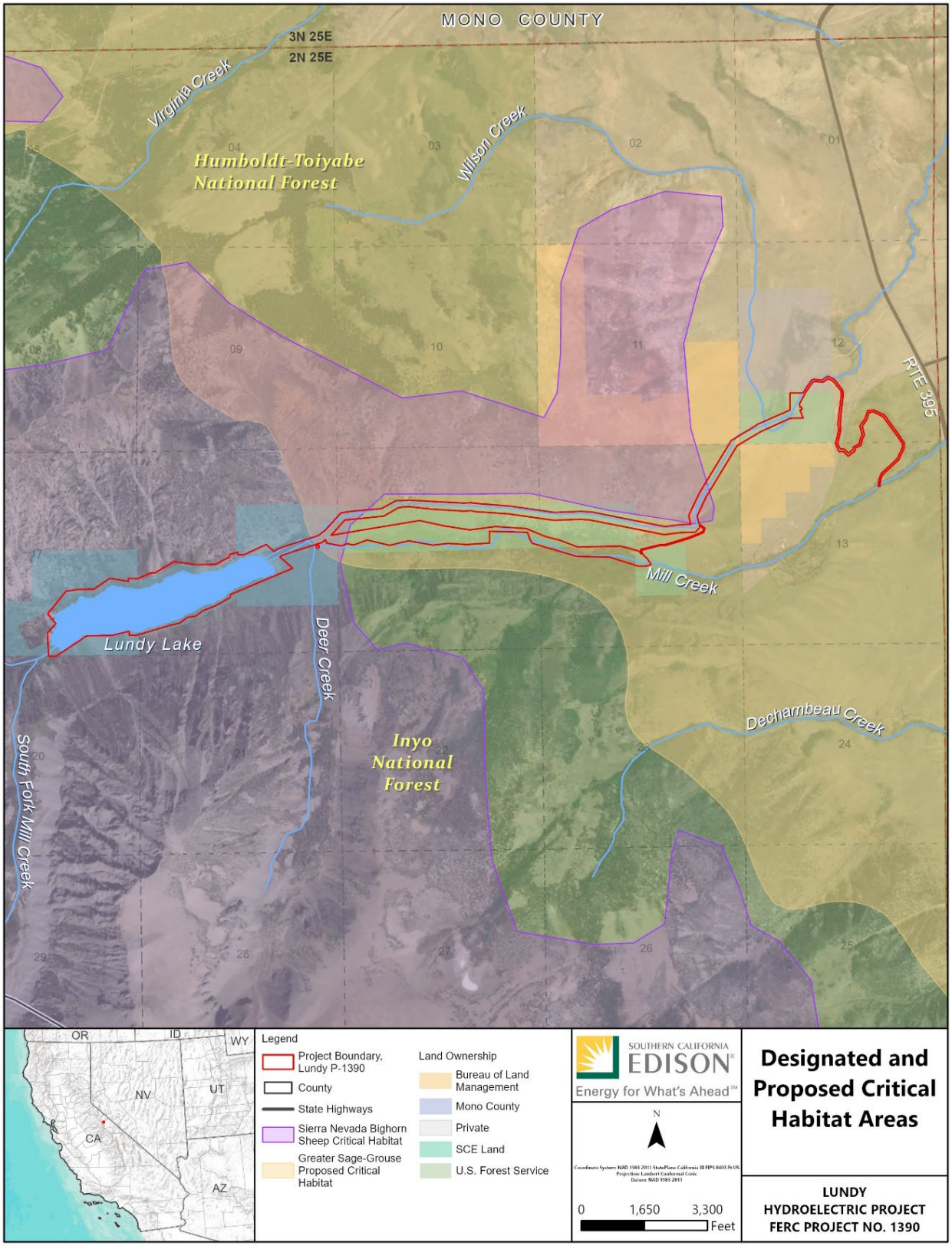


Figure 8.9-2. Designated and Proposed Critical Habitat Areas in Relation to the Existing FERC Project Boundary.

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8.9.2. Environmental Effects

8.9.2.1. Effects of Project Operations and Maintenance on Rare, Threatened, and Endangered Plant Resources Within the Project Boundary

No RTE plant species are known to occur in the Project Boundary.

No-Action Alternative

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the FERC license. No adverse effects to RTE plant species as a result of Project O&M have been identified; no RTE plant species are known to occur in the Project Boundary. Ground disturbance is limited to the developed areas around facilities. Vegetation management would continue, including trimming, mowing, and hazard tree removal and inspection along Project roads and at Project facilities.

The Project, as currently operated, does not interfere with the ecological conditions that allow the persistence of RTE plant species and has no adverse effect on the spatial distribution of existing RTE plant species, such as whitebark pine, that may occur in the area surrounding the Project.

Proposed Action

Under the Proposed Action, SCE proposes Project Boundary modifications and new or modified PME measures. No O&M changes are proposed. Vegetation management and maintenance activities, such as trimming, mowing, and hazard tree removal, are anticipated to continue to be located in developed areas associated with Project facilities and are not anticipated to have adverse effects to RTE plant species because no RTE plant species are known to occur in the Project Boundary.

Adjustment of the existing FERC Project Boundary would include areas currently being used for O&M activities but not previously included in the boundary. No adverse effects are anticipated to RTE plant species, as the lands proposed to be added to the FERC Project Boundary have been previously developed and consist of already disturbed land. No RTE plant species are known to occur in the areas that would be added to the Project Boundary.

8.9.2.2. Effects of Project Operations and Maintenance Activities on Sierra Nevada Bighorn Sheep and Designated Critical Habitat

Terrestrial habitat in the Project Boundary generally consists of the upland vegetation types of big sagebrush, mixed shrubs, wet meadows, quaking aspen, shrub willows, mountain mahogany, and pine. Sierra Nevada bighorn sheep, a federally and state-listed endangered wildlife species, is known to use terrestrial habitat within the Project Boundary.

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A portion of the existing FERC Project Boundary occurs within federally designated bighorn sheep critical habitat. A single bighorn sheep was observed within the FERC Project Boundary at the Lundy Lake and dam area by a member of the public, and the observation was verified by SCE biologists. Bighorn sheep herds have large ranges that include both the Project Boundary and adjacent lands, with the designated critical habitat comprised of 417,577 acres. This species was not observed during the TERR-2 surveys.

The Project Boundary is located predominantly within the established Warren Mountain herd range in the Northern Recovery Unit (CDFW, 2026b). Sierra Nevada bighorn sheep generally prefer open, steep, rocky terrain with good visibility and low vegetation, including alpine meadows, summit plateaus, and hanging meadows near escape terrain. These conditions provide access to forage while allowing sheep to detect and evade predators, particularly mountain lions; consequently, they generally avoid heavily forested areas, dense vegetation, and areas with moderate to high levels of human activity (CDFW, 2024a). Bighorn sheep typically migrate seasonally between high-elevation summer range (10,000 to 14,000 feet) and lower elevation winter range (5,000 to 9,000 feet), although some individuals winter at elevations of 11,000 to 12,000 feet. During the lambing season, generally April through June, sheep tend to retreat to higher elevations. Although the Project occurs within an established herd range, bighorn sheep occurrence within the Project Boundary is uncommon outside the winter months.

The elevation of Lundy Lake is approximately 7,800 feet, with the powerhouse and other facilities at lower elevations. Elevations of Project facilities are sited at the lower elevation preference for bighorn sheep. The upper slopes above Lundy Lake and higher plateaus are suitable habitat but are out of SCE's operational reach. SCE's maintenance activities are limited to the areas immediately around Lundy Lake, dam, gaging stations, valves houses, and access roads. All these areas have been previously disturbed, are routinely accessed by SCE personnel, and are well below the elevation range preferred by bighorn sheep. Although bighorn sheep may travel to lower elevations and other less preferrable habitats, there have been no reported interactions between SCE personnel and bighorn sheep.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the FERC license, with no change from baseline conditions. Maintenance of Project facilities occurs on SCE property within previously disturbed and maintained areas, such as the areas surrounding valve houses and gaging stations. A small portion of the large range of Sierra Nevada bighorn sheep currently overlaps the Project Boundary and includes designated critical habitat in the western portion of the Project Boundary; however, the continuation of current Project O&M activities would not have an adverse effect on designated critical habitat for the bighorn sheep.

No effects to RTE wildlife species or their associated habitat, including designated critical habitat, have been identified.

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The Project, as currently operated, does not interfere with the ecological conditions that allow the persistence of Sierra Nevada bighorn sheep.

PROPOSED ACTION

Under the new license, SCE proposes to modify the existing FERC Project Boundary to include areas currently used for O&M activities but not previously incorporated. Although this would increase the size of the Project Boundary, the added lands have already been subject to ongoing disturbance and development; therefore, no new impacts to surrounding areas are anticipated.

Based on the analysis in Section 8.9.2.2 above, because Sierra Nevada bighorn sheep were not observed during the TERR-2 surveys, and because the Proposed Action does not involve changes to maintenance activities, no adverse effects on Sierra Nevada bighorn sheep have been identified. Ongoing maintenance would continue to occur within developed or previously disturbed areas and is not expected to adversely affect designated critical habitat. Similarly, inclusion of these areas within the revised FERC Project Boundary is not anticipated to result in adverse effects to designated critical habitat.

8.9.2.3. Effects of Project Operations and Maintenance Activities on Greater Sage-grouse and Proposed Critical Habitat

Terrestrial habitat in the Project Boundary generally consists of the upland vegetation types of big sagebrush, mixed shrubs, wet meadows, quaking aspen, shrub willows, mountain mahogany, and pine. Greater sage-grouse were not observed within the Project Boundary, but appropriate habitat is present.

The FERC Project Boundary also overlaps with greater sage-grouse proposed critical habitat. Greater sage-grouse were not observed during the TERR-2 surveys. The proposed critical habitat for the Bi-State DPS consists of 1,868,017 acres.

The greater sage-grouse occurs between elevations of 3,500 and 12,000 feet in large, interconnected expanses of sagebrush, with a native grass and forb understory (Innes, 2016). In the dry summer months, most sage-grouse move into riparian areas or wet meadows. As described in Section 8.7 *Botanical Resources*, the Big Sagebrush Alliance vegetation type occurs at the Project on a slope along the Penstock Flowline near the Lundy Powerhouse, the Great Basin Mixed Scrub Alliance (which also contains sagebrush) occurs on slopes throughout the Project Boundary, and Wet Meadows occur along the edges of Lundy Lake near the boat launch, in openings at the Lundy Campground, near the powerhouse, and along the MCRD. Elevations of Project facilities are within the greater sage-grouse's preferred range. Though preferred habitat conditions are present in much of the Project Boundary, the Bi-State Partnership (2025) mapped greater sage-grouse core areas (50 percent utilization distributions) and home ranges (95 percent utilization distributions), and the Project Boundary is outside of these areas, indicating a low likelihood of greater sage-grouse occurring in the Project Boundary.

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NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the FERC license. Maintenance of Project facilities occurs on SCE property within previously disturbed and maintained areas, such as the areas surrounding valve houses and gaging stations.

No effects to greater sage-grouse or their associated habitat, including proposed critical habitat, have been identified.

The Project, as currently operated, does not interfere with the ecological conditions that allow the persistence of greater sage-grouse.

PROPOSED ACTION

Under the new license, SCE proposes to modify the existing FERC Project Boundary to include areas currently used for O&M activities but not previously incorporated. Although this would increase the size of the Project Boundary, the added lands have already been subject to ongoing disturbance and development; therefore, no new impacts from Project operations to surrounding areas are anticipated.

Based on the analysis in Section 8.9.2.3 above, because greater sage-grouse were not observed during the TERR-2 surveys, and because the Proposed Action does not involve changes to maintenance activities, no adverse effects on greater sage-grouse have been identified. Ongoing maintenance would continue to occur within developed or previously disturbed areas and is not expected to adversely affect proposed critical habitat. Similarly, inclusion of these areas within the revised FERC Project Boundary is not anticipated to result in adverse effects to proposed critical habitat.

8.9.2.4. Effects of Project Operations and Maintenance Activities on Threatened and Endangered Aquatic Species

Tui chub, while not native to the watershed, were captured in Lundy Lake during AQ-1. The Eastern Sierra hosts multiple subspecies of tui chub: the Owens and Mohave subspecies of tui chub that are native to watersheds south of the Project Boundary are listed RTE species, but the Lahontan subspecies, which inhabits the Walker River and its tributaries directly north of the Project Boundary, which has been documented in Walker Lake is not listed. Therefore, no aquatic RTE species are known to inhabit the Project Boundary.

NO-ACTION ALTERNATIVE

Because no aquatic RTE species have been documented in the Project Boundary, continued Project operations under the No-Action Alternative are not expected to result in adverse effects on RTE aquatic species.

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PROPOSED ACTION

Because no aquatic RTE species have been documented in the Project Boundary, continued Project operations under the Proposed Action are not expected to result in adverse effects on RTE aquatic species.

8.9.2.5. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

Chapter 2 of the 2019 Inyo National Forest LMP (USFS, 2019) describes forest-wide conditions and management direction for wildlife resources. This direction applies across all lands of the Inyo National Forest, including desired conditions, objectives, goals, standards, guidelines, and potential management approaches. Using the results obtained from Project technical reports, SCE assessed RTE species and associated habitat against the desired future conditions stated in the Inyo National Forest LMP.

Current Project O&M activities, which would continue to be implemented under the Proposed Action, do not interfere with the Inyo National Forest LMP (USFS, 2019) conditions to manage the landscape for at-risk species or provide for the recovery of RTE species.

Desired conditions for RTE resources, with which the Project is consistent, include the following:

- SPEC-FW-DC 02: Habitats for at-risk species support self-sustaining populations within the inherent capabilities of the plan area. Ecological conditions provide habitat conditions that contribute to the survival, recovery, and delisting of species under the federal ESA; preclude the need for listing new species; improve conditions for SCC including addressing threats (e.g., minimal impacts from disease); and sustain both common and uncommon native species.

- SPEC-FW-DC 03: Land management activities are designed to maintain or enhance self-sustaining populations of at-risk species within the inherent capabilities of the plan area by considering the relationship of threats (including site-specific threats) and activities to species survival and reproduction.

- SPEC-FW-DC 05: The Inyo National Forest provides high quality hunting and fishing opportunities. Habitat for non-native fish and game species is managed in locations and ways that do not pose substantial risk to native species while still contributing to economies of local communities.

- SPEC-FW-DC 06: Residents and visitors have ample opportunities to experience, appreciate, and learn about the Inyo National Forest's wildlife, fish, and plant resources.

- SPEC-SHP-DC 01: An adequate amount of suitable habitat supports persistent populations of bighorn sheep. These habitat patches include unforested openings supporting productive plant communities with a variety of forage species in and near

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adequate steep rocky escape terrain throughout the elevational range of mountain ranges. These areas meet different seasonal needs for each sex for feeding, night beds, birthing sites, lamb rearing, and migration routes between suitable habitat patches.

- TERR-FW-DC 05: Ecological conditions contribute to the recovery of threatened and endangered species, conserve proposed and candidate species, and support the persistence of SCC.

Project management is consistent with these desired conditions, and no changes to Project O&M activities are currently proposed.

8.9.2.6. Proposed Protection, Mitigation, and Enhancement Measures

The Project, as described under this License Application, proposes minor changes to the FERC Project Boundary and no changes to O&M. O&M activities take place on previously developed and disturbed areas. No new ground- or habitat-disturbing activities are proposed; therefore, the Project would not affect the current habitat (soils, vegetation, or movement and connectivity for wildlife) or habitats that support RTE species.

As no significant effects are anticipated, SCE is not proposing specific PME measures for RTE species; however, protection and avoidance measures for general wildlife and botanical resources are described in the Resources Management Plan (Appendix E.1, DLA Volume II).

8.9.2.7. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for RTE species.

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8.10. RECREATION RESOURCES

8.10.1. AFFECTED ENVIRONMENT

The Lundy Project is partially located within the Inyo National Forest, approximately 6 miles north of the community of Lee Vining and 4 miles west of U.S. Highway 395. The Inyo National Forest stretches 165 miles north to south along the Eastern Sierra Nevada, featuring over 2 million acres of pristine lakes, winding streams, rugged peaks, and arid Great Basin Mountains (USFS, 2023). The Inyo National Forest features some of the world's oldest trees in the Ancient Bristlecone Pine Forest in the White Mountains that mark the eastern boundary of Owens Valley, glaciers along the Sierra Nevada crest, and an elevation range from the tallest peak in the lower 48 states (Mount Whitney at elevation 14,494 feet) to semi-arid deserts and valleys at elevation 3,900 feet (USFS, 2019).

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Although the Lundy Project does not occupy any Congressionally designated wilderness areas, nine wilderness areas are in the vicinity of the Project: Hoover, Ansel Adams, John Muir, Golden Trout, Inyo Mountains, Boundary Peak, South Sierra, White Mountains, and Owens River Headwaters (USFS, 2019). In addition, Devils Postpile National Monument, administered by the United States National Park Service, is outside the Lundy Project Area but within the Inyo National Forest in the Reds Meadow area, west of Mammoth Lakes.

8.10.1.1. Recreation in Lundy Canyon

Recreation opportunities in the Project vicinity are shaped by the combination of alpine scenery, accessible water resources, and proximity to the Eastern Sierra Nevada travel corridor. The Project provides recreation facilities that support camping, boating, fishing, and day use activities, which complement additional dispersed opportunities available on surrounding Inyo National Forest lands. These opportunities attract visitors seeking accessible outdoor experiences, particularly those traveling along U.S. Highway 395.

The primary recreation draw within the Project Boundary is Lundy Lake, which provides opportunities for fishing, boating, and scenic viewing. Mill Creek and its surrounding riparian corridor also support angling. Hiking opportunities are more limited within the Project Boundary but are available nearby on public lands (Inyo National Forest) where visitors can access informal routes and trails. Scenic viewing, photography, and wildlife observation are commonly reported activities throughout the Project Area due to the high-quality visual setting. Consistent with these characteristics, recreation use at the Project is dominated by camping and fishing activities, with hiking and scenic viewing also commonly reported. Visitor intercept survey results indicate that approximately 58 percent of respondents participate in camping, 42.5 percent in fishing, and 42.5 percent in hiking, while spot count observations show camping accounting for approximately 50.3 percent of observed use and fishing accounting for approximately 23.2 percent. Overall, the Project serves as a localized recreation destination that provides facilities in an area otherwise dominated by dispersed recreation opportunities.

8.10.1.2. Recreation Facilities within the Project Boundary

The Lundy Project includes seven FERC-approved recreation sites: Lundy Lake Boat Launch, Lundy Dam Day Use Area, Lundy Campground, and Lundy Day Use Areas 1, 2, 3, and 4. These sites provide a range of recreation opportunities, from developed overnight accommodations to day use areas with minimal amenities. All facilities are owned by SCE, with some operated and maintained by Mono County. A summary of these recreation sites is provided in Table 8.10-1, and their locations are shown in Figure 8.10-1.

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Table 8.10-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

Recreation Site Name	**Maintenance**/Owner Entity	**Amenities**
Lundy Lake Boat Launch	Mono County/SCE	Fishing line trash receptacle, boat launch, portable restrooms.
Lundy Dam Day Use Area	Mono County (Restroom Only)/SCE	ADA restroom, information board.
Lundy Campground	Mono County/SCE	Established campsites, fire rings, bear boxes, picnic tables, portable restrooms, information board, iron ranger, ADA restrooms, dumpsters.
Lundy Day Use Area 1	Mono County/SCE	Picnic table, portable restroom.
Lundy Day Use Area 2	Mono County/SCE	Picnic table.
Lundy Day Use Area 3	Mono County/SCE	Picnic table, portable restroom.
Lundy Day Use Area 4	Mono County/SCE	Picnic table, portable restroom.

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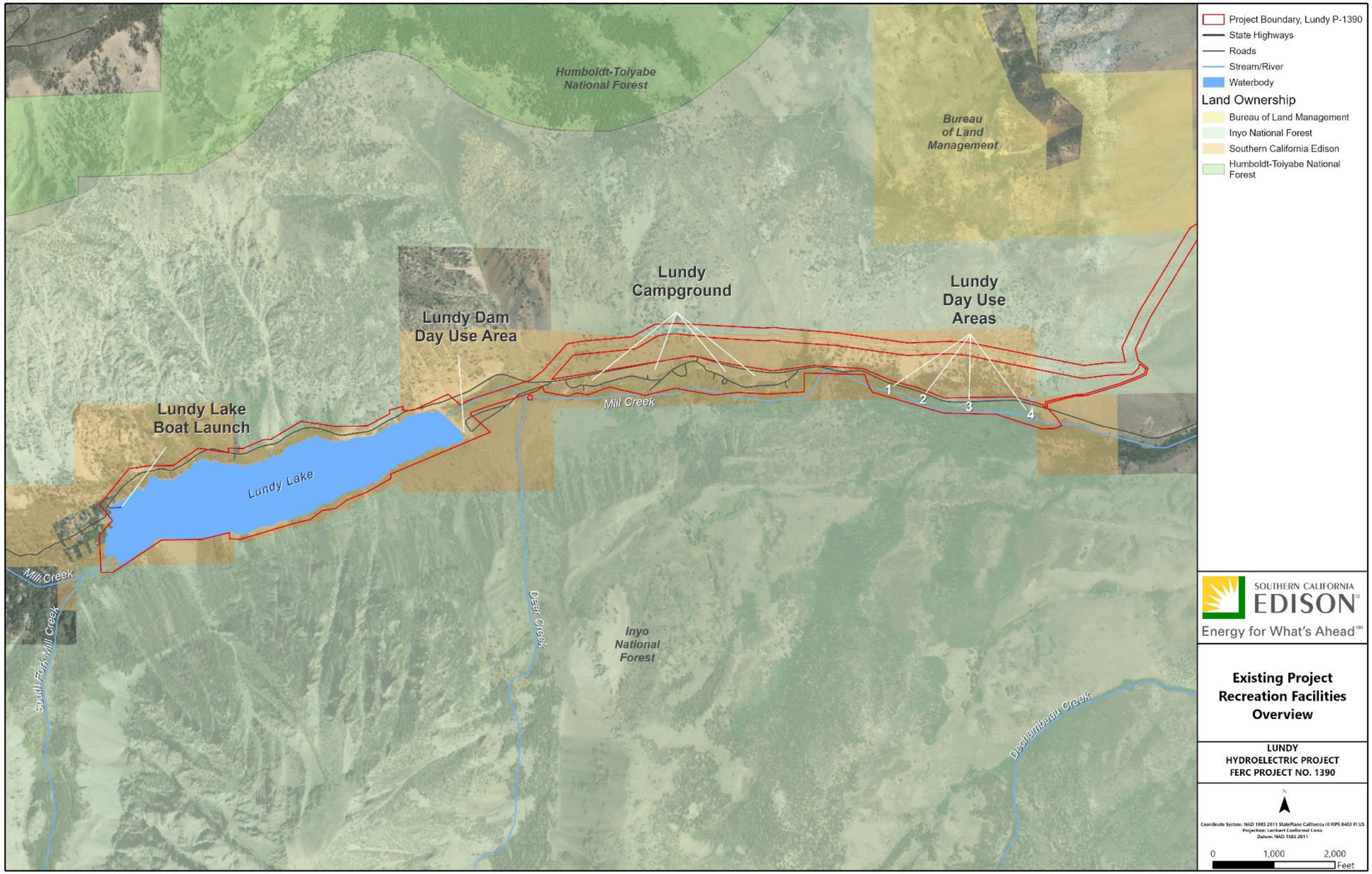


Figure 8.10-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary.

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LUNDY LAKE BOAT LAUNCH

The Lundy Lake Boat Launch (Figure 8.10-2) is located on the westerly side of Lundy Lake. The boat launch provides developed boating and fishing access to Lundy Lake. The site includes a concrete boat launch ramp, floating boat dock, parking area with vehicle/trailer parking (approximately 5 vehicle/trailer spaces), portable restrooms, informational signage, and a fishing line disposal station. All inventoried amenities were documented in good condition (REC-1 draft report, DLA Volume III).

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Figure 8.10-2. Lundy Lake Boat Launch.

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LUNDY DAM DAY USE AREA

The Lundy Dam Day Use Area (Figure 8.10-3) is a developed day use site within the Project. The site provides lakeshore access, scenic viewing, day use recreation, and access to adjacent hiking and biking opportunities (located outside of the Lundy Project Boundary). The site includes parking (approximately 20 vehicles), ADA-accessible restroom facilities, informational signage, safety signage, and trash receptacles. All inventoried amenities were documented in good condition (REC-1 draft report, DLA Volume III).

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Figure 8.10-3. Lundy Dam Day Use Area.

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LUNDY CAMPGROUND

Lundy Campground (Figure 8.10-4 through Figure 8.10-8) is located approximately 1 mile northeast of the Lundy Dam. Lundy Campground is the primary overnight recreation facility within the Project Boundary and contains 38 individual campsites accessed through three campground entrances. Recreation facilities support camping, picnicking, campfires, food storage, and sanitation. Most facilities were documented in good condition, though some amenities require maintenance, repair, or replacement (REC-1 draft report, DLA Volume III).

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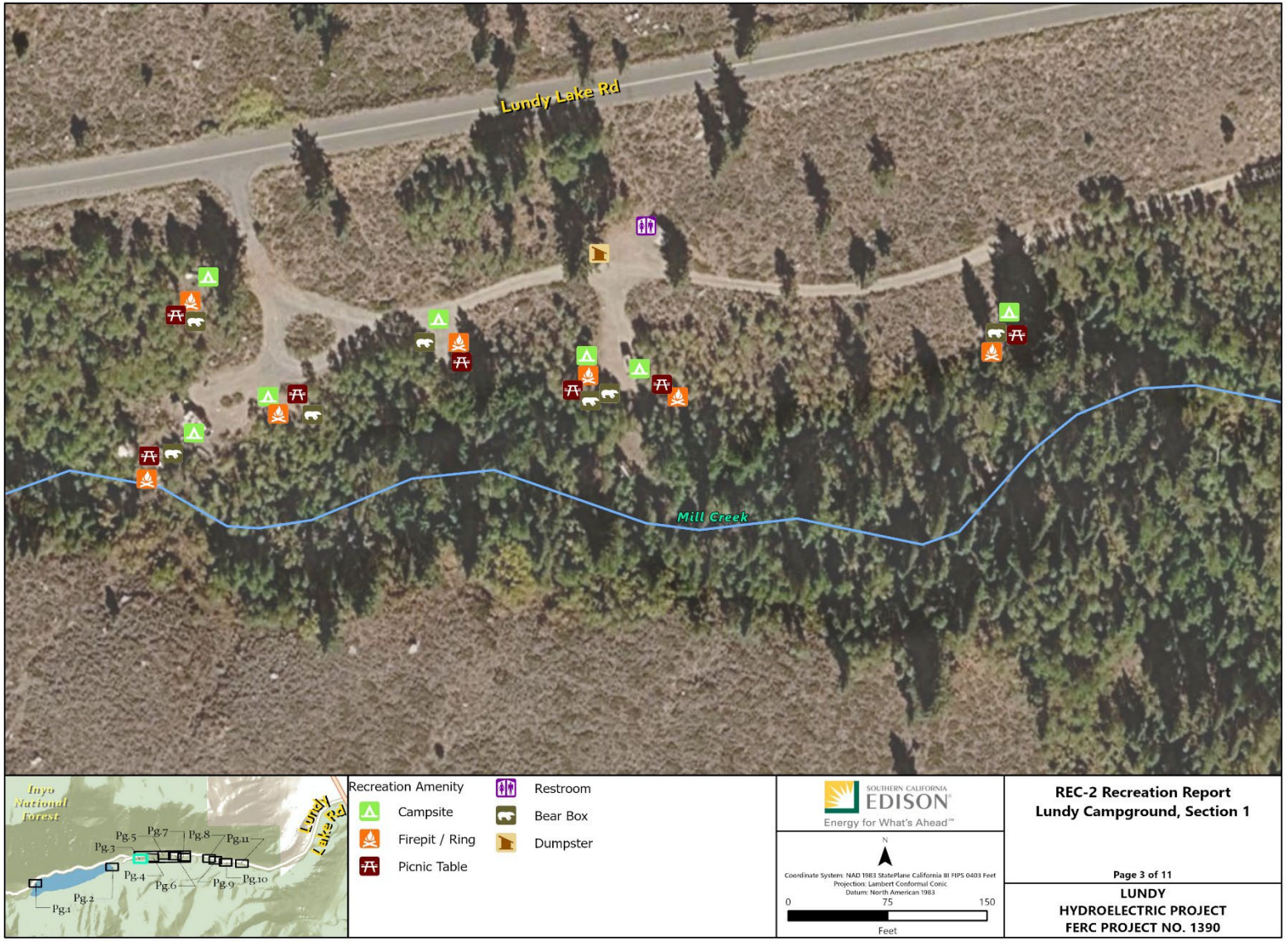


Figure 8.10-4. Lundy Campground, Section 1.

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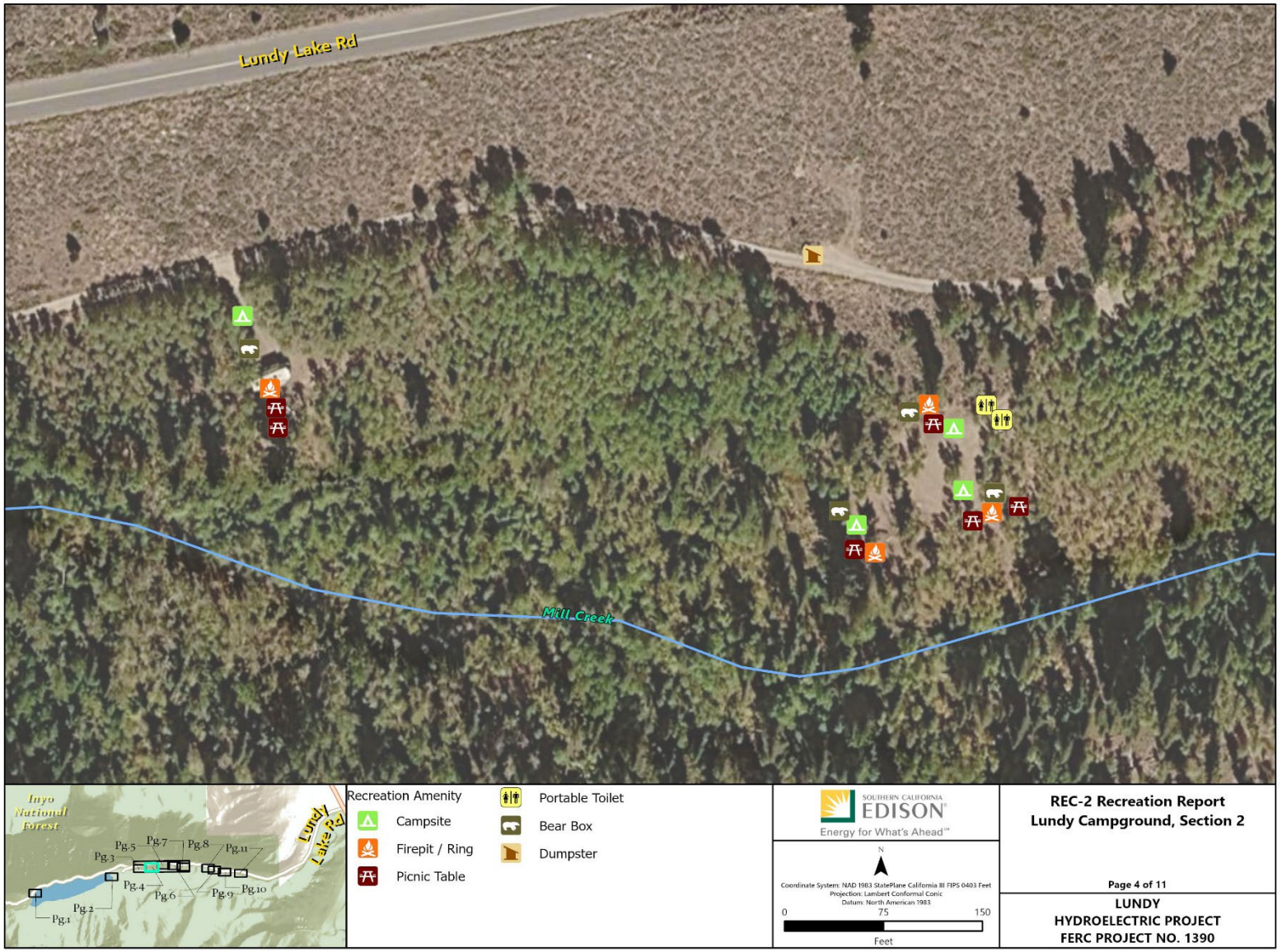


Figure 8.10-5. Lundy Campground, Section 2.

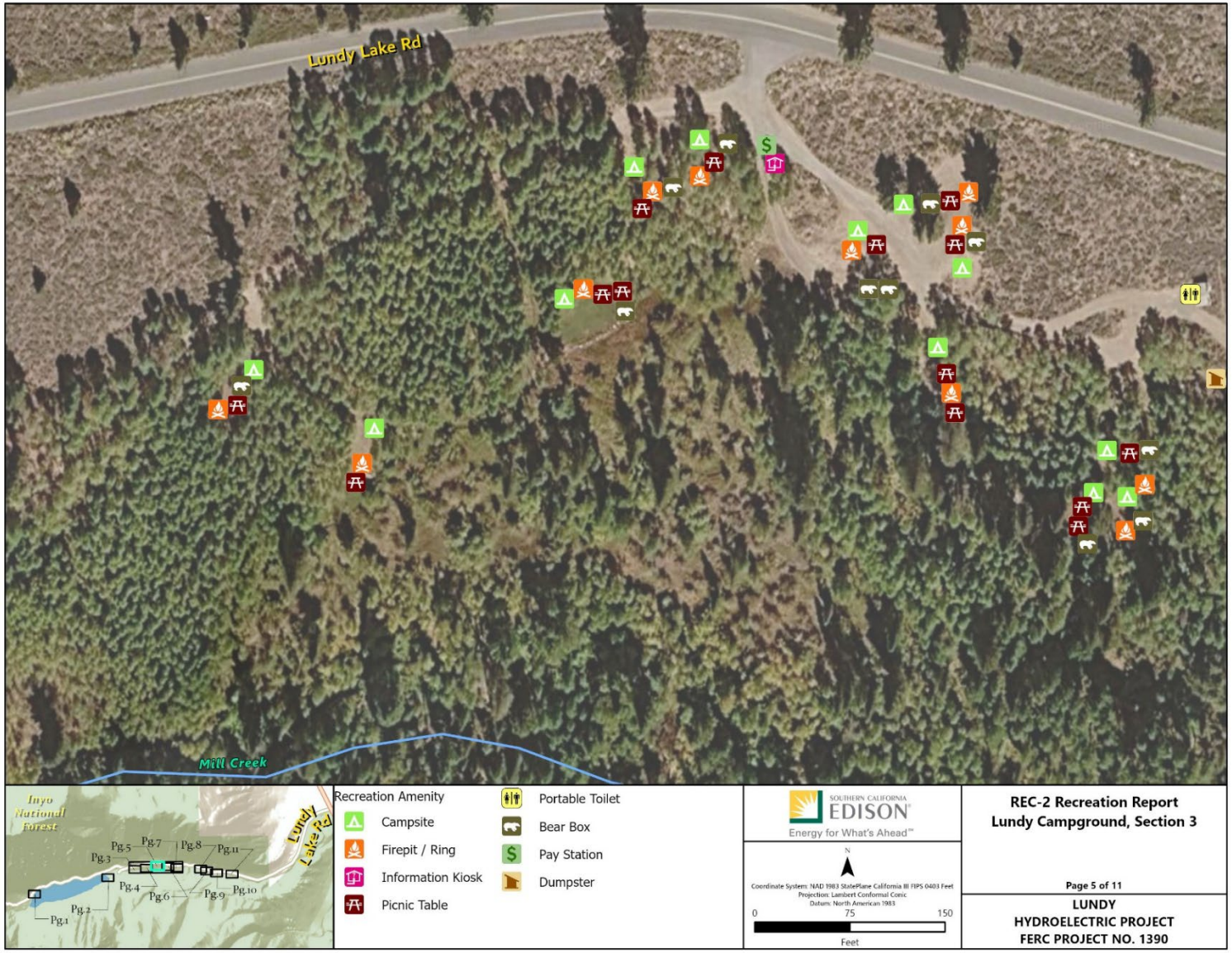


Figure 8.10-6. Lundy Campground, Section 3.

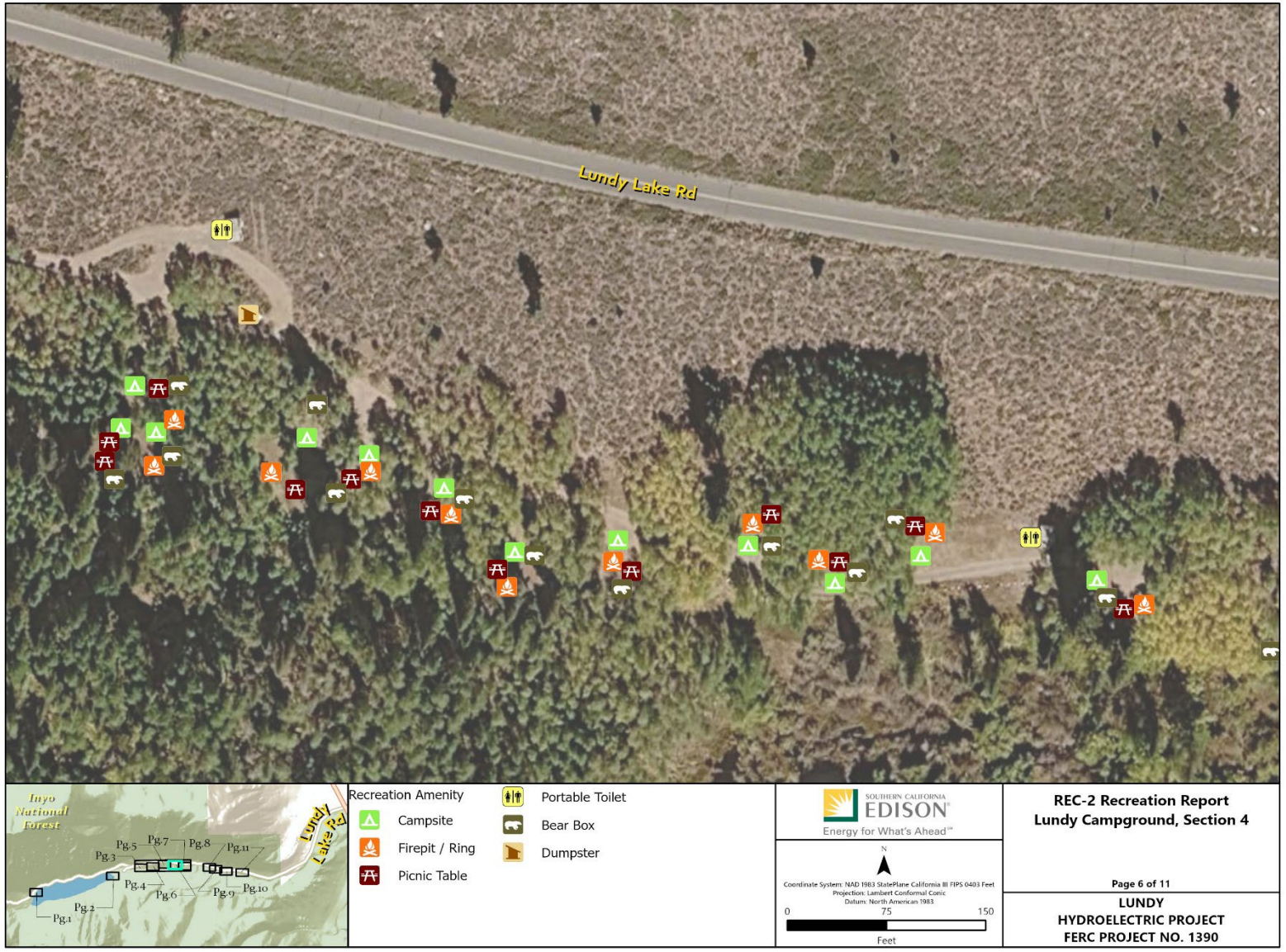


Figure 8.10-7. Lundy Campground, Section 4.



Figure 8.10-8. Lundy Campground, Section 5.

DAY USE AREAS

Lundy Day Use Areas 1, 2, 3, and 4 (Figure 8.10-9 through Figure 8.10-12) are located between Lundy Lake Road and Mill Creek. Collectively, the four sites provide picnic and shoreline access opportunities and are equipped with five picnic tables, three portable toilets, and one social fire ring. The sites each include informal gravel parking areas. Facility condition assessments identified a mix of amenities in good condition, requiring maintenance, and requiring repair. Recreational opportunities provided by the four day use sites include picnicking, sightseeing, shoreline access, and dispersed day use recreation (REC-1 draft report, DLA Volume III).

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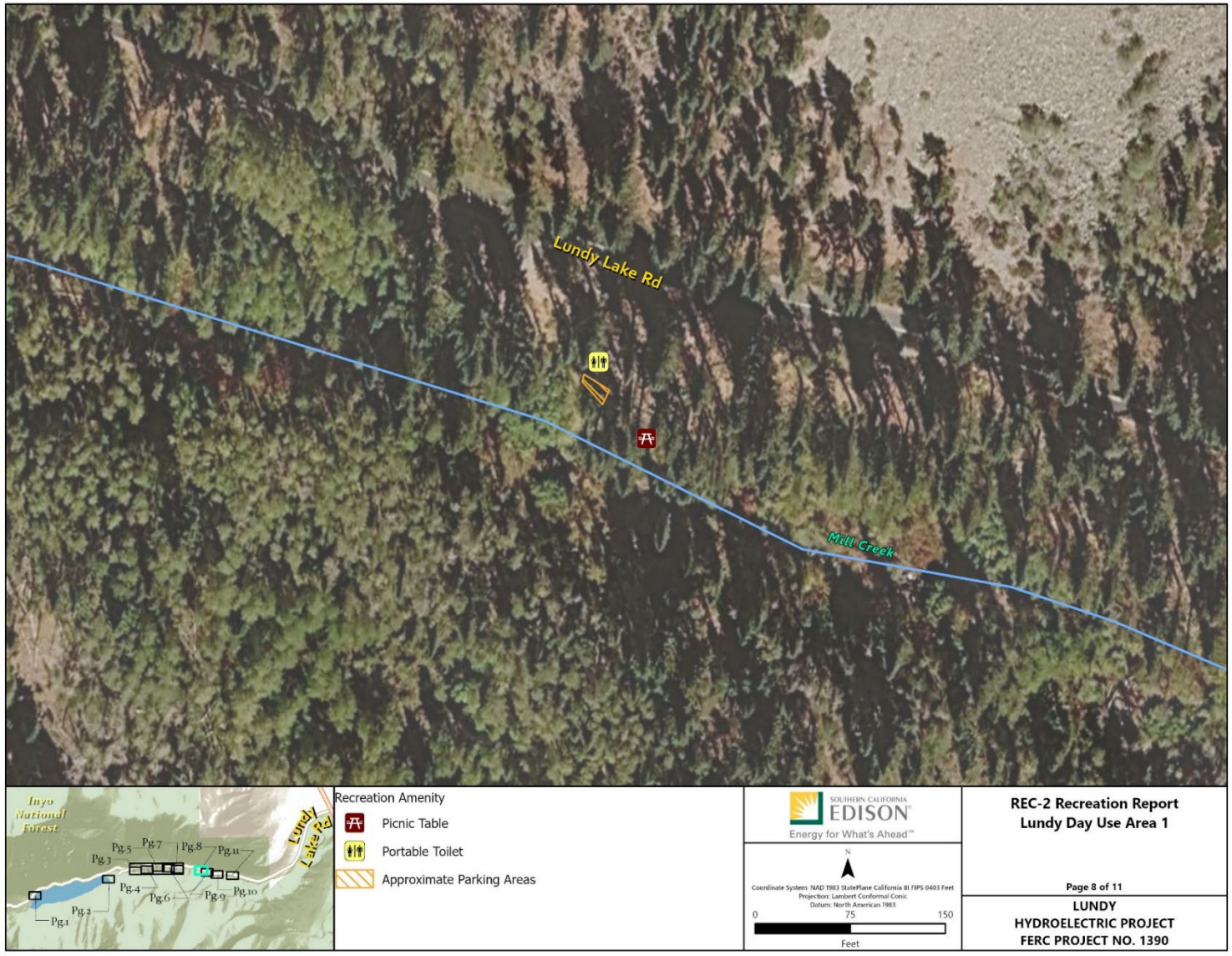


Figure 8.10-9. Lundy Day Use Area 1.

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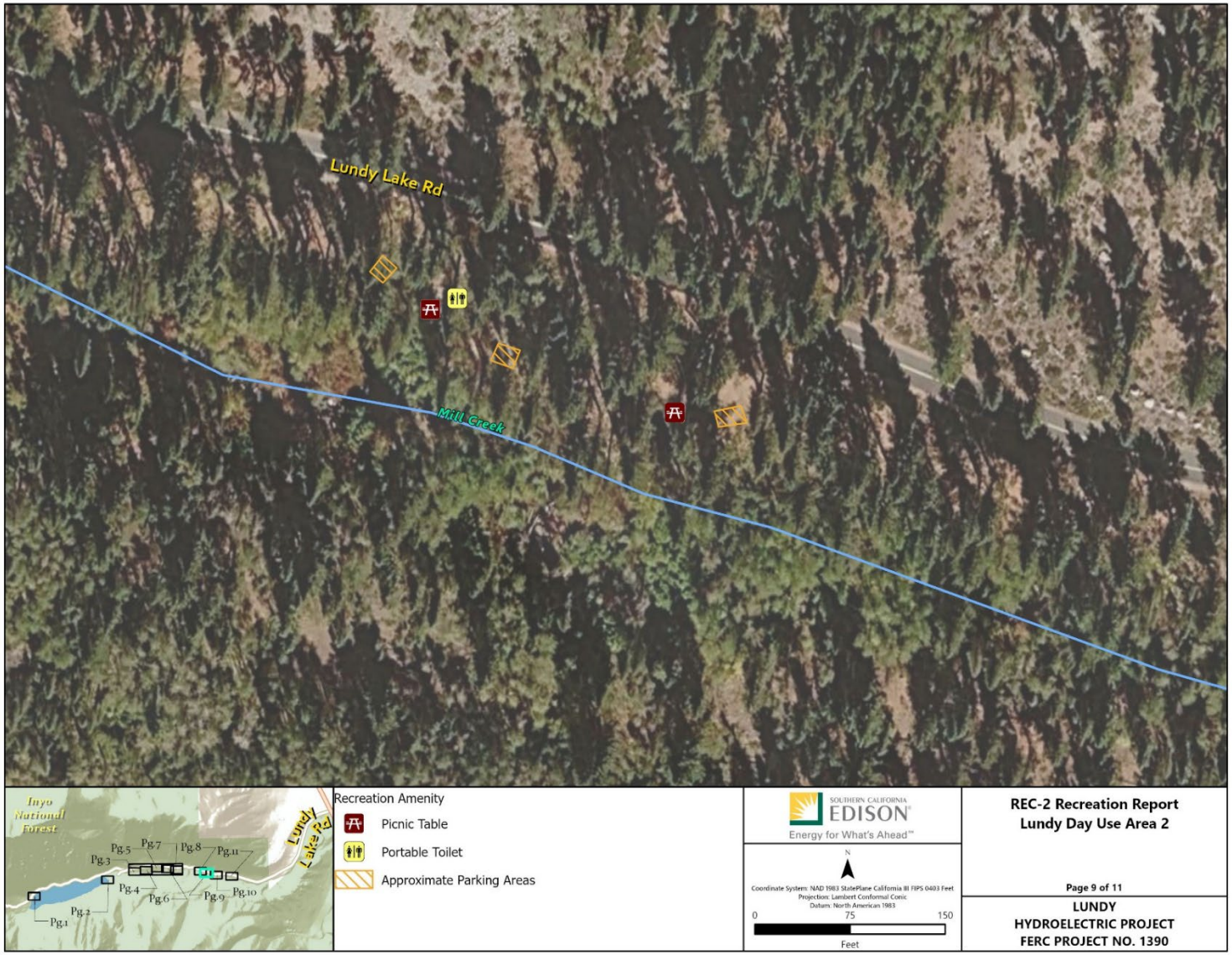


Figure 8.10-10. Lundy Day Use Area 2.

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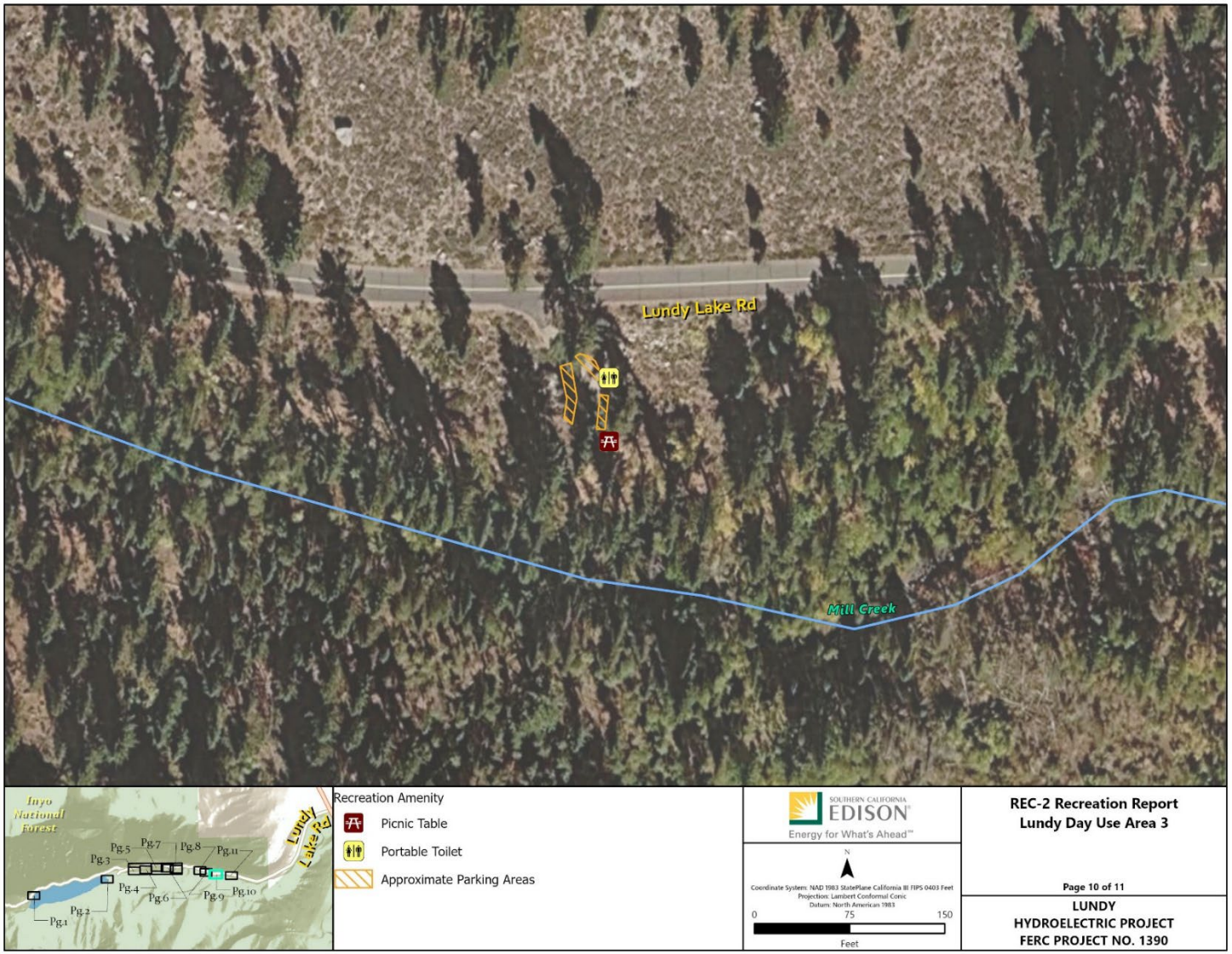


Figure 8.10-11. Lundy Day Use Area 3.

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Figure 8.10-12. Lundy Day Use Area 4.

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8.10.1.3. Recreation Use and Needs

SCE conducted the Recreation Use and Needs Assessment (REC-1) to characterize existing recreation use and visitor experience at the FERC-approved recreation sites within the Lundy Project and to estimate current and future recreation needs. REC-1 evaluated use through spot counts and recreation use visitor intercept surveys conducted between April 15, 2025, and November 15, 2025. For visitors who identified fishing as either a primary or secondary activity, the visitor intercept survey also included angling-related questions regarding fishing effort, target species, harvest, and catch-per-unit effort (CPUE) (REC-1 draft report, DLA Volume III).

Recreation days were estimated separately for Lundy Lake Boat Launch, Lundy Dam Day Use Area, Lundy Day Use Areas 1 through 4, and Lundy Campground because recreation use occurs and was measured differently at these locations. Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Day Use Areas 1 through 4 generally reflect shorter duration visits with turnover throughout the day, while Lundy Campground use reflects overnight occupancy.

For Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Day Use Areas 1 through 4, recreation days were estimated based on observed vehicles, visitor group sizes, and average length of stay. Shown in Table 8.10-2, during the study period, the total recreation use at these sites was estimated at 13,179 recreation days.

Table 8.10-2. Estimated Recreation Days for Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Day Use Areas 1-4

Day Type	Count	Lundy Lake Boat Launch	Lundy Dam Day Use Area	Lundy Day Use Areas 1-4	Total
Weekday	150	4,300	3,200	480	7,980
Non-Peak Weekend	53	2,000	1,400	130	3,530
Peak Weekend	12	1,200	410	59	1,669
Total		7,500	5,010	669	13,179

Recreation days for Lundy Campground were estimated based on the number of occupied campsites and visitor group sizes reported in recreation use visitor intercept surveys. Because campground use reflects overnight occupancy, the estimate did not include an adjustment for length of stay. Shown in Table 8.10-3, the total campground use was estimated at approximately 5,070 recreation days.

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Table 8.10-3. Estimated Recreation Days for Lundy Campground

Day Type	Count	Recreation Days
Weekday	150	3,000
Non-Peak Weekend	53	1,400
Peak Weekend	12	670
Total		5,070

Based on data collected during REC-1, Table 8.10-4 shows the FERC-approved recreation sites with associated parking available and estimated utilization. Parking utilization at Lundy Lake Boat Launch was highest on peak weekend days, averaging approximately 167 percent of the estimated parking capacity for vehicles with trailers. Parking utilization at Lundy Dam Day Use Area and Lundy Day Use Areas 1 through 4 was substantially lower. Average peak weekend utilization ranged from 0 to 35 percent, with the highest utilization occurring at Lundy Dam Day Use Area.

Table 8.10-4. Estimated Parking Utilization

Site	Parking Spaces[a]	Non-Peak Weekend	Peak Weekend	Weekday
Lundy Lake Boat Launch	5	55	167	45
Lundy Dam Day Use Area	20	21	35	10
Lundy Day Use Area 1	1	25	33	0
Lundy Day Use Area 2	3	2	0	0
Lundy Day Use Area 3	4	2	8	3
Lundy Day Use Area 4	3	0	11	6

[a] In parking areas where spaces were not clearly defined (i.e., gravel parking areas), the average size of a standard car parking space was estimated to be 16 to 18 feet long and 8 to 9 feet wide (~130 to 160 square feet). The average size of a trailered parking space was estimated to be 38 to 40 feet long and 13 to 15 wide (~500 to 600 square feet). For the purpose of REC-1, the upper range was used to determine total parking availability.

For Lundy Campground, utilization represents the percentage of the 38 available campsites occupied during sampling periods. REC-1 noted that campground spot counts were based on occupied campsites rather than parked vehicles. Across all spot count dates, campground utilization remained below capacity, ranging from approximately 0 to

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87 percent. Average utilization was highest during peak weekends (56 percent), followed by non-peak weekends (34 percent), and weekdays (30 percent).

Mono County also provided campground payment-envelope data for the 2022 through 2025 recreation seasons. These data were used to evaluate overall campground use throughout the recreation season. Seasonal campground utilization estimates derived from payment-envelope records are summarized in Table 8.10-5.

Table 8.10-5. Lundy Campground Site Use

Year	Start	End	Season Length (days)	Season Capacity	Total Camping Days Paid	Average Utilization (%)
2022	7/7/2022	10/25/2022	111	4,218	1,860	44
2023	6/23/2023	8/22/2023	61	2,318	1,304	56
2024	7/3/2024	12/3/2024	154	5,852	2,261	39
2025	4/19/2025	11/14/2025	210	7,980	3,070	39

REC-1 characterized recreation use and visitor experience at the FERC-approved recreation sites within the Lundy Project Boundary through recreation use visitor intercept surveys, angling-related survey questions, spot count observations, parking utilization estimates, campground utilization estimates, and future recreation use projections.

A total of 207 visitor intercept surveys were completed during the study period, representing approximately 640 visitors across all recreation sites. Survey respondents were primarily residents of California and Nevada and most commonly participated in camping, fishing, and hiking activities. Camping was the most frequently reported activity and the most common primary recreation activity, while fishing was the second-most common primary activity and represented a major component of overall recreation use throughout the Project Area.

Visitor survey results indicate that recreation facilities were generally viewed favorably by Project users. Respondents generally rated recreation facilities as being in good condition, reported that the number of recreation facilities was “just right,” and indicated relatively low levels of perceived crowding. Most respondents also indicated that they had not modified visitation patterns due to crowding and generally viewed recreation sites as less crowded than expected.

Spot count observations documented a total of 239 vehicles and 590 individuals across all recreation sites during the study period. Recreation use was concentrated at Lundy Campground, Lundy Lake Boat Launch, and Lundy Dam Day Use Area, while Lundy Day Use Areas 1 through 4 supported comparatively low levels of observed visitation. Activity observations indicate that recreation use is primarily associated with camping and fishing, which together accounted for approximately 73 percent of all observed recreation activities.

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Recreation day estimates indicate that use is concentrated at Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Campground. Recreation use at the day use facilities was estimated at approximately 13,179 recreation days during the study period, while Lundy Campground supported approximately 5,070 recreation days. These results indicate that most recreation activity occurs at developed facilities that provide access to Lundy Lake or overnight camping opportunities.

Parking and campground utilization data indicate that most recreation facilities operated below capacity during the study period. Parking utilization was generally low at Lundy Dam Day Use Area and Lundy Day Use Areas 1 through 4, while the highest parking demand occurred at Lundy Lake Boat Launch during peak weekend periods. Campground utilization remained below full occupancy throughout the study period and averaged approximately 39 percent based on seasonal payment-envelope records provided by Mono County.

Future recreation use estimates indicate that recreation demand may increase gradually over the term of a new license. Based on forecasted population growth for California and Nevada, future recreation days, parking utilization, and campground utilization are anticipated to increase modestly. Projected recreation use remains below capacity at most recreation sites throughout the forecast period, although Lundy Lake Boat Launch is forecasted to experience the highest future parking utilization and may periodically exceed existing parking capacity during peak recreation periods.

Overall, REC-1 results indicate that existing FERC-approved recreation facilities are accommodating current recreation use levels and generally meeting visitor needs. Recreation use is concentrated at developed facilities associated with Lundy Lake and Lundy Campground, facility conditions are generally adequate to support existing recreation opportunities, and visitor survey results indicate a high level of satisfaction with the recreation experience provided within the Project Area.

Recreation use at the Project is moderate in intensity and is concentrated at a limited number of developed recreation facilities, including Lundy Campground and primary access points along Lundy Lake. Spot count observations indicate that a total of 239 vehicles and 590 individuals were recorded across all sites during the study period, with most use occurring at the boat launch, dam day use area, and campground. These patterns demonstrate that recreation use is focused at locations providing lake access and overnight facilities, while dispersed day use areas support comparatively low levels of visitation.

Activity patterns indicate that camping and fishing are the dominant forms of recreation, supported by both overnight stays and day use visitation. Visitor survey results further indicate high levels of satisfaction, low perceived crowding, and general agreement that existing recreation facilities are appropriately scaled to current use levels. Most respondents rated facilities as good to excellent and indicated that the number of recreation sites is sufficient to meet their needs.

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Recreation use data indicate that most Project recreation sites are below capacity for most of the recreation season. Campground utilization averages approximately 39 percent, and parking utilization at most sites remains relatively low, with the exception of the Lundy Lake Boat Launch during peak periods. While localized increases in use occur during summer weekends and holidays, these increases do not result in widespread crowding or system-wide capacity constraints.

Water level monitoring data documented seasonal fluctuations in lake elevations and provided the basis for evaluating the Lundy Lake Boat Launch functionality under existing operating conditions. Comparison of observed water levels with accepted boat launch design criteria indicated that the Lundy Lake Boat Launch remains functional across typical recreation season conditions. Recreation user survey results further support these findings, as most respondents reported that lake levels did not affect their recreation experience and generally rated normal and high water conditions as acceptable. Together, these data provide a baseline understanding of how existing Project operations influence recreational boating access at Lundy Lake.

Overall, the visitation, activity distribution, visitor survey, and utilization data indicate that recreation use within the Project Boundary is concentrated at developed facilities associated with Lundy Lake and Lundy Campground. Survey results indicate high levels of visitor satisfaction, low perceived crowding, and general agreement that existing recreation facilities are appropriately scaled to current use levels, while utilization data indicate that most recreation facilities operate below capacity throughout much of the recreation season.

8.10.2. Environmental Effects

In SD2,[22] FERC identified the following potential issues: (1) effects of continued Project O&M on recreation resources; and (2) adequacy of existing recreation facilities to meet current and future recreation demand.

8.10.2.1. Effects of Continued Project Operation and Maintenance on Recreation Resources

REC-1 collected information regarding recreation use, visitor experience, recreation capacity, and future recreation needs within the Lundy Project Area. During the 2025 study period, an estimated 18,249 recreation days occurred at the FERC-approved recreation sites, consisting of approximately 13,179 recreation days at the Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Day Use Areas 1 through 4, and approximately 5,070 recreation days at Lundy Campground. Recreationists participating in visitor intercept surveys identified camping, fishing, and hiking as the most common recreation activities occurring within the Project Area. Recreation survey results indicate that existing recreation facilities are generally viewed favorably by Project users. Respondents generally rated recreation facilities as being in good condition, indicating

[22] Accession No. 20240729-3029

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that the number of recreation facilities was "just right," and reported low levels of perceived crowding throughout the Project Area.

As part of REC-1, recreationists at Lundy Lake Boat Launch and Lundy Dam Day Use Area were asked whether existing lake levels affected their recreation visit. Approximately 80.7 percent of respondents indicated that lake levels did not affect their visit, while approximately 10.1 percent reported lake levels that were too low and 1.8 percent reported lake levels that were too high (REC-1 draft report, DLA Volume III). Most respondents rated simulated normal and high water conditions as acceptable or very acceptable for recreation use. REC-2 also evaluated the functionality of the Lundy Lake Boat Launch under existing Project operations and determined that the facility remains fully functional over a range of reservoir elevations consistent with typical recreation season conditions (REC-2 draft report, DLA Volume III).

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the FERC license. No effects to recreation resources have been identified. The Project, as currently operated, does not interfere with recreation use within the Project boundary.

PROPOSED ACTION

Under the Proposed Action, SCE proposes to continue to operate and maintain the Lundy Project under existing operational conditions. Additionally, SCE would continue to operate and maintain Project recreation facilities at the Lundy Project. No changes to Project operations, recreation facilities, or recreation management are proposed. Based on the recreation use, recreation facility inventory and condition assessment, visitor survey responses, and lake level evaluations collected as part of the recreation studies, continued Project O&M is not expected to adversely affect recreation opportunities, recreation access, or recreation experience within the Project Area.

8.10.2.2. Adequacy of Existing Recreation Facilities to Meet Current and Future Recreation Demand

REC-1 evaluated recreation use, visitor experience, parking utilization, campground utilization, and future recreation demand at the FERC-approved Lundy Project recreation sites. Recreation survey responses indicate that recreationists generally considered the number of publicly available recreation sites, campsites, parking areas, boat launch facilities, and day use opportunities to be appropriate for current recreation use levels. Recreationists also generally rated recreation facilities as being in good condition and reported low levels of perceived crowding throughout the Project Area.

An evaluation of current recreation use and facility capacity indicates that most recreation facilities operate below capacity. Parking utilization remained relatively low at Lundy Dam Day Use Area and Lundy Day Use Areas 1 through 4 throughout the study period. The highest parking utilization occurred at Lundy Lake Boat Launch, where parking demand exceeded available trailer parking capacity during certain peak weekend periods because

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of informal parking patterns and the use of trailer-designated spaces by passenger vehicles. Campground utilization remained below full occupancy throughout the study period and ranged from approximately 39 to 56 percent based on seasonal utilization estimates. Consistent with these findings, visitor survey responses indicate that recreation sites were generally perceived as not crowded and that existing recreation facilities are appropriately scaled to meet current recreation demand.

Future recreation use was estimated using visitor origin data and forecasted population growth rates for California and Nevada. Based on these analyses, recreation use is forecasted to gradually increase. Recreation day estimates indicate that use at Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Day Use Areas 1 through 4 could increase from approximately 13,380 recreation days in 2028 to approximately 17,070 recreation days in 2078. Recreation use at Lundy Campground is forecasted to increase from approximately 5,100 recreation days in 2028 to approximately 6,600 recreation days in 2078. Future parking utilization and campground utilization are also forecasted to increase; however, forecasted future use remains below capacity at most Project recreation facilities. Lundy Lake Boat Launch is the only recreation facility where future parking utilization is forecasted to periodically exceed available parking capacity during peak-use periods (e.g., holidays).

REC-2 documented existing recreation facility conditions and found that most recreation facilities and amenities are functional and generally in good condition. Facilities at Lundy Lake Boat Launch, Lundy Dam Day Use Area, and Lundy Campground were documented as operational and capable of supporting existing recreation opportunities. While some amenities require minor maintenance, repair, replacement, or accessibility improvements, these needs are localized and do not represent system-wide deficiencies. The recreation facility inventory indicates that existing recreation facilities remain capable of supporting both current recreation use and forecasted future recreation demand.

Based on the recreation facility inventory and condition assessment, recreation use and visitor survey data collected during the recreation studies, and an evaluation of current use in relation to forecasted future use, the existing FERC-approved recreation facilities are meeting current recreation demand and are expected to continue meeting anticipated recreation demand throughout the term of a new license. Although future recreation use is forecasted to increase gradually, most recreation facilities are currently operating below capacity and are expected to continue accommodating recreation use under existing Project operations.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, SCE would continue to operate and maintain the Project in accordance with the terms and conditions of the FERC license. The Project, as currently operated, does not interfere with recreation use within the Project boundary and use is currently meeting the recreation demand.

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PROPOSED ACTION

Under the Proposed Action, SCE proposes to continue to operate and maintain the Lundy Project under existing operational conditions. Additionally, SCE would continue to operate and maintain Project recreation facilities at the Lundy Project. No changes to Project operations, recreation facilities, or recreation management are proposed. Based on the recreation use, recreation facility inventory and condition assessment, visitor survey responses, and lake level evaluations collected as part of the recreation studies, continued Project O&M is not expected to adversely affect recreation use, recreation access, or recreation experience within the Project Area.

8.10.2.3. Consistency with Inyo National Forest Land Management Plan

The LMP for the Inyo National Forest (USFS, 2019) provides direction for managing recreation resources within Lundy Canyon, where lands within the FERC Project Boundary are designated as a Destination Recreation Area (High Use). Destination Recreation Areas provide developed recreation opportunities supported by recreation facilities, amenities, and services and emphasize facilities such as roads, parking areas, and restrooms that accommodate a variety of recreational activities. The LMP also identifies desired conditions that include developed recreation facilities, access to destinations, and amenities and infrastructure that supports a wide variety of recreational activities.

The existing FERC-approved recreation sites at the Lundy Project provide a range of developed recreation opportunities, including camping, boating access, picnicking, fishing access, lakeshore access, and day use recreation. Recreation facilities within the Project Boundary include the Lundy Campground, Lundy Lake Boat Launch, Lundy Dam Day Use Area, and four additional Day Use Areas. These sites provide developed recreation amenities including campsites, boat launching facilities, picnic tables, restrooms, parking areas, potable water, signage, fire rings, bear-proof food storage, and lake access. The recreation site types and associated amenities provided within the Project Boundary are consistent with the Destination Recreation Area (High Use) designation and recreation management direction identified in the LMP.

8.10.2.4. Proposed Protection, Mitigation, and Enhancement Measures

The Project, as described under this License Application, proposes minor changes to the FERC Project Boundary and no changes to O&M. O&M activities take place on previously developed and disturbed areas. The proposed Project would not affect the current recreation resources.

As no significant effects are anticipated, SCE is not proposing specific PME measures for recreation resources; however, to maintain recreation resources over the term of a new license, recreation resources are described in the Recreation Resources Management Plan (Appendix E.3, DLA Volume II).

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8.10.2.5. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Recreation resources.

8.10.3. 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: May 2026. Available online: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd664404.pdf.

_____. 2023. Inyo National Forest. About the Forest. Accessed May 2026. Available online: https://www.fs.usda.gov/main/inyo/about-forest#:~:text=Inyo%20National%20Forest%20extends%20165,Valley%20to%2014%2C494%27%20at%20Mt.

8.11. LAND USE AND AESTHETIC RESOURCES

This section describes land use resources within and in the vicinity of the Lundy Project. FERC regulations require the applicant to provide information regarding both land use and recreation. This section focuses on describing land use and aesthetic resources and pertinent land management plans and policies that govern land use within and adjacent to the FERC Project Boundary. A description of recreation resources is described in Section 8.10 for *Recreation Resources*.

8.11.1. AFFECTED ENVIRONMENT

The Lundy Project is located on Lundy Lake within the glacially carved Upper Lundy Canyon in Mono County, California. The Project is situated approximately 6.1 miles upstream of Mono Lake and the town of Mono City. The surrounding landscape is characterized by steep canyon topography, forested lands, alpine and subalpine environments, and relatively limited development typical of the Eastern Sierra Nevada region.

Land use in the region is largely influenced by federal land management policies, as well as recreation and natural resource conservation objectives.

8.11.1.1. Land Use Resources

LAND USE, LAND COVER, AND LAND MANAGEMENT IN THE EXISTING FERC PROJECT BOUNDARY AND ADJACENT LANDS

Land ownership within the Lundy Project Boundary is dominated by lands owned by SCE, with a small portion of land owned by Mono County. A small portion of land at the eastern end of the Project Boundary is administered by BLM, while most federal lands are

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administered by USFS as part of the Inyo National Forest. Within the Project Boundary, approximately 329.3 acres are included (Figure 8.11-1). Table 8.11-1 shows ownership acreages within the existing FERC Project Boundary.

Table 8.11-1. Land Ownership/Administration within the Existing Lundy Project Boundary

Ownership/Administration Agency		Acreage	Percentage of Total
Federal Land		54.0	16.4
	USFS	53.1	16.1
	BLM	0.9	0.3
Non-Federal Land		275.3	83.6
	SCE	272.9	82.9
	Mono County	1.1	0.3
	Private	1.3	0.4
Total Project Acreage		**329.3**	**100**

Source: Mono County, 2024, ParcelQuest 2026, Record of Survey No. 34-106

BLM = Bureau of Land Management; SCE = Southern California Edison; USFS = U.S. Forest Service

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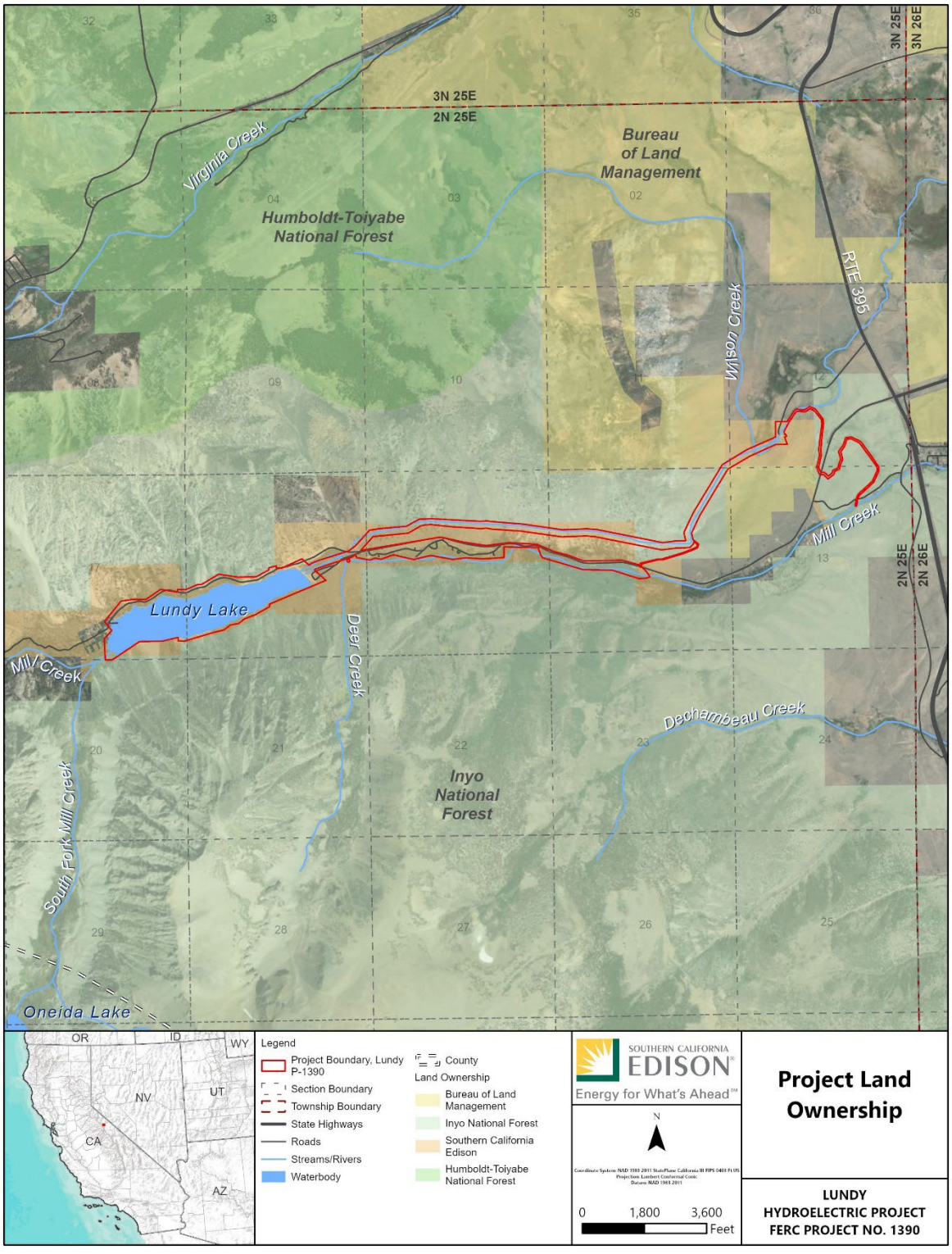


Figure 8.11-1. Project Land Ownership in Existing FERC Project Boundary.

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Land use within a 0.5-mile buffer of the existing FERC Project Boundary was estimated by analyzing the MRLC Consortium's NLCD collected through 2025, which provides land use information by generalizing land cover within the area (USGS, 2024). Figure 8.11-2 shows the NLCD land use categories that are dominant within 0.5 miles of the Lundy Project. Table 8.11-2 shows land use classifications within 0.5 miles of the Project. Predominant land use within the existing FERC Project Boundary is overwhelmingly classified as shrub/scrub. The remainder of Project lands is largely dominated by evergreen forest, deciduous forest, and woody wetlands.

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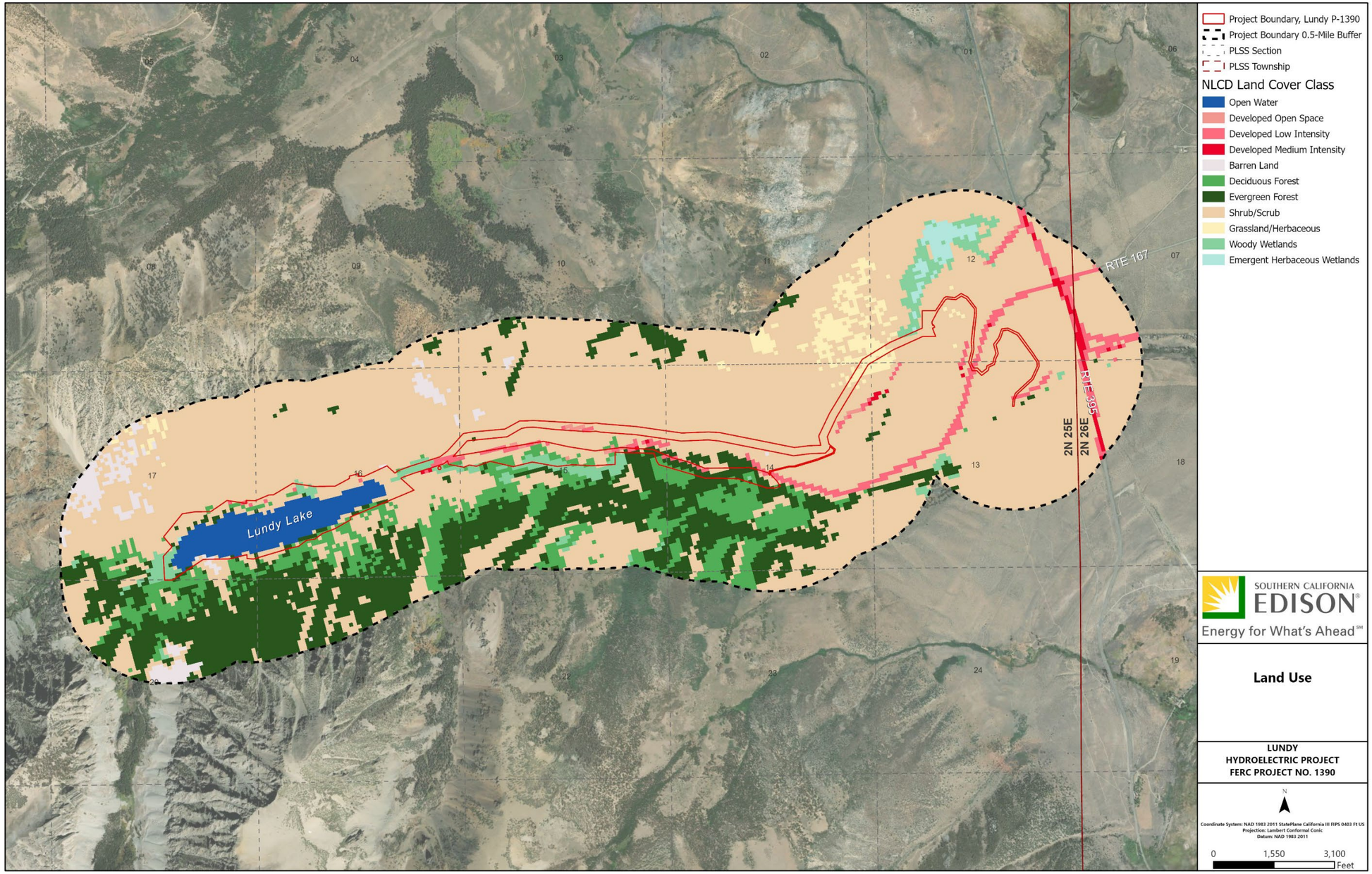


Figure 8.11-2. Land Use Classifications within 0.5 Mile of the Lundy Project.

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Table 8.11-2. Land Use within 0.5 Miles of the Existing FERC Project Boundary

NLCD Land Use Classification	Land Use within 0.5-Mile	
	acres	percentage
Barren Land	67.5	1.6
Deciduous Forest	295.3	6.9
Developed Low Intensity	89.4	2.1
Developed Medium Intensity	16.2	0.4
Developed Open Space	6.6	0.2
Emergent Herbaceous Wetlands	24.8	0.6
Evergreen Forest	693.2	16.3
Grassland/Herbaceous	76.7	1.8
Open Water	102.3	2.4
Shrub/Scrub	2,777.6	65.3
Woody Wetlands	91.8	2.2

Source: USGS, 2024

NLCD = National Land Cover Database

Shoreline Management Plan and Buffer Zones

The Lundy Project Boundary at the impoundment encompasses only the lands necessary for Lundy Project operations up to the reservoir elevation associated with the maximum operating capacity of the development. Generally, this boundary has been drawn through metes and bounds to encompass reservoir elevations with a slight buffer due to the accuracy of the metes and bounds survey. Therefore, SCE does not maintain a shoreline management plan.

Non-Project Use of Project Lands

Article 416 of the existing Lundy Project license authorizes SCE to permit certain uses and occupancies of Project lands and shorelines that are not located on federally

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administered lands and are not associated with hydroelectric generation or other licensed Project purposes. Under this authorization, SCE maintains a lease agreement with Lundy Lake Resort for operation of a non-Project boat dock at the Lundy Lake Boat Launch.

MONO COUNTY GENERAL PLAN

Mono County (2021) recently updated the land use element of its *Mono County General Plan* in 2021. According to the plan, lands within the current Lundy Project Boundary and within 0.5 mile of that boundary have been given the following land use classifications:

- Agriculture
  - Intended to preserve and encourage agricultural uses, to protect agricultural uses from encroachment from urban uses, and to provide for the orderly growth of activities related to agriculture.
- Commercial
  - Intended for a mix of uses and services, including retail, business, and professional services, as well as commercial lodging and denser housing, all of which must complement the retail and service functions of the community areas.
- Open Space
  - Intended to protect and retain open space for future generations. These lands may be valuable for resource preservation (e.g., visual open space, botanical habitat, stream environment zones), low-intensity recreational uses, mineral resources, or other reasons.
- Resource Management
  - Intended to recognize and maintain a wide variety of values in the lands outside existing communities. The Resource Management designation indicates the land may be valuable for uses including but not limited to recreation, surface water conservation, groundwater conservation and recharge, wetlands conservation, habitat protection for special-status species, wildlife habitat, visual resources, cultural resources, and geothermal or mineral resources. The land may also need special management consideration due to the presence of natural hazards in the area (e.g., avalanche-prone areas, earthquake faults, flood hazards, or landslide or rockfall hazards).

The Lundy Project falls within the Mono Basin community area, for which the *Mono Basin Community Plan* (Mono County, 2021) outlines certain issues, opportunities, and constraints. Items specific to the Lundy Project are listed in Table 8.11-3, and specific goals and objectives are listed in Table 8.11-4.

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Table 8.11-3. Issues, Opportunities, and Constraints in the Mono Basin Community Area.

No.	Issue/Opportunity/Constraint
1	Residents express conflicting sentiments about additional growth. The concept of a sustainable, successful economy is supported, but the fear is that communities will need to become too big or "citified" to achieve this, sacrificing the rural characteristics and healthy natural environment valued by residents. The challenge is to appropriately balance economic development goals with the desired rural community characteristics and protection of the natural, scenic, historical, and recreational values of the area. Growth does not necessarily mean becoming bigger; it could also mean improving what already exists within the current development footprint.
3	Residents of Mono City are concerned about the expansion of their community beyond the current limits of the subdivision. They are concerned about possible impacts to visual quality and to the deer herd in the area. The impacts from increased traffic levels are also a concern.
4	Workforce housing opportunities, both to rent and buy, are needed to sustain the existing community and enable people to live where they work.
7	Federal resource management agencies and LADWP own and manage much of the land in the Mono Basin. Residents expressed conflicting sentiments about protecting the natural environment and sensitive habitats versus the ability to use, access, and enjoy the land without overly restrictive regulations and/or fees. The challenge is to work with other agencies and within regulations to ensure the ability to use and enjoy the land while protecting its health.
8	Agriculture and grazing, including cows and sheep, was common in the Mono Basin at one time and is greatly reduced or does not exist now. The pastoral nature of agriculture and grazing, sheep grazing in particular, was part of the character of the Basin, a basis for an historical way of life, and is highly valued by some. Possibilities exist to adapt sheep grazing practices to be compatible with resource protection and even to be used to enhance management of the natural landscape.
11	Residents are concerned about the lack of jobs that enable people to live in the community. An increase in employment opportunities and diversity, along with a sustainable and diversified economy, is generally supported.
12	Residents are deeply concerned about bringing the community together to overcome prejudice, support equal opportunity, reach across cultural barriers, and build social capacity. Residents would like to increase the social capacity and vitality of their communities by encouraging citizens to contribute to community life. A concern is that increasing second-home ownership results in residents who do not participate in the community.
13	Residents are interested in Conway Ranch operations and generally support sheep grazing, aquaculture, and other historic agricultural uses and infrastructure. Water availability is a concern, with apparent support for Conway Ranch to receive its full allotment of water. Opportunities for expanding the agricultural operations are also of interest.
14	Residents are interested in upland water management in the north. Identified issues include general water distribution and flows, the de-watering of historically green ranches and meadows, riparian habitat and stream health, maximizing water delivery to Mono Lake, and water for Conway Ranch operations.

Source: Mono County, 2012
LADWP = Los Angeles Department of Water and Power; USFS = U.S. Forest Service

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Table 8.11-4. Goals and Objectives in the Mono Basin Community Area.

Goal	Description of Goal	Objectives
10	Maintain the spectacular natural values of the Mono Basin and rural, small-town character of communities by managing growth, ensuring high-quality aesthetics, and providing for community development needs to enhance the quality of life for residents.	*Objective 10.C.* Encourage building types and architectural design compatible with the scenic and natural attributes of the Mono Basin. *Objective 10.D.* Maintain, protect, and enhance the natural, historical, and recreational attributes of the Mono Basin. *Objective 10.E.* Promote well-planned and functional community uses that retain small-town character and increase quality of life. *Objective 10.F.* Provide appropriate public infrastructure and service capability expansion to support development, public safety, and quality of life.
11	Grow a sustainable local economy with diverse job opportunities that offers year-round employment and wages that reflect the cost of living in the area.	*Objective 11.A.* Plan for a diversified, sustainable economy. *Objective 11.B.* Enhance and support the existing tourism-related economy. *Objective 11.C.* Diversify the existing economic base and employment opportunities to achieve a more sustainable economy.
12	Build a safe, friendly community where people feel connected, work together to resolve community issues, and are involved in community activities and events.	*Objective 12.A.* Build healthy social connections and interactions that contribute to a sense of community. *Objective 12.B.* Encourage and support local events and programs that provide community and youth activities, capitalize on the tourist economy, and bring the community together. *Objective 12.C.* Encourage people to volunteer in the community and participate in events.

Source: Mono County, 2021

Notes:
Objectives 10 through 12 pertain to the Mono Basin Community Area, in which the Lundy Project is located.
Refer to the Land Use Element portion of the *Mono County General Plan* for further definition of policies and actions for each proposed objective.

INYO NATIONAL FOREST LAND MANAGEMENT PLAN

The 2019 Inyo National Forest LMP is intended to identify long-term or overall desired conditions and provide general direction for achieving those desired conditions (USFS, 2019).

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As it relates to land use, special uses of National Forest System lands are managed in a way that protects natural resources, public health, and safety. Section 8.11.2.3, *Consistency with Current Resource Management Objectives*, provides a summary of forest-wide desired conditions related to land use in the Inyo National Forest. Further details regarding guidelines and potential management approaches for each desired condition may be found in the 2019 LMP.

The Inyo National Forest LMP (USFS, 2019) defines the following seven management areas for the Inyo National Forest: fire management zones, conservation watersheds, Riparian Conservation Areas, sustainable recreation, recommended wilderness, eligible Wild and Scenic Rivers, and the Pacific Crest National Scenic Trail corridor. The Lundy Project Boundary and its 0.5-mile buffer fall within two of the seven management areas, as listed in Table 8.11-5.

Table 8.11-5. Inyo National Forest Management Areas Relevant to the Lundy Project

Management Area	Discussion of Relevance to the Project in the Land Management Plan
Sustainable Recreation	Discussed in detail in Section 5.8.13.1., *Sustainable Recreation Management Areas*
Eligible Wild & Scenic Rivers	Discussed in detail in Section 5.8.9., *National Wild and Scenic River System*

Source: USFS, 2019

The Inyo National Forest LMP also defines the following 10 designated areas for the Inyo National Forest: Wilderness, Mono Basin National Forest Scenic Area, Wild and Scenic Rivers, Ancient Bristlecone Pine Forest National Protection Area (National Protection Area), Pacific Crest National Scenic Trail, Inventoried Roadless Areas, National Recreation Trails, Research Natural Areas, Scenic Byways, and Wild Horse and Burro Territories. While not within the Lundy Project Boundary or its 0.5-mile buffer, the following designated areas are found near the Lundy Project:

- Inventoried Roadless Areas within the Upper Lundy Canyon
- Mono Basin National Forest Scenic Area, approximately 6 miles downstream of the Lundy Project and surrounding Mono Lake

While no Congressionally designated Wild and Scenic Rivers are found in the Upper Lundy Canyon, the entirety of Mill Creek within the Lundy Project Boundary has been determined to be eligible for listing by USFS (2019) in the Inyo National Forest LMP. Eligibility for Mill Creek was determined based on recreational values (Section 8.11.1.2, *Wild and Scenic Rivers and Scenic Highways/Byways*).

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8.11.1.2. Aesthetic Resources

NEARBY SCENIC ATTRACTIONS

Recreation opportunities within Inyo National Forest include activities such as camping, hiking, biking, hunting, fishing, climbing, water-based recreation, wildlife viewing, and winter sports (USFS, 2026). The Pacific Crest National Scenic Trail, which extends along the crest of the Sierra Nevada, passes through Yosemite National Park and represents the nearest National Scenic Trail to the Project (NPS, 2025). One of the United States' most popular parks, Yosemite National Park is located approximately 3 miles west of the Lundy Project and had approximately 4.2 million visitors in 2025 (Dapcevich, 2026). The Lundy Project is partially located within the Inyo National Forest and surrounded by other federally designated national forests including Tahoe (approximately 170 miles), Stanislaus (approximately 90 miles), and Humboldt-Toiyabe (approximately 81 miles) national forests.

VISUAL CHARACTER OF THE LUNDY PROJECT

The Lundy Project resides in a primarily undeveloped area, and the Lundy Project facilities are primarily surrounded by shrub/scrub vegetation, with limited evergreen forest and deciduous forest. The key visual features associated with the Lundy Project are Lundy Lake, Lundy Dam, a flowline, a penstock, a powerhouse, and the MCRD. The Lundy Project facilities are visible from Lundy Lake Road, Lundy Dam Road, and Mill Creek Powerhouse Road. The scenic character of Lundy Lake and Mill Creek is predominantly undeveloped shorelines with occasional recreation facilities and structures. Vegetated areas are followed by barren rock, exposed rock boulders, and distant views of hills and mountains beyond. The lowland and surrounding mountain areas are covered in dispersed snow in winter.

Photo 8.11-1 shows a representative view of Lundy Lake. Photo 8.11-2 shows the boat launch, and Photo 8.11-3 provides a view of the bypass. Photo 8.11-4 and Photo 8.11-5 provide representative views of the tailrace within the Lundy Project Boundary.

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Photo 8.11-1. View of Lundy Lake Facing Southwest.



Photo 8.11-2. View of Lundy Lake Boat Launch Facing East.

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Photo 8.11-3. View of Lundy Bypass Facing West.



Photo 8.11-4. Lundy Powerhouse Tailrace Facing Southeast.

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Photo 8.11-5. Lundy Powerhouse Tailrace Facing Northeast.

BUREAU OF LAND MANAGEMENT VISUAL RESOURCE MANAGEMENT FOR AESTHETIC RESOURCES

A portion of the Lundy Project Boundary includes lands administered by BLM. Management of scenic and visual resources on these lands is guided by BLM's Visual Resource Management (VRM) system (BLM, 1986), which provides a structured framework for inventorying visual values and establishing management objectives.

The VRM system includes the following key components:

- **Visual Resource Inventory (VRI):** Evaluation of scenic quality, public sensitivity, and distance zones to determine relative visual resource values. These factors are combined to assign VRI classes (I–IV), which inform planning decisions.
- **VRM Classes and Objectives:** Established through the land use planning process (Resource Management Plan), these classes define the desired future visual condition and the allowable level of landscape change.
- **Project Evaluation:** Proposed activities are assessed for consistency with VRM objectives, including evaluation of visual contrast and the degree of change to the landscape, with mitigation applied as needed.
- **Management and Implementation:** Visual resource considerations are integrated into planning and project design to minimize impacts and maintain the visual quality consistent with assigned VRM class objectives.

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INYO NATIONAL FOREST LAND MANAGEMENT PLAN FOR AESTHETIC RESOURCES

The following scenic integrity objectives applies to 14.2 percent of the Lundy Project lands. The Inyo National Forest LMP (USFS, 2019) provides a planning framework for the management of uses and resources associated with the Inyo National Forest (see Section 8.10, *Recreation Resources* for more information). The Forest Service Land Management Planning Handbook (USFS, 2015) identifies scenic character as the combination of the physical, biological, and cultural images that give an area its scenic identity and contribute to its sense of place. Scenic character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity. The Inyo National Forest LMP identifies desired conditions for scenic character (see Section 8.11.2.3*, Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.*, Table 8.11-9) and scenic integrity objectives (desired conditions) for the management and preservation of scenic character within the Inyo National Forest.

As described in the Inyo National Forest LMP (USFS, 2019), scenic integrity objectives describe the minimum thresholds for the management of the scenery resource, ranging from very high to low scenic integrity objectives. Scenic integrity objectives describe the degree to which desired attributes of the scenic character are to remain and reflect changes in public perceptions and the importance of viewing scenery as well as integrating scenery resources with the overall management of the landscape.

USFS measures scenic integrity in five levels (USFS, 2019):

- **Very High:** Landscapes where the valued scenic character "is" intact with only minute, if any, deviations. The existing scenic character and sense of place is expressed at the highest possible level.

- **High:** Landscapes where the valued scenic character appears unaltered. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the scenic character so completely and at such scale that they are not evident.

- **Medium**: Landscapes where the valued scenic character appears slightly altered. Noticeable deviations must remain visually subordinate to the scenic character being viewed.

- **Low**: Landscapes where the valued scenic character appears moderately altered. Deviations begin to dominate the valued scenic character being viewed, but they borrow valued attributes such as size, shape, edge effect, pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed. They should appear as not only valued character outside the landscape being viewed, but also compatible or complementary to the character within.

- **Very Low**: Landscapes where the valued scenic character appears heavily altered. Deviations may strongly dominate the valued scenic character. They may not borrow from valued attributes such as size, shape, edge effect, pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain so

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that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

For land within the Lundy Project Boundary, USFS predominantly identifies scenic integrity objectives as High (87.5 percent), with a small amount of land identified as Medium (12.5 percent) (see Figure 8.11-3). For land within a 0.5-mile buffer of the Lundy Project Boundary, USFS predominantly identifies scenic integrity objectives as High (80.25 percent) and Very High (18.3 percent), with a miniscule amount of land identified as Medium (1.4 percent) (see Figure 8.11-3). The Inyo National Forest LMP (USFS, 2019) also identifies potential management approaches relative to vegetation management and consideration of scenic character, such as minimizing visible lines in landscape areas where vegetation is removed and ensuring cleared areas include edges that reflect the visual character of naturally occurring vegetation openings.

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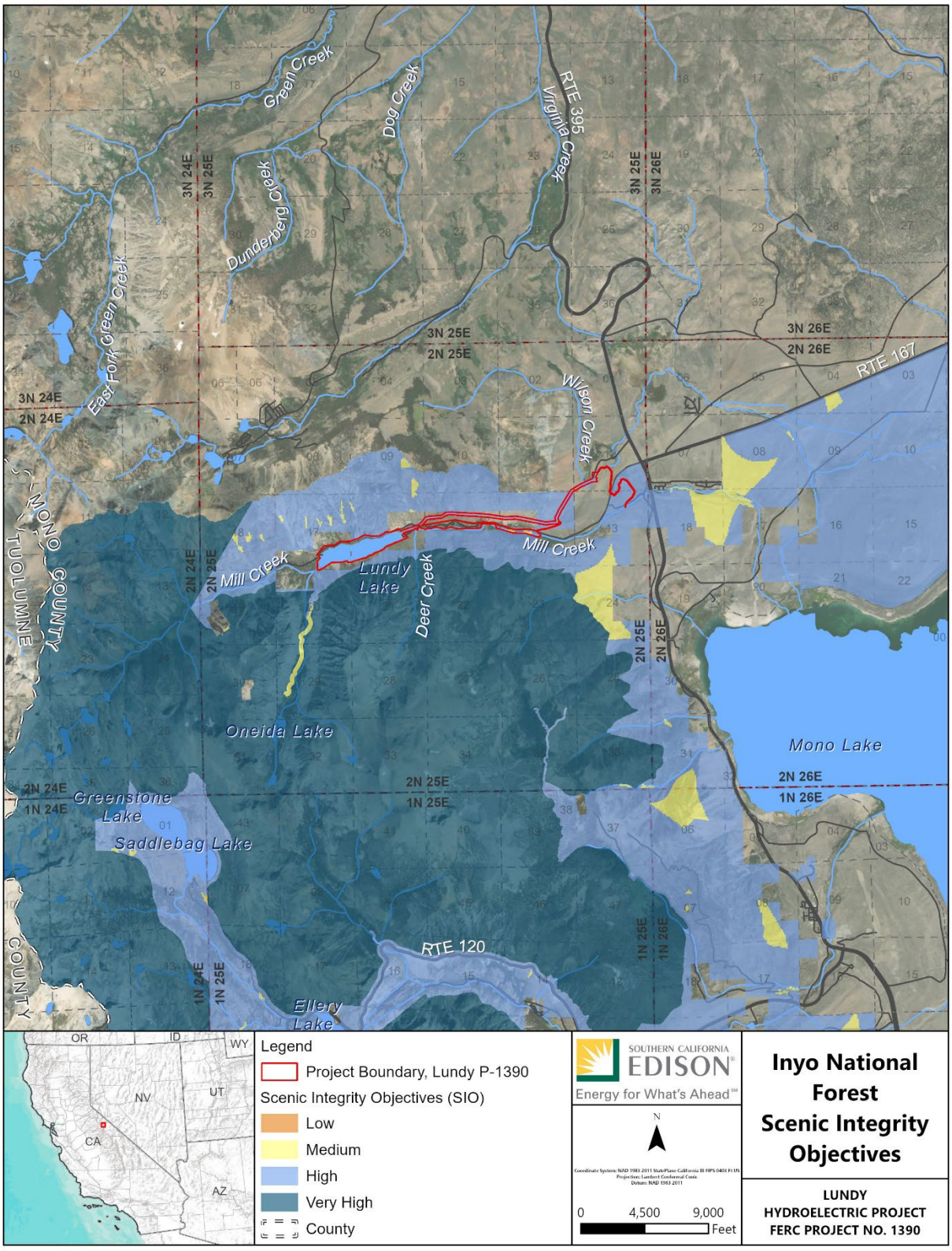


Figure 8.11-3. Inyo National Forest Land Management Plan Scenic Integrity Classifications for the Project Vicinity.

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WILD AND SCENIC RIVERS AND SCENIC HIGHWAYS/BYWAYS

No rivers associated with the Project are included in the National Wild and Scenic Rivers System; however, the 2019 Inyo National Forest LMP (USFS, 2019) recently identified over 75 miles of river in the Mono Basin as eligible for inclusion in the National Wild and Scenic River System, including all of Mill Creek.

8.11.1.3. Existing Measures for Land Use and Aesthetics Resources

The existing Lundy Project license includes aesthetic measures, as listed below.

- The Lundy Project Visual Resource Plan (Section 4(e) Condition 10) includes measures for Lundy Project-related activities or maintenance to consider building materials, color, conservation of vegetation, and landscaping to preserve the aesthetics of the Project Area.

8.11.2. ENVIRONMENTAL EFFECTS

8.11.2.1. Land Use Resources

Pursuant to FERC guidance, the FERC Project Boundary must encompass all lands necessary for Project O&M purposes over the term of the FERC license. SCE has reviewed the existing FERC Project Boundary and identified lands that should be added or removed. Lands proposed for addition to the Project Boundary include roads for access and O&M. Lands proposed for removal generally include lands above the mean high water not needed for Project operations. Table 8.11-6 summarizes those proposed changes tied to operations and facilities, and changes specifically related to Project lands and roads are identified in Table 8.11-7. The *Project Lands and Road Study (LAND-1) Draft Technical Report* (DLA Volume III) concentrates on proposed modifications to Project lands involving features that are either not presently accounted for in the Project license (addition) or are no longer required for Project purposes (removal). Each proposal is accompanied by a unique ID, figure reference, brief description, recommended action, and rationale for the proposed boundary adjustment, where relevant. The LAND-1 report does not delve into minor boundary modifications resulting from improved data accuracy, such as refined mapping details like centerlines and buffers for roads, flowlines, or creeks within the FERC Project Boundary.

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Table 8.11-6. Proposed FERC Project Boundary Changes Related to Operations/Facilities

ID	Figure Reference	Current Description	Proposed Action	Reason for Proposed FERC Project Boundary Change
Operations/ Facilities – 1[a]	Figure 8.11-4	Project boundary around Lundy Lake	Adjust Project boundary around lake to maximum full pool elevation (7813' NAVD 88).	Include lands only necessary for Project O&M purposes.

Table 8.11-7. Proposed FERC Project Boundary Changes Related to Project Roads and/or to the Project Roads Inventory

ID	Figure Reference	Current Description	Proposed Action	Reason for Proposed FERC Project Boundary Change
Roads – 1	Figure 8.11-5	Lundy Dam	Extend Project boundary to include access roads to Lundy Dam and Lundy Day Use Areas	Used exclusively for Project O&M purposes
Roads – 2	Figure 8.11-5	Weather station	Extend Project boundary to include weather station and access road.	Used exclusively for Project O&M purposes
Roads – 3	Figure 8.11-6, Figure 8.11-7	Recreation areas	Remove lands between Lundy Lake Campground and Lundy Day Use Area 1 not associated with recreation at the Project	Lands not needed exclusively for Project purposes. Lundy Lake Road is a public access road not needed for project purposes.
Roads – 4	Figure 8.11-7	Recreation areas	Remove land not needed for Lundy Day Use Area 4	Not needed exclusively for recreation access
Roads – 5	Figure 8.11-8	Sand trap access road	Extend Project boundary to include access road to the sand trap.	Used exclusively for Project O&M purposes
Roads – 6 Roads – 7	Figure 8.11-8	Return ditch access	Extend Project boundary to include 2 Mill Creek Return Ditch access roads.	Used exclusively for Project O&M purposes

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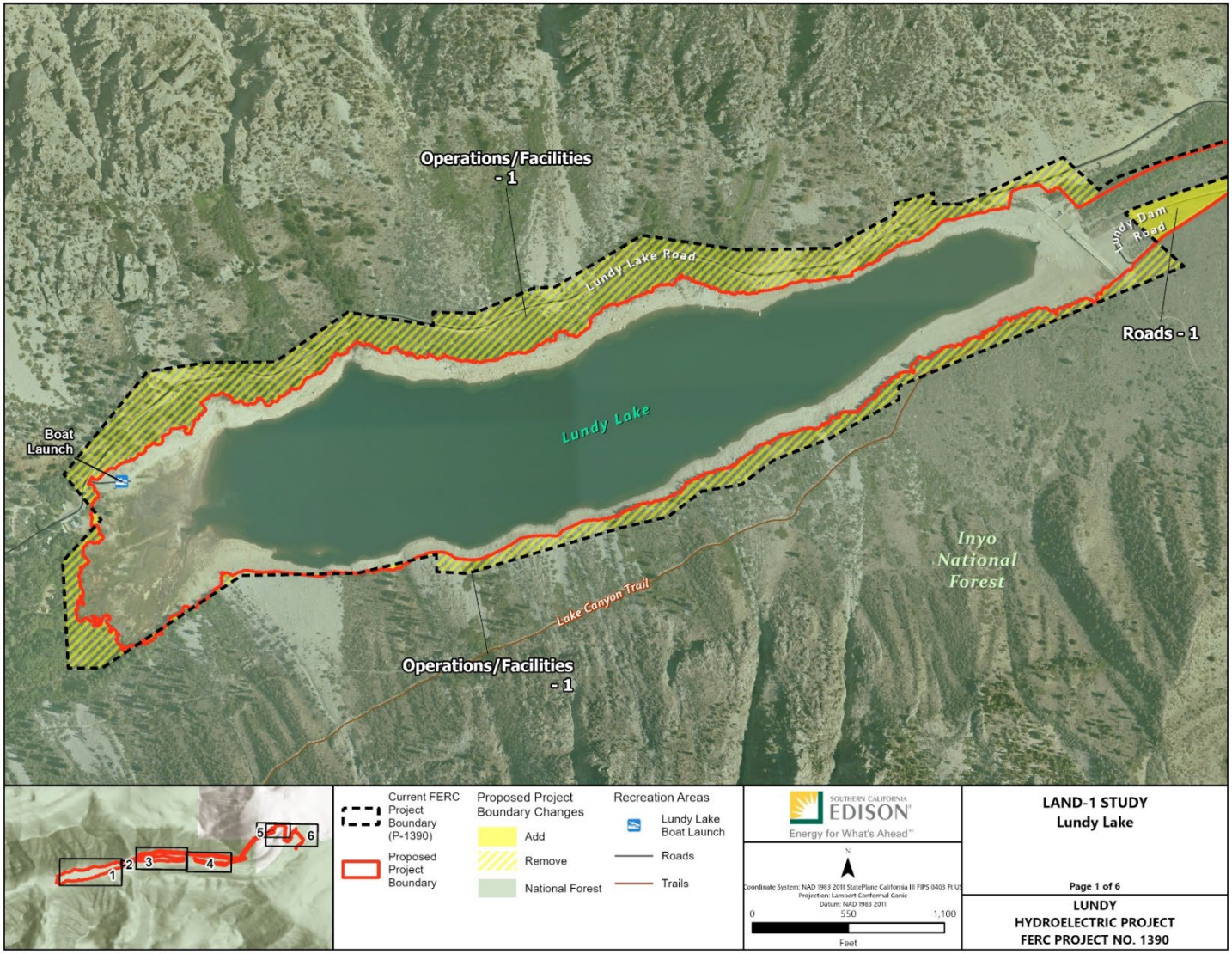


Figure 8.11-4. Lundy Lake.

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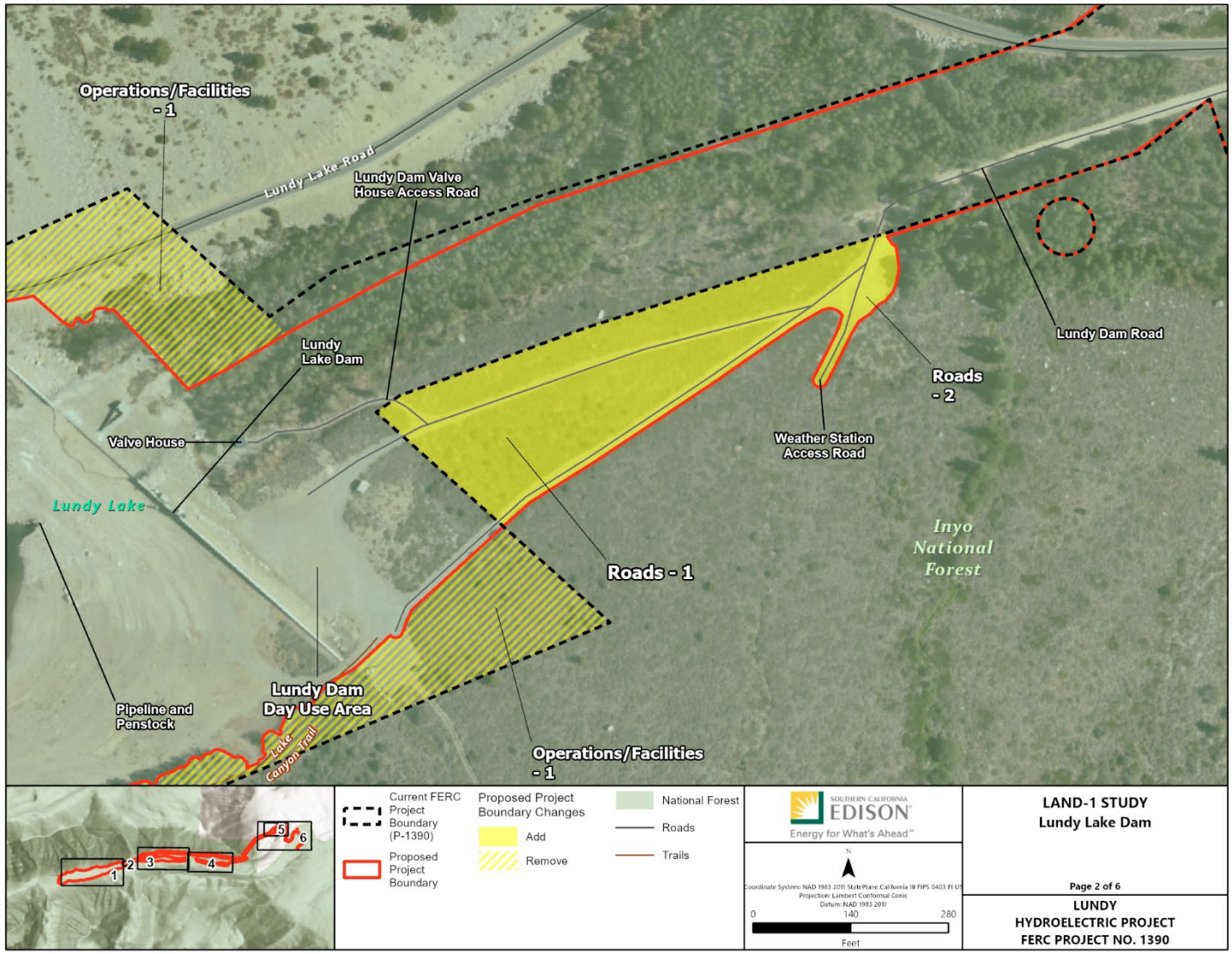


Figure 8.11-5. Lundy Lake Dam.

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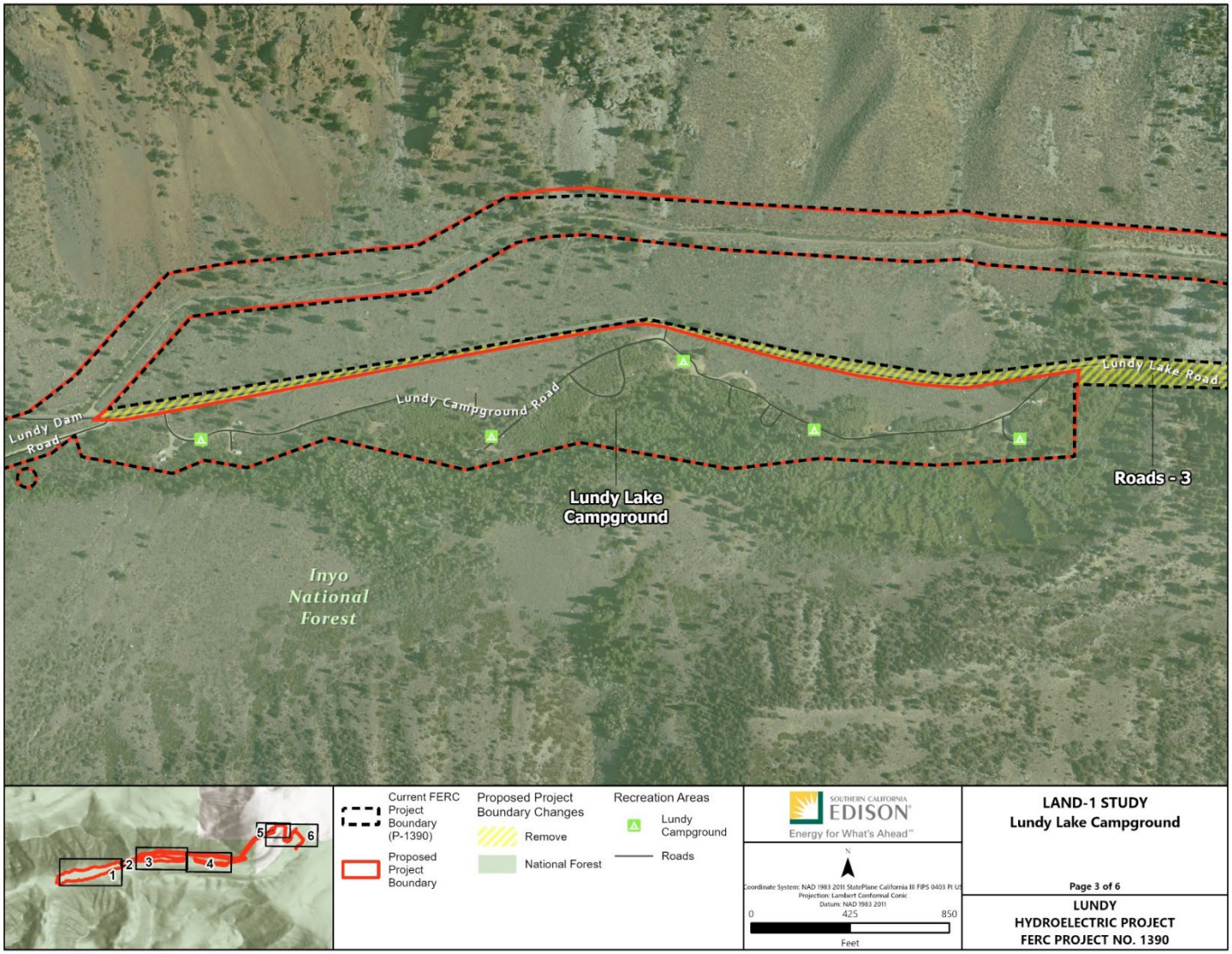


Figure 8.11-6. Lundy Lake Campground.

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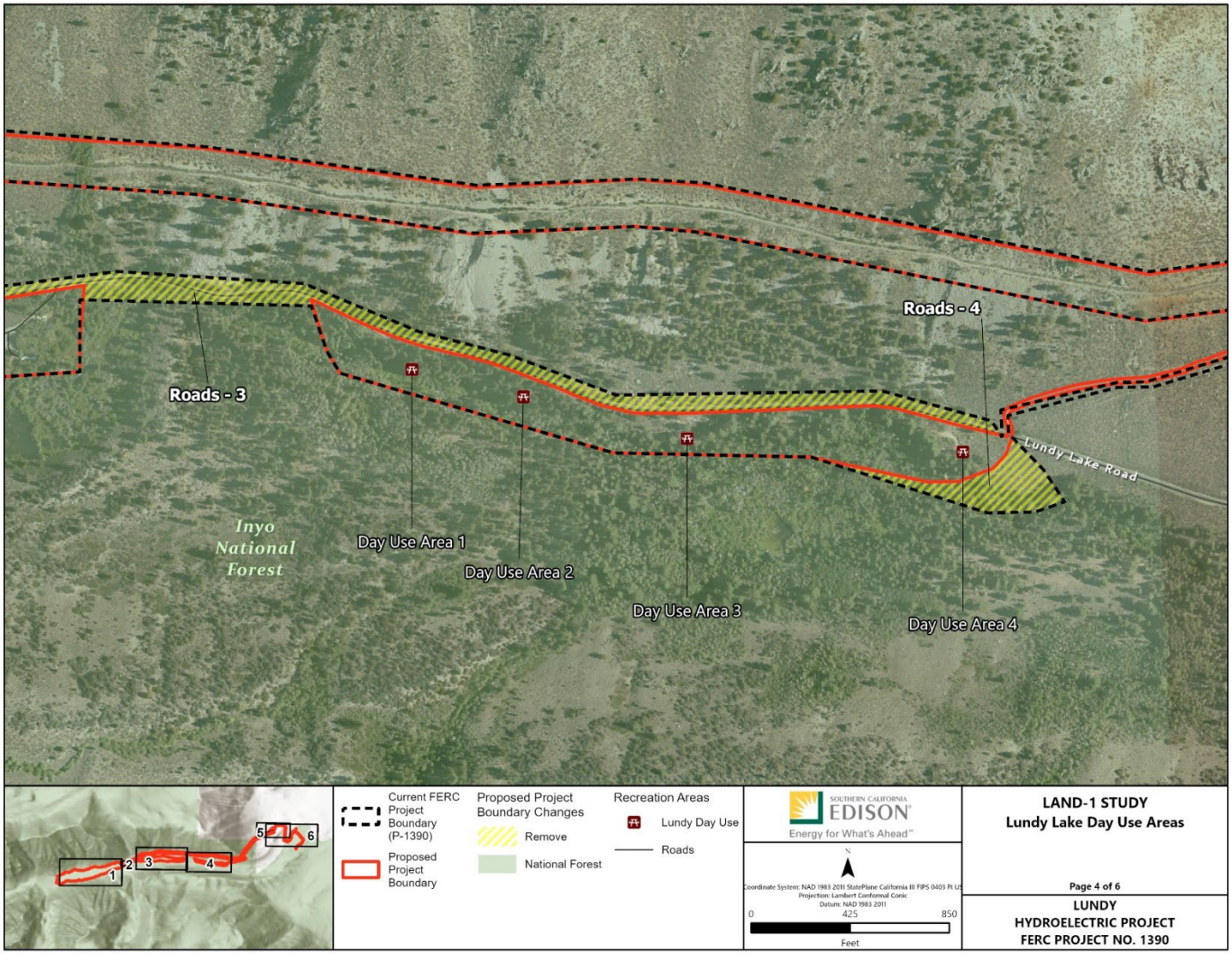


Figure 8.11-7. Lundy Lake Day Use Areas.

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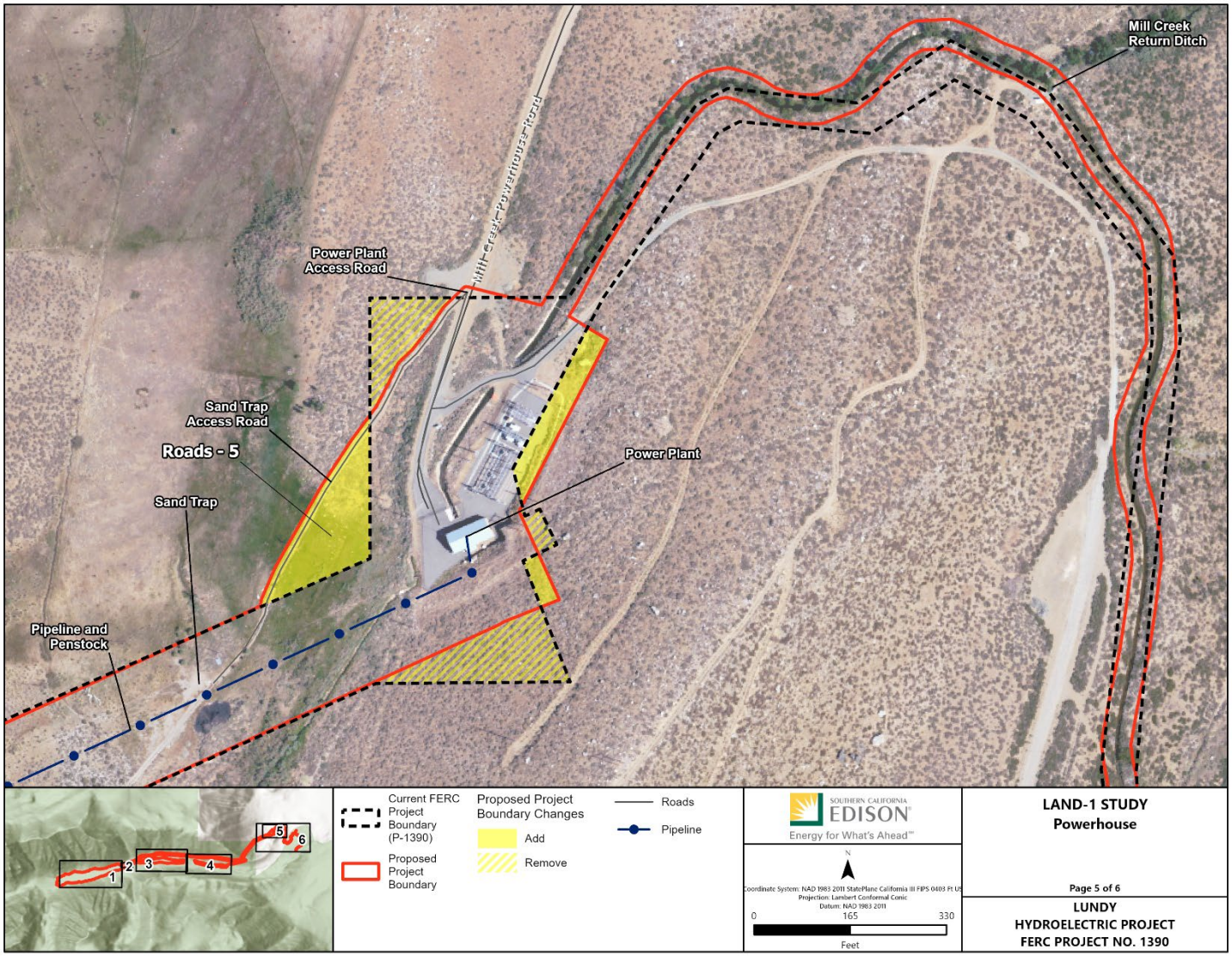


Figure 8.11-8. Powerhouse.

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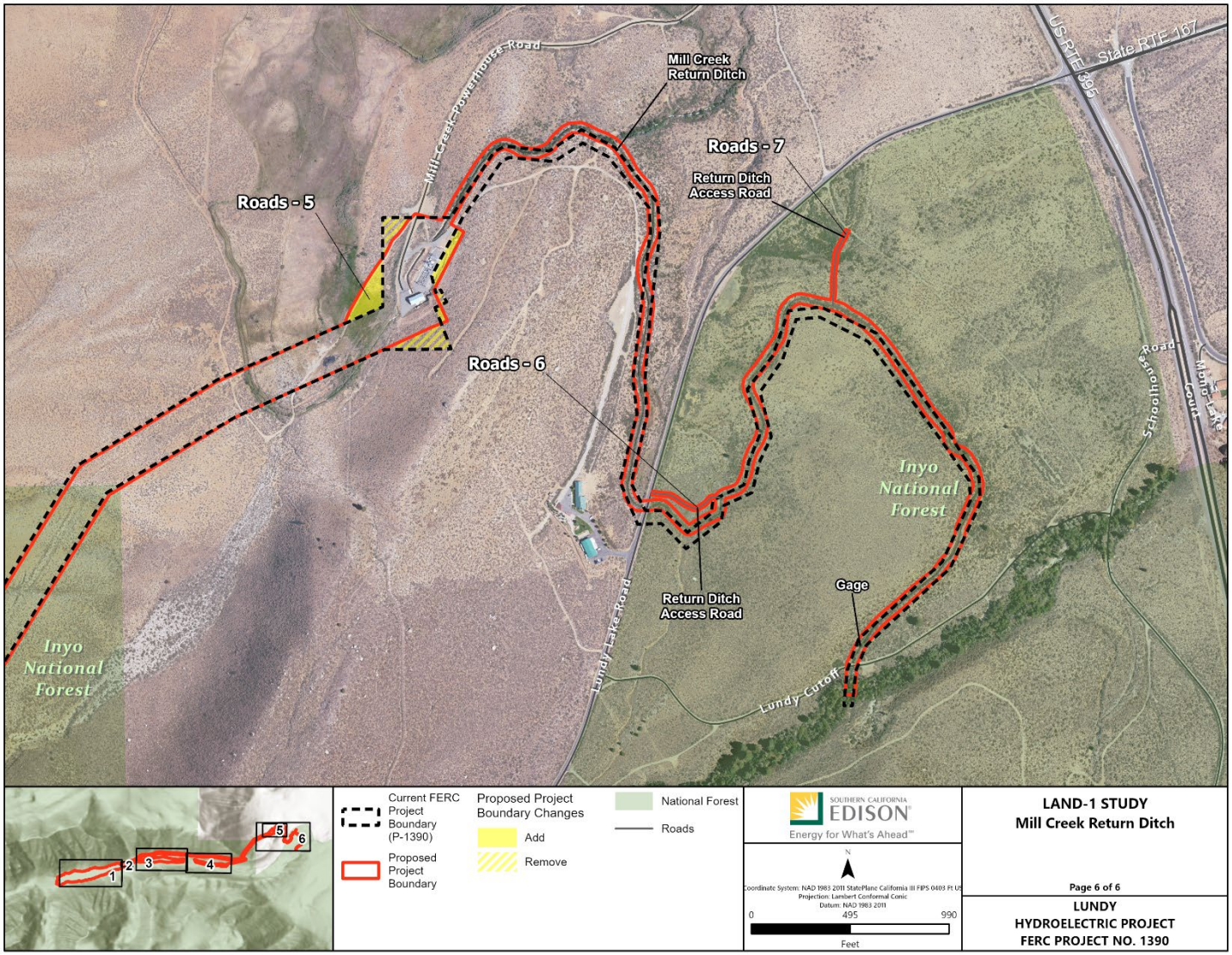


Figure 8.11-9. Mill Creek Return Ditch.

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Based on results of LAND-1 (DLA Volume III), the proposed boundary modifications described above would result in the following changes to land ownership within the FERC Project Boundary shown in Table 8.11-8.

Table 8.11-8. Land Ownership within the Proposed FERC Project Boundary

Ownership	Existing Acreage	Proposed Acreage	Change in Acreage
USFS	53.1	45.0	-8.1
BLM	0.9	0.8	-0.1
Southern California Edison	272.9	225.2	−47.7
Mono County	1.1	1.1	0.0
Private	1.3	0.4	−0.9
Total Project Acreage	329.3	272.5	−56.8

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Project would continue to operate under the terms and conditions of the current license, and the FERC Project Boundary would not change. As such, there would be no effects resulting from implementation of the No-Action Alternative.

PROPOSED ACTION

After analyzing available data, a comprehensive list of proposed adjustments to the existing FERC Project Boundary has been compiled (Table 8.11-6 and Table 8.11-7) and described in the LAND-1 Draft Technical Report (DLA Volume III). The proposed adjustments primarily aim to ensure thorough coverage of all current Project operations and facilities, including existing and planned Project roads (Figure 8.11-4 through Figure 8.11-9). Note that minor boundary refinements have occurred surrounding Mill Creek, Lundy Lake, and the MCRD resulting from improved data accuracy, such as refined mapping details like centerlines and buffers for roads, flowlines, or creeks within the FERC Project Boundary. SCE proposes to file a final Exhibit G to accurately show the updated Project Boundary once a new license is issued.

Based on the results of the LAND-1 study and the proposed addition of Project access roads within the Project boundary, SCE has developed a Project Roads Management Plan to guide the maintenance and operation of Project roads (Appendix E.4, DLA Volume II).

No changes to land use or ownership are included under the Proposed Action; therefore, no adverse effects are anticipated.

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8.11.2.2. Aesthetic Resources

For the Lundy Project, BLM-administered lands represent a small portion of the Project Boundary (Table 8.11-1). Current Project operations do not propose surface-disturbing activities or changes to these parcels. Visual resource values on BLM lands will continue to be managed in accordance with the established VRM policy.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Project would continue to operate under the terms and conditions of the current license, and the FERC Project Boundary would not change. As such, there would be no effects resulting from implementation of the No-Action Alternative.

PROPOSED ACTION

Under the Proposed Action, no operational changes are proposed that would impact aesthetic resources. Existing Project O&M practices would continue. Proposed modifications are limited to administrative boundary adjustments and updated PME measures and would not impact aesthetic resources.

8.11.2.3. Consistency with Current Resource Management Objectives (Forest Plans, Basin Plan, etc.)

SCE has reviewed the desired conditions in the 2019 Inyo National Forest LMP (USFS, 2019) to assess whether the Project is consistent with stated management objectives. The desired conditions relating to land use and aesthetics, with which the Project is consistent, are presented in Table 8.11-9.

Table 8.11-9. Inyo National Forest Forest-wide Desired Conditions Related to Land Use at the Lundy Project

Code	No.	Forest-wide Desired Land Use Conditions
LAND-FW-DC	01	Land ownership and access management support authorized activities and uses on National Forest System lands. Land exchanges promote improved management of National Forest System lands.
LAND-FW-DC	02	Coordination of land and resource planning efforts with other federal, state, Tribal, county, and local governments, and adjacent private landowners, promotes compatible relationships between activities and uses on National Forest System lands and adjacent lands of other ownership.
INFR-FW-DC	01	A minimum and efficient national forest transportation system, administrative sites, and other infrastructure and facilities are in place and maintained at least to the minimum standards appropriate for planned uses and the protection of resources.
INFR-FW-DC	02	Management operations on the Inyo National Forest are energy and water efficient.

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Code	No.	Forest-wide Desired Land Use Conditions
INFR-FW-DC	03	Roads allow safe and healthy wildlife movement in areas of human development. Vehicular collisions with animals are rare.
REC-FW-DC	01	The diverse landscapes of the Inyo National Forest offer a variety of recreation settings for a broad range of year-round, nature-based recreation opportunities. Management focuses on settings that enhance the national forest recreation program niche.
REC-FW-DC	02	The condition, function, and accessibility of recreation facilities accommodate diverse cultures with appropriate activities available to the public.
REC-FW-DC	03	Recreation opportunities provide a high level of visitor satisfaction. The range of recreation activities contribute to social and economic sustainability of local communities.
REC-FW-DC	04	Areas of the national forest provide a variety of activities with minimal impact on sensitive environments and resources.
REC-FW-DC	05	Visitors can connect with nature, culture, and history through a range of sustainable outdoor recreation opportunities.
REC-FW-DC	06	The management and operation of facilities are place based, integrated, and responsive to changes that may limit or alter access.
REC-FW-DC	07	New developed recreation infrastructure is located in ecologically resilient landscapes, while being financially sustainable, and responsive to public needs.
REC-FW-DC	08	Summer dispersed recreation occurs in areas outside of high visitation, developed facilities, or communities, and it does not adversely impact natural or cultural resources.
REC-FW-DC	09	Permitted recreation uses, such as recreation special events or guided activities, are consistent with recreation settings, protect natural and cultural resources, and contribute to the economic sustainability of local communities.
REC-FW-DC	10	Forest recreation information is current, connecting people to the national forest through contemporary means including social media and available technology. Diverse communities are aware of recreation opportunities on the Inyo National Forest.
REC-FW-DC	11	The Inyo National Forest provides a range of year-round developed and dispersed recreation settings that offer a variety of motorized and non-motorized opportunities and recreation experiences.
REC-FW-DC	12	Trails used in summer provide access to destinations, provide opportunities that connect to a larger trail system, provide linkages from local communities to the national forest, and are compatible with other resources.
REC-FW-DC	13	Trails meet trail management objectives based on trail class and designed use.
SCEN-FW-DC	01	The Inyo National Forest provides a variety of ecologically sound, resilient, and visually appealing forest landscapes that sustain scenic character, supporting the national forest recreation program niche in ways that contribute to visitors' sense of place and connection with nature.

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Code	No.	Forest-wide Desired Land Use Conditions
SCEN-FW-DC	02	Scenic character is maintained and/or adapted to changing conditions to support ecological, social, and economic sustainability of the Inyo National Forest and in surrounding communities.
SCEN-FW-DC	03	Scenic integrity is maintained in places people visit for high-quality viewing experiences.
SCEN-FW-DC	04	The Inyo National Forest's scenic resources complement the recreation settings and experiences, as described by the range of scenery integrity objectives, while reflecting healthy and sustainable ecosystem conditions.
SCEN-FW-DC	05	The built environment meets or exceeds scenic integrity objectives and contributes to scenic stability.

Source: USFS, 2019

8.11.2.4. Proposed Protection, Mitigation, and Enhancement Measures

Implementation of the Proposed Action would not have an effect on land use, aesthetics, or land ownership in the Project Area. In order to proactively operate and maintain Project roads, SCE proposes the Project Road Management Plan as described in Appendix E.4, DLA Volume II.

8.11.2.5. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Land Use and Aesthetics.

8.11.3. REFERENCES

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8.12. CULTURAL RESOURCES

This section summarizes the results of the FERC-approved Cultural Resources – Archaeology Technical Study (CUL-1) and Cultural Resources – Built Environment Technical Study (CUL-2) Plans for FERC Project No. 1390 (SCE, 2024). The discussion here is intended to provide a basis for evaluating the potential issues summarized in the CUL-1 and CUL-2 Draft Technical Reports, which are currently under review by USFS and BLM; Tribal resources are discussed separately in Section 8.13 *Tribal Resources* of this Exhibit E.

This section was prepared to comply with Section 106 of the NHPA (16 USC § 470f) and its implementing regulations in 36 CFR Part 800, which requires that federal agencies consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. The CUL-1 and CUL-2 Technical Reports were developed in collaboration with the Cultural and Tribal Technical Working Group (TWG), which includes representatives from FERC, the California SHPO, the Inyo National Forest, BLM-Bishop Field Office, and Tribes and Tribal representatives identified by the Native American Heritage Commission and through SCE's Tribal outreach.

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As defined in the NHPA (54 USC § 300308), a **historic property** is any "prehistoric [precontact] or historic district, site, building, structure, or object included in, or eligible for inclusion on, the NRHP, including artifacts, records, and material remains related to such a property or resource." Following National Register Bulletin No. 36, *Guidelines for Evaluating and Registering Archaeological Properties* (NPS, 2020), an **archaeological site** is "a location that contains the physical evidence of past human behavior that allows for its interpretation." The term archaeological site refers to sites that are eligible for or are listed in the NRHP (historic properties), as well as those that do not qualify for listing in the NRHP. Unevaluated cultural resources are assumed to be eligible until determined otherwise.

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

Cultural resource(s), for the purpose of this document, is used to discuss any precontact or historic-period district, archaeological site, building, structure, object, or landscape regardless of its NRHP eligibility.

The CUL-1 and CUL-2 Study Plan and Technical Reports were completed by individuals who meet the Secretary of the Interior Professional Qualification Standards in Archaeology and/or History and Architectural History (36 CFR Part 61) and are experienced at documenting historic properties in California. These individuals also hold the appropriate permits to conduct cultural resources work on lands managed by the Inyo National Forest and BLM-Bishop Field Office.

8.12.1. AFFECTED ENVIRONMENT

8.12.1.1. Area of Potential Effect and Study Area

PROJECT VICINITY

The Project is located in Mono County, California, northwest of the town of Lee Vining in the Eastern Sierra Nevada. The majority of the Project is located on lands owned by SCE, while the rest is managed by the Inyo National Forest, BLM–Bishop Field Office, and Mono County, and a small portion on other private property. The pedestrian surveys conducted for this Project took place within the APE as described below, which is located in Township 2 North, Range 25 East on the Lundy Project 7.5-minute USGS quadrangles.

AREA OF POTENTIAL EFFECTS

A Project's APE is defined in the regulations implementing Section 106 of the NHPA as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR 800.16(d)). Additionally, the ACHP and the SHPO have provided guidance for

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federal agencies and their delegated licensees to consider potential effects that may occur immediately and directly, are reasonably foreseeable or may occur later in time, are farther removed in distance and potentially affected indirectly, and/or include cumulative effects of/related to the undertaking.

The APE is defined as the FERC Project Boundary and a 50-foot radius around ancillary facilities (e.g., gages) located outside the FERC Project Boundary. SCE submitted the proposed APE, on behalf of FERC, to the SHPO for comments on the adequacy of the APE pursuant to 36 CFR § 800.16(d). On November 25, 2025, SCE received comments from the SHPO on the adequacy of the APE (SHPO Reference No. FERC_2025_1105_001). The SHPO recommended that additional information regarding the potential effects from O&M to historic properties present below the ground surface be provided. Therefore, SCE has expanded the APE to include a vertical APE ranging from 0 feet below current grade to a maximum depth of approximately 10 feet (3 meters) below current grade, where excavations due to O&M could take place.

During planning for the 2025 fieldwork, it became evident that the current FERC Project Boundary, as mapped, did not accurately follow all Project facilities. Some minor corrections were made and additional areas surveyed as part of the current study to accommodate the actual configuration of the Project. Also, in 2025, minor additions, including access routes and staging areas, were added outside the original FERC Project Boundary. For the purposes of this discussion, the APE thus consists of the current FERC Project Boundary, as well as these corrections and additions. An additional 30-meter (98.4-foot) buffer around the MCRD, outside the APE, was also surveyed in the interest of complete recording of cultural resources. Together, all these areas total 377 acres (Figure 8.2-1).

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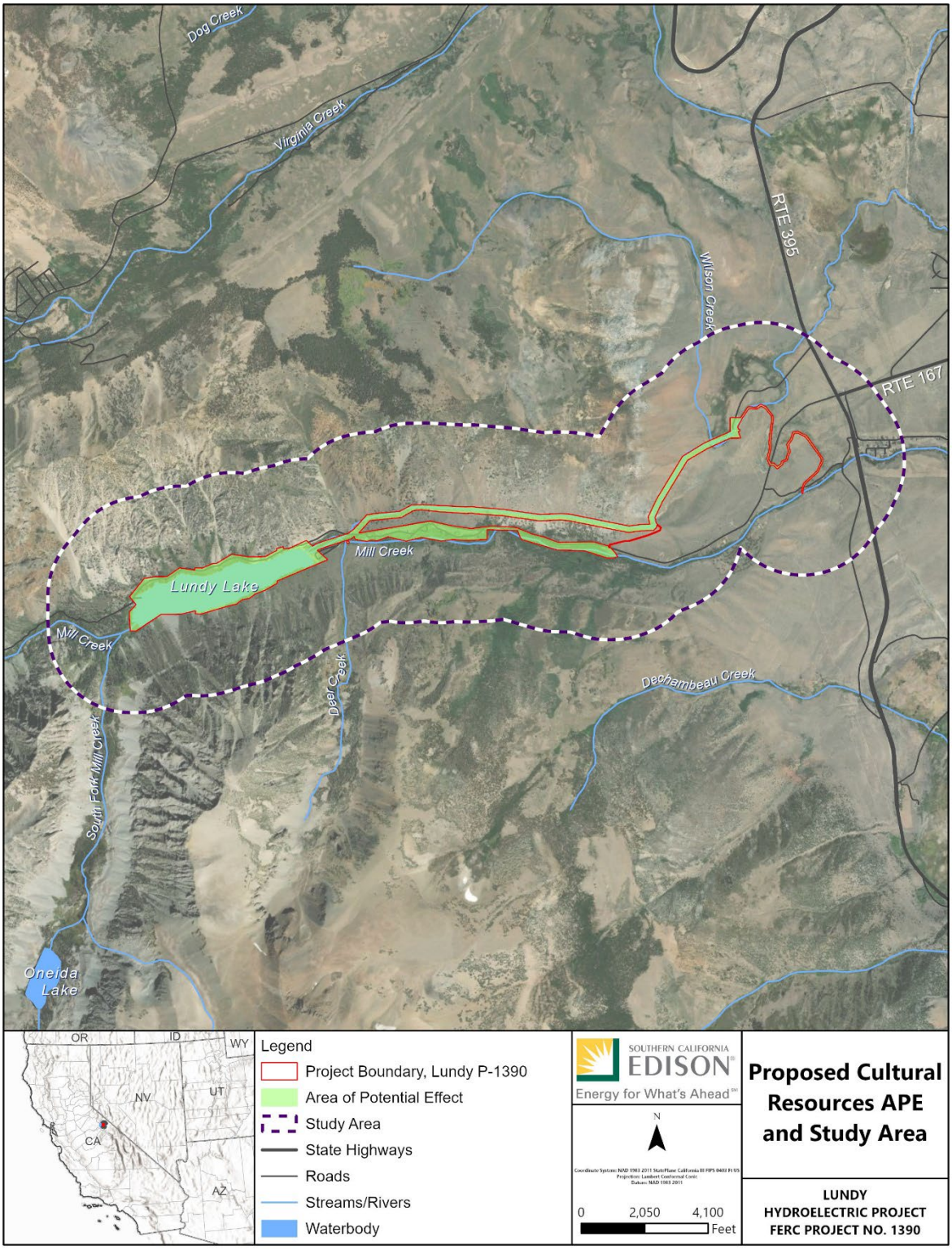


Figure 8.12-1. Cultural Resources APE and Study Area.

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8.12.1.2. Physical Environment and Climate

The Sierra Nevada forms an abrupt orographic boundary focusing significant precipitation on its mountainous western slopes. The crest blocks precipitation from reaching the enclosed basins beyond the eastern escarpment, producing an abrupt moisture dichotomy between the generally mesic, subalpine habitats of the tarn lakes and floodplain meadows of Mill Creek drainage net through Lundy Canyon and the xeric sagebrush steppe and local riparian corridors of the Great Basin immediately to the east. Up to 125 centimeters (49.2 inches) of precipitation (water content) can fall along the crest annually, enlarging the winter snowpack at 20 Lakes Basin and Lundy Pass, while the Mono Basin, only a few miles east, receives about 13 centimeters (5.1 inches) per year (Hodelka et al., 2020; Montague, 2010). At Tuolumne Meadows (Montague, 2010), just west of the Project Area and a proxy for the alpine settings above Lundy Lake, the maximum temperature in summer averages 21.7°C (71°F), with a minimum winter average of 2.6°C (37°F). The average winter maximum reaches 5.2°C (41°F), with chilling low averages of -13.0°C (8.6°F) annually. The high-altitude cold and significant winter precipitation support a deep snowpack whose moisture is released slowly, supporting meadows and riparian habitats on both sides of the crest well into the summer.

The orographic effect also influenced past climate along the crest. The Project Area was fully glaciated during the Late Pleistocene with deep, scouring glaciers extending from the stepped cirques below North Peak and Excelsior Mountain, burying and ultimately shaping the landforms of the Project Area. With glacial retreat culminating between 18,000 and 16,000 years ago, pluvial Lake Russell reached its highstand (Ali, 2018; Hodelka et al., 2020). The lake record shows several high-amplitude fluctuations on either side of the Pleistocene–Holocene transition about 12,600 years ago, suggesting shifts in wet storms systems, pulses of glacial expansion locking up moisture, and glacial retreat providing surface water to the streams and basin lake.

The Early Holocene was drier and colder than today; sagebrush and grass pollen appear in the Early Holocene (earliest) section of a pollen core at Tioga Pass Lake (Spaulding, 1999). Cooler and wetter conditions, with brief forest expansions, arrive in the high country by about 6,000 calendar years (cal) Before Present (BP). The current woodland pattern of subalpine forest was established about 2,500 years ago with expansions and contractions due to drought and climate punctuating the Late Holocene. Extreme drought is evident during the Medieval Climate Anomaly, 1100–700 cal BP (Mensing et al., 2008; Stine, 1994). Although the mountain received winter moisture, it was not enough to support tarn lakes, and flashy stream and groundwater discharge depleted earlier in each season. Downed trees in Tenaya Lake (Stine, 1994), downstream to the west of the Sierran crest, record the diminished surface water during the Medieval Climate Anomaly. The drought was long enough for woodlands to occupy the lake basins unless other changes (e.g., tectonics, landslides) altered the drainage and pool levels. About 600 years ago, the Little Ice Age may have resulted in reactivated glaciers due to increased orographic winter precipitation. The Little Ice Age glacial advance was confined to cirques (Gillespie and Zehfuss, 2004), and although the Project Area remained free of glaciers, it seems likely that snow depths were significant and may have been year-round. This may have affected recent patterns of resource productivity and access to the passes and

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corridors of the Sierran crest just prior to European contact and the resulting dramatic changes in the ethnohistoric land use of Lundy Canyon.

GEOMORPHOLOGICAL CONTEXT

Formed beneath the deep glaciers that covered the cirque-line crest of the Sierra Nevada, the landscape of the Lundy Canyon is a product of the Late Pleistocene glaciation. Glaciers extending along the crest formed a coalesced glacial mass that pushed into and scoured canyons along the eastern front. Near Lundy Pass, the glacials worked basinward from escarpments of Excelsior Mountain (12,445 feet amsl) and North Peak (12,242 feet amsl), where the scouring glacial mass formed the 20 Lakes Basin before dropping into Lundy Canyon. The Mill Creek glacier carved the steep-sided Lundy Canyon, forming a series of steps at structural resistance. Lundy Lake, at the western extent of the Project Area, occupies the trough of Lundy Canyon, just below the confluence of Mill and South Fork creeks at Lake Canyon, itself formed by a glacier tributary to that of Mill Creek.

While the gravity of the western slope and the Grand Canyon of the Tuolumne pulled the Dana glacier westward, the Lee Vining glacier dropped eastward into the Great Basin, carving a dramatic canyon of its own as it extended toward the basin of Mono Lake and pluvial Lake Russell. The bedrock of Lundy Canyon is a mix of granodiorite and plutonic rocks—components of the Tuolumne Intrusive Suite (Coleman et al., 2004)—that intrude remnants of metasedimentary and metavolcanic rocks (Hodelka et al., 2020). The Pleistocene glaciers scoured the bedrock exposing patchy rock surfaces surrounded by rubble of canyon colluvium, irregular ground moraines, and well-formed end and lateral moraines. With the retreat of glaciers in the Terminal Pleistocene and Early Holocene, extreme surface flow continued scouring the once-glaciated terrain. Pluvial Lake Russell in the basin of Mono Lake reached its highstand during the period of glacial retreat (Ali, 2018) and high meltwater drainage into Lundy Canyon. Eventually, floodplain and linear riparian habitats formed as drainages sought equilibrium in the scoured landscape.

Tarn lakes, formed in minor cirques and in-ground moraine catchments, are a common feature of the eponymous 20 Lakes Basin in the upper reaches of Lundy Canyon. Today, local drainages are generally steep, relatively straight channels with pools and riffles leading to dropping falls. However, Lee Vining Creek's upper reach has evolved into a meandering channel with a broad wetland floodplain between steep confining slopes. The floodplain shows distributary meanders and oxbows along a channel subject to high seasonal fluctuations due to local runoff. Geologic structures create pools and wetlands along mid-canyon reaches of Mill Creek, and well-preserved end moraines create natural restrictions impounding relatively broad floodplains. Where there is evidence of long-term floodplain stability, shown by moderately developed soils and an absence of recent channeling, the floodplain deposits have potential for preserving an intact, buried archaeological record.

Below Lundy Lake, the Project Area is generally confined to sections of the Mill Creek floodplain and the foot of colluvial slopes of the south-facing (north side or left bank) canyon margin. Soils are generally poorly developed and immature (A-Bw-C or A-C

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horizons) on the young active landforms. Soils forming on the formerly glaciated landscape or fan inset below the Pleistocene stands of pluvial Lake Russell are Holocene-age profiles. These immature profiles are A-C horizons on young landforms of moraines, floodplains, and minor alluvial fans. The profiles are generally thin and shallow on local plutonic (i.e., granitic) bedrock, till, or small, inset floodplains. In general, soils and sedimentary parent material throughout the Project Area form a shallow veneer on local bedrock with the deepest profiles in floodplain meadows. Beyond the canyon, in the alluvial systems surrounding the prominent lateral moraine that protrudes in the Mono Basin—the end of the sedimentary conveyor belt of the Mill Creek glacier—sedimentary profiles may be very deep. While archaeological resources are likely to manifest as surface assemblages on the moraines, the margins of the moraines and the smaller inset fans below the mountain have the potential to bury and preserve sites that might otherwise reveal limited surface expression. These locally confined areas include the small inset reaches of the Wilson System in the vicinity of the powerhouse and areas of the outwash floodplain near the eastern terminus of the Project Area, areas generally mapped as the DeChambeau soil series (NRCS, 2023).

FLORA AND FAUNA

This section has been adapted from Davis-King and Snyder (2010), Montague (2010), and Stevens and Lenzi (2015). The Project Area lies at the western margin of the Basin and Range Province, a region defined as semidesert due to the rain shadow effect of the adjacent Sierra Nevada. However, semidesert conditions are ameliorated by significant winter precipitation and spring runoff in high elevations connected to the Project Area. Subalpine habitat and lodgepole pine (*Pinus contorta*) community flourishes adjacent to seasonally flooded riparian meadows. The subalpine areas, dominant throughout much of the Project Area, transition eastward to stream-side riparian habitats along Mill Creek in Lundy Canyon. Subalpine communities are dominated by lodgepole pine, as mentioned, but also feature Jeffrey pine (*Pinus jeffreyi*) and white fir (*Abies concolor*). Occasional limber pine (*Pinus flexilis*) and whitebark pine (*Pinus albicaulis*) occur between approximately 8,000 and 9,500 feet, approaching the Project Area at its western extent. These may have colonized lower elevations briefly following glacial retreat at the close of the Pleistocene. Wet meadows in subalpine habitats—a common Project Area setting—harbor root plants, especially various wild onion (*Allium* sp.) varieties, lupine (*Lupinus latifolius*), grasses, and sedges. Willows (*Salix* sp.) and cottonwood/aspen (*Populus* sp.) communities, along with the occasional pinyon pine (*Pinus monophylla*), occupy the rock-bounded linear corridor of Lundy Canyon. The variety of useful plants available seasonally in well-watered areas of subalpine habitats is significant for Native peoples.

Fauna within these communities consists primarily of various mammals and migratory birds. Common summer residents of the subalpine zone include the mountain bluebird (*Sialia currucoides*), Clark's nutcracker (*Nucifraga columbiana*), gray-crowned rosy finch (*Leucosticte tephrocotis*), and white-crowned sparrow (*Zonotrichia leucophrys*). A variety of mammals are found within these communities at times throughout the year; these include the yellow-bellied marmot (*Marmota flaviventris*), Nuttall's cottontail (*Sylvilagus nuttallii*), mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), badger (*Taxidea*

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taxus), black bear (*Ursus americanus*), and possibly grizzly bear (*Ursus arctos horribilis*) (Montague, 2010). Historically, bighorn sheep (*Ovis canadensis*) would have also been present in the higher elevations. Rodents are particularly prevalent at higher elevations and important to Native American subsistence.

8.12.1.3. Cultural Context

PRECONTACT SETTING OF THE PROJECT VICINITY

This section describes the precontact chronology and general archaeological patterns (i.e., the setting) characterizing the Mono Basin region. References primarily include Montague's (2010) synthesis of the archaeology of the Tuolumne River watershed, Stevens et al.'s (2015) testing results at the nearby Mountain Warfare Training Center, Rosenthal's (2012) synthesis of the archaeology of Crane Flat, and work by Clay and King (2020, 2021) in the Bodie Hills.

According to these researchers and others who have worked extensively in this part of Mono County (e.g., Basgall, 1998; Bettinger, 1981; Bieling, 1992; Fredrickson, 1991, 1998; Giambastiani, 1998; Halford, 1998, 2008; Noble, 1992; Overly, 2002, 2004), the Lundy Canyon precontact setting is broadly divided into three temporal intervals: Early Holocene (pre-8200 cal BP), Middle Holocene (8200–3400 cal BP), and Late Holocene (3400–150 cal BP), with the Late Holocene era subdivided into the Newberry (3400–1300 cal BP), Haiwee (1300–600 cal BP), and Marana (600–150 cal BP) archaeological periods. These divisions reflect broad adaptive shifts, referencing hundreds of radiocarbon and obsidian hydration assays and observations of technological shifts based on a regional research base spanning decades.

Early Holocene (pre-8200 cal BP)

Evidence for the Early Holocene occupation of the Mono Basin is sparse, represented by just a few widely dispersed sites (Basgall, 1987, 1988; Hall, 1990), some of which are in the nearby Rush Creek project area (York, 1990). The presence of Great Basin or Western Stemmed (e.g., Lake Mohave, Silver Lake) or fluted/concave-based (i.e., Clovis, Western Fluted) spear or dart points, along with formalized flaked stone tools in archaeological assemblages, mark these occupations. Associated archaeology suggests a high degree of residential mobility, with most debitage composed of local obsidian, particularly the Casa Diablo or Bodie Hills sources (Halford, 2001, 2008), but most formal tools made from a variety of more distantly available toolstones (Basgall, 1989, 1991; Delacorte, 1999). The use of seed resources appears minimal, given the near absence of associated milling gear. Instead, hunter-gatherer diets seemed to have focused on large and small game animals, the latter of which are prevalent in arid settings (Elston et al., 2014; Hall, 1990).

Brady's (2011) study supports suppositions regarding regional Early Holocene hunter–gatherer mobility patterns. Specifically, he found through sourcing and hydration analyses of obsidian artifacts collected during a probabilistic survey of the wetland settings around Mono Lake that the earliest Holocene use of the basin focused on brackish environments

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tracking lake level recession to the north and south of the catchment, where sampled obsidian reflected toolstone acquired from farther sources than Mono Craters, implying wider hunter–gatherer mobility tied to fluctuations in lake levels.

Middle Holocene (8200–3400 cal BP)

The Middle Holocene (also known as the Little Lake Period; Bettinger and Taylor, 1974) is marked by Pinto or Gatecliff dart points (Basgall and McGuire, 1988; Delacorte et al., 1995; Gilreath, 1995; Hall, 1980; Jackson, 1985; Jenkins and Warren, 1984; Peak, 1975), overlapping the Early Martis period (5000–3000 cal BP) of the Sierra chronology. Gilreath and Hildebrandt (1997) also found that thicker, more robust Elko projectile points, typically a Newberry Period marker, tended to be older than thinner versions based on obsidian hydration data, a pattern confirmed by Norton (2008). Larson (2009) also documented unusually old Elko points among assemblages along the Owens River.

Beyond ambiguous archaeological markers, this period remains enigmatic as land-use patterns appear to have been severely affected by a prolonged regional warm-dry climate cycle (the mid-Holocene Xerithermic Period). Arid conditions generally persisted between 8500 and 3800 cal BP, with the severest conditions occurring prior to 6300 cal BP (Mensing et al., 2004; Wigand and Rhode, 2002). Post-6300 cal BP, drought conditions may have lessened slightly, but periods of severe drought persisted. As throughout the Great Basin, a noticeable gap in components dating to this interval is present in the Inyo–Mono record (Basgall, 2009), although evidence points to continued acquisition of Bodie Hills obsidian (Halford, 2001, 2008). Likewise, the marginal fringes of the Great Basin, perhaps including the Eastern Sierra, may have sustained human occupation during this time or even served as refugia for populations in drier hinterlands (McGuire, 2007:170–172; Milliken and Hildebrandt, 1997).

Overall, patterns of toolstone acquisition and use, mobility, and hunting among regional Middle Holocene assemblages resemble those of the Early Holocene. They differ by showing an increase in the frequency of milling gear, a shift probably reflecting a broadening diet breadth incorporating seed resources in response to climatic conditions and associated reduced environmental productivity (Antevs, 1948; Warren and Crabtree, 1986).

Late Holocene (3400–150 cal BP)

Newberry Period (3400–1300 cal BP)

Regionally marked by Elko-series dart points and Humboldt Basal-notched bifaces in archaeological assemblages, alongside a variety of *Olivella* shell beads (i.e., F2, G2, G3, and L series), the Newberry Period reflects an era where hunter–gatherers remained highly mobile, but occupied smaller ranges and engaged in more directed and regular seasonal movements, as well documented in the Owens and Deep Springs Valleys (Basgall and McGuire, 1988; Bettinger, 1989, 1999a; Bettinger et al., 1984; Delacorte, 1990). Local hunter–gatherers probably inhabited and re-occupied longer term lowland settlements supported by task-specific, logistical acquisition of upland resources like

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pinyon, bighorn sheep, and marmots, as implied throughout the region (Bettinger, 1991; Delacorte, 1990; McGuire, 1981; Montague, 2010; Stevens, 2005; Wickstrom, 1993; Wallace, 1958).

Trans-Sierran obsidian transport and exchange appear to have reached its peak during this period (Rosenthal, 2012), as suggested by an overall increase in quarry production and biface manufacture at several regional sources, including Bodie Hills, Mono Lake, and Casa Diablo. Obsidian sourcing among sites in the western Sierra also suggests that people conveyed material in an east–west direction, confined by watershed boundaries that would have made north–south travel difficult (Davis-King and Snyder, 2010; Montague, 1996; Rosenthal, 2012).

More regularized settlement patterns that emerged during this interval, which in turn fostered more predictable interaction among neighboring populations, probably explain this obsidian conveyance pattern (Basgall, 1983; Ericson, 1982; Gilreath and Hildebrandt, 1997, 2011; Goldberg et al., 1990; Hall, 1983; King et al., 2011). The clustering of sites along east–west travel corridors leading from the Summit/Virginia, as well as Tioga, Mono, Parker, and Donohue passes, supports this idea of regular trans-Sierran travel. The Mono Trail, passing through Bloody Canyon, Mono Pass, and Tuolumne Meadows, was probably the most convenient route between Yosemite Valley and Mono Lake (Montague, 2010).

Haiwee Period (1300–600 cal BP)

The regional adoption of the bow and arrow, suggested by the archaeological presence of Rose Spring and similar arrow-sized points (e.g., Eastgate and Saratoga Springs forms), characterizes the Haiwee Period. *Olivella* shell beads of the D and M series are also markers, and Humboldt Basal-notched bifaces likewise persist among contemporaneous resources. Lowland archaeological assemblages containing residential and bedrock milling features, extensive flaked and ground stone accumulations, and rich suites of floral and faunal material emphasize a restructuring of local subsistence-settlement systems accompanying this major technological change, highlighting a shift toward the establishment of permanent or semi-permanent villages. Temporary upland pinyon camps and centralized seed production stations in the valley bottoms probably supported these residential bases (Basgall and McGuire, 1988; Bettinger, 1989), which served in part to defend stored commodities, such as acorns (Bettinger, 2015; Whelan et al., 2013).

Contemporaneous higher elevation archaeological assemblages are also more likely to contain bedrock milling and other features, portable ground stone, and midden deposits, suggesting more intensive use of higher elevation settings (Montague, 2010). Notable decreases in toolstone richness, increased evenness between tool and debitage material preferences, and higher frequencies of expedient, non-curated milling gear further imply that the scale of seasonal elevational movements diminished, resulting in overuse of marginal resources within progressively smaller foraging areas (Basgall, 1989; Basgall and Giambastiani, 1995; Basgall and McGuire, 1988; Bettinger, 1989, 1999a, 1999b; Bettinger and Baumhoff, 1982; Delacorte, 1990; Delacorte and McGuire, 1993). A

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collapse of interregional obsidian conveyance networks seems to accompany this shift in settlement patterning (Bettinger, 1977, 1982; Bettinger and King, 1971; Gilreath and Hildebrandt, 1997), a supposition supported by obsidian hydration data from western Sierra sites and distant quarries (Rosenthal, 2012).

While variable, increased territoriality and arrow technology probably best explain this collapse. Regarding the former, demand for obsidian appears higher prior to the Haiwee Period, and acquisition constraints limited (Gilreath and Hildebrandt, 1997). Over time, however, the widescale conveyance of obsidian and other commodities became inhibited as residential mobility decreased and population density and territoriality increased, restricting free movement across the landscape. From a technological perspective, the reduced need for toolstone with small arrow points made on smaller flakes instead of prepared bifaces or larger flake blanks tandemly reduced the overall importance of obsidian in regional economies (Basgall and Giambastiani, 1995; Gilreath and Hildebrandt, 1997; Goldberg et al., 1990).

Marana Period (600–150 cal BP)

Cottonwood and Desert Side-notched arrow points are key archaeological markers of the Marana Period in the Eastern Sierra. Owens Valley Brownware; E, J, and K series *Olivella* shell beads; steatite and talcic schist disk beads; and schist millingstones (cf. Hanrahan, 2022) also variably mark contemporaneous archaeological assemblages. Many of the trends characterizing Haiwee Period settlement-subsistence patterns continued, including the more intensive use of local environments, particularly increased use of riparian and lacustrine settings (to obtain flies, shrimp, shellfish, waterfowl, and tule seeds), pine nuts in the intermediate zones, and a variety of root crops and small mammals in the subalpine zones of the Sierra Nevada (Basgall and McGuire, 1988; Delacorte, 1999). This intensification is likely attributed to large, dense populations, as evidenced by well-developed midden deposits dating to this period in Sierran sites (Moratto, 1999). The introduction of ceramic vessels, perhaps coeval with the advent of bow and arrow technology at the onset of the Haiwee Period, also represented a crucial technological advancement that transformed cooking efficiency and nutritional processing of small seeds (Eerkens, 2001, 2003, 2004, 2005).

In the Sierra Nevada, high-elevation settings record a proliferation of small, late-dating assemblages incorporating midden smears, portable ground stone, milling features, ceramics, and the occasional rock ring, distinguishing them from the flaked stone-dominated camps characteristic of earlier sites (Stevens, 2002, 2005; Wickstrom, 1993). Referred to as the Late Residential Pattern (McGuire et al., 2012:135), such resources reflect a late period phenomenon, although the precise timeframe of this settlement transformation remains unclear.

Archaeological Investigations

The following discussions summarize key archaeological investigations that have enhanced understanding of the regional precontact archaeological record, in general chronological order.

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White (1985) completed an extensive series of archaeological inventories in 1984 in support of the preparation of a Historic and Archaeological Preservation Plan for the Lundy Project and other local hydroelectric projects (Note: These hydroelectric project inventories included the associated transmission lines). This work identified 26 previously unrecorded archaeological sites, of which 13 incorporated precontact components. Most of these resources (62 percent) consisted of fewer than five obsidian flakes and reflected ephemeral use areas or undifferentiated temporary camps; all the precontact resources in the Lundy Project Area were of this type. White (1985) identified two sites in the Lee Vining area as pinyon camps, two more as hunting camps, and characterized another Lee Vining site as a seed camp. York (1990) subsequently test-excavated most of these sites to assess their NRHP eligibilities.

Shortly after White's (1985) surveys, Brooke Arkush conducted a focused investigation of the CA-MNO-2122 multi-era site complex on the eastern shore of Mono Lake in 1986 and 1987 (Arkush, 1995). Among documented constituents in this massive, 300-hectare resource were the remains of three pronghorn drive traps suggesting the use of such features beginning in the Haiwee Period, a post-contact era wild mustang trap, and 31 archaeological loci, among which a majority (68 percent) reflect Paiute camps dating between 150 and 100 cal BP, recording the tumultuous timeframe of Euro-American contact (McGuire, 1996).

York (1990) conducted test excavations of 17 archaeological sites with precontact components in the canyons of the Eastern Sierra scarp in support of prior relicensing of the Lee Vining, Rush Creek, and Lundy Hydroelectric Projects; only two of these were in the Lundy Project Area. Generally characterizing most of these sites as temporary camps, per Bettinger (1977), York's (1990) work suggested that most spoke to lithic reduction/production and hunting activities; associated milling gear proved rare. Diagnostic projectile points and obsidian hydration assays implied hunter–gatherer occupations ranging from the Early Holocene through Marana periods, with the points highlighting Haiwee (33 percent of sites with diagnostic projectile points) and Marana (50 percent) period hunting, and assayed obsidian emphasizing Newberry (79 percent of sites with tested obsidian) and Haiwee (57 percent) period reduction. At least one of the tested Rush Creek sites (CA-MNO-2179) solidly pre-dated the Newberry Period, with several Pinto and Western Stemmed projectile points in the assemblage and most obsidian estimated to reflect pre-Newberry manufacture. Geochemical sourcing revealed the use of a wide variety of Eastern Sierra obsidian sources (e.g., Casa Diablo, Mono Craters, Mono Glass Mountain, Mount Hicks, Queen [also known as Truman-Queen], Bodie Hills, and Fish Springs), dominated by Casa Diablo (76 percent) and Mono Glass Mountain (65 percent).

Wickstrom et al. (1993) and McGuire (1994) also tested sites for the Rush Creek Four-Lane Project, extending several miles south of Lee Vining Canyon; two of these sites were later subject to data recovery (Carpenter, 2001). Typical of the region, excavated precontact sites incorporated few constituents and preserved only shallow deposits in temporary camps or task-specific areas. Also emblematic were rich obsidian profiles dominated by local Mono sources (i.e., Glass Mountain and Mono Craters), primarily pointing to Haiwee and Marana period use. Site CA-MNO-891, a multi-locus residential

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occupation on the western rim of the Mono Basin, proved contextually exceptional, containing a Newberry Period component dominated by Casa Diablo obsidian, speaking to the regional Haiwee Period collapse of obsidian conveyance networks.

Archaeological survey projects completed over the past 20 years north of the northern rim of the Mono Basin (e.g., Clay and King, 2020, 2021; Darcangelo et al., 2005; King and Clay, 2018) have further enriched the local record. The more than 400 sites with precontact components newly documented or otherwise updated from these studies point to a range of inferred hunter–gatherer activities in and around the Bodie Hills, emphasizing lithic reduction/production (74 percent of total sites), green cone pinyon harvesting and caching (52 percent), milling (42 percent), and hunting (16 percent), with temporally diagnostic projectile point finds highlighting Late Holocene (i.e., Newberry-to-Marana period) land-use timeframes, but also including a handful of Early and Middle Holocene markers.

Ethnographic Context of the Project Vicinity

The Lundy Project Area is in the traditional homeland of the Kootzaduka'a, who have inhabited the Mono Lake area since time immemorial and live there to the present day. The Kootzaduka'a is the southernmost band of the group, referred to by anthropologists as the Northern Paiute, and speaks the local dialect of Numu Yadooana. The name Kootzaduka'a, or Kutsavi (kootzabe) Eaters, derives from kutsavi, the pupae of the alkali fly (*Ephydra hians)*, found in the waters of Mono Lake. Kootzaduka'a value this important source of highly nutritious and easily digestible protein.

The Northern Paiute, or Numa, are a widespread linguistic group whose homeland extends from an area just south of Mono Lake north into Oregon and Idaho, and east to the Little Humboldt and Reese rivers. Although connected by language, the Indigenous Peoples inhabiting this geographic area are somewhat diverse culturally, in part due to the environmental variability of this vast region.

The terrain of the Kootzaduka'a homeland spans from 6,378 feet (1,944 meters) amsl at Mono Lake to the high peaks of the Sierra Nevada, including Mount Dana at 13,061 feet (3,981 meters) amsl. Abundant water is supplied by the perennial Rush, Lee Vining, and Mill Creeks; their tributaries; freshwater lakes; and springs. Winters are typically cold and wet, and summers are hot and dry. The Kootzaduka'a have maintained a longstanding relationship with this unique landscape, which provides important natural and cultural resources.

While the traditional Kootzaduka'a homeland is centered in the Mono Lake Basin of the western Basin and Range Province, the Kootzaduka'a people followed a subsistence and residence pattern that took them from Walker Lake to the east, up into the Sierra Nevada to the west, and north and south along the Eastern Sierra Nevada piedmont. This pattern of seasonal transhumance provided access to two vast ecoregions, the Great Basin and the Sierra Nevada. Both ecoregions comprise numerous biotic communities containing diverse subsistence resources, including plants for food, medicine, basketry materials, shelters, and other uses. In addition to kutsavi (kootzabe), faunal resources such as

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bighorn sheep, antelope, mule deer, jackrabbits and cottontails, migratory birds, and piagi (Pandora moth larvae; cf. peagu) are also available within the Kootzaduka'a homeland. Kutsavi is harvested during the summer and prepared in various ways for immediate consumption, but importantly it is also dried, pulverized into a powder, and stored for winter use and trade. Pinyon pine nuts, black oak acorns, seeds from various plants, dried berries, and meat also provide sustenance during winter.

Although Stephen Powers (1877) conducted some early anthropological investigations in Northern Paiute territory in the mid-1870s and John Wesley Powell in 1880 (Fowler and Fowler 1971), C. Hart Merriam (1900, 1901) appears to be the first anthropologist to take a keen interest in the people of the Project Area and environment. However, much of his work remains unpublished. Frederick S. Hulse (1935), whose work is also unpublished, compiled interviews with people residing at Mono Lake and nearby communities in the 1930s. The first ethnographic overview covering the Project vicinity was published by Emma Lou Davis in 1965.

John Muir and others made early non-anthropological observations of Indigenous Peoples, including the Kootzaduka'a traveling on well-established trails to the western Sierra to collect or trade for black oak acorn. Merriam (1900, 1901, 1910, 1955) and Davis (n.d., 1962, 1963, 1964, 1965) also reported the Kootzaduka'a moved back and forth between the Great Basin and the Sierra Nevada, especially into what eventually became Yosemite National Park. People lived in small familial groups during much of the year, although communal hunting for animals such as pronghorn or rabbits was common. Seasonal transhumance was the normal way of life for the Kootzaduka'a, who often wintered at Walker Lake due to the milder winters. Because of this pattern of frequent and wide-ranging mobility, transportation corridors radiating in all directions are important Tribal resources. In addition to trails, small camps, often with one or two residences or brush shelters, along with pine nut camps, medicine gathering areas, water modification features, Pandora moth larvae collecting basins, and game drives are some of the site types found in the Mono Basin. Emma Lou Davis (1965) observed the Kootzaduka'a used almost every square mile, some areas are classified as use areas and some as occupancy areas.

Material culture largely reflects subsistence and residence patterns, with milling slabs and less frequent rock mortars indicative of seed and nut processing. Stone tools made of local materials such as obsidian from the Bodie Hills source, which is in the Kootzaduka'a homeland, as well as from toolstone obtained from other sources via direct procurement or trade, found use for hunting, scraping, cutting, and smoothing tasks. Basketry includes both twined and coiled varieties of several important functional types and dimensions.

The Northern Paiute may have encountered outsiders by the early 1800s and had likely experienced some changes to their environment and lifeways by this time. For example, horses were quickly adopted after being introduced into the Great Plains region in the 1700s, allowing people to become more nomadic. On his journey from California to the Great Salt Lake in 1827, Jedediah Smith (1977) encountered 20 to 30 Indigenous men on horseback at Walker Lake; these men may have been Kootzaduka'a or their relations. As explorers, fur trappers, and settlers of many ethnic affiliations moved west, they

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encroached on Northern Paiute territory. Reports of these newcomers and their violent treatment of Indigenous people likely reached the Kootzaduka'a even before direct contact occurred.

By 1850, seekers of mineral wealth rushing to California and western Nevada had profoundly impacted Indigenous lifeways in many areas. Seed plants were eaten and trampled by the emigrant's livestock, water sources were fouled, and game was hunted or frightened away, depleting the traditional resources the Kootzaduka'a depended on for survival. After entering Yosemite Valley in 1851, the Mariposa Battalion, a unit of the California State Militia, burned Indigenous villages and food stores, killed many Indigenous people, and forcibly removed others, bringing the act of genocide even closer to areas occupied by the Kootzaduka'a (Madley, 2016).

The ranching and lumber industries that were soon established in the Mono Lake area, including Lundy Canyon, substantially reduced access to important subsistence resources, requiring the Kootzaduka'a to incorporate wage labor into their traditional subsistence strategy to avoid starvation. Non-native manufactured items such as metal, glass, and ceramics became a part of the Kootzaduka'a's material culture, and non-Native foods and clothing were adopted. In the early twentieth century, decorative baskets made specifically for sale became an important source of income for women. Kootzaduka'a weavers such as Lucy Telles, Carrie Bethel, and sisters Nellie and Tina Charlie helped advance this art form and have become among the most well-known basket makers worldwide.

By this time, the federal government had assumed oversight of the Indigenous Peoples, resulting in removal to reservations for some and for the Kootzaduka'a and others, a period of neglect. However, the Kootzaduka'a have suffered the removal of their children to government- or church-run boarding schools, a practice that has been described as a form of cultural genocide, as did other Indigenous Peoples in the Eastern Sierra region and elsewhere. Although the Kootzaduka'a's traditional way of life has been altered by numerous external factors, they have maintained important elements of their culture and history to the present day.

HISTORIC PERIOD CONTEXT OF THE PROJECT VICINITY

This section sets up the historical contexts within which the Project was developed and within which some of these resources will be evaluated. Thus, the history of the proposed APE and the surrounding area has been divided into the following main themes: early exploration and mining; logging; agriculture and ranching; transportation; hydroelectric development; and recreation.

Early Exploration and Mining

Non-Native people began exploring the region that would become Mono County in the early nineteenth century. Trappers such as Jedediah Strong Smith, Robert Evans, and Silas Goble may have crossed Sonora Pass, north of the study area, on their journey to the Great Salt Lake in 1827. Joseph Reddeford Walker led an expedition of 40 soldiers

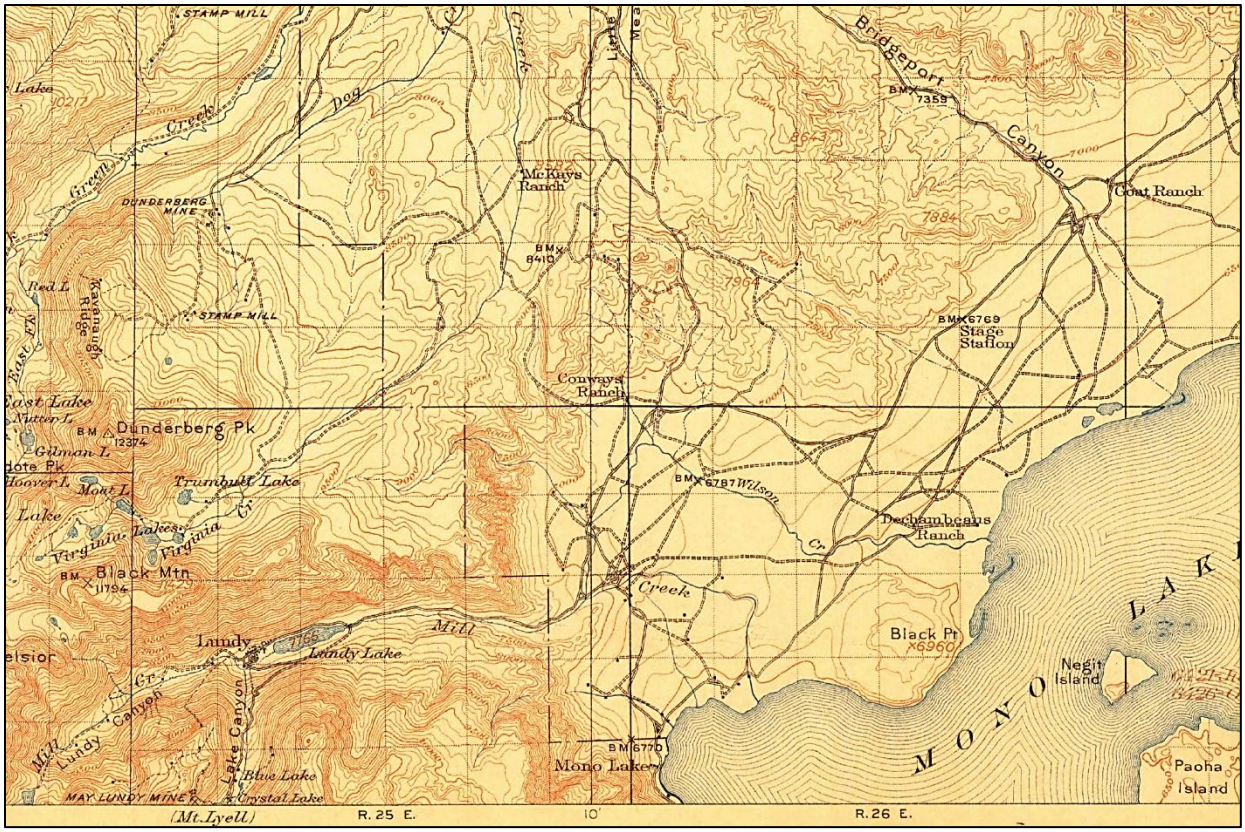
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along the East Walker River through Mono County on their way westward to the San Joaquin Valley in 1834. Other explorers and early emigrant parties also passed through the region before California statehood in 1850, including Lt. John C. Fremont and the Bartleson-Bidwell Party, all without creating permanent built resources in the study area (Chappell, 1947:234-236; Hamilton and Dale, 2011:66-69).

Mining activities initially drove the late nineteenth and early twentieth-century non-Native settlement of Mono County and the eastern slope of the Sierra Nevada. The miners and settlers who accompanied them created built environment resources in and near the Project Area. The western Nevada and Comstock silver discoveries near Carson City inspired these prospectors to look eastward in the Sierra Nevada as the original Mother Lode rush in the western foothills started to abate in the 1850s. Gold and silver strikes at Dogtown and Monoville in Mono County in the late 1850s, and larger scale mining in Aurora, Nevada, in the 1860s and then Bodie, California, in the 1870s, all drew more prospectors to the region. This influx prompted the California Legislature to create Mono County from parts of Calaveras, Fresno, and Mariposa counties in April 1861. A state boundary survey conducted 2 years later determined that the original choice for the county seat, the town of Aurora, was actually in Nevada, so Bridgeport was selected instead. The mining activity continued to fuel Mono County's development in the late nineteenth century as roads were built to facilitate the transportation of goods and materials to and from the mining towns and camps, and the early farms, ranches, and small towns that supported them. Many of the communities within these mining districts thrived for a few years, but the boom-and-bust cycle of mining led to inevitable declines with only sporadic resurgences through much of the twentieth century (California State Mining Bureau, 1917:131-132, 163-169; Chappell, 1947:238-242; Hamilton and Dale, 2011:72-80; Hoover et al., 1990:209-213; Whitney and Hoffman, 1873).

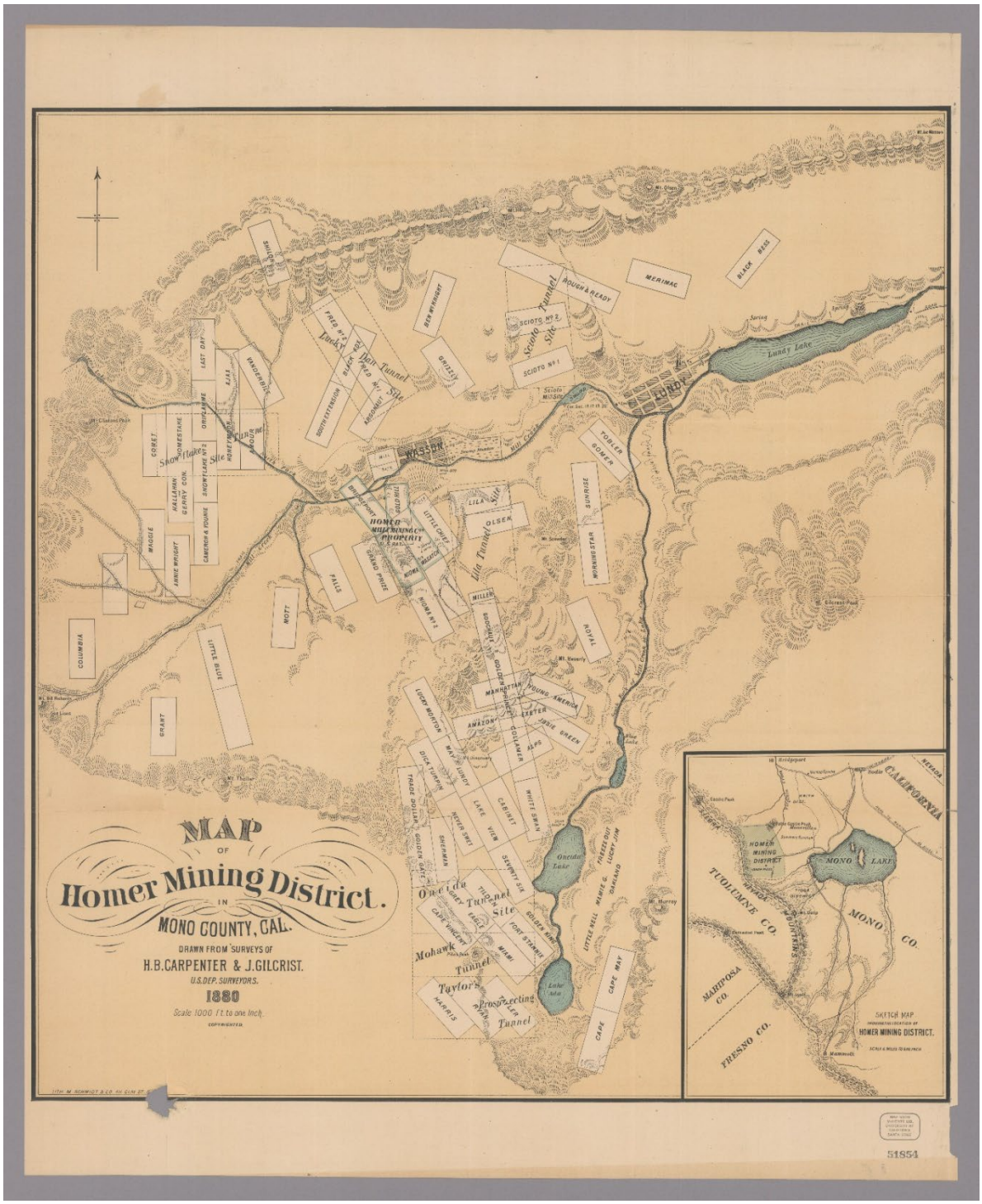
The Bodie mines in the 1870s triggered a local rush, and miners fanned out into central Mono County, prospecting for rich quartz veins. The search proved fruitful as gold was located in the mountains north and west of Mono Lake, where several notable quartz mines were developed during the next 20 years. W. J. Lundy built a lumber mill on upper Mill Creek in the 1860s to supply Bodie, and he located a rich quartz lode near the mill in 1878 that he named the *May Lundy*, after his daughter. Shortly thereafter, I. L. Homer found another highly productive quartz vein nearby. The development of other mines followed, and this particularly rich mining area came to be called the Homer District. The focal point of activity in the Homer District was the town of Lundy, platted in 1880 at the west end of Lundy Lake. At its height, Lundy had a population of about 500 people, several commercial buildings, and a newspaper. Other smaller, short-lived mining settlements, such as Wasson and Geneva, also emerged in the greater Lundy area (Figure 8.12-2 and Figure 8.12-3).

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Source: USGS, Washington D.C., 1911 Edition

Figure 8.12-2. May Lundy Mine, the Town of Lundy, and Lundy Lake on the Lower Left; Mill and Wilson Creeks, and Conway and DeChambeau Ranches also Depicted. The Map was Surveyed in 1905–1909.



Source: Stanford University, 1880.

Figure 8.12-3. Homer Mining District, Showing Towns of Lundy, Wasson, and Several Mining Claims. The Map was Surveyed in 1880.

Although the Homer District peaked in the 1880s, prospecting and mining northwest of Mono Lake continued into the early twentieth century. Adjacent to the east of the Homer District, the Jordan District, developed in the 1890s, centered around mines in the mountains north of Mill Creek, such as the Goleta Mine, Golden Eagle Mine, and Golconda Mine, and ultimately led to the demand for electricity and the hydroelectric power development of Mill Creek (California State Mining Bureau, 1894:177-184, 1917:145-146, 163-169; McIntosh, 1908:89-90; Mono County Assessor, 1896a, 1896b). Mining continued in fits and starts into the early decades of the twentieth century, reflecting fluctuating gold prices and other economic factors. World War II effectively put an end to large-scale mining in the region, as the U.S. government ordered the closure of all gold mines during the war, and much of the industry remained shuttered after World War II because of low gold prices (California Division of Mines, 1927:374-377, 385-386; Carle and Banta, 2008:7, 8, 30-32, 52-57, 63, 68, 87-90; Clark, 1970:6-8, 97; Hamilton and Dale, 2011:79-80).

Logging

The mines and mining towns needed timber for construction, and by 1863 there were four sawmills in the area, including W. J. Lundy's mill on upper Mill Creek and Lee Vining's mill to the south. Pine was harvested for construction lumber, and while it was sometimes used for shoring mine shafts and cordwood, pinyon and juniper were typically harvested for those uses (Chappell, 1947:233-234; Maule, 1938:48). By the end of the 1870s, most locally harvested and milled lumber was hauled by wagon to Bodie for building construction and use in the mines. The Bodie Railway and Lumber Company was organized and built within a few more years, meaning lumber could be sent by rail from Mono Mills. After construction was completed in 1882, 5 million linear feet of lumber and 27,000 cords of wood were shipped from Mono Mills to Bodie (Cain, 1961:71-81).

By the turn of the twentieth century, the federal government had begun implementing programs and policies to help control natural resources harvesting and extraction on public lands, including logging. The executive branch established the first national forest reserves and then national forests in the 1890s and early 1900s, during the formative years of the U.S. Department of Agriculture and establishment of USFS, to manage the harvesting of timber and other uses of natural resources on forested federal land. President Theodore Roosevelt established the Inyo National Forest in 1907 to safeguard valuable watershed lands along the Owens River from private water claims and other land entries and to ensure water resource availability as the city of Los Angeles began construction on its massive aqueduct. The following year, Roosevelt issued an Executive Order creating the Mono National Forest in the Mono Basin from parts of the Inyo, Sierra, Stanislaus, and Tahoe National Forests. Some of the lands within the present-day boundaries of both the Inyo National Forest and the former Mono National Forest had originally been part of the Sierra National Forest—founded in 1893 as part of the 6-million-acre Sierra Forest Reserve. The national forests of the Eastern Sierra Nevada and western Nevada continued to go through administrative reorganizations throughout the years, and USFS discontinued the Mono National Forest in 1945, dividing its lands between the Inyo National Forest and the Humboldt-Toiyabe National Forest (Davis, 1983; Hamilton and Dale, 2011:116-119; USGS, 1909, 1911, 1920).

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Regardless of which national forest had jurisdiction, USFS supervisors were charged with overseeing timber and grazing management, watershed protection, and fire suppression in the forest lands of the Mono Basin. These duties remained priorities, with an increasing emphasis on recreational uses of the forests during the mid- to late twentieth century as timber harvesting in central Mono County generally decreased (Rose, 1994:1-2; Stark, 2020:131-132). Inyo National Forest currently encompasses about 165 square miles of the southern Sierra Nevada (about 2 million acres) and spans portions of Mono and Inyo counties in California, as well as Esmeralda County in Nevada. The study area falls partly within the northernmost Inyo National Forest administrative district, namely the Mono Lake Ranger District, administered from its office in Lee Vining. Timber and grazing are still among the Inyo National Forest management goals and responsibilities, although it is also known as a forest that prioritizes the non-timber mandates of USFS, such as habitat restoration and natural resources conservation (Selters, 2012; USFS, 2021a, 2021b, 2023a, 2023b).

Agriculture and Ranching

The arrival of miners in the greater Mono Basin led to the establishment of the first farms and ranches in central Mono County because mining areas like Bodie, Lundy, and Jordan districts were in rugged, mountainous areas not conducive to agriculture. The lowlands of the Mono Basin, specifically along its western shores, offered the nearest suitable agricultural land. This relatively level landscape was watered by streams flowing east out of the Sierra Nevada from which farmers and ranchers could irrigate grazing and cropland. The first farmers and ranchers settled in the Mono Basin in the late 1870s, coinciding with the mining booms at Bodie and Lundy; those mining districts were the primary market for their produce and ranch products (Carle and Banta, 2008:7, 8, 33-48; McIntosh, 1908:82-88).

The first non-Native farmers acquired land from the public domain via homestead, cash entry, or desert land patents. From the time of their initial settlement, landowners made improvements, including irrigation and stock watering systems. They raised diverse livestock and crops, including milk cows, beef cattle, pigs, chickens, goats, potatoes, cabbage, onions, wheat, barley, corn, and alfalfa. Among the early ranchers and farmers was Albert Sylvester, who had 50 acres in the lower Mill Creek watershed and grew hay, apples, potatoes, and other vegetables. Joseph and Maria Scanavino also had a large vegetable produce farm in the northwest Mono Basin. Near the Scanavino's property was the DeChambeau ranch of about 160 acres. The lands that would become known as the Conway Ranch were also used to grow crops and graze livestock, and the Mattly family did the same on their properties located between Lee Vining and the northern county line. These farms and ranches were typical of those in the northwestern Mono Basin from the late 1870s through the 1930s. After that time, large-scale acquisition of land and water by LADWP, and the end of mining after World War II, led to the end of most farming operations in the Mono Basin. Most of the remaining ranches in the basin transitioned to sheep raising, but during recent years this endeavor has declined as well (BLM, n.d., 1857, 1880, 1902; Carle and Banta, 2008:33, 34, 37, 42, 46; Eastern Sierra Land Trust, 2014:4; McIntosh, 1908:45-48, 86-88; Mono County Assessor, 1896a, 1896b, 1940a, 1940b; USGS, 1909, 1911).

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Some of the former farm, dairy, and ranch land adjacent to the Lundy Project is now owned by Mono County under the "Conway and Mattly Ranches Conservation Easement." John Conway was from Canada and had immigrated to Bodie by the time he acquired the property now known as the main Conway Ranch in the northwestern Mono Basin, largely north and east of the lower reaches of the Lundy Project. The founder of the nearby Mattly ranching operation was Fred Mattly, who acquired 160 acres at some point after it was homesteaded in 1894. The parcel is north of the Lundy Powerhouse in the western half of Section 12, T2N, R25E, MDBM. Years later, members of the Conway family acquired the Mattly parcel and combined it with their holdings. The Conway Ranch (including the Mattly parcel) was largely a stock-raising operation into the 2010s. The Mattly Ranch conservation parcel no longer contains any standing buildings or structures. However, there is a concrete foundation located near the east side, and a dirt road runs north–south through it to the small cemetery for victims of the 1911 avalanche located north of the parcel (McIntosh, 1908:86-88; Eastern Sierra Land Trust, 2014:4-5; 13-14; Mono County Assessor, 1896a, 1896b, 1940a, 1940b; NRCS, 2018:3; USFS, 2001:25; USGS, 1909).

The Trust for Public Land initiated negotiations in the mid-1990s with the Conway Ranch owners and Mono County to acquire the portions of the ranch property (including the Mattly parcel north of the Lundy Powerhouse) as a conservation area. The ultimate goal of the conservation project was to preserve the natural, open space, scenic, historic, habitat, and public access values of the property in perpetuity. and allow for the continuation of fish-rearing, sheep grazing, and public access. The Trust for Public Land eventually acquired land and some associated water rights and "by the end of 2000, The Trust for Public Land had conveyed approximately 808 acres to Mono County and 220 acres to the BLM in a complex, multi-phase real estate transaction that utilized federal, state, and foundation grant funding" (Eastern Sierra Land Trust, 2014:5).

Unlike the farming enterprises, the livestock ranching operations in Mono and Inyo counties tended to rely on both direct land ownership and the use of public lands for range lands. One of the largest nineteenth-century operations was that of Thomas B. (T. B.) Rickey, who first established a ranch in 1859 in the northern part of the Antelope Valley, Nevada, and expanded to the south into California, locating his ranch headquarters near Coleville in the southwestern reaches of the Antelope Valley in Mono County. The enterprise thrived and continued to grow as Rickey supplied beef to the mining regions of Carson Valley, Aurora, and Bodie, eventually owning an estimated 100,000 head of cattle and 200,000 acres extending from Antelope Valley and Markleeville in the north to Bishop in the south (BLM, n.d., 1857, 1880,1902; Imswiler, 2007:19-28; Maule, 1938:50).

Despite the establishment of privately held farms and ranches, much of the Mono Basin was in the public domain through the early twentieth century—first under the General Land Office and then under the jurisdiction of the BLM and USFS. Ranchers had utilized these lands for grazing cattle and sheep long before federal agencies had management systems in place. Upon creation of the national forests, rangers noted that uncontrolled use of the open range had led to overgrazing, threatening the viability of the land to support livestock. In response, USFS began managing the rangelands by dividing them into tracts called allotments and setting limits on the number of livestock and duration of

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grazing season for each allotment. Ranchers had to apply for permits to graze livestock on a USFS allotment, including the Inyo National Forest lands west of Mono Lake (Hamilton and Dale, 2011:88-91; USGS, 1911, 1953, 1958). By the early 1920s, Mono National Forest Supervisor William Maule noted, “The Mono is primarily a sheep grazing Forest and, in fact, certain descriptive units cover territory solely used for this purpose. There are grazed within the forest, exclusive of private lands, 98,626 head of sheep and 5,874 cattle and horses” (Hamilton and Dale, 2011:88-91). While livestock ranching remains an important part of the local economy, it now takes place largely on private lands or through permits with other land-owning agencies because “grazing allotments on [USFS] lands within the [Mill Creek watershed] were eliminated over time, based on direction from the *Mono Basin National Forest Scenic Area Management Plan*” (USFS, 2001:16). More recently, Mono County terminated sheep grazing in Conway and Mattly ranch conservation areas in 2017 because of potential conflict with the Sierra Nevada bighorn sheep population (NRCS, 2018:3).

Basque sheepherders were also among the early non-Indigenous users of the Eastern Sierra. The Basque ranged throughout the Sierra Nevada mountains, including the vicinity of the study area in central Mono County, often beginning from the San Joaquin Valley or Eastern Sierra lowlands in June to reach highland grazing ranges. The grazing areas on USFS and BLM lands were subject to grazing allotments or permits for the herds of as many as 1,000 sheep that needed to be moved to fresh grazing every few days. The Taylor Grazing Act of 1934 and the Great Depression started a long decline of Basque sheep grazing operations in the Eastern Sierra. New legislation required sheep raisers to establish a home ranch, which many Basques could not do during the economic downturn. The number of open-range Basque sheepherders remained relatively high in California into the 1960s, but fewer of these entrepreneurs could head their own operations, and their numbers declined after that (Hamilton and Dale, 2011:103-104; Wohlgemuth et al., 2015:22, 23, 36).

Transportation

Nineteenth-century mining activity in Mono County was the driving force in the development, improvement, and expansion of its road system. In the 1850s and early 1860s, there were few, if any, engineered roads, and travel was largely limited to pack trails. The principal routes into the county were from Carson Valley, Nevada, to the north and eastward from Tuolumne County over Sonora Pass or Mono Pass. These main routes were soon improved from trails to wagon toll roads by private companies or individuals because neither the State of California nor the local counties had the administrative or financial capacity to build and maintain roads during the mid-nineteenth century. The toll road builders took on the financing, construction, and maintenance of roads and charged travelers a toll to use their roads. County involvement was limited to granting rights-of-way and awarding toll road franchises. For example, the Sonora and Mono Wagon Road Company improved the Sonora Trail from Tuolumne County over Sonora Pass into northern Mono County. The company received a county franchise for their toll road between Sonora and Bridgeport and completed it in 1865. Other toll roads connecting the population centers and larger mining towns of the county were built in the next two decades by various interests, including the Bodie & State Line Road, Bridgeport

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& Bodie Road, Lundy Road, East Walker River Road, and the Mono Lake and Lake District Toll Road (Blow, 1920:20-26; Chappell, 1947:243-244; DeGroot, 1863; Klein and Yin, 1994:2-5; Maule, 1938:44; Wheeler, 1876; Whitney and Hoffman, 1873).

The private toll road system lasted into the early twentieth century when the state and counties began to recognize the importance of a comprehensive, well-maintained road system and had the administrative and financial structures to carry out road building and maintenance. Mono County acquired the Mono Lake and Lake District Toll Road in 1900 from Archibald McNabb. It remained a county road until about 1915, when it was taken over by the state and named State Route 23, the predecessor of U.S. Highway 395. The state did not do any major work on the section of State Route 23 along the west shore of Mono Lake until 1933, when it was brought up to state highway standards by resurfacing, widening, and reducing curve radii. By this time, the route was used by locals and increasingly by tourists visiting the Eastern Sierra Nevada or traveling between Mono Lake and Yosemite National Park over Tioga Pass. The highway became part of the United States Highway System in 1934 as U.S. Highway 395 and, in the late 1950s, was straightened in the vicinity of the study area northwest of Mono Lake (BLM, 1857, 1880, 1902; California Department of Engineering, 1912:199-200; California Division of Highways, 1921:34, 1933, 1935; USGS, 1909, 1953, 1958, 1986).

There are still relatively few paved roads in the northwestern Mono Basin other than U.S. Highway 395. The exceptions include State Route 167, which began as a series of earlier dirt roads leading to local ranches and roughly paralleling the transmission line heading east from the Lundy Powerhouse. By the 1950s, a roadway was established and paved as a nearly straight alignment running north of Mono Lake from U.S. Highway 395 to the state border to connect to Nevada State Route 359 heading north to Hawthorne. Mono County currently maintains a few paved roads in this part of the basin, including Lundy Canyon Road that runs west of U.S. Highway 395, and Cemetery Road, which skirts Mono Lake east of U.S. Highway 395. Other roads in this area are gravel or dirt roads, some maintained by the county and some by USFS, while many were created informally by loggers, miners, and ranchers, or more recently by recreational users (Fairchild, 1929; USFS, 2001:26-27; USGS, 1953, 1958, 1986, 1987).

Hydroelectric Development

Several small hydroelectric power companies began developments in Mono and Inyo counties at the turn of the century. Development of the Lundy Hydroelectric Project was started by James Stuart Cain. He was an entrepreneur and stockholder in the Standard Consolidated Mining Company in Bodie, California. In 1902, Cain and his partner R.T. Pierce claimed appropriation rights on the waters of Rush Creek and planned to survey Lee Vining Creek. By 1907, Cain had controlling interest in the California–Nevada Canal Water and Power Company. That year, he obtained rights-of-way on public land to construct reservoirs on Lee Vining Creek as well as the right to build numerous ditches and flumes (Williams and Hicks, 1989). Cain and associates found another suitable site northeast of Mono Lake on Mill Creek, began buying up land and water rights, and made plans to construct a plant that would transmit electricity for the first time to the residents of Bodie and to mines at Aurora and Wonder, Nevada (Diamond and Hicks, 1988:7-8).

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Delos Allen Chappell, another entrepreneur of hydroelectric development in Mono and Inyo counties, sold his holdings in the Victor Coal Company in Colorado and moved to California about 1906. In the fall of 1907, he became president of the Nevada–California Power Company, which had hydroelectric plants on Bishop Creek and saw Cain's development of plants on Rush, Lee Vining, and Mill creeks as a threat to the Nevada–California Power Company (Diamond and Hicks, 1988:8). Chappell tried to acquire the Pacific Power Company's holdings. He personally began buying shares in both Pacific Power Company and Hydro-Electric Company, and he instructed members of his company's Board of Directors and its officers to do the same. By the end of 1911, Chappell held a substantial interest in both these companies (Diamond and Hicks, 1988:8).

In April 1910, Hydro-Electric Company began construction on a hydroelectric power plant near the former mining town of Jordan on Mill Creek, northwest of Mono Lake and downstream from Lundy Lake, naming it the Jordan Powerhouse (Figure 8.12-4). Crews constructed the powerhouse, the Lundy Lake intake structure, pipeline and penstock, and a transmission line running northeast towards Bodie and beyond to Nevada for most of that year. Before the Hydro-Electric Company system went online on January 1, 1911, Pacific Power Company took over as operator because Hydro-Electric Company was embroiled in a federal lawsuit over unpermitted use of USFS lands. Meanwhile, the system generated power for just a few months before the Jordan Powerhouse and nearby attendants' cottages, as well as an older copper smelter building, were destroyed by an avalanche in March 1911 (Calhoun, 1984:103; Fowler, 1923:766-767; Moore, 1994:38-39; Theodoratus et al., 1988:9-10; Vargo, 2007).

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Figure 8.12-4. Original Power Plant (Jordan Powerhouse) During Construction in 1910. Powerhouse Roof and the Attendants' Housing are Nearing Completion in this View.

Pacific Power Company crews started work on a temporary power plant as soon as they could, reportedly salvaging an undamaged generator and the water wheel, as well as "duplicate machinery, ordered the previous fall but held in Hawthorne due to the storms. […] By May, the first power was generated from the temporary facility, and after the new plant was finished all the machinery was moved" (Moore, 1994:47). The new permanent powerhouse was operational by December 1911 and was called the Mill Creek Plant until SCE acquired the system in 1964 and began calling it Lundy (Fowler, 1923:797; Moore, 1994:47; Theodoratus et al., 1988:10; White, 1985:24). About a decade after the new power plant was completed, it was described as follows:

> *The powerhouse is just north of the mouth of Mill Creek canyon, at an elevation of 7,016 feet above sea level. The entire equipment is contained in a single building 71 feet 10 inches long by 33 feet 10 inches wide, with a bay 17 feet long by 8 feet deep at its back to contain the gates at the lower end of the pressure line. The type of construction of the powerhouse is the same as that adopted on Bishop Creek, namely, reinforced concrete pilasters with 6-inch reinforced concrete curtain walls between. The roof is of corrugated iron and is carried on a steel roof system. (Fowler, 1923:799)*

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Accounts of the avalanche tragedy do not specifically mention damage to the rockfill and concrete dam constructed to raise the level of the natural body of water known as Lundy Lake, but it appears to have been part of the original Hydro-Electric Company plan. In 1923, Fowler described the dam as "of earth fill with riprapped surface which has a slope of 3 to 1, […] a reinforced concrete core wall on a line even with the upstream edge of the crest, and the backing behind the core wall is rock fill with a slope of 1 ½ to 1." The dam was designed to roughly double the lake's surface area, but in the early 1920s, a rockslide on the north of the dam was preventing the power company from raising the water level very much. Fowler described the rest of the system in his 1923 report, and at that time, the intake for the pipeline was controlled by a 48-inch valve at the toe of the dam that fed a 54-inch-diameter, 170-foot-long steel pipe connected to a 48-inch wood stave pipe coated with 8 inches of concrete. The wood stave pipe ran for almost another 12,000 feet along the south side of Mill Creek before crossing to the north side and the standpipe at the head of the riveted steel pressure line, or penstock. Fowler reported that the pressure line ran down the hillside "to the old powerhouse site, the scene of the avalanche, and then [ran] nearly horizontally across a shallow wash to the new powerhouse" (Fowler, 1923:798-799).

Pacific Power Company remained the system operator for a few years after the avalanche. Chappell's plan for Pacific Power Company was eventually to line up, by means of a transmission line, its Mill Creek plant and proposed plants at Rush and Lee Vining creeks, with those of the Nevada-California Power Company at Bishop Creek. Chappell hoped that the power generated at these plants would one day be transmitted not only northeastward into Nevada, but southward over the Nevada-California Power Company's new 238-mile Tower line to San Bernardino. After 1911, Pacific Power Company was controlled by both Cain and Chappell. In 1913, a 56,000-volt transmission line was built from the company's Mill Creek plant to Nevada-California Power Company's Bishop Creek Plant 5 Control Station, fulfilling one part of Chappell's plan (Diamond and Hicks, 1988). The company also connected the Lundy system with the Bishop Creek system to the south; however, by 1914, Pacific Power Company had defaulted on its bonds and entered foreclosed proceedings. Ultimately, a new entity—Pacific Power Corporation—was formed in October 1915 to operate the Lundy system and other facilities. Just 2 years later, the corporation sold all its property to the Nevada-California Power Company (controlled by N-CE Corp). By the early 1920s, N-CE Corp had subsidiaries and a controlling interest in several smaller companies and their electrical generation facilities, including the Southern Sierras Power Company and the Cain Irrigation Company. The Lundy Powerhouse stayed in operation from its completion in late 1911 through the legal battles and corporate reorganizations of its early owners and then through its subsequent ownerships, including Nevada-California Power Company (1917–1936), N-CE Corp (1936–1941) and California Electric Power Company, also known as Calectric (1941–1964), before SCE acquired the Lundy system as part of its acquisition of Calectric in 1964. SCE already had a "Mill Creek Powerhouse" in San Bernardino County, so the facility in Mono County became known as the Lundy Powerhouse (Fowler, 1923:766-767; Theodoratus et al., 1988:9-12; White, 1985:20, 24).

The power companies that operated the Lundy Powerhouse provided onsite housing for up to four employees and their families in a short row of three to four houses just northeast

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of the power plant. Census records indicate a fairly regular turnover of these employees because different families were recorded living there in each of the four censuses between 1920 and 1950. Personnel changes may be at least partly attributed to the frequent early transfers of owners and operators of the facility (U.S. Bureau of the Census, 1920-1950). The power plant was reportedly out of service during the transition from Calectric to SCE in the 1960s, from about 1961 through the end of 1967. The staff houses near the Lundy Powerhouse and other small ancillary buildings were eventually torn down, most likely after 1975 and before 1986 (Mitchell, 1975:35; USFS, 2001:18; USGS, 1958, 1986).

Today, the key Lundy Project facilities include Lundy Dam, Lundy Lake, a flowline consisting of pipeline and penstock, Lundy Powerhouse, and the MCRD. Releases and spill originate from the intake and Lundy Lake, the regulating reservoir for Lundy Powerhouse. The 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.

Recreation

Recreation has a very long history in Mono County and continues to today. The many lakes, streams, and mineral and hot springs in the area provide opportunities for fishing and swimming, while packers, hunters, and campers enjoy the surrounding forests and mountains. The high elevation snowpack allows skiing, snowboarding, and snowshoeing. Mono Lake is popular among visitors not only because of its unusual beauty, but also because of the unique salinity that keeps swimmers more buoyant. Creeks and lakes draining into Mono Lake, such as Mill Creek, fed by Lundy Lake, and other streams in the region have long been popular with fishermen. Hot springs, such as Fales Hot Springs Resort, established in the early 1860s, were perceived as a way to improve one's health and are still a draw for visitors to the area (Cain, 1961:51-54). The late nineteenth and early twentieth centuries also saw the creation of Yosemite National Park and the National Forest System, both of which brought visitors to the Sierra Nevada region (USFS, 2001:6).

The upward trend in tourism in Mono County that began in the 1920s continued after World War II as Americans found themselves with more leisure time and the money to enjoy it. Local, state, and federal agencies, civic groups, and private entrepreneurs heavily promoted Mono County as a tourist destination, and tourism ultimately became one of the county's main industries. World-class trout fishing draws thousands from throughout California, Nevada, and beyond. Hunting also remains popular, and other types of outdoor recreation, such as hiking, boating, camping, and winter sports, grew in popularity throughout the twentieth century. Mono Lake draws bird watchers, kayakers, and hikers. Tourism was further enhanced by the establishment of the Mono Lake Tufa State Reserve in 1981 and the Mono Basin National Forest Scenic Area and its visitor center in 1984. Many local businesses in central Mono County cater to the needs of tourists, providing food, lodging, guided fishing, hiking, packing trips, and supplies (Alkire, 2012:3-8; Carle and Banta, 2008:115-125; Evarts, 1991:47).

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Outdoor recreation of all types continued to grow in popularity in the mid-twentieth century and included construction of campgrounds on USFS lands, as well as other agencies and private company lands. Calectric established camping areas in Lundy Canyon by 1961, and Mono County has been managing the Lundy Canyon Campground facility ever since, continuing under an agreement with SCE after it acquired Calectric (Mono County Public Works, 2014, 2023). Older campgrounds were sometimes "positioned in drainages or were otherwise too close to water. This building practice continued unabated through the 1960s; as a result, many accommodations were outdated and poorly placed for management objectives. As part of the FERC relicensing, SCE has closed campsites that were too close to water and […] renovated the campgrounds" (USFS, 2001:26).

The USFS continues to manage recreation uses on the Inyo National Forest and, within it, the Mono Basin National Forest Scenic Area:

> *The emphasis of [USFS] management on wilderness lands is to provide opportunities for solitude, challenge, and conventional recreation while protecting these wild lands and their values of natural ecological integrity and appearance. Portions of Lundy Canyon [within the national forest] are managed as a concentrated recreation area, which provides for a broad range of facilities and opportunities that accommodate a limited number of people safely, conveniently, and with little resource damage. These facilities include a trailhead for the Hoover Wilderness that accommodates moderate use by day hikers and light use by backpackers, campgrounds for moderate to extensive use during the summer season, and a private resort that caters to fishermen and campers. (USFS, 2001:6)*

The recreational infrastructure along Mill Creek was also described in the 2001 USFS report as follows:

> *There are 52 campsites on SCE land, managed by Mono County. There is an informal parking area adjacent to Lundy Dam. This parking area serves day-use fisherman and is an informal trailhead for hikers to Lake Canyon. The [USFS] maintains trailhead parking above Lundy Lake for day use and Hoover Wilderness visitors. In addition, a privately operated resort at the west end of Lundy Reservoir provides camping, cabins, boat rentals, a small store and a concrete boat launch recently built by SCE. (USFS, 2001:27)*

8.12.1.4. Archaeological Resources

Background research and archaeological survey of the APE were conducted in 2024–2025. Archaeological survey occurring on Inyo National Forest lands was conducted under Organic Act Permit Number LVD25011 and on BLM lands under Cultural Resource Use Permit Number CA-24-17, Fieldwork Authorization 2025-17. During this study, several proposed additions and corrections to the FERC Project Boundary and thus the

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APE were identified, resulting in a cumulative survey area of 376.3 acres. Of this total, systematic survey could be completed on 223.5 acres, with the remainder excluded due to steep slope, open water, and other limitations.

A total of 12 previously recorded sites, 15 newly identified archaeological sites, and 27 isolated finds were documented during the survey (Table 8.12-1).

The only previous NRHP eligibility determinations were made as part of the previous relicensing effort (White, 1990). During that work, nine sites within the APE were found not eligible for listing on the NRHP, and one was determined eligible (Jordan Powerhouse site P-26-002411 [CA-MNO-2411H, FS No. 05045100694]). All these determinations received SHPO concurrence (Ref. No. FERC831003B).

During the current survey, these sites were revisited, and all the previous determinations were reassessed in light of current conditions. One site (Lundy Cemetery, P-26-002407) was recommended for re-evaluation. This site was previously determined ineligible but is recommended for re-evaluation because of new information regarding the specific people buried at the cemetery.

White (1985) characterized the sites along the north shore of Lundy Lake (P-26-002400, -002401, 002402, 002403, 002404, 002405, -002406) as “effectively destroyed” through erosion, snowpush, and seasonal inundation. These sites retained little to no integrity and were determined not eligible for NRHP listing.

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Table 8.12-1. Archaeological Sites and Evaluation Status within the APE.

Primary No. / Trinomial	USFS No. / Temporary No.	Age	Summary Description	Landowner	NRHP Eligibility
P-26-002400 (CA-MNO-2400H)	05045100680	H	Refuse scatter, Cairn (destroyed)	Inyo National Forest	Not Eligible (FERC831003B)
P-26-002401 (CA-MNO-2401H)	05045100681	H	Road	Inyo National Forest, SCE	Not Eligible (FERC831003B)
P-26-002402 (CA-MNO-2402H)	05045100682	H	Foundation, Refuse scatter (destroyed)	Inyo National Forest	Not Eligible (FERC831003B)
P-26-002403 (CA-MNO-2403H)	05045100683	H	Foundation, Refuse scatter (destroyed)	SCE	Not Eligible (FERC831003B)
P-26-002404 CA-MNO-2404H)	05045100684	H	Foundation, Refuse scatter (destroyed)	SCE	Not Eligible (FERC831003B)
P-26-002405 (CA-MNO-2405H)	05045100685	H	Foundation, Refuse scatter (destroyed)	SCE	Not Eligible (FERC831003B)
P-26-002406 (CA-MNO-2406H)	05045100686	H	Road	SCE, other Private	Not Eligible (FERC831003B)
P-26-002407 (CA-MNO-2407H)	05045100688	H	Cemetery	SCE	Re-Evaluate; Not Eligible (FERC831003B)
P-26-002411 (CA-MNO-2411H)	05045100694	H	Jordan Powerhouse	SCE	Eligible (FERC831003B)
P-26-003814	05045100687	P	Lithic scatter	SCE	Not Eligible
Pending	05045101858	MC	Lithic scatter; Refuse scatter	Inyo National Forest	Not Eligible
Pending	MCRD Historic	H	Refuse scatter	SCE	Not Eligible
Pending	LS-02	MC	Limited habitation; Refuse scatter	Inyo National Forest	Unevaluated
Pending	LS-03	H	Refuse scatter	Inyo National Forest	Not Eligible
Pending	LS-04	MC	Limited habitation; Refuse scatter	Inyo National Forest	Eligible
Pending	LS-06	H	Refuse scatter, Rock alignment	SCE, Mono County	Eligible
Pending	LS-07	H	Water conveyance (old alignment of Upper Conway Ditch)	SCE	Not Eligible
Pending	LS-09	H	Water conveyance (pipe)	Mono County	Not Eligible
Pending	LS-10	H	Arborglyph	Inyo National Forest	Not Eligible
Pending	LS-11	H	Arborglyph	Inyo National Forest	Not Eligible
Pending	LS-12	H	Refuse scatter	SCE	Not Eligible

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Primary No. / Trinomial	USFS No. / Temporary No.	Age	Summary Description	Landowner	NRHP Eligibility
Pending	LS-13	H	Refuse scatter	SCE	Not Eligible
Pending	LS-15	H	Arborglyph	SCE	Not Eligible
Pending	LS-18	H	Water conveyance (unnamed ditch)	Inyo National Forest, SCE	Not Eligible
Pending	LS-19	H	Arborglyph (Basque)	SCE	Unevaluated
Pending	LS-22	H	Refuse scatter	SCE	Not Eligible
Pending	LS-23	H	Foundation, refuse pits, refuse scatter	SCE, other Private	Not Eligible

None of the previously unevaluated or newly recorded sites could be shown to be associated with historically significant people or events (NRHP Criteria A and B), nor did any retain design elements representing high artistic values or the work of a master (Criterion C). Thus, eligibility recommendations for the newly recorded sites hinged on their ability to reveal information important in prehistory or history (Criterion D).

Three previously recorded sites within the APE were previously unevaluated. These sites were revisited and assessed for the NRHP eligibility. A very sparse lithic scatter (P-26-003814) on the southeast shore of Lundy Lake was found to be in poor condition and is recommended not eligible for NRHP listing. A sparse historic refuse deposit west of the Lundy Powerhouse (Lundy Return Ditch Historic-Era) has been disturbed since its original recording, retains no data potential, and is recommended not eligible for NRHP listing. Finally, a multi-component site straddling the MCRD (FS 05-04-51-01858) includes a low-density lithic scatter and 1950s–1970s refuse. The lithic scatter is sparse and lacks temporally sensitive artifacts, while the historic-era deposit is beyond the period of significance for the area. Both the precontact and historic-era components of the site are recommended not eligible for listing in the NRHP.

Newly recorded water conveyances (LS-07, LS-09, LS-18) generally lack data potential beyond their initial recording and do not provide new information regarding the history of the area. The same is true for arborglyphs (LS-10, LS-11, LS-15), which likely relate to recreational use of the area rather than sheepherding; these features lack names or other information that might relate to local history. Sparse historic refuse scatters (LS-03, LS-12, LS-13) or historic sites in poor condition (LS-22, LS-23) are also unable to yield important information, lacking dateable artifacts, diverse assemblages, or depositional integrity.

Site LS-04, a multi-component assemblage near the MCRD above Mill Creek, included obsidian projectile points and debitage, with the potential to provide data regarding chronology and toolstone procurement patterns. Ground stone artifacts were also present. The cooccurrence of lithic material alongside late nineteenth- and early twentieth-century historic artifacts could indicate a historic-period Indigenous occupation. The site is also in proximity to additional sites on the banks of Mill Creek (e.g., P-26-000422, P-26-000459, P-26-002454, P-26-004074), which contain similar assemblages. Therefore, the site is recommended eligible for listing in the NRHP under Criterion D.

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Site LS-06 comprises a historic foundation, rock wall, and dense refuse deposits that are potentially associated with the Lundy Powerhouse. Formal evaluation under Criterion B (historic persons) would require additional research on the residents of the powerhouse cottages, thus the site remains unevaluated under Criterion B. The refuse scatter reflects a domestic deposit dating between the 1920s and 1950s, and it includes artifacts associated with children. As few residential or domestic deposits have been investigated in the Inyo–Mono region (Ross, 2025), the site retains data potential and is recommended eligible for listing in the NRHP under Criterion D.

Site LS-19 is a collection of Basque arborglyphs on aspen trees near the Mill Creek Instream Flow Release Gage. Formal evaluation under Criterion B (historic persons) would require additional research on the individuals associated with the arborglyphs and their role in the broader sheepherding industry. The arborglyphs are also representative of a specific ethnic group, Basque sheepherders, and may demonstrate a connectedness to community and homeland. While the data potential of arborglyphs is typically exhausted through recordation, additional glyphs may be discernible through different methods of documentation and the site may contain further data potential. The site remains unevaluated under Criteria B and D.

Site LS-02 is a multi-component site with obsidian debitage, ground stone, and late nineteenth-century cans and vessels. It could reflect a historic-period Indigenous occupation, which would contribute to the history of the area. The site is considered potentially eligible for listing in the NRHP under Criterion D but remains unevaluated until this can be confirmed.

These findings are pending USFS, BLM, and SHPO concurrence, which will be completed in 2026–2027.

8.12.1.5. Built Environment Resources

Research and literature review identified 34 previous cultural resource investigations within the overall study area. Of these, 21 were conducted for locations either within the proposed APE, or that partly overlap the proposed APE or study area. Among the investigations are those conducted during the last relicensing (White, 1983, 1985, 1990; York, 1990). Most of these reports focused on documenting archaeological resources.

The cultural resources survey prepared in 1985 for the previous Lundy Project relicensing by David R. M. White, Ph.D., concluded that the Lundy Powerhouse was not eligible for listing on the NRHP. The SHPO concurred with this finding on December 9, 1988 (FERC Ref No. FERC861112A, FERC831003B, FERC880816A). The 1985 evaluation concluded that the powerhouse was not eligible but did not analyze the other Project facilities or the system as a whole. The record search results conducted in 2023 identified three other built environment resources (P-26-000422 [Lundy Cutoff Road], P-26-004077 [MCRD], and P-26-008664 [Mill Creek Powerhouse Road]) previously documented on DPR 523 forms in the study area. Recent inventories also documented and evaluated the Mill Creek-Control (also known as Bishop-Lundy) Transmission Line (P-14-014235/P-26-009006 [FS 05-04-53-02829]) and the SCE Inyo National Forest Distribution Lines (FS

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05-04-51-02075) as not eligible for listing on the NRHP (Croix and Becker, 2019; Miller et al., 2022; Williams, 2025). The SHPO concurred with these findings on July 24, 2023 (SHPO Reference No. FERC831003C) and October 9, 2025 (USFS_2025_0904_002). No other built environment resources have been previously documented with the APE.

The CUL-2 Draft Technical Report (under review with the land managing agencies) documented each built environment resource to evaluate them for NRHP eligibility within their historic context, using the research and field survey undertaken for this study. The evaluation of all historic-period built environment resources in the APE addressed built resources individually and as a potential contributor to a historic district, where appropriate. Each evaluation assessed historic integrity, noting visible alterations and historically documented alterations, and compared current appearance to any previous documentation; these results are presented in Table 8.12-2.

These findings are pending USFS, BLM, and SHPO concurrence, which will be completed in 2026–2027.

Table 8.12-2. Built Environment Resources and Evaluation Status within the APE

Primary / USFS No.	Resource Group Name	Landowner	NRHP Evaluation
Pending	**Lundy Hydroelectric Project, FERC No. 1390**	BLM, Inyo National Forest, Mono County, SCE, Other Private	Not Eligible (FERC861112A, FERC831003B, FERC880816A)
Pending	Lundy Dam Complex	SCE, other Private	Not Eligible
Pending	Lundy Flowline and Penstock	BLM, Inyo National Forest, SCE	Not Eligible
Pending	Lundy Powerhouse Complex	SCE	Not Eligible
Pending	Lundy Tailrace and Tail Canal	Mono County, SCE	Not Eligible
P-26-004077	Mill Creek Return Ditch (MCRD)	BLM, Mono County	Not Eligible
P-14-014235, P-26-009006; FS 05045302829	Mill Creek to Control (also known as Bishop-Lundy) Transmission Line	Inyo National Forest, BLM, Private	Not Eligible (FERC831003C)
P-26-008664; 26-000422	Lundy Roads	Inyo National Forest, BLM, SCE, other Private	Not Eligible
Pending	Upper Conway Ditch	SCE	Not Eligible
Pending	Adair Ditch	BLM, Inyo National Forest, other Private	Not Eligible
Pending	Lundy Campground	SCE	Not Eligible
Pending	Lundy Day Use Area	SCE	Not Eligible
FS 05045102075	SE Distribution Lines on Inyo National Forest	Inyo National Forest, BLM, Private	Not Eligible (USFS_2025_0904_002)

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8.12.2. Environmental Effects

8.12.2.1. Effects of Continued Project Operation and Maintenance on Historic or Archaeological Resources and Traditional Cultural Properties that may be Eligible for Inclusion in the NRHP, or on Other Areas or Places of Religious, Cultural, and Traditional Importance to Indian Tribes

Current Cultural Resource Management

SCE prepared a Cultural Resource Management Plan for the Lundy Project in 1990 called *Management Plan for Historic and Archaeological Resources Associated with the Lundy Hydroelectric Project, (FERC Project No. 1390), Mono County, California*, (White, 1990). The plan identifies specific measures that SCE undertakes to avoid adverse effects to NRHP-eligible cultural resources in the FERC Project Boundary. The plan identifies various programmatic measures that SCE is required to implement, as well as resource monitoring and required data recovery efforts. Resource monitoring and recordation is required to occur in 3- to 5-year increments to determine the success of current measures and to evaluate the need for additional treatment. The plan requires that if effects to NRHP-eligible properties cannot be avoided with implementation of protective and avoidance measures, SCE, in consultation with SHPO and FERC, shall address any effects in accordance with 36 CFR Part 800.

Current Potential Adverse Effects and Issues on Cultural Resources

FERC's decision to issue a new license is considered an "undertaking" pursuant to 36 CFR 800.16(y), and the NHPA requires federal agencies to consider the effect of undertakings on historic properties and provide the ACHP an opportunity to comment. Project O&M could potentially affect cultural and Tribal resources, Traditional Cultural Properties (TCPs), and other resources of traditional, cultural, or religious importance to the Native American community.

The purpose of identifying effects is to determine which resources may have heritage values compromised or altered, and to aid in the development of management/protection measures to incorporate in the HPMP for the Project. In consultation with the stakeholders and Tribes, PME measures specific to cultural resources will be developed and included in the HPMP.

Archaeological Resources

During the 2025 survey, archaeologists observed various disturbances to sites, including those caused by erosion, construction, wave action and inundation, O&M activities at the Project, and recreation. To help SCE prioritize management measures at archaeological sites most likely to be affected by the Project, the crew assessed whether each archaeological site is or may be affected by O&M of the Project in the future. The crew also noted non-Project-related effects, or the potential for them to occur at the sites. The purpose of identifying effects is to help develop management measures to incorporate into the HPMP for the Project.

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Of the 27 archaeological resources documented during the 2025 inventory, 22 were evaluated as not eligible for listing in the NRHP. Two resources remain unevaluated. In the case of LS-02, a multi-component lithic and refuse scatter, potential effects to LS-02 are minimal due to its location away from Project activities. LS-19 is a grove of trees containing Basque historic arborglyphs. The glyphs are not located near energized equipment and therefore have a low potential to be subject to effects via vegetation maintenance. Three archaeological resources are NRHP eligible, P-26-002411, the remains of the Jordan Powerhouse; LS-04, a multicomponent site; and LS-06, a historic refuse and rock alignment. These resources have moderate potential for effects via access road and facility maintenance activities. The CUL-1 study has identified no immediate, direct Project-related effects.

BUILT-ENVIRONMENT RESOURCES

As none of the Project nor any built environment resources documented as part of the study are NRHP-eligible, there is a finding of no effect on built environment resources as a whole.

NO ACTION

Under the No Action Alternative, SCE would continue Project O&M in accordance with the terms and conditions of the existing FERC Project license. Effects to historic properties, resources that are being reevaluated, and unevaluated resources as a result of Project O&M have been identified, relative to baseline conditions.

PROPOSED ACTION

Under the Proposed Action, SCE would continue Project O&M activities in accordance with the terms and conditions of the license to be issued for the Proposed Action. The Proposed Action includes implementation of MIFs, and other resource management plans (DLA Volume II). Specific to cultural resources, SCE is in the process of developing an HPMP (Appendix E.5, DLA Volume II).

8.12.2.2. Consistency with Inyo National Forest Land Management Plans

SCE reviewed the desired conditions in the Inyo National Forest LMP for consistency with the Project (USFS, 2019). Desired conditions with which the Project is consistent include the following (USFS, 2019):

- CULT-FW-DC 01: Cultural resources (buildings, sites, districts, structures, and objects) having scientific, cultural, or social values are preserved and protected for their cultural importance. Site integrity and stability are protected and maintained on sites that are susceptible to imminent risks or threats, or where values are rare or unique. Priority heritage assets are stable, and their significant values protected; vandalism, lootings, theft, and human-caused damage to heritage resources are rare. Site significance and integrity are maintained through conservation and preservation efforts.

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- CULT-FW-DC-03: Cultural resources provide educational opportunities that connect people to the land and its history. Through interpretive sites, historic standing structures, and other materials, the national forest provides opportunities for an appreciation of the region's history and an awareness of preservation efforts. In some cases, historic routes (such as railroad grades) are used for recreation trails with interpretation of their history and historic features. Heritage-based recreation opportunities are connected, where practical, with other recreation opportunities such as trails.

- VIPS-FW-DC 06: Nationally registered historic sites and culturally important properties retain their historic and cultural significance when public use and education opportunities are provided.

8.12.2.3. Proposed Protection, Mitigation, and Enhancement Measures

Potential effects and PME measures related to this resource are described in the CUL-1 and CUL-2 Technical Reports currently under review with the land managing agencies. These reports will be filed as confidential and privileged in Volume V of the FLA. An HPMP is being developed in consultation with the Inyo National Forest, BLM-Bishop Field Office, and Tribes (Appendix E.5, DLA Volume II).

The HPMP will be implemented after license issuance and include guidelines for monitoring archaeological site conditions as well as PME measures to avoid, minimize, and/or mitigate direct and indirect effects to NRHP-eligible or listed resources.

8.12.2.4. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for cultural resources.

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8.13. TRIBAL RESOURCES

This section summarizes the results of the FERC-approved Tribal Resources Technical Study (TRI-1) for FERC Project No. 1390 (SCE, 2024). This section identifies Tribal resources and American Indian Tribes (Tribes) that are known to have cultural ties or other Tribal interests in the vicinity of the Project, identifies Tribal lands in the vicinity of

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the FERC Project Boundary, and identifies Tribal cultural or economic interests, including TCPs that may be affected by the Proposed Action and existing Project O&M activities. Preliminary information regarding implementation of TRI-1 is presented in the section. The TRI-1 Draft Technical Study Report is in draft preparation and pending Tribal review. Information provided in this section may be updated following review of the TRI-1 Draft Technical Study Report.

This section was prepared to comply with Section 106 of the NHPA (16 USC § 470f) and its implementing regulations in 36 CFR Part 800, which requires that federal agencies consider the effects of their undertakings on historic properties and afford ACHP a reasonable opportunity to comment on such undertakings.

Three main categories of Tribal resources are listed here and described below:

- **Tribal places** are locations associated with the ancestral past and places related to current gathering and/or hunting practices or other resource types.
- A **Traditional Cultural 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.
- **Tribal government** resources are Indian reservations, rancherias, colonies, trust assets, and individual Indian allotments issued by the Bureau of Indian Affairs (BIA).

This analysis recognizes that locations within the landscape with significant, intangible qualities may qualify as Tribal places, Tribal resources, TCPs, or traditional cultural landscapes (NPS, 2024). These types of properties are much more likely to emerge through Tribal consultation and interviews than solely identified through observation of material remains such as archaeological sites.

The TRI-1 Technical Study Report is being completed by individuals who meet the Secretary of the Interior Professional Qualification Standards in Archaeology and/or History (36 CFR Part 61) and are experienced at documenting Tribal resources in California and who hold the appropriate permits to conduct cultural resources work on lands managed by the Inyo National Forest and BLM–Bishop Field Office.

8.13.1. AFFECTED ENVIRONMENT

8.13.1.1. Area of Potential Effects and Study Area

PROJECT VICINITY

The Project is located in Mono County, California, northwest of the town of Lee Vining in the Eastern Sierra Nevada. The majority of the Project is located on lands owned by SCE, while the rest is managed by the Inyo National Forest, BLM–Bishop Field Office, and Mono County, and a small portion on other private property. The pedestrian surveys conducted for this Project took place within the APE as described below, which is located in Township 2 North, Range 25 East on the Lundy Project 7.5-minute USGS quadrangles.

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AREA OF POTENTIAL EFFECTS AND STUDY AREA

A Project's APE is defined in the regulations implementing Section 106 of the NHPA as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR 800.16(d)). Additionally, ACHP and the SHPO have provided guidance for federal agencies and their delegated licensees to consider potential effects that may occur immediately and directly, are reasonably foreseeable or may occur later in time, are farther removed in distance and potentially affected indirectly, and/or include cumulative effects of/related to the undertaking.

The APE is defined as the FERC Project Boundary and a 50-foot radius around ancillary facilities (e.g., gages) located outside the FERC Project Boundary. SCE submitted the proposed APE, on behalf of FERC, to the SHPO for comments on the adequacy of the APE pursuant to 36 CFR § 800.16(d). On November 25, 2025, SCE received comments from the SHPO on the adequacy of the APE. The SHPO recommended that additional information regarding the potential for effects from O&M to historic properties present below the ground surface be provided. Therefore, SCE has expanded the APE to include a vertical APE ranging from 0 feet below current grade to a maximum depth of approximately 10 feet (3 meters) below current grade, where excavations due to O&M could take place.

For Tribal resources, the study area consists of the area within 5 miles of the FERC Project Boundary. This study area was used for archival research and interviews to develop contextual and background information. Figure 8.13-1 shows the APE, study area, and watersheds for the Lundy Project and the nearby recent Lee Vining Hydroelectric Project (FERC No. 1388), as their study areas overlap significantly, which is relevant to the current TRI-1.

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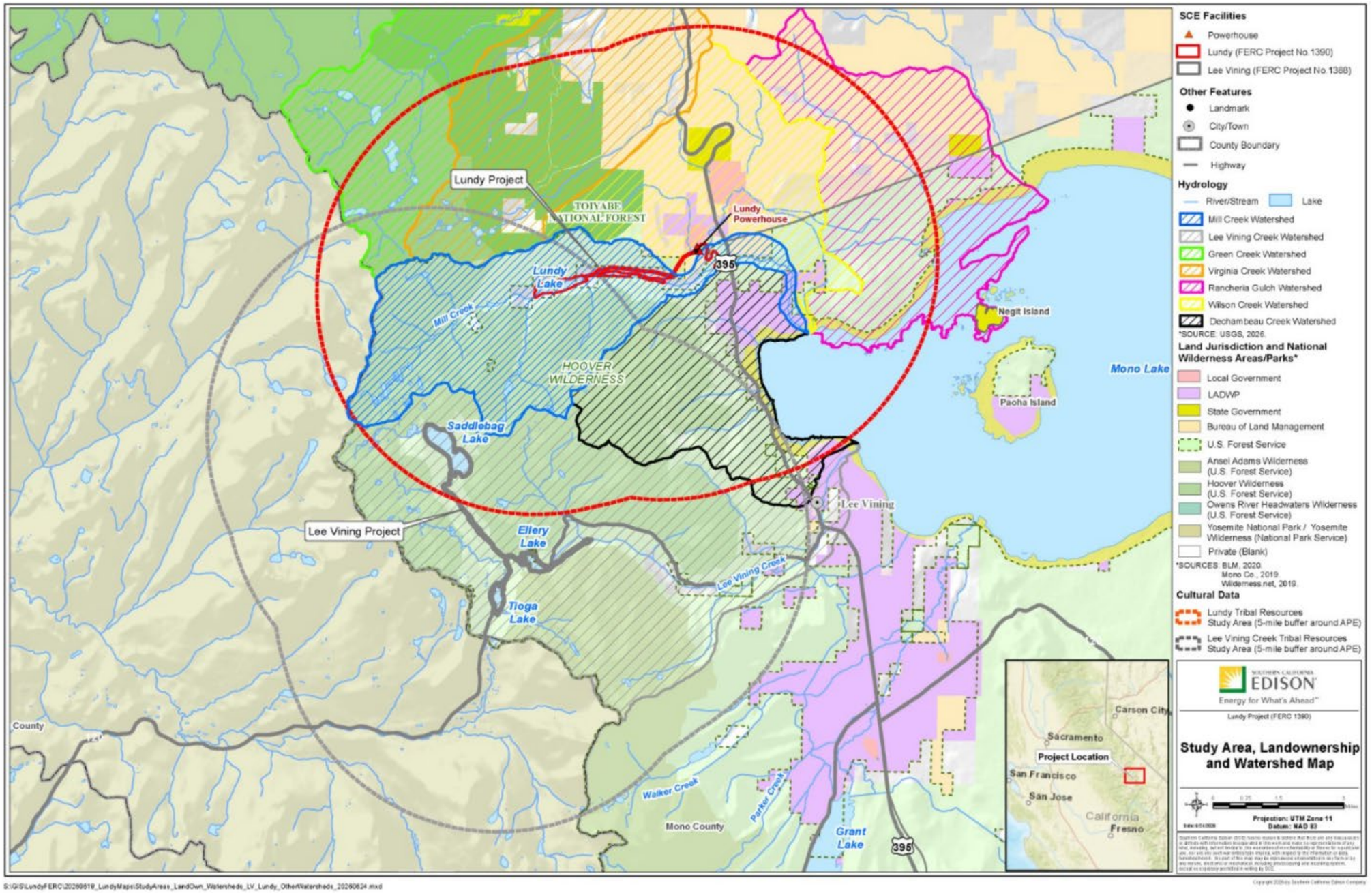


Figure 8.13-1. Tribal Resources APE and Study Area.

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8.13.1.2. Physical Environment and Climate and Cultural Context

See Section 8.12 for an overview of the physical environment and climate and cultural context.

INDIGENOUS USES OF PLANTS AND ANIMALS

The Native people who have lived in, and visited, the Mono Lake basin for generations are very well acquainted with the flora and fauna found within their traditional homelands and beyond. Information about Native names and uses of plants and animals has been recorded by Merriam (1979a, 1979b, 1979c), Steward (1933), Davis (1965), Logan (1965), Goode (2019), Mono Lake Kootzaduka'a Tribe (2019), and Andrews (2024). The information collected to date has been assembled in a preliminary compilation of Tribal biological data, along with identification of Tribally important species found within the Project APE, as presented in the Project Initial Study Report (SCE, 2026).

An important source of food for the Kootzaduka'a was *tuba'a* (pinenuts) from *tubabe,* or pinyon pine (Mono Lake Kootzaduka'a Tribe, 2019:125; Tonenna, 2024b). Although their cultural significance is demonstrated in the origin story "Theft of the Pinenuts" (Tonenna, 2024a), and trees of this species are present within the APE, the Project Area has not been identified as an important gathering area for pinenuts (Davis, 1965). However, "the pinyon tree has other uses such as for medicine, and waterproofing, and [they] are important even in smaller quantities as tribal people who are within the area count on whatever amount of pinyon trees that are found in the project area" (Tonenna, 2024b).

TRADITIONAL ECOLOGICAL KNOWLEDGE

Federal, state, and local land-management agencies are increasingly aware that the "natural" environment in the Sierra Nevada and adjoining regions is the result of regular maintenance, or "Indigenous resource management," by the people who live and lived in those environments. As explained by Anderson (2004) in *Tending the Wild:*

> *Resource management is not a modern invention. Indigenous people in California and elsewhere have practiced the roots of this applied discipline for millennia. Our California landscapes, a reflection of historical processes, both natural and cultural, bear the indelible imprint of a medley of management techniques. […N]ative peoples of California very purposely harvested, tended, and managed the wild—pruning tobacco patches, burning willow to discourage insect pests, allowing for rest periods between sedge rhizome harvests, and maintaining plants with edible seed in the understories of open lower montane forests.*
>
> *The foundation of native peoples' management of plants and animals was a collective storehouse of knowledge about the natural world, acquired over hundreds of years through direct experience*

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> *and contact with the environment. The rich knowledge of how nature works and how to judiciously harvest and steward its plants and animals without destroying them was hard-earned; it was the product of keen observation, patience, experimentation, and long-term relationships with plants and animals. It was a knowledge built on a history, gained through many generations of learning passed down by elders about practical as well as spiritual practices. This knowledge today is commonly called "traditional ecological knowledge." (Anderson, 2005:4)*

Anderson went on to note:

> *The traditional ecological knowledge of California Indians and the techniques they used to manage nature are still retrievable. The historical literature contains many descriptions of Indian practices and former landscapes before they were completely transformed by Euro-American settlement. (Anderson, 2005:4)*

Traditional Ecological Knowledge (TEK), also known as Traditional Knowledge or Indigenous Ecological Knowledge, has been used to interpret the anthropogenic landscapes of Yosemite National Park with information derived from historical and archival research, as well as ethnographic research with "Indigenous Knowledge bearers" (Deur and Bloom, 2021). Biological cultural resources were identified by Tribal participants in TRI-1 as a concern to be addressed. A consideration of TEK as part of the environmental context recognizes Tribal Knowledge and contributions to natural resource management in the study area and provides the necessary background to understand Tribal concerns related to the landscape.

8.13.1.3. Study Approach and Methods

TRI-1 involved a multi-step process including literature review and archival research; meetings with Tribal governments; interviews and field visits; collaboration with colleagues; and review of the draft report by Tribal participants. All phases of the Tribal resource investigation were 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 publication *Consultation with Indian Tribes in the Section 106 Review Process: A Handbook* (ACHP, 2021).

LITERATURE REVIEW AND ARCHIVAL RESEARCH

The goals of the literature review and archival research were to develop the Tribal resources historical context to be used in identification and evaluation of Tribal resources within the APE for NRHP eligibility.

Published ethnographies for the Mono Lake region are somewhat limited when compared to other parts of California and the Great Basin. Therefore, ethnographic information from other published sources was also used to prepare the TRI-1 Technical Study Report.

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Literature reviewed includes Davis (n.d., 1962, 1963, 1964, 1965); Davis-King (1996, 1998, 2007, 2010); Davis-King and Snyder (2010); Marvin and Costello (1993); McCarthy (1996); and NPS (2019), as well as Fletcher (1987) and Marks (2022, 2023a, 2023b) for information on Mono Basin ethnohistory, and Bates and Lee (1990) for information on prominent Kootzaduka'a basket weavers in the 1900s. Information from Fowler and Liljeblad (1986) was used to fill in gaps in ethnographic data for the Mono Basin.

Julian Steward included information from four Mono Lake Kootzaduka'a consultants in his *Ethnography of the Owens Valley Paiute* (Steward, 1933) and published several of their stories in his *Myths of the Owens Valley Paiute* (Steward, 1936), including a version of the Big Fish story related by Bridgeport Tom.

Emma Lou Davis worked with Mono Lake Kootzaduka'a Elders and their families in 1959 and 1960. Resulting in two of Davis's publications, *Ethnography of the Kutzedika Paiute of Mono Lake* (Davis, 1965) and *An Archaeological Survey of the Mono Lake Basin and Excavations of Two Rockshelters* (Davis, 1964).

Davis's 1965 ethnography, although brief, is the most exhaustive study available and contains valuable information on Kootzaduka'a lifeways, as well as some historical data. In addition to Davis's two main consultants, Nellie John Reynolds and Carrie McGowan Bethel, other collaborators mentioned include Carrie Bethel's older sister, Minnie McGowan Mike, and Minnie's husband, Casuse Mike; Nellie Reynolds' daughter, Florence Williams, and Florence's husband, Willie Williams; and Harry Blaver Jr. and his mother, Emma Hess Blaver, as well as Emma's brother, Stanley Hess. Davis's field notes, tape recordings, photos, maps, and other original materials from work with the Mono Lake Kootzaduka'a are no longer extant.

Davis also published two professional papers related to her work in the Mono Basin, *Hunter-Gatherers of Mono Lake* (Davis, 1962) and *The Desert Culture of the Western Great Basin: A Lifeway of Seasonal Transhumance* (Davis, 1963).

More recently, the Mono Lake Committee conducted interviews in 1991 and 1992 with Tribal consultants including John Dondero, Jr. with Jerry Andrews and Dorothy Andrews (Dondero, 1992), Jessie Cluette Durant (Durant, 1991), and August (Augie) Hess and Jerry Andrews that were documented in an Environmental Impact Report assessing Mono Lake water rights (Jones & Stokes Associates, 1993). Marvin and Costello (1993) interviewed several of the same Tribal consultants for a Historic Resources Study of the Frank and Betsy Sam homestead on Parker Creek in support of a California Department of Transportation road-widening project along U.S. Highway 395. In addition to Dondero, Andrews, and Hess, Marvin and Costello also interviewed Alta Sam Lange, Joseph Sam, and B. Gurule.

McCarthy (1996) conducted ethnographic and ethnohistoric research in the mid-1990s for a study to complement an archaeological inventory of 2,700 acres on the lower reaches of the Lee Vining, Walker, Parker, and Rush Creek drainages. These studies were conducted under contract to LADWP for the proposed Mono Streams Restoration Project. McCarthy consulted with five Kootzaduka'a individuals who were intimately

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familiar with the Mono Lake area, including Jessie Cluette Durant, her cousins, August "Augie" Hess and Elma Hess Blaver, and two younger men, Jerry Andrews and Richard Williams (McCarthy, 1996). All three Elders spent their entire lives in the Mono Lake area, with a significant part of their childhoods spent with their grandparents at the settlement on Rush Creek. McCarthy reported that Jessie Durant was a fluent speaker of the Mono Lake dialect. The Elders were all knowledgeable about traditional Kootzaduka'a lifeways and well aware of the effects historical events had on traditional subsistence and settlement patterns and other aspects of their culture.

Davis-King (2007, 2010) conducted research relevant to the current study for more than a decade. A synthesis of information on the Indigenous People of Mono County is found in Davis-King (2007, 2010). Information on trails in the Project study area, as well as the wider region, is found in Davis-King and Snyder (2010).

TRI-1 draws heavily from *Voices of the People: The Traditionally Associated Tribes of Yosemite National Park* (NPS, 2019). This book was published as a collaborative effort between the Seven Associated Tribes of Yosemite (the North Fork Rancheria of Mono Indians of California, the Southern Sierra Miwuk Nation, the Picayune Rancheria of the Chukchansi Indians, the Bridgeport Indian Colony, the Mono Lake Kootzaduka'a Tribe, the Tuolumne Band of Me-wuk Indians, and the Bishop Paiute Tribe) and NPS. This collaboration began as a way for Tribal members to tell their own stories in their own voices. As stated by Superintendent Michael Reynolds in the forward to NPS (2019), "there are no better storytellers than the people themselves." This collaborative effort between the Seven Associated Tribes and NPS resulted in a collection of "first-person narratives, photographs, personal family stories, and academic and historical information" (NPS, 2019).

Archival research was conducted to obtain unpublished ethnographic data to supplement information from published ethnographic studies and interviews with Tribal members. The archival data, used in the preparation of several chapters of the TRI-1 Technical Study Report, helped establish a context for identifying and evaluating Tribal resources. Archival materials were found in the following archival repositories:

- **Bancroft Library, University of California, Berkeley:** Three sources of unpublished ethnographic information relevant to TRI-1 are archived in the Bancroft Library, University of California, Berkeley:

  - The C. Hart Merriam Papers (1898-1938) contain Mono Lake Kootzaduka'a vocabularies and ethnogeography information, which was reviewed for place and plant and animal names used to prepare maps and tables included in the TRI-1 Technical Study Report.

  - The C. Hart Merriam Collection of Native American Photographs (circa 1890-1938) contains photographic prints of several Kootzaduka'a individuals and families, as well as of traditional dwellings in the Mono Lake Basin.

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  - The Hulse and Essene Manuscript Collection (1935-1936) contains ethnographic material from interviews with Mono Lake and Bridgeport Kootzaduka'a Elders compiled by Frederick Seymour Hulse.

- **General Land Office (GLO):** Land patents for Paiute allotments in the vicinity of the study area were obtained by searching BLM's GLO Land Patent Search online database. Information found in land patent documents includes the name of the patentee, the legal land description of the patented allotment, the amount of acreage patented, and the date the patent was issued.

- **Emma Lou Davis/Great Basin Foundation Collection at Maturango Museum, Ridgecrest:** Davis's original field notes, taped interviews, photographs, and other materials related to her ethnography study were destroyed in a fire in 1961. The collection at Maturango Museum otherwise consists of materials that postdate Davis's work in Mono County.

- **Mono Basin Historical Society, Lee Vining:** The Mono Basin Historical Society has photographs, articles, and reports relevant to TRI-1.

- **Mono Basin Clearing House Digital Library:** The Mono Basin Clearing House has interviews conducted in 1991 and 1992 with Jerry Andrews and August "Augie" Hess, two Mono Lake Kootzaduka'a men intimately familiar with the Mono Lake Basin, as well as interviews with Jessie Cluette Durant, who grew up on her grandfather's allotment on Rush Creek and was also a knowledgeable Tribal expert (Durant 1991); and John Dondero, Jr. (with Dorothy Andrews and Jerry Andrews), who grew up on Rush Creek and the Farrington Ranch (Dondero, 1992).

- **National Archives and Records Administration (NARA), San Bruno:** NARA, San Bruno, has several important collections that were used in the preparation of TRI-1. Original documents related to Indian allotments, made under the provisions of the Dawes Act of 1887, are found in Land Transaction Case Records, Record Group (RG) 75, BIA (NARA, 1928-33). These records document the period during which an allotment was held in trust by the BIA. Applications for Enrollment with the Indians of the State of California under the Act of May 18, 1928 (45 Stat. L. 602), also in RG 75, BIA, contain a wealth of genealogy and other information, including: when and where the person was born; where they were living in 1928; their occupation; whether they owned allotted land; names of minor children and when and where they were born; names of their parents, when and where they were born and where they lived after their marriage; names of other ancestors; traditional Kootzaduka'a names; and if they were aware of any treaties made with their Tribe. The original Township Tract Books from the GLO in Independence, California, archived at NARA, record every land claim filed in Mono County, including those for people who never proved their claims. Information recorded in the Township Tract Books includes the legal land description for the claim, the type of claim (e.g., I.A. for Indian allotment), the name of the person filing the claim, the original filing date, the date the patent was issued, and if no patent was issued, the reason the claim was rejected and the date the case was closed.

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- **C. Hart Merriam Collections at University of California, Davis Department of Anthropology Museum:** C. Hart Merriam, a biologist who became Director of the U.S. Biological Survey in 1885 at the age of 30, was one of the great naturalists of his generation (Johnson and Molenaar, 2008; Osgood, 1944). From the beginning of his tenure with the Biological Survey, Merriam's driving interest lay in ascertaining the geographical distribution of the fauna of North American. By 1890, Merriam had laid the foundation for the life zone concept, which he is generally credited with developing and which he formally outlined in 1892. During his explorations in California, Merriam shifted his interest almost entirely to recording ethnographic data, primarily language and documenting and collecting utilitarian baskets.

  - Merriam (1890-1938, 1898-1938, 1900, 1901, 1903-1938, 1910, n.d.) conducted fieldwork in the Mono Basin between 1900 and 1938, camping on Lee Vining Creek and staying at the Farrington Ranch north of Walker Creek while seeking out Kootzaduka'a encampments and working with the people there to document names of plants and animals and other words in the Kootzaduka'a vocabulary, including place names and the name for their Tribe and other Tribes. Merriam also took numerous photographs. His basket purchases were primarily made in 1900 and 1901. Merriam made repeated visits to the Mono Basin (i.e., 1900, 1901, 1903, 1934, 1935, 1937, and 1938) and kept records of these visits in his field journals. Although his field visits were typically brief, the information he was able to gather is valuable, nonetheless (McCarthy, 1996). Some of the data Merriam collected were published posthumously in *Studies of California Indians* (Merriam, 1955a, 1955b, 1955c), *Ethnographic Notes on California Indian Tribes* (Merriam, 1966), and *Indian Names for Plants and Animals among Californian and other Western North America Tribes* (Merriam, 1979a, 1979b, 1979c).

  - Merriam's basket collection and catalogue cards, as well as a photocopy of his California Journals (Merriam, 1898-1938), are archived at the University of California Davis Department of Anthropology Museum, which is currently in the process of transcribing Merriam's California Journals. Transcribed copies of Merriam's journals from 1900 and 1901 were obtained; however, journals covering the other dates Merriam visited the Mono Lake Basin have yet to be transcribed. Merriam's original journals are housed in the Library of Congress Manuscript Collections in Washington, D.C. (see below).

- **Library of Congress, Washington, D.C.:** The Library of Congress holds the C. Hart Merriam Papers (mss32698), which contain Merriam's original California Journals and Indian Vocabularies. The vocabulary schedule for the "Mono Lake Piute" was accessed for TRI-1 to obtain some of the Kootzaduka'a place names. The vocabulary forms have responses recorded on English-language questionnaires that were elicited with the aid of pictures of plants and animals from Kootzaduka'a speakers of the Mono Lake dialect living at Farrington Ranch (who Merriam called the Tu'-ne-gab'-ba after the name of the village there). Merriam collected simple phrases, kinship terms, words for parts of the body, place names, names for animals, plants, birds, fish, and various foods, as well as material culture (e.g., names for traditional items used for traditional activities such as hunting, fishing, cooking, and basketmaking), and more. Merriam

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was a trained naturalist but was an amateur linguist, which probably accounts for some of the discrepancies in spellings of words.

- **Northwestern University Libraries, Illinois:** The Charles Deering McCormick Library of Special Collections archived at Northwestern University Libraries has a collection of photogravure prints of Edward S. Curtis photographs from the Frederick Webb Hodge Set of The North American Indian, which includes prints of photographs taken by Curtis in the Mono Lake area in 1924.

- **U.S. Federal Census Records** from RG 29, Records of the Bureau of the Census, held at NARA in Washington, D.C. Census records provided additional information on the identities of Kootzaduka'a families that lived near the Tribal study area between 1900 and 1950. These records provide a wealth of information of relevance to the current study, including family relationships, the date and, in some cases, place of birth and current residence, whether attending school, current occupation, and land ownership status. Other records used to prepare this report that were accessed on Ancestry.com include World War I and World War II draft registration records and death records for Nevada and California.

- **Yosemite National Park Research Library, El Portal**: During the archival research activities, information held at the Yosemite National Park Research Library was reviewed online. The library's holdings were used extensively during preparation of previous reports (Davis-King, 1996, 1998; Davis-King and Snyder, 2010), and those documents were reviewed for information relevant to this study.

Altogether, ethnographic and ethnohistoric inquiries into the Kootzaduka'a culture span more than 125 years and represent the contributions of dozens of Tribal consultants.

Outreach and Meetings with Tribal Governments

The investigation for TRI-1 involved a good-faith effort at 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 (FERC, 2003, 2019). The investigation also followed the FERC regulations at 18 CFR § 2.1c, which added a policy statement on consultation with Tribes in FERC proceedings. Despite this good-faith effort, because of the overwhelming schedules of capacity-limited Tribes, Tribal participation in the current study was limited to a few individuals, as discussed below.

FERC initiated consultation with Tribes under Section 106 of the NHPA via a letter dated March 19, 2024. On April 17, 2024, FERC issued a Notice of Commencement for the Lundy Project and designated SCE as FERC's non-federal representative for carrying out informal consultation, pursuant to Section 106 of the NHPA under 36 CFR Part 800.2.

FERC and SCE held a meeting for stakeholders and Tribes on September 3, 2024, to clarify SCE's proposed study plans, discuss information gathering or study requests, and to discuss the process and schedule for refining study plans. None of the invited Tribes attended the meeting.

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On April 8, 2025, SCE sent a letter inviting Tribes to participate in consultation in support of the relicensing process of the Lundy Project. The letter notified the recipients that SCE had developed study plans as part of the licensing process to address resources in the Project Area, including Tribal and other cultural resources. SCE filed its proposed Study Plans on August 6, 2024, and on December 4, 2024, filed revised Study Plans that included the TRI-1 Technical Study Plan. On January 2, 2025, FERC issued its Study Plan Determination approving the TRI-1 Technical Study Plan.

A critical component of the TRI-1 Technical Study Plan implementation is consultation with Tribes regarding cultural and Tribal resources in the Project Area. In a letter dated April 8, 2025, sent via email, SCE informed Tribes that they had retained an environmental consultant, Kleinschmidt, who in turn retained TEAM Environmental (TEAM) to implement TRI-1. In this letter, SCE introduced Lynn Johnson as the ethnographer for the Project.

On April 24, 2025, TEAM sent follow-up letters to 35 individuals from 18 Tribes and Tribal groups (listed below). The letters were followed by attempts to reach out by phone to recipients of the letters.

- American Indian Council of Mariposa County (Southern Sierra Miwuk Nation)
- Antelope Valley Paiute Tribe, Coleville, California
- Big Pine Paiute Tribe of Owens Valley, Big Pine, California
- Bishop Paiute Tribe, Bishop, California
- Bridgeport Indian Colony, Bridgeport, California
- Fort Independence Indian Community of Paiute Indians, Independence, California
- Lone Pine Paiute-Shoshone Tribe, Lone Pine, California
- Mono Lake Kootzaduka’a Tribe of California and Nevada, Lee Vining, California
- Mono Lake Kutzadika’a Indian Community Cultural Preservation Association (2023a, 2023b), Lee Vining, California
- North Fork Mono Tribe of California, Clovis, California
- North Fork Rancheria of Mono Indians, North Fork, California
- Timbisha Shoshone Tribe, Bishop, California
- Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California, Tuolumne, California
- Utu Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation, Benton, California

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- Walker River Paiute Tribe, Schurz, Nevada
- Washo Tribe of Nevada and California, Gardnerville, Nevada
- Yerington Paiute Tribe of the Yerington Colony and Campbell Ranch, Yerington, Nevada
- Yosemite-Mono Lake Paiute Indian Community

TEAM's outreach efforts resulted in interviews with two Mono Lake Kootzaduka'a Tribal Elders and the Tribal Chairperson, as well as with an Elder who is a member of the Bridgeport Indian Colony but was raised at Mono Lake and has Kootzaduka'a ancestry. One Kootzaduka'a' Tribal Elder participated in a field visit. Other Tribes listed above either did not respond, declined to participate, or deferred to the Mono Lake Kootzaduka'a Tribe.

TRIBAL CONSULTANT INTERVIEWS AND FIELD VISITS

Informal interviews in the form of phone calls and a field visit were conducted with a few participants. The purpose of these was to identify Tribal resources and interests within the APE and study area. Ethnographic and historic maps were georeferenced for the identification of Tribal resources within the study area and APE. Google Earth was used during Tribal interviews and meetings to confirm locations of Tribal resources such as important water features, travel corridors, named places, allotments, and the Big Fish Story (Blaver, 2006).

Four Tribal members, three from the Mono Lake Kootzaduka'a Tribe and one who is a member of the Bridgeport Indian Colony who grew up near the study area and has ancestral ties to the Mono Lake area, agreed to be interviewed for TRI-1. One interviewee provided additional information by phone and via email.

Because the Mono Lake Kootzaduka'a Tribe has not had federal recognition and because of the wide-ranging kinship ties they had with neighboring groups, many Mono Lake people are on other Tribal rolls due to these and other historical factors. In *Voices of the People,* the late Monty Bengochia, former THPO for the Bishop Paiute Tribe, wrote: "As a result of the 1939 Owens Valley Land Exchange, a board of trustees was created to oversee the granting of land assignments and housing. A good number of Mono Lake Paiutes moved to the Bishop Reservation because the land exchange opened membership to homeless Indians in Inyo and Mono counties" (Bishop Paiute Tribe, 2019:197).

Tribal Elder Dean Tonenna participated in a field reconnaissance of several places in the study area on August 28 and 29, 2025.

COLLABORATION WITH COLLEAGUES

The Lundy Project study area overlaps with the recently completed Lee Vining Hydroelectric Project (FERC No. 1388) TRI-1 Technical Study Report (Johnson, 2025), which therefore includes information relevant to the Lundy Project TRI-1. In addition,

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Johnson (2025) collaborated on the Rush Creek Hydroelectric Project (FERC No. 1389) TRI-1 Technical Study Report (West and Lerch, 2025), as those projects are located within the traditional homelands of the Kootzaduka'a Tribe and the studies were completed simultaneously. Because the environmental and historical contexts for the Lee Vining and Rush Creek hydroelectric projects are similar, the ethnographers for each project shared background information common to both study areas. Relevant information from these studies was used for the Lundy Project TRI-1.

In addition to Tribal interviews and correspondence, Johnson consulted with colleagues familiar with the study areas, including people contributing to CUL-1. Methods and preliminary results were discussed multiple times during the study with Audry Williams, Senior Advisor, SCE Archaeology Program.

TRIBAL REVIEW OF DRAFT REPORTS

Tribal comments and suggestions are incorporated throughout the TRI-1 Technical Study Report and are currently ongoing. During multiple reviews, the Tribal consultants confirmed and elaborated on the findings of previous studies reported from the literature and archival review, including information on travel corridors and place names.

8.13.1.4. Results

TRIBAL LANDS

Tribal lands are defined as all lands within the boundaries of an Indian reservation and all dependent Indian communities (36 CFR Part 800.16[x]), and any lands held in trust for any Tribe by the BIA. Based on review of BIA data sources, archival research, and interviews, there are no Tribal lands located within or adjacent to the FERC Project Boundary.

TRIBAL RESOURCES AND INTERESTS

Tribal resources and interests have been identified within the APE and study area. Continued consultation with participating Tribes, Inyo National Forest, BLM-Bishop Field Office, the SHPO, and FERC is ongoing.

TRADITIONAL CULTURAL PROPERTIES

A TCP is a resource 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 that community. A TCP must have integrity and meet at least one of the four NRHP eligibility criteria (36 CFR Part 63) to be considered a historic property (defined as a resource listed in or determined eligible for the NRHP).

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A Native American Heritage Commission (NAHC) Sacred Lands File search was conducted for the Project Area, and results were received on June 1, 2023. The NAHC search produced no results.

Any potential TCPs identified by the current study will be reviewed by Tribes associated with the TCP, Inyo National Forest, BLM-Bishop Field Office, the SHPO, and FERC.

8.13.2. Environmental Effects

8.13.2.1. Effects of Continued Project Operation and Maintenance on Tribal Resources that May be Eligible for Inclusion in the NRHP, or on Other Areas or Places of Religious, Cultural, and Traditional Importance to Indian Tribes

Current Cultural Resource Management

SCE prepared a Cultural Resource Management Plan for the Lundy Project in 1990 (White, 1990). The plan identifies specific measures that SCE undertakes to avoid adverse effects to NRHP-eligible cultural resources in the FERC Project Boundary. The plan identifies various programmatic measures that SCE is required to implement, as well as resource monitoring and required data recovery efforts. Resource monitoring and recordation is required to occur in 3- to 5-year increments to determine the success of current measures and to evaluate the need for additional treatment. The plan requires that if effects to NRHP-eligible properties cannot be avoided with implementation of protective and avoidance measures, SCE, in consultation with the SHPO and FERC, shall address any effects in accordance with 36 CFR Part 800.

Current Potential Adverse Effects and Issues on Tribal Resources

FERC's decision to issue a new license is considered an "undertaking" pursuant to 36 CFR 800.16(y), and the NHPA requires federal agencies to consider the effect of undertakings on historic properties and provide ACHP an opportunity to comment. Project O&M could potentially affect cultural and Tribal resources, TCPs, and other resources of traditional, cultural, or religious importance to the Native American community.

The purpose of identifying effects is to determine which resources may have heritage values compromised or altered, and to aid in the development of management/protection measures to incorporate in the HPMP for the Project. In consultation with the stakeholders and Tribes, PME measures specific to Tribal resources will be developed and included in the HPMP.

Tribal Resources

Identification of Tribal resources and their documentation in the TRI-1 Technical Study Report is not complete.

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NO ACTION

Under the No Action Alternative, SCE would continue Project O&M in accordance with the terms and conditions of the existing FERC Project license. Effects to historic properties, resources that are being reevaluated, and unevaluated resources as a result of Project O&M have been identified, relative to baseline conditions.

PROPOSED ACTION

Under the Proposed Action, SCE would continue Project O&M activities in accordance with the terms and conditions of the license to be issued for the Proposed Action. The Proposed Action includes implementation of new MIFs, and other resource management plans (DLA Volume II). Specific to cultural resources, SCE is in the process of developing an HPMP (Appendix E.5, DLA Volume II).

8.13.2.2. Consistency with Inyo National Forest Land Management Plan

SCE reviewed the desired conditions in the Inyo National Forest LMP for consistency with the Project (USFS, 2019). The following include desired conditions with which the Project is consistent (USFS, 2019):

- TRIB-FW-DC 03: Native Americans have access to areas that provide them an opportunity to practice traditional, cultural, and religious lifeways, such as plant gathering, fishing, hunting, and ceremonial activities that are essential to maintaining their cultural identity and the continuity of their culture.
- TRIB-FW-DC 04: Traditional ecological knowledge is a valued part of the process when developing and implementing restoration projects and other national forest programs.
- CULT-FW-DC 02: Cultural resources, TCPs, and sacred sites are protected through project design and consultation with Indian Tribes, Tribal cultural leaders, and consulting parties.

8.13.2.3. Proposed Protection, Mitigation, and Enhancement Measures

Potential effects and PME measures related to this resource are pending the completion of the TRI-1 Technical Study Report. Upon completion, the report will be filed as confidential and privileged in Volume V of the Final License Application. An HPMP is being developed in consultation with the Inyo National Forest, BLM-Bishop Field Office, and Tribes (Appendix E.5, DLA Volume II).

The HPMP will be implemented after license issuance and include guidelines for monitoring archaeological site conditions as well as PME measures to avoid, minimize, and/or mitigate direct and indirect effects to NRHP-eligible or listed resources.

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8.13.2.4. Unavoidable Adverse Impacts

As the Proposed Action would continue existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Tribal resources.

Identification of effects is pending the completion of the TRI-1 Technical Study Report.

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8.14. SOCIOECONOMIC RESOURCES

8.14.1. AFFECTED ENVIRONMENT

The Lundy Project is located near the town of Mono City, Mono County, California, approximately 5 miles west of Mono Lake. Mono City is a small town with a total area of 7.8 square miles, located at 6,768 feet NGVD (see Figure 2.1-1). The surrounding area has almost no development aside from the roads that traverse the vicinity. Mono County is centrally located on the eastern side of California, with the State of Nevada bordering to the east. Tuolumne, Mariposa, Madera, and Fresno counties border to the west; Alpine County borders to the north; and Inyo County borders to the south. An extensive road system provides transportation through the county including U.S. Highways 6 and 395, which traverse in a general north-south direction, while numerous scenic byways and county roads run east-west within the county.

The following is a summary of socioeconomic data for the town of Mono City and Mono County, where the Lundy Project is located, including population patterns, average household income, and employment sectors.

8.14.1.1. General Land Use

The Lundy Project is located on Mill Creek in Mono County, California, on private land owned by SCE and on federal lands (USFS and BLM, and a small portion of Mono County lands). The predominant land use are shrub/scrub, deciduous forest, and evergreen forest (USGS, 2024) (see Figure 8.11-2 and Table 8.11-2 in Section 8.11 *Land Use*).

8.14.1.2. Population Patterns

Census Data from the U.S. Census Bureau (USCB) was last collected during the 2020 decennial census. The 2020 Census provides information for communities in Mono County and communities within, including a Census Designated Place (CDP). A CDP is a concentration of population identified by the USCB for statistical purposes. Ninety percent of the population in Mono County lives within one of 15 CDPs identified by the USCB. The unincorporated community of Mono City is the nearest CDP to the Lundy Project. The Town of Mammoth Lakes is the only incorporated community within Mono County.

The American Community Survey (ACS) is an ongoing survey that collects information on social, economic, housing, and demographic information from a sample of households across the 50 states, the District of Columbia, and Puerto Rico. These data, with the recent census data (2020), provide estimates on social, economic, housing, and demographic statistics each year and were used in this report to provide updated statistics when available.

Mono City is a small town that had a recorded population of 224 people during the 2020 Census (USCB, 2020e). Between 2010 and 2020, the population of Mono City increased from 172 residents to 224, a 30.23 percent increase (Table 8.14-1; USCB, 2010, 2020g). From 2016 to 2019, the population fluctuated widely, even declining to 58 people in 2017,

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but generally remained between 96 and 115 people (USCB, 2016, 2017, 2018, 2019). By 2021, the USCB estimate placed the population of Mono City to 197, slightly down from 2020 (USCB, 2021). The 2024 population estimate of Mono City increased to 324 people, a 44.6 percent change (USCB, 2024b). Bridgeport, with an estimated 303 people in 2024, and Lee Vining, with an estimated 628 people in 2024, are the next largest CDPs near Mono City within Mono County (Data USA, 2024c, 2024h).

The 2024 population of Mono County is estimated at 12,991 people and has experienced a total decrease in population of 1.5 percent since 2020, when the population was 13,195 people, a decline rate larger than the rest of California, which has a decline rate of 0.63 percent (USCB, 2020b, 2024m).

Table 8.14-1 summarizes the population estimates for the town of Mono City, Mono County, and state of California, as reported in the 2010 and 2020 Census, and 2024 ACS Demographic and Housing survey results.

Table 8.14-1. Comparison of Changes in Total Populations in Mono City, Mono County, and the State of California

Location	2010 Census Population	2020 Census Population	2024 Population Estimates	% Change 2010 - 2020	% Change 2020–2024
Mono City	172	224	324	30.2%	44.6%
Mono County	14,202	13,195	12,991	-7.1%	-1.5%
California	37,253,956	39,538,223	39,287,377	6.10%	-0.63%

Source: USCB, 2010a, 2020b, 2024a, 2024b, 2024m

The median age in Mono City is 38.9 years old, similar to the median age of California residents at 37.9 years old (USCB, 2024a, 2024b). The total number of civilians in the labor force in Mono County (ages 16 or older) in 2024 was 7,794, or 70.7 percent, slightly above California's employment rate of 64.2 percent (USCB, 2024c, 2024d). None of the population lives below the poverty line in Mono City. Comparatively, 11.8 percent of the population in California does live below the poverty line (USCB, 2024g, 2024h).

As of 2020, the diversity of Mono City is characterized as predominantly White, with a population of approximately 184 residents identifying as White alone, 15 residents as one non-White race, 15 residents as two or more races, and one resident as three or more races. Nine residents chose not to identify (USCB, 2020e). Approximately 0.0 percent of Mono City's 324 residents are foreign-born (outside the United States), significantly less than the rate of foreign-born residents in Mono County at 14.1 percent and California at 27.6 percent (USCB, 2024m, 2024p, 2024q).

8.14.1.3. Households/Family Distribution and Income

Table 8.14-2 provides the estimated 2024 income, employment, and workforce statistics for households and families in Mono County from the 2020 Census survey estimated

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using the 2024 ACS 5-year estimate. The total number of occupied households in Mono County was estimated to be 5,744, with 158 of those households located within Mono City (USCB, 2024p). Out of the estimated 324 people in Mono City, 192 are currently employed (USCB, 2024n). Comparatively, out of the 12,991 people in Mono County, 7,904 of them are employed. The average household size is 2.16 in Mono City, compared to 2.63 in Mono County (USCB, 2024e).

Table 8.14-2. Household and Family Distribution and Income for Mono City and County

Statistic	Mono City	Mono County
Households (Occupied)[a]	158	5,744
Population in the Workforce[b]	192	7,904
Unemployment Rate[b]	N/A	3.1%
Median Household Income (in 2024 dollars)[c]	$109,265	$99,415
Average Household Size[d]	2.16	2.63

Sources: a = USCB, 2024l; b = USCB, 2024n; c = USCB, 2024k; d = USCB, 2024e

Table 8.14-3 breaks down the income statistics for households in the Mono County census-designated places. The minimum median household income is in Colville, with $46,860, and the maximum median income is $203,698 in Sunny Slopes. Mono City's median household income of $109,265 is right in between the minimum and maximum within Mono County.

Table 8.14-3. Household Income for Mono County Census-Designated Places

Median Household Income	
Location	**2024 Median**
County-wide	$100,149
Mono County Census-Designated Places	
Aspen Springs	$131,673
Benton	$68,027
Bridgeport	$120,850
Chalfant	$83,077
Coleville	$46,860
Crowley Lake	$115,476
June Lake	N/A
Lee Vining	$134,120

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Median Household Income	
Location	**2024 Median**
McGee Creek	$91,860
Mammoth Lakes	$98,056
Mono City	$109,265
Paradise	$67,687
Sunny Slopes	$203,698
Swall Meadows	$156,917
Topaz	N/A
Twin Lakes	$90,087
Virginia Lakes	N/A
Walker	N/A

Source: Data USA, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f, 2024g, 2024h, 2024i, 2024j, 2024k, 2024l, 2024m, 2024n, 2024o, 2024p, 2024q; USCB, 2024k

N/A = data not available

8.14.1.4. Project Vicinity Employment

In 2020, employment in Mono City was 99 employees, an increase of 83.3 percent (USCB, 2020a). The 99 people employed were in the following industries: Professional, Scientific & Technical Services (57 people), Other Services, Except Public Administration (22 people), and Transportation and Warehousing (20 people) (USCB, 2020g). Median household income data for the town of Mono City were not publicly available for 2020. Mono County's median household income was $64,924 in 2020 (USCB, 2020d, 2020f). This was lower than the state median household income of $78,672 at the time (USCB, 2020c).

In the 2024 ACS estimates, employment in Mono City increased by approximately 192 people. Industries included: Professional, Scientific & Technical Services (74 people), Educational services, and health care and social assistance (49 people), Other Services, Except Public Administration (47 people), and Public administration (22 people) (USCB, 2024l). Median household income in 2024 in Mono City was estimated to be around $109,265 (USCB, 2024k). Median household income in Mono County increased to $99,415, which is now higher than the $100,149 median household income in the state of California (USCB,2024j, 2024f). Major employers within Mono County are listed in Table 8.14-4. Many of the major employer opportunities in Mono County revolve around hospitality services or government services.

Table 8.14-4. Major Employers in Mono County, California

Employer Name	Location	Industry	Class Size
Annett's Mono Village	Bridgeport	Resorts	20-49

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Employer Name	Location	Industry	Class Size
County of Mono	Mammoth Lakes	Government Offices-County	100-249
Double Eagle Resort & Spa	June Lake	Resorts	50-99
Edna Beaman Elementary	Benton	Schools	50-99
Hermosa Hospitality Group	Mammoth Lakes	Hotel & Motel Management	50-99
June Meadows Chalet	June Lake	Skiing Equipment-Rental	100-249
Juniper Springs Resort	Mammoth Lakes	Resorts	50-99
Mammoth Community Water District	Mammoth Lakes	Water & Sewage Companies-Utility	20-49
Mammoth Elementary School	Mammoth Lakes	Schools	50-99
Mammoth Five Star Lodging	Mammoth Lakes	Hotel & Motel Management	20-49
Mammoth Mountain Inn	Mammoth Lakes	Resorts	50-99
Mammoth Mountain Ski Area	Mammoth Lakes	Resorts	20-49
Mammoth Ranger District Ctr	Mammoth Lakes	Ranger Services	50-99
Mammoth Reservations Inc	Mammoth Lakes	Vacation Rentals	50-99
Mammoth Unified School District	Mammoth Lakes	Schools	250-499
Mono County Office-Emergency	Bridgeport	Government Offices-County	50-99
Mono County Public Works Dept	Bridgeport	Utility Contractors	100-249
Mono County Sheriff	Crowley Lake	Sheriff	20-49
Sheriff Office-Finance	Bridgeport	Sheriff	50-99
Southern Mono Healthcare District	Mammoth Lakes	Health Care Management	100-249
Tamarack Lodge Resort	Mammoth Lakes	Resorts	50-99
TOOMEY'S	Mammoth Lakes	Restaurants	20-49
Village Lodge Mammoth	Mammoth Lakes	Resorts	100-249

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Employer Name	Location	Industry	Class Size
Vons	Mammoth Lakes	Grocers-Retail	100-249
Westin Monache Resort Mammoth	Mammoth Lakes	Hotels & Motels	100-249

Source: ALMIS, 2026

8.14.2. ENVIRONMENTAL EFFECTS

8.14.2.1. Effects of continued Project operations and flow diversions on agriculture and other consumptive uses in Mono City

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Lundy Project would continue to operate in a manner consistent with existing operations, with no proposed changes. As such, there would be no impact on socioeconomics within the Project vicinity under the No-Action Alternative.

PROPOSED ACTION

Under the Proposed Action, the Lundy Project would continue to operate in a manner consistent with existing operation, including compliance with the Mill Creek Water Rights[23]. As such, there would be no impact to flow diversions for agriculture or other consumptive uses of water within the Project vicinity under the Proposed Action.

8.14.2.2. Effects of any reduction in the amount of water available for irrigation on agricultural production and pastureland for livestock in Mono Lake watershed.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Lundy Project would continue to operate in a manner consistent with existing operations, with no proposed changes. As such, there would be no impact on socioeconomics within the Project vicinity under the No-Action Alternative.

PROPOSED ACTION

Under the Proposed Action, the Lundy Project would continue to operate in a manner consistent with existing operation, including compliance with the Mill Creek Water Rights.

[23] SCE operates the project to comply with the Mill Creek Water Rights, which were adjudicated in Mono County Superior Court on November 30, 1914. SCE has a non-consumptive water right (pass-through) for hydropower generation on Mill Creek. SCE's operations rely on an Annual Operations Plan that utilizes the Mill Creek Accounting and Planning Tool (MCAPT) and forecast methodology that has been developed with the water rights holders and memorialized in a Settlement Agreement (SCE et al., 2004) and Amended Settlement Agreement (SCE et al., 2022). The MCAPT integrates forecasted and observed run off quantities with the water rights priorities to develop a schedule for Mill Creek water diversions and deliveries.

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As such, there would be no impact to the amount of water available for agricultural and pastureland irrigation within the Project vicinity under the Proposed Action.

8.14.2.3. Consistency with Management Plan(s)

SCE has reviewed the desired conditions in the Mono County General Plan (Mono County, 2021) to assess if the Project is consistent with management objectives and goals outlined under the Housing Element and Conservation-Open Space Element. As the Lundy Project would not affect housing, the proposed Project would not interfere with this plan's goals. In addition, Goal 11 "encourage[s] appropriately scaled renewable energy generation for use within the county," which the Lundy Project helps support by continuing to provide renewable energy under the Proposed Action. As such, the Lundy Project, as it relates to socioeconomic resources is consistent with relevant management plans.

8.14.2.4. Proposed Protection, Mitigation, and Enhancement Measures

There are no protection, mitigation, or enhancement measures proposed for socioeconomic resources.

8.14.2.5. Unavoidable Adverse Impacts

As the Proposed Action continues existing operations and does not anticipate changes to facilities, no unavoidable adverse impacts have been identified for Socioeconomic Resources.

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9.0 CUMULATIVE EFFECTS ANALYSIS

A cumulative effect is the impact on the environment that results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

FERC identified water quantity and quality, and aquatic species and their habitats, in SD2,[24] as resources that could be cumulatively affected by the proposed continued O&M of the Lundy Project.

9.1. WATER RESOURCES

For purposes of this cumulative effects analysis, the geographic scope for water quantity and quality includes Lundy Lake and Mill Creek to Mono Lake, including all stream reaches of Mill Creek between Lundy Lake and Mono Lake, as well as the Mill Creek Return Ditch, all within the Mono Lake Subbasin. This scope reflects the hydrologic connectivity among Project facilities, downstream receiving waters, and return-flow pathways, and is consistent with the Project-affected area described for water resources.

The temporal scope for cumulative effects includes the period of historic and ongoing for hydropower and non-hydropower activities in the Mill Creek watershed affecting water quantity and water quality, as well as reasonably foreseeable future conditions during the term of a new license. Such activities include, but are not limited to construction and operation of Lundy Dam and Lundy Lake, hydropower generation, operation of the powerhouse and associated conveyance facilities, and management of flows to satisfy adjudicated water rights for irrigation. Natural and regional factors, including snowpack accumulation, snowmelt timing, seasonal runoff variability, groundwater interactions, tributary inflows, drought, and long-term climate-driven changes in hydrology, also contribute to cumulative conditions in the watershed.

Under existing conditions, Mill Creek is a snowmelt-dominated system, with higher flows typically occurring during spring and early summer runoff and lower flows during late summer and winter. The Project influences the timing, routing, and short-term regulation of flows through storage in Lundy Lake, controlled releases below Lundy Dam, diversion through the flowline and powerhouse, and routing of powerhouse discharge either to the Wilson System or back to Mill Creek via the MCRD. However, the Project operates as a non-consumptive hydropower use and does not result in long-term net water loss to downstream areas; flows are passed through the system and returned to Mill Creek or downstream conveyance systems in accordance with adjudicated water rights and operational requirements.

Cumulative effects on water quantity are primarily associated with the combined influence of Project flow regulation, adjudicated water-rights administration, irrigation diversions

[24] Accession No. 20240729-3029

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and deliveries, return-flow pathways, and natural hydrologic variability. The MCAPT and Annual Operations Plan are used to integrate forecasted and observed runoff with water-right priorities and to support scheduling of diversions and deliveries. Existing flow monitoring infrastructure, including gages at Lundy Lake, Mill Creek below Lundy Dam, the Lundy Powerhouse tailrace, Upper Conway Ditch, the splitter box release to the Wilson System, and the MCRD, provides the basis for documenting Project releases, downstream routing, and compliance with applicable flow requirements.

The Project's contribution to cumulative hydrologic effects is associated with its ongoing role in regulating flow timing and routing within the Mill Creek system. Lundy Lake stores and seasonally regulates runoff, while powerhouse operations and conveyance facilities redistribute flows downstream of the Lundy Dam. These operations may affect the spatial and temporal availability of water in Project-affected reaches, particularly during low-flow periods or when routing between Mill Creek, the Wilson System, and the MCRD varies. However, under the Proposed Action, SCE would continue existing operations, including current MIF requirements, water-rights-based deliveries, and flow-routing practices; therefore, the Proposed Action would not introduce a new operational effect or increase the Project's incremental contribution to cumulative water quantity impacts relative to current conditions.

Cumulative effects on water quality are closely related to the same hydrologic and operational factors that influence water quantity. Flow timing, residence time in Lundy Lake, reservoir stratification, routing through the powerhouse, and intermittent return flows through the MCRD may affect localized water temperature, DO, and sediment transport conditions. Available 2025 water quality and water temperature monitoring data indicate that Lundy Lake and Project-affected stream reaches generally reflect a high-elevation, low-nutrient system characterized by cold water, low mineral content, high DO in stream reaches, low nutrient concentrations, low turbidity, and generally low concentrations of metals and other dissolved constituents.

In Lundy Lake, cumulative water quality conditions reflect natural watershed inputs, seasonal reservoir processes, and Project-related storage and release operations. Monitoring documented seasonal thermal stratification during summer, with warmer surface waters and cooler deeper waters, and corresponding seasonal variation in DO within the reservoir. These conditions are typical of reservoir limnology and are not expected to result in downstream water quality degradation under continued operations. Nutrient concentrations and chlorophyll-a were low, indicating limited primary productivity and no evidence of nuisance algal blooms attributable to Project operations.

In Mill Creek and downstream receiving waters, cumulative water quality conditions reflect the combined influence of upstream hydrology, reservoir releases, tributary and groundwater inputs, the MCRD, irrigation-related return pathways, and natural seasonal variability. Water temperatures in Project-affected reaches showed seasonal variation, with warmer conditions during summer and cooler conditions during winter, while DO in stream sites generally remained high and near saturation. The MCRD and powerhouse tailrace may contribute localized variability in temperature and flow where they mix with

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Mill Creek; however, available monitoring data do not indicate that these localized effects result in watershed-scale water quality degradation or impairment of beneficial uses.

Sediment- and turbidity-related cumulative effects are also expected to remain limited. Lundy Lake serves as a natural sediment trap from upstream sources, so the impact of the dam on sediment supply downstream is likely minimal. Deer Creek continues to serve as the primary natural sediment supply to lower Mill Creek. Suspended sediment and turbidity conditions in Mill Creek are influenced by natural watershed processes, flow conditions, channel characteristics, and localized inputs. Available monitoring data show generally low turbidity, low total suspended solids, and no evidence of Project-related increases in sediment loading that would adversely affect beneficial uses.

Mercury in fish tissue represents an additional cumulative water quality consideration in Lundy Lake. Fish tissue sampling conducted in 2025 found mercury concentrations in sampled rainbow trout and brown trout below the U.S. EPA tissue residue criterion of 0.3 µg/g, and the highest trophic-level mean concentration was below the Lahontan Basin Plan sport fish objective of 0.2 µg/g. Mercury cycling and bioaccumulation are influenced by regional atmospheric deposition, watershed and reservoir biogeochemical conditions, and food-web dynamics rather than by a Project-specific mercury source. Continuation of existing Project operations is not expected to measurably alter mercury cycling or fish tissue bioaccumulation patterns.

Reasonably foreseeable future actions and conditions that may influence cumulative water quantity and water quality include continued O&M of Project facilities, continued administration of adjudicated water rights, continued downstream irrigation and land-management activities, and hydrologic changes associated with drought, snowpack variability, and climate-driven shifts in runoff timing. These regional and watershed-scale drivers may affect the timing, magnitude, and duration of flows in Mill Creek and may indirectly influence water temperature, DO, and other water quality parameters, particularly during low-flow and warm-season periods.

Because the Proposed Action would continue existing operations without changes to reservoir management, MIF requirements, water delivery obligations, powerhouse operations, or flow-routing practices, it would not create new cumulative effects or increase the Project's incremental contribution to existing cumulative effects on water quantity or water quality. The Project would continue to contribute to cumulative hydrologic conditions through flow regulation and routing; however, this contribution would remain consistent with current conditions and would continue to be managed through established water-rights procedures, minimum flow requirements, gaging and monitoring infrastructure, and applicable water quality standards.

Overall, cumulative effects on water quantity and water quality in the project area are the result of the combined influence of historic and ongoing Project operations, adjudicated downstream water uses, irrigation and conveyance systems, natural snowmelt-driven hydrology, and regional climatic variability. Available monitoring data indicate that water quality in Lundy Lake, Mill Creek, the MCRD, and downstream receiving waters remains generally consistent with high-quality, cold-water conditions and supports designated

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beneficial uses. Under the Proposed Action, continued Project operation is not expected to result in cumulative degradation of water quality, impairment of beneficial uses, or additional cumulative impacts to downstream water rights and users beyond those associated with existing conditions.

9.2. FISH AND AQUATIC RESOURCES

For purposes of this cumulative effects analysis, the geographic scope includes Lundy Lake, Mill Creek downstream of Lundy Dam to Mono Lake, the MCRD, and associated aquatic habitats potentially influenced by Project operations. This area encompasses aquatic habitats used by fish and benthic macroinvertebrates, including the Project impoundment, bypassed reach, and downstream reaches influenced by Project flow regulation and water routing.

The temporal scope includes historic and ongoing Project operation, past watershed modifications, current environmental conditions, and reasonably foreseeable future actions over the term of a new license. Past and present actions affecting fish and aquatic resources include construction and operation of Lundy Dam and Lundy Lake, operation of the hydropower system and associated conveyance facilities, implementation of MIF requirements, historical water diversions and irrigation infrastructure within the Mill Creek watershed, fish stocking programs conducted by CDFW, recreational fishing, beaver colonization and associated habitat modification, and regional land-management activities. Reasonably foreseeable future actions include continued Project operation, continued recreational fishery management by CDFW, natural changes in beaver distribution and habitat creation, and climate-driven changes in runoff timing, snowpack, streamflow, and water temperature.

The aquatic community within the Project Area has developed under the combined influence of Project operations, watershed processes, and historic fish introductions. Although the Mill Creek watershed was historically fishless, it currently supports an established fish assemblage dominated by brown trout, with rainbow trout maintained primarily through stocking and tui chub present within Lundy Lake. Available fisheries data indicate that brown trout populations in both Lundy Lake and Mill Creek are self-sustaining and contain multiple age classes, including young-of-year, juveniles, and adults. Population metrics documented over approximately four decades indicate continued recruitment, relatively high abundance, biomass, and density, and generally good fish condition, demonstrating that the aquatic environment continues to support viable fish populations despite hydrologic modification and other watershed influences.

Cumulative effects on fish populations and aquatic habitat are influenced by a combination of Project flow regulation, natural hydrologic variability, habitat complexity, channel morphology, fish stocking activities, and watershed-scale ecological processes. Stream habitats within Mill Creek are highly heterogeneous and are shaped by channel confinement, substrate composition, groundwater accretion, tributary inputs, flow regime, beaver activity, and localized infrastructure influences. Beaver-created habitats contribute substantially to habitat diversity by creating ponds, off-channel habitats, low-velocity refugia, and complex wetland features that support multiple fish life stages. These

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features interact with Project-regulated flows to create the current mosaic of habitat conditions.

The Project contributes to cumulative aquatic habitat effects primarily through its regulation of flow timing, storage of runoff in Lundy Lake, diversion through the powerhouse, and provision of MIFs in Mill Creek. These operations influence hydraulic conditions, habitat availability, and wetted channel extent within the bypassed reach. Historical studies and recent investigations indicate that habitat availability for brown trout varies with flow and life stage, but existing habitat conditions continue to support persistent and reproducing fish populations throughout Project-affected reaches. Because the Proposed Action would maintain existing flow management practices, MIF requirements, diversion operations, and reservoir management, the Project would not contribute additional cumulative habitat effects beyond those that currently exist.

Fish passage conditions also contribute to cumulative effects on aquatic resources. Mill Creek contains several natural and anthropogenic passage constraints, including beaver dams, culverts, bedrock features, and historic diversion structures. These features collectively influence fish movement and habitat connectivity independent of Project operations. Although these barriers may affect localized movement patterns, the continued presence of multiple age classes of brown trout throughout the watershed indicates that sufficient connectivity and habitat access remain available to sustain the existing fish population. The Proposed Action would not alter existing passage conditions or increase the Project's contribution to cumulative connectivity effects.

Fish entrainment and stranding represent additional cumulative considerations. Historical studies (as noted in Section 8.5) have indicated that fish entrainment at the unscreened Lundy Lake intake occurs at relatively low rates. Similarly, results of AQ-2 indicate that stranding risk is primarily associated with localized geomorphic features, off-channel habitats, beaver pond complexes, and rates of wetted-perimeter dewatering rather than Project operations alone. Stranding potential varies among reaches and is heavily influenced by natural channel complexity and beaver activity. Existing operational practices, including controlled flow reductions (controlled releases), help reduce rapid dewatering. Because no operational changes are proposed, the Project's contribution to cumulative entrainment and stranding effects would remain unchanged from existing conditions.

Aquatic macroinvertebrate communities provide an important indicator of cumulative aquatic ecosystem health. Available benthic macroinvertebrate data collected in 1990 and 2012 document a diverse assemblage dominated by pollution-sensitive taxa typical of cold-water Sierra Nevada streams. The 2012 CSCI score placed Mill Creek within the highest biological condition category and indicated conditions comparable to reference streams in the region. These findings suggest that aquatic food-web processes, water quality, and habitat conditions remain suitable for supporting healthy aquatic communities despite long-term Project operation and other watershed influences. The continued presence of abundant insectivorous trout populations further supports the conclusion that aquatic productivity remains sufficient to sustain fish populations.

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Aquatic invasive species represent a reasonably foreseeable cumulative concern within the watershed. While quagga mussels, zebra mussels, New Zealand mudsnails, and golden mussels have not been documented within the Project Area, regional spread of invasive aquatic species remains possible. Existing vulnerability assessments indicate that Lundy Lake has a low to low-moderate suitability for establishment of invasive mussels based on current water chemistry conditions. Future establishment of invasive species would likely be driven by regional vectors, recreational use, and broader watershed processes rather than Project operations. Consequently, the Proposed Action would not substantially increase cumulative invasive species risk relative to existing conditions.

Climate-driven changes in hydrology, runoff timing, stream temperatures, and drought frequency represent the most substantial reasonably foreseeable future influence on fish and aquatic resources. Changes in snowpack accumulation and earlier runoff timing could alter habitat availability, water temperatures, and aquatic productivity throughout the Mill Creek watershed. These watershed-scale drivers would affect fish populations regardless of Project operation and are expected to have a greater influence on future aquatic resource conditions than continuation of existing Project operations.

Because the Proposed Action consists of continued operation without changes to reservoir management, diversion practices, instream flow requirements, powerhouse operations, entrainment risk, or fish stranding management, it would not increase the Project's incremental contribution to cumulative effects on fish populations, aquatic habitat, aquatic macroinvertebrates, or aquatic ecosystem function. Existing evidence demonstrates that fish populations remain self-sustaining, aquatic habitats continue to support multiple life stages, benthic macroinvertebrate communities exhibit high biological condition, and overall aquatic ecosystem processes remain functional under current conditions.

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10.0 DEVELOPMENTAL ANALYSIS

As specified in the FERC content requirements at 18 CFR § 5.18(b)(5)(ii)(E), this section compares costs associated with the No-Action Alternative (existing condition) with costs associated with SCE's Proposed Action Alternative for the Lundy Project. This analysis includes a comparison of economic benefits; costs of new environmental measures, management, and monitoring plans; and power generation between the alternatives. Costs are provided in 2026 United States dollars (unless otherwise noted), and all analyses are predicated on a new license with a 40-year term being granted.

In keeping with FERC policy as described in 72 FERC ¶ 61,027 (July 13, 1995), this economic analysis is based on current electric power cost conditions and does not consider future escalation of fuel prices in valuing the Project's power benefits. In most cases, electricity from hydropower would displace some form of fossil fuels, solar, or wind generation, in which fuel cost is the largest component of the cost of electricity production.

10.1. NO-ACTION ALTERNATIVE

Table 10.1-1 will be populated for the Final License Application with the most recent data available for 2026. The populated table will summarize the assumptions and the economic information used in the analysis.

Table 10.1-1. Parameters for Economic Analysis of the Project

Parameter	Value
Taxes ($)	
Federal income tax rate (%)	
State income tax rate (%)	
Levy rate for Mono County (%)	
Insurance (SCE is self-insured)	
Net investment (2026) ($)[a]	
Original cost (2026) ($)[b]	
Relicensing implementation capital cost ($)	
Relicensing cost ($)[c]	
Routine O&M ($/year)[d]	
New and non-routine O&M ($/year)[e]	
Annual fees ($/year)[f]	

O&M = operation and maintenance; PME = protection, mitigation, and enhancement; SCE = Southern California Edison

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[a] Net investment, or net book value, is the depreciated Project investment allocated to power purposes. Reported as of the end of 2026.
[b] Future major capital costs included major plant rehabilitation to maintain present-day capability scheduled from 2027 through 2063 and are expressed in non-inflated dollars.
[c] Relicensing costs include the administrative, legal/study, and other expenses to date or budgeted to complete the license process.
[d] Existing plant O&M does not include O&M related to PME measures associated with the current license.
[e] New and non-routine O&M includes PME measure operation, dam safety, and recreation and other PME measure maintenance.
[f] Annual fees paid under part I of the FPA are based on the nameplate capacity of the Project.

As currently operated, the Project generates an average of 7,785 MWh annually (2016-2025) and has an installed capacity of 3.0 MW.

10.2. COMPARISON OF ALTERNATIVES

Table 10.2-1 will be populated for the Final License Application with the most recent data available for 2026. The populated table will summarize the annual cost, power benefits, and annual net benefits for the No-Action Alternative and the Proposed Action. Project costs and benefits are presented in Exhibit H *Description of Project Management and Need for Project Power*.

Table 10.2-1. Summary of the Annual Cost, Power Benefits, and Annual Net Benefits for the No-Action Alternative and Proposed Action

	No-Action Alternative	Proposed Action
Installed capacity (MW)	3.0	3.0
Average annual generation (MWh)[a,b,c]		
Reduction in average annual generation (MWh)		
Average annual energy value ($/MWh) (2026)		
Average annual O&M cost ($)[a]		
Annual net benefit ($)		
Reduction in annual net benefit ($)[d]		

MW = megawatt; MWh = megawatt-hour; O&M = operation and maintenance
[a] Annual averages over the most recent 5-year period (2021 to 2025).
[b] Since issuance of the current license (1999 to 2025).
[c] Reduction in annual net benefit calculated by multiplying the reduction in average annual energy production (-7,785 MWh) by the 2026 average energy value ($/MWh) of $TBD.

The Proposed Action would result in the environmental benefits that accompany implementation of the PME measures described in the DLA Volume II. SCE would continue to operate the Project as a dependable source of renewable electrical energy for its customers.

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Implementation of the Proposed Action would provide favorable customer benefits over the Project decommissioning. Project decommissioning was not considered and is dismissed from detailed analysis.

10.3. COST OF ENVIRONMENTAL MEASURES

Table 10.3-1 will be populated for the Final License Application with the most recent data available for the proposed PME measures. The populated table will summarize the assumptions and the economic information used in the analysis.

Table 10.3-1. Cost of PME Measures Considered in Addressing the Environmental Effects of Continuing to Operate the Project

PME Measure	Capital Cost[a]	O&M Cost (Proposed Action)
Resources Management Plan[b]		
Water Management Plan		
Recreation Resources Management Plan		
Project Roads Management Plan		
Historic Properties Management Plan		

PME = protection, mitigation, and enhancement; O&M = operation and maintenance;
[a] (--) no significant change in level of effort/cost is anticipated.
[b] Cost of the Resource Management Plan implementation excludes Project operations, and is intended to summarize costs of the remaining existing and new management plans only.

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11.0 CONCLUSIONS AND RECOMMENDATIONS

This section compares the developmental and non-developmental effects of the No-Action Alternative and the Proposed Action for the Project; identifies the recommended alternative; summarizes unavoidable adverse effects; discusses the recommendations of fish and wildlife agencies; and describes the Project's consistency with comprehensive plans.

11.1. COMPARISON OF ALTERNATIVES

This section includes a comparison of the developmental and non-developmental effects (resource conditions) resulting from O&M of the Project under the No-Action Alternative and the Proposed Action.

11.1.1. NO-ACTION ALTERNATIVE

The No-Action Alternative maintains the existing baseline conditions with no additional benefits to resources (status quo). The Project would continue to operate under the current license conditions. No new environmental or cultural measures would be implemented.

11.1.2. PROPOSED ACTION

Overall, the Proposed Action (as described in Section 4.0 *No-Action Alternative* and Section 5.0 *Proposed Action*) is to continue to operate and maintain the Project with no changes to MIFs. Key considerations in developing the Proposed Action were to ensure future O&M of the Project protects power generation, consumptive water supply, and system capability and reliability, while maintaining or enhancing environmental and cultural resources in the Project vicinity. Potential resource effects under the Proposed Action are described in detail in Section 8.0 *Environmental Analysis*. Under the Proposed Action, ongoing Project O&M activities will be memorialized in management plans, which are designed to protect, maintain, or enhance environmental and cultural resources over the term of the new license (DLA Volume II). The proposed measures include new resource protection measures (see Table 5.6-1 in Section 5.6 *New or Modified Environmental Measures, Management and Monitoring Plans, and Programs*) compared to the No-Action Alternative.

The Project's annual average energy generation (2016–2025) under the No-Action Alternative is between 4,116 MWh and 16,799 MWh, and it is estimated that the annual average energy generation under the Proposed Action will be between 4,116 MWh and 16,799 MWh.

The PME measures under the Proposed Action with this DLA will result in benefits to resources compared to the No-Action Alternative. Examples of potential benefits associated with the PME measures are described below:

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- Water Resources
  - Formalizes existing water management, monitoring, and reporting procedures to support compliance with license requirements, water rights obligations, and resource agency commitments.
  - Provides a framework for continued streamflow monitoring and adaptive management to support efficient Project operations while maintaining aquatic habitat conditions and downstream flow regimes.
  - Establishes clear operational protocols that support long-term protection of water quantity and water quality resources.
- Fish and Aquatic Resources
  - Supports the continued implementation of minimum flow requirements and flow management practices that maintain aquatic habitat conditions within Project-affected stream reaches.
  - Provides ongoing streamflow monitoring data that can be used to verify compliance with flow requirements and support resource management decisions.
  - Promotes predictable flow conditions that reduce the potential for abrupt changes in aquatic habitat and associated effects on fish and other aquatic organisms.
- Botanical Resources and Wildlife Resources
  - Establishes procedures for routine environmental review of Project operation and maintenance activities to minimize potential effects on sensitive habitats, special-status species, and native plant communities.
  - Incorporates existing corporate and Project-specific environmental protection measures, including invasive species prevention, vegetation management, and wildlife protection practices.
  - Supports the long-term maintenance and protection of terrestrial and riparian habitats within the Project Boundary.
- Recreation
  - Establishes processes for operation, maintenance, inspection, and periodic evaluation of Project recreation facilities over the term of the license.
  - Provides a framework for implementing recreation facility improvements identified through relicensing studies and stakeholder consultation.
  - Supports continued public access to Project-related recreation opportunities while maintaining recreation facilities in a safe and functional condition.

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- Land Use and Management
  - Provides documented procedures for managing Project lands and facilities in a manner consistent with applicable land management requirements and agency coordination commitments.
  - Supports continued maintenance of Project infrastructure and associated access routes while minimizing potential effects on surrounding resources.
  - Establishes a consistent framework for environmental review of future Project maintenance and construction activities.
- Cultural and Tribal Resources
  - Establishes clear protocols for protection and management of cultural and Tribal resources, including resource identification, evaluation, treatment, and protection measures.
  - Establishes procedures for consultation and coordination with Tribes, SHPO, and other consulting parties, as appropriate.
  - Establishes protocols for environmental and cultural resource review of Project operation and maintenance activities to ensure the protection of cultural, Tribal, and historic properties.
  - Provides a structured process for managing discoveries, reporting, and compliance activities throughout the term of the license.

11.2. UNAVOIDABLE ADVERSE IMPACTS

No unavoidable adverse effects to environmental resources have been identified as a result of implementation of the Proposed Action (refer to Section 8.0 *Environmental Analysis*).

11.3. CONSISTENCY WITH COMPREHENSIVE PLANS

FERC currently lists 67 comprehensive management plans for the state of California, of which 12 comprehensive plans pertain to resources in the Project vicinity (FERC, 2025); no inconsistencies between these plans and the Proposed Action were identified (Table 11.3-1).

Section 10(a)(2)(A) of the FPA, 16 USC Section 803(a)(2)(A), requires FERC to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the Project. On April 27, 1988, FERC issued Order No. 481-A, revising Order No. 481, issued October 26, 1987, establishing that FERC will afford FPA Section 10(a)(2)(A) comprehensive plan status to any federal or state plan that: (1) is a comprehensive study of one or more of the beneficial uses of a waterway or waterways; (2) specifies the standards, the data, and

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the methodology used; and (3) is filed with the Secretary of the Commission. No inconsistencies between these plans and the Proposed Action were found (Table 11.3-1).

Table 11.3-1. Relevant Comprehensive Management Plans

Agency	Comprehensive Plan	Year
BLM	Final Environmental Impact Statement for 19 Wilderness Study Areas within the Benton-Owens Valley and the Bodie-Coleville Study Areas	1987
USFS	Mono Basin National Forest Scenic Area Comprehensive Management Plan	1989
USFS	Sierra Nevada National Forest Land and Resource Management Plan, Amendment	2004
USFS	Land Management Plan for the Inyo National Forest	2023
USFWS	Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report	2013
CDFG	Strategic Plan for Trout Management: A Plan for 2004 and Beyond	2003
CDFW	California Aquatic Invasive Species Management Plan	2008
CDPR	Outdoor Recreation in California's Regions 2013	2013
CDPR	2012 Survey on Public Opinions and Attitudes on Outdoor Recreation in California: Complete Findings	2014
CDPR	California Statewide Comprehensive Outdoor Recreation Plan (SCORP)	2021
SWRBC	Water Quality Control Plan for the Lahontan Region (Lahontan Basin Plan)	2016
Mono County	Mono County General Plan	2021

BLM = Bureau of Land Management; CDFG = California Department of Fish and Game; CDFW = California Department of Fish and Wildlife; CDPR = California Department of Parks and Recreation; SWRBC = California State Water Resources Control Board; USFWS = U.S. Fish and Wildlife Service; USFS = U.S. Forest Service

11.4. FINDING OF NO SIGNIFICANT IMPACT

Continuing to operate and maintain the Project with the recommended environmental measures (including management and monitoring programs) included under the Proposed Action would not be a major federal action significantly affecting the quality of the environment. Implementation of the measures would result in greater resource enhancements as compared to the No-Action Alternative. These measures are provided in DLA Volume II.

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11.5. REFERENCES

FERC (Federal Energy Regulatory Commission). 2025. *List of Comprehensive Plans*. Federal Energy Regulatory Commission, Office of Energy Projects. Washington, D.C. May 2025. Accessed: August 6, 2026. Available online: https://www.ferc.gov/media/comprehensive-plans.

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SOUTHERN CALIFORNIA EDISON
LUNDY HYDROELECTRIC PROJECT
(FERC PROJECT NO. 1390)



EXHIBIT G
DRAFT LICENSE APPLICATION

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

October 2026

SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
EXHIBIT G: Project Maps

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

Support from:

Kleinschmidt

Exhibit G: Project Maps

Title 18 of the Code of Federal Regulations (CFR), Section 4.61 (License for Minor Project and a Major Project 10MW or less—Existing Dam) includes a description of information that an applicant must include in Exhibit G of its license application.

Exhibit G is a map of the project that must conform to the specifications of 18 CFR § 4.39. In addition to the other components of Exhibit G, the applicant must provide the project boundary data in a geo-referenced electronic format—such as ArcView shape files, GeoMedia files, MapInfo files, or any similar format. The electronic boundary data must be positionally accurate to ±40 feet, in order to comply with the National Map Accuracy Standards for maps at a 1:24,000 scale (the scale of United States Geological Survey) quadrangle maps). The electronic Exhibit G data must include a text file describing the map projection used (i.e., Universal Transverse Mercator, State Plane, Decimal Degrees, etc.), the map datum (i.e., feet, meters, miles, etc.). Three sets of the maps must be submitted on compact disk or other appropriate electronic media. If more than one sheet is used for the paper maps, the sheets must be numbered consecutively, and each sheet must bear a small insert sketch showing the entire project and indicate that portion of the project depicted on that sheet. Each sheet must contain a minimum of three known reference points. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown. If at any time after the application is filed there is any change in the project boundary, the applicant must submit, within 90 days following the completion of project construction, a final Exhibit G showing the extent of such changes. The map must show:

(1) *Location of the project and principal features*. The map must show the location of the project as a whole with reference to the affected stream or other body of water and, if possible, to a nearby town or any other permanent monuments or objects, such as roads, transmission lines or other structures, that can be noted on the map and recognized in the field. The map must also show the relative locations and physical interrelationships of the principal project works and other features described under paragraph (b) of this section (Exhibit A).

(2) *Project boundary*. The map must show a project boundary enclosing all project works and other features described under paragraph (b) of this section (Exhibit A) that are to be licensed. If accurate survey information is not available at the time the application is filed, the applicant must so state, and a tentative boundary may be submitted. The boundary must enclose only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (see paragraph (f) of this section (Exhibit E)). Existing residential, commercial, or other structures may be included within the boundary only to the extent that underlying lands are needed for project purposes (e.g., for flowage, public recreation, shoreline control, or protection of environmental resources). If the boundary is on land covered by a public survey, ties must be shown on the map at sufficient points to permit accurate platting of the position of the boundary relative to the lines of the public land survey. If the lands are not covered by a public land survey, the best available legal description of the position of the boundary must be provided, including distances and directions from fixed monuments or physical features. The boundary must be described as follows:

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(i) *Impoundments*.

(A) The boundary around a project impoundment must be described by one of the following:

(1) Contour lines, including the contour elevation (preferred method);

(2) Specified courses and distances (metes and bounds);

(3) If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or

(4) Any combination of the above methods.

(B) The boundary must be located no more than 200 feet (horizontal measurement) from the exterior margin of the reservoir, defined by the normal maximum surface elevation, except where deviations may be necessary in describing the boundary according to the above methods or where additional lands are necessary for project purposes, such as public recreation, shoreline control, or protection of environmental resources.

(ii) *Continuous features*. The boundary around linear (continuous) project features such as access roads, transmission lines, and conduits may be described by specified distances from center lines or offset lines of survey. The width of such corridors must not exceed 200 feet unless good cause is shown for a greater width. Several sections of a continuous feature may be shown on a single sheet with information showing the sequence of contiguous sections.

(iii) *Noncontinuous features*.

(A) The boundary around noncontinuous project works such as dams, spillways, and powerhouses must be described by one of the following:

(1) Contour lines;

(2) Specified courses and distances;

(3) If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or

(4) Any combination of the above methods.

(B) The boundary must enclose only those lands that are necessary for safe and efficient operation and maintenance of the project or for other specified project purposes, such as public recreation or protection of environmental resources.

(3) *Federal lands.* Any public lands and reservations of the United States (Federal lands) [see 16 U.S.C. 796 (1) and (2)] that are within the project boundary, such as lands administered by the U.S. Forest Service, Bureau of Land Management, or National Park Service, or Indian tribal lands, and the boundaries of those Federal lands, must be identified as such on the map by:

(i) Legal subdivisions of a public land survey of the affected area (a protraction of identified township and section lines is sufficient for this purpose); and

(ii) The Federal agency, identified by symbol or legend, that maintains or manages each identified subdivision of the public land survey within the project boundary; or

(iii) In the absence of a public land survey, the location of the Federal lands according to the distances and directions from fixed monuments or physical features. When a Federal survey monument or a Federal bench mark will be destroyed or rendered unusable by the construction of project works, at least two permanent, marked witness monuments or bench marks must be established at accessible points. The maps show the location (and elevation, for bench marks) of the survey monument or bench mark which will be destroyed or rendered unusable, as well as of the witness monuments or bench marks. Connecting

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courses and distances from the witness monuments or bench marks to the original must also be shown.

(iv) The project location must include the most current information pertaining to affected Federal lands as described under 18 CFR § 4.81(b)(5).

(4) *Non-Federal lands.* For those lands within the project boundary not identified under paragraph (h)(3) of this section, the map must identify by legal subdivision:

(i) Lands owned in fee by the applicant and lands that the applicant plans to acquire in fee; and

(ii) Lands over which the applicant has acquired or plans to acquire rights to occupancy and use other than fee title, including rights acquired or to be acquired by easement or lease.

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PROJECT MAPS

The attached Exhibit G maps denote the Lundy Hydroelectric Project (Lundy Project) boundary. Table G-1 provides a summary of the drawing numbers and titles for the Exhibit G maps. The Lundy Project Boundary Maps show the vicinity, location, and boundary in sufficient detail to provide a full understanding of the Lundy Project. The Exhibit G maps were prepared in accordance with the requirements of 18 C.F.R. § 4.51(h).

Table G-1 Lundy Project Boundary Maps

Drawing Number	Title
Exhibit G- Sheet 1 of 3	Project Boundary Map
Exhibit G- Sheet 2 of 3	Project Boundary Map
Exhibit G – Sheet 3 of 3	Project Boundary Map

Southern California Edison (SCE or Licensee) is proposing to modify the Lundy Project boundary to remove approximately 56.8 acres of land not needed for Lundy Project purposes. The Exhibit G drawings incorporate these proposed Lundy Project boundary modifications and minor corrections. SCE possesses property or easement rights to all areas within the defined Lundy Project boundary. Table G-2 gives a summary of the additions and removals of Lundy Project lands. Figure G-1 shows the location of each addition and removal.

Table G-2 Lundy Project Boundary Modifications

Map ID	Addition/Removal	Description	Justification
Operations/Facilities-1	Removal 41.4 acres	Adjust Project boundary around lake to maximum full pool elevation (7813’ NAVD 88).	Include lands only necessary for Project O&M purposes.
Roads-1	Addition 2.5 acres	Extend Project boundary to include access roads to Lundy Dam and Lundy Day Use Areas	Used exclusively for Project O&M purposes
Roads-2	Addition 0.1 acres	Extend Project boundary to include weather station and access road.	Used exclusively for Project O&M purposes
Roads-3	Removal 2.2 acres	Remove lands between Lundy Lake Campground and Lundy Day Use Area 1 not associated with recreation at the Project	Lands not needed exclusively for Project purposes. Lundy Lake Road is a public access road not needed for project purposes.

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Roads-4	Removal 2.4 acres	Remove land not needed for Lundy Day Use Area 4	Not needed exclusively for recreation access
Roads-5	Addition 0.6 acres	Extend Project boundary to include access road to the sand trap.	Used exclusively for Project O&M purposes
Roads-6	Addition 0.2 acres	Extend Project boundary to include Mill Creek Return Ditch access road.	Used exclusively for Project O&M purposes
Roads-7	Addition 0.2 acres	Extend Project boundary to include Mill Creek Return Ditch access road.	Used exclusively for Project O&M purposes
Minor corrections	Removal 14.4 acres		

FEDERAL LANDS

There are 53.1 acres of land within the Inyo National Forest administered by the U.S. Forest Service located within the existing Lundy Project boundary. Additionally, there are 0.9 acres of land administered by the Bureau of Land Management within the existing Lundy Project boundary.

There are 45.0 acres of land within the Inyo National Forest administered by the US Forest Service located within the proposed Lundy Project boundary. Additionally, there are 0.8 acre of land administered by the Bureau of Land Management within the proposed Lundy Project boundary.

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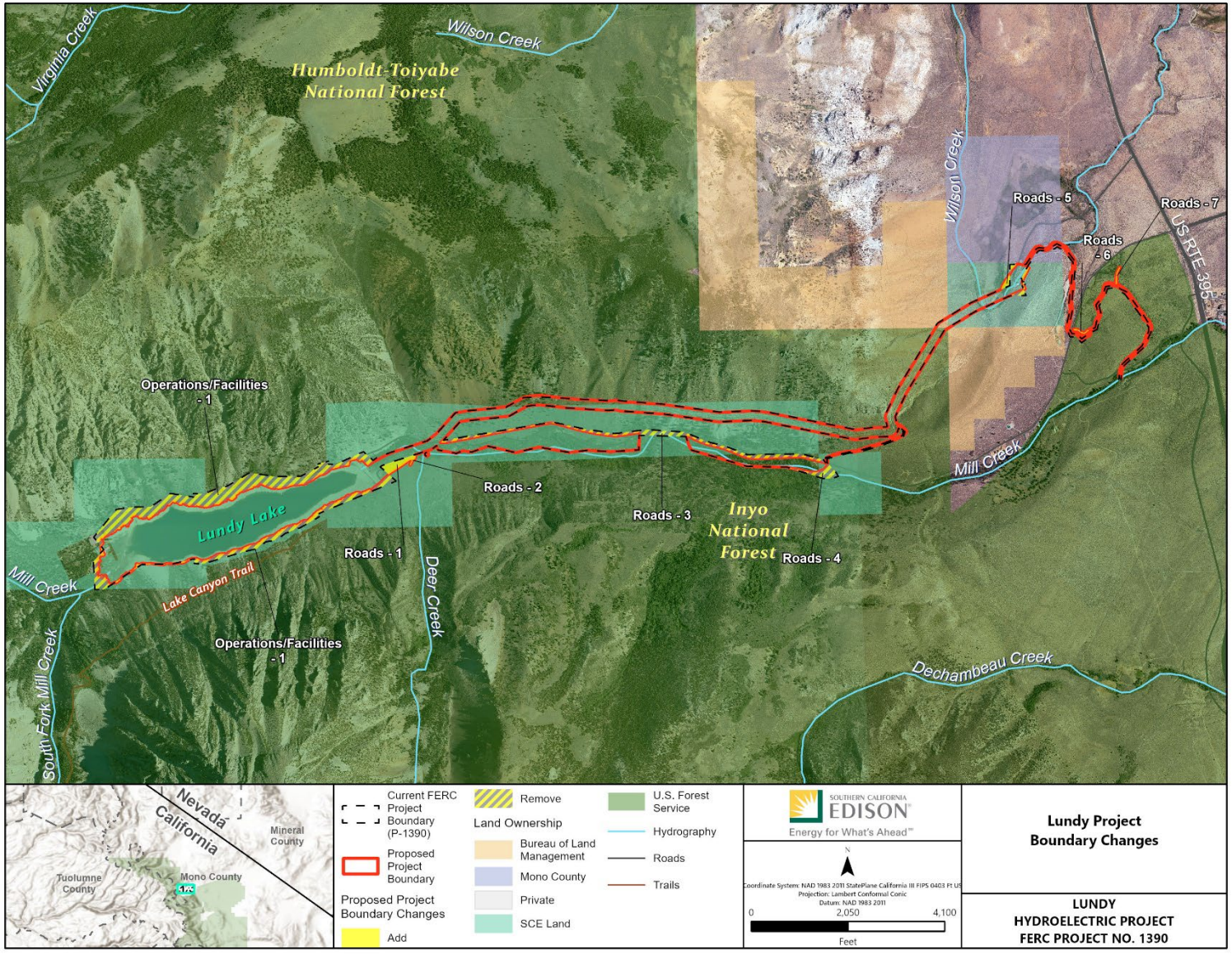
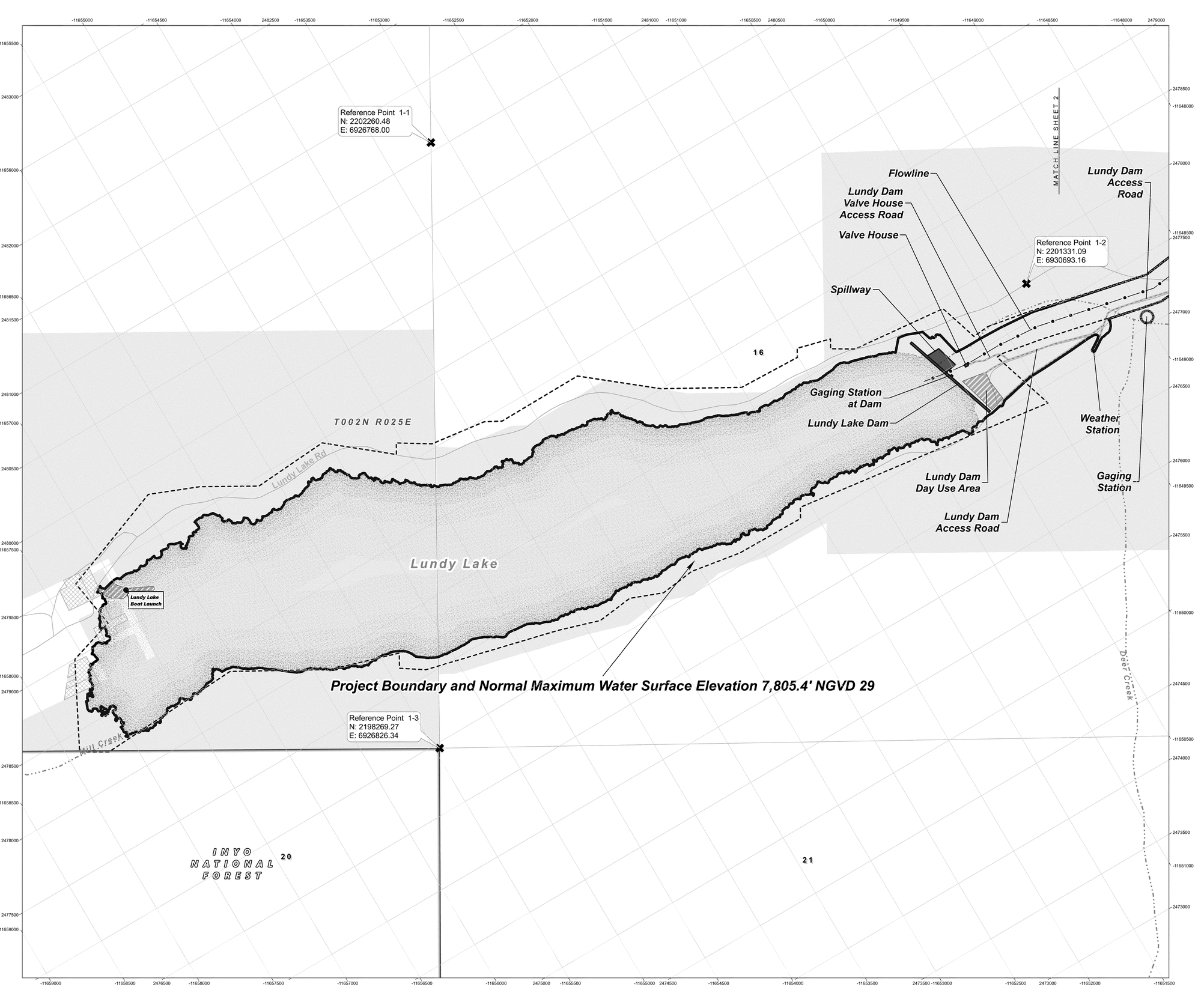


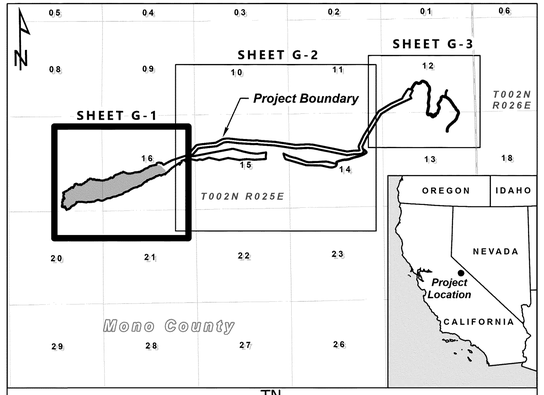
Figure G-1 Lundy Project Boundary Changes

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EXHIBIT G
DRAWINGS

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- Proposed Project Boundary
- Existing FERC Project Boundary
- Match Line
- Road
- Hydrography
- Reference Point

Project Feature
- Project Access Road
- Flowline
- Project Features

- Project Recreation Site
- Recreation Area
- County
- State
- PLSS Section
- PLSS Township/ Range

Parcel
Owner
- BLM
- INF
- Mono County
- Private
- SCE

MAP NOTES
1. The Lundy Project is located in the State of California in Mono County.
2. Reference Point coordinates are shown in NAD 1983 (2011) StatePlane California III FIPS 0403 Ft US.
3. Elevations shown are referenced to NGVD 29.
4. NAVD 88 = NGVD 29 + 5.122 ft. Conversion Factor was determined from an elevation point on Lundy Dam (https://www.ngs.noaa.gov/NCAT/).
5. Licensee has acquired all flowage rights and title in fee or the right to use in perpetuity all lands necessary or appropriate for the construction, maintenance, and operation of the Project. All property records are kept on file with the licensee.
6. Land ownership intersecting the Proposed Project Boundary is depicted. Parcel boundaries were obtained from the 2024 Mono County Tax Parcels spatial dataset (Mono County and the Town of Mammoth Lakes. Tax Parcels (Feature Layer). Mono County GIS Open Data Portal. Accessed July 2, 2026. Available from (https://gis-monomammoth.opendata.arcgis.com/pages/open-data)). Ownership information was subsequently appended by joining assessor records to the parcel dataset using the Assessor Parcel Number (APN) (ParcelQuest. 2026. ParcelQuest Lite (California County Assessor Property Information). Property ownership and assessor records accessed July 2, 2026, from (https://assr.parcelquest.com/Home/Index)). Record of Survey No. 34-106 was used as reference for land ownership in the unincorporated territory of Mono County, State of California for Sections 12 & 13, Township 2 North, Range 25 East, Mount Diablo Base & Meridian. Ownership within the Lundy Townsite is assumed to be Southern California Edison (SCE) unless otherwise indicated, based on Master Title Plat for Township 2N Range 25 East of the Mount Diablo Meridian, California.
7. There are 45.5 acres of federal lands in the Proposed Project boundary; 2.9 acres of Bureau of Land Management lands, and 42.6 acres of US Forest Service lands.
8. The Project boundary description, as required by 18 CFR 4.41, is represented here by a grid of Northings and Eastings around, and graticules within, the map frame. Any position in Northings and Eastings along the Project boundary can be determined using these references.
9. The Proposed Project Boundary, in part, was digitized from contour elevations derived from USGS Sierra Nevada LiDAR data (U.S. Geological Survey (USGS). 2024. USGS Lidar Point Cloud, CA_SierraNevada_B22 (tiles 11SLC0311, 11SLC0411, and 11SLC0511). Point cloud data acquired June 4–September 17, 2022. Published December 17, 2024. Horizontal Coordinate System: NAD83(2011) / UTM Zone 11N.).
10. The Proposed Project Boundary, in part, was generated using the following buffers: 10-ft buffer of Project access road centerlines, 25-ft buffer of the return ditch centerline, and 100-ft buffer of the pipeline and penstock centerline.

SOUTHERN CALIFORNIA EDISON

LUNDY HYDROELECTRIC PROJECT
FERC NO. 1390

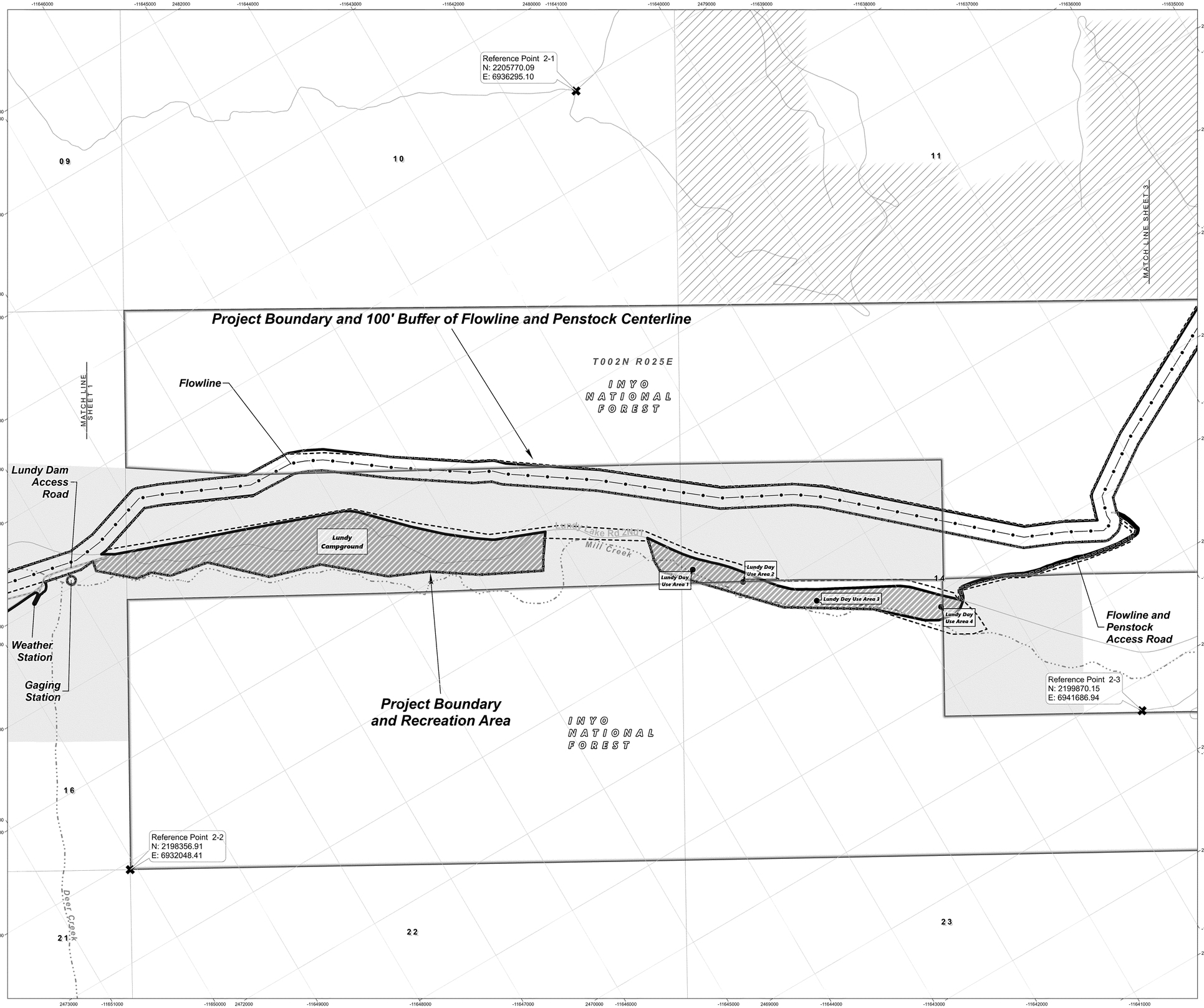
PROJECT BOUNDARY MAP

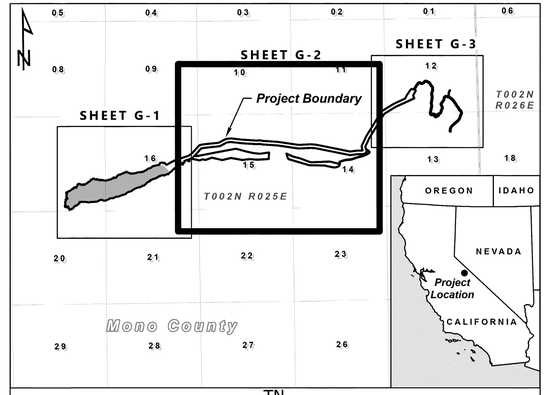
EXHIBIT G | SCALE: 1" = 300' | SHEET NO. 1 OF 3

0 150 300 600 900 1,200 Feet

DATE: SEPTEMBER 2026 | FERC DWG. NO. 1390-

Project Boundary and 100' Buffer of Flowline and Penstock Centerline





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- Proposed Project Boundary
- Existing FERC Project Boundary
- Match Line
- Road
- Hydrography
- Reference Point

Project Feature
- Project Access Road
- Flowline

- Project Recreation Site
- Recreation Area
- County
- State
- PLSS Section
- PLSS Township/ Range

Parcel
Owner
- BLM
- INF
- Mono County
- Private
- SCE

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2. Reference Point coordinates are shown in NAD 1983 (2011) StatePlane California III FIPS 0403 Ft US.
3. Elevations shown are referenced to NGVD 29.
4. NAVD 88 = NGVD 29 + 5.122 ft. Conversion Factor was determined from an elevation point on Lundy Dam (https://www.ngs.noaa.gov/NCAT/).
5. Licensee has acquired all flowage rights and title in fee or the right to use in perpetuity all lands necessary or appropriate for the construction, maintenance, and operation of the Project. All property records are kept on file with the licensee.
6. Land ownership intersecting the Proposed Project Boundary is depicted. Parcel boundaries were obtained from the 2024 Mono County Tax Parcels spatial dataset (Mono County and the Town of Mammoth Lakes. Tax Parcels (Feature Layer). Mono County GIS Open Data Portal. Accessed July 2, 2026. Available from (https://gis-monomammoth.opendata.arcgis.com/pages/open-data)). Ownership information was subsequently appended by joining assessor records to the parcel dataset using the Assessor Parcel Number (APN) (ParcelQuest. 2026. ParcelQuest Lite (California County Assessor Property Information). Property ownership and assessor records accessed July 2, 2026, from (https://assr.parcelquest.com/Home/Index)). Record of Survey No. 34-106 was used as reference for land ownership in the unincorporated territory of Mono County, State of California for Sections 12 & 13, Township 2 North, Range 25 East, Mount Diablo Base & Meridian. Ownership within the Lundy Townsite is assumed to be Southern California Edison (SCE) unless otherwise indicated, based on Master Title Plat for Township 2N Range 25 East of the Mount Diablo Meridian, California.
7. There are 45.5 acres of federal lands in the Proposed Project boundary; 2.9 acres of Bureau of Land Management lands, and 42.6 acres of US Forest Service lands.
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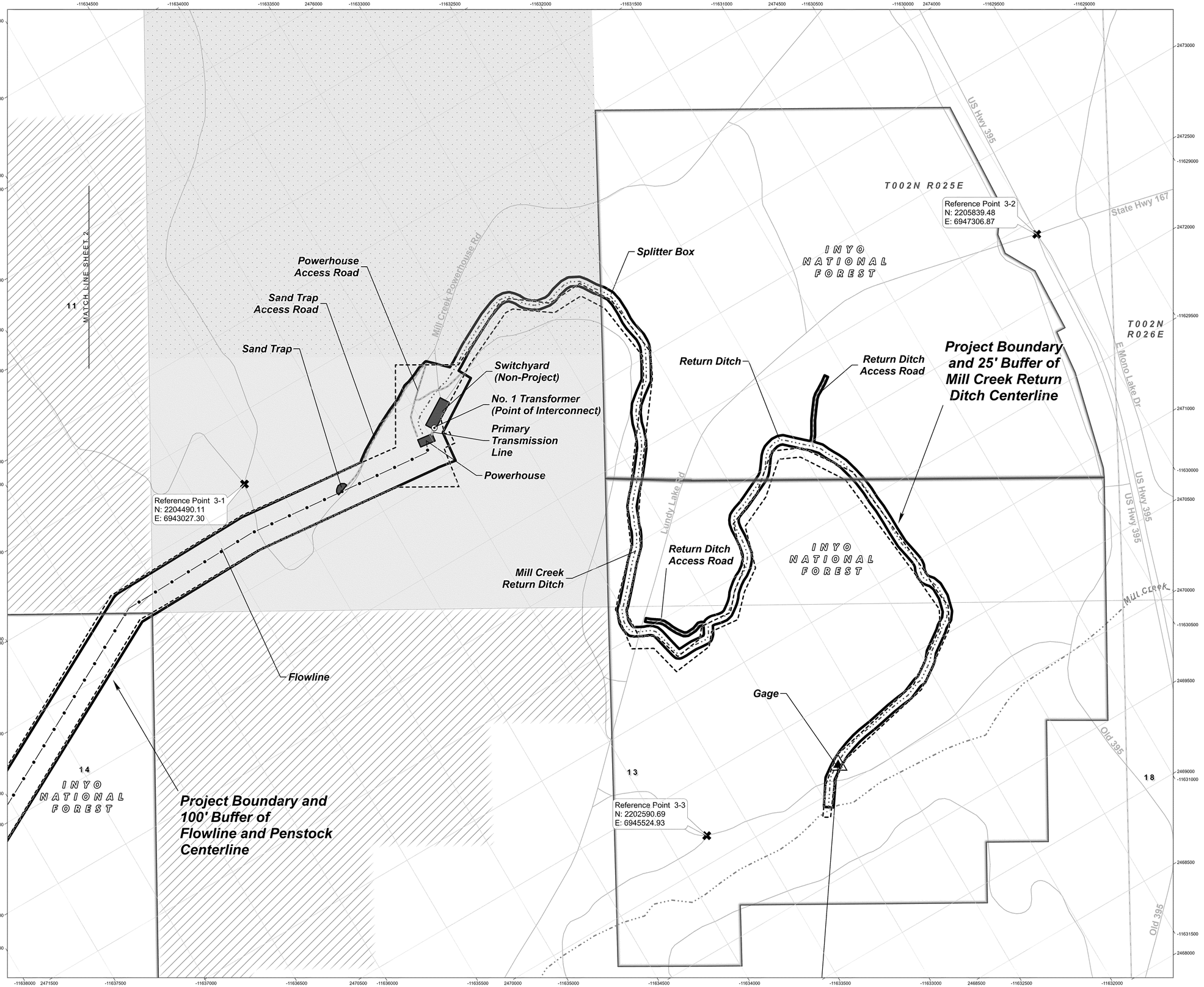
LUNDY HYDROELECTRIC PROJECT
FERC NO. 1390

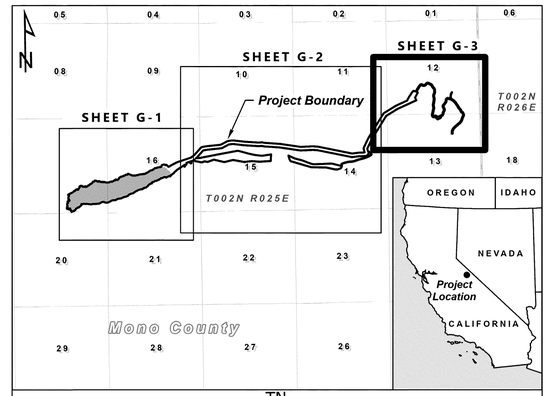
PROJECT BOUNDARY MAP

EXHIBIT G | SCALE: 1" = 450' | SHEET NO. 2 OF 3

0 225 450 900 1,350 1,800 Feet

DATE: SEPTEMBER 2026 | FERC DWG. NO. 1390-





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9/1/2026

Proposed Project Boundary
Existing FERC Project Boundary
Match Line
Road
Hydrography
Reference Point

Project Feature
Project Gage
Project Access Road
Flowline
Return Ditch
Project Features

County
State
PLSS Section
PLSS Township/ Range

Parcel
Owner
BLM
INF
Mono County
Private
SCE

MAP NOTES
1. The Lundy Project is located in the State of California in Mono County.
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4. NAVD 88 = NGVD 29 + 5.122 ft. Conversion Factor was determined from an elevation point on Lundy Dam (https://www.ngs.noaa.gov/NCAT/).
5. Licensee has acquired all flowage rights and title in fee or the right to use in perpetuity all lands necessary or appropriate for the construction, maintenance, and operation of the Project. All property records are kept on file with the licensee.
6. Land ownership intersecting the Proposed Project Boundary is depicted. Parcel boundaries were obtained from the 2024 Mono County Tax Parcels spatial dataset (Mono County and the Town of Mammoth Lakes. Tax Parcels (Feature Layer). Mono County GIS Open Data Portal. Accessed July 2, 2026. Available from (https://gis-monomammoth.opendata.arcgis.com/pages/open-data)). Ownership information was subsequently appended by joining assessor records to the parcel dataset using the Assessor Parcel Number (APN) (ParcelQuest. 2026. ParcelQuest Lite (California County Assessor Property Information). Property ownership and assessor records accessed July 2, 2026, from (https://assr.parcelquest.com/Home/Index)). Record of Survey No. 34-106 was used as reference for land ownership in the unincorporated territory of Mono County, State of California for Sections 12 & 13, Township 2 North, Range 25 East, Mount Diablo Base & Meridian. Ownership within the Lundy Townsite is assumed to be Southern California Edison (SCE) unless otherwise indicated, based on Master Title Plat for Township 2N Range 25 East of the Mount Diablo Meridian, California.
7. There are 45.5 acres of federal lands in the Proposed Project boundary; 2.9 acres of Bureau of Land Management lands, and 42.6 acres of US Forest Service lands.
8. The Project boundary description, as required by 18 CFR 4.41, is represented here by a grid of Northings and Eastings around, and graticules within, the map frame. Any position in Northings and Eastings along the Project boundary can be determined using these references.
9. The Proposed Project Boundary, in part, was digitized from contour elevations derived from USGS Sierra Nevada LiDAR data (U.S. Geological Survey (USGS). 2024. USGS Lidar Point Cloud, CA_SierraNevada_B22 (tiles 11SLC0311, 11SLC0411, and 11SLC0511). Point cloud data acquired June 4–September 17, 2022. Published December 17, 2024. Horizontal Coordinate System: NAD83(2011) / UTM Zone 11N.).
10. The Proposed Project Boundary, in part, was generated using the following buffers: 10-ft buffer of Project access road centerlines, 25-ft buffer of the return ditch centerline, and 100-ft buffer of the pipeline and penstock centerline.

SOUTHERN CALIFORNIA EDISON

LUNDY HYDROELECTRIC PROJECT
FERC NO. 1390

PROJECT BOUNDARY MAP

EXHIBIT G | SCALE: 1" = 250' | SHEET NO. 3 OF 3

0 125 250 500 750 1,000 Feet

DATE: SEPTEMBER 2026 | FERC DWG. NO. 1390-

SOUTHERN CALIFORNIA EDISON

Lundy Hydroelectric Project
(FERC Project No. 1390)

Draft License Application
EXHIBIT H: General Information

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

October 2026

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

Exhibit H: General Information

The Code of Federal Regulations, Title 18, Section 5.18(c) describes information that an applicant for a new license (License for Minor Water Power Projects or Major Water Projects 10 Megawatts or Less – Existing Dam) must include in Exhibit H of its license application.

The information required to be provided by this paragraph (c) must be included in the application as a separate exhibit labeled "Exhibit H".

(1) *Information to be provided by an applicant for new license: Filing requirements*

(i) *Information to be supplied by all applicants.* All Applicants for a new license under this part must file the following information with the Commission:

(A) A discussion of the plans and ability of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service, including efforts and plans to:

(1) Increase capacity or generation at the project;

(2) Coordinate the operation of the project with any upstream or downstream water resource projects; and;

(3) Coordinate the operation of the project with the applicant's or other electrical systems to minimize the cost of production.

(B) A discussion of the need of the applicant over the short and long term for the electricity generated by the project, including:

(1) The reasonable costs and reasonable availability of alternative sources of power that would be needed by the applicant or its customers, including wholesale customers, if the applicant is not granted a license for the project;

(2) A discussion of the increase in fuel, capital, and any other costs that would be incurred by the applicant or its customers to purchase or generate power necessary to replace the output of the licensed project, if the applicant is not granted a license for the project;

(3) The effect of each alternative source of power on:

(i) The applicant's customers, including wholesale customers;

(ii) The applicant's operating and load characteristics; and

(iii) The communities served or to be served, including any reallocation of costs associated with the transfer of a license from the existing licensee.

(C) The following data showing need and the reasonable cost and availability of alternative sources of power:

(1) The average annual cost of the power produced by the project, including the basis for that calculation;

(2) The projected resources required by the applicant to meet the applicant's capacity and energy requirements over the short and long term including:

(i) Energy and capacity resources, including the contributions from the applicant's generation, purchases, and load modification measures (such as conservation, if considered as a resource), as separate components of the total resources required;

(ii) A resource analysis, including a statement of system reserve margins to be maintained for energy and capacity; and

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(iii) If load management measures are not viewed as resources, the effects of such measures on the projected capacity and energy requirements indicated separately;

(iv) For alternative sources of power, including generation of additional power at existing facilities, restarting deactivated units, the purchase of power off-system, the construction or purchase and operation of a new power plant, and load management measures such as conservation: The total annual cost of each alternative source of power to replace project power; the basis for the determination of projected annual cost; and a discussion of the relative merits of each alternative, including the issues of the period of availability and dependability of purchased power, average life of alternatives, relative equivalent availability of generating alternatives, and relative impacts on the applicant's power system reliability and other system operating characteristics; and the effect on the direct providers (and their immediate customers) of alternate sources of power.

(D) If an applicant uses power for its own industrial facility and related operations, the effect of obtaining or losing electricity from the project on the operation and efficiency of such facility or related operations, its workers, and the related community.

(E) If an applicant is an Indian tribe applying for a license for a project located on the tribal reservation, a statement of the need of such Indian tribe for electricity generated by the project to foster the purposes of the reservation.

(F) A comparison of the impact on the operations and planning of the applicant's transmission system of receiving or not receiving the project license, including:

(1) An analysis of the effects of any resulting redistribution of power flows on line loading (with respect to applicable thermal, voltage, or stability limits), line losses, and necessary new construction of transmission facilities or upgrading of existing facilities, together with the cost impact of these effects;

(2) An analysis of the advantages that the applicant's transmission system would provide in the distribution of the project's power; and

(3) Detailed single-line diagrams, including existing system facilities identified by name and circuit number, that show system transmission elements in relation to the project and other principal interconnected system elements. Power flow and loss data that represent system operating conditions may be appended if applicants believe such data would be useful to show that the operating impacts described would be beneficial.

(G) If the applicant has plans to modify existing project facilities or operations, a statement of the need for, or usefulness of, the modifications, including at least a reconnaissance-level study of the effect and projected costs of the proposed plans and any alternate plans, which in conjunction with other developments in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in Section 10(a)(1) of the Federal Power Act.

(H) If the applicant has no plans to modify existing project facilities or operations, at least a reconnaissance-level study to show that the project facilities or operations in conjunction with other developments in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in Section 10(a) (1) of the Federal Power Act.

(I) A statement describing the applicant's financial and personnel resources to meet its obligations under a new license, including specific information to demonstrate that the applicant's personnel are adequate in number and training to operate and maintain the project in accordance with the provisions of the license.

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(J) If an applicant proposes to expand the project to encompass additional lands, a statement that the applicant has notified, by certified mail, property owners on the additional lands to be encompassed by the project and governmental agencies and subdivisions likely to be interested in or affected by the proposed expansion.

(K) The applicant's electricity consumption efficiency improvement program, as defined under Section 10(a)(2)(C) of the Federal Power Act, including:

(1) A statement of the applicant's record of encouraging or assisting its customers to conserve electricity and a description of its plans and capabilities for promoting electricity conservation by its customers; and

(2) A statement describing the compliance of the applicant's energy conservation programs with any applicable regulatory requirements.

(L) The names and mailing addresses of every Indian tribe with land on which any part of the proposed project would be located or which the applicant reasonably believes would otherwise be affected by the proposed project.

(ii) *Information to be provided by an applicant licensee.* An existing licensee that applies for a new license must provide:

(A) The information specified in paragraph (c)(1) of this section.

(B) A statement of measures taken or planned by the licensee to ensure safe management, operation, and maintenance of the project, including:

(1) A description of existing and planned operation of the project during flood conditions;

(2) A discussion of any warning devices used to ensure downstream public safety;

(3) A discussion of any proposed changes to the operation of the project or downstream development that might affect the existing Emergency Action Plan, as described in subpart C of part 12 of this chapter, on file with the Commission;

(4) A description of existing and planned monitoring devices to detect structural movement or stress, seepage, uplift, equipment failure, or water conduit failure, including a description of the maintenance and monitoring programs used or planned in conjunction with the devices; and

(5) A discussion of the project's employee safety and public safety record, including the number of lost-time accidents involving employees and the record of injury or death to the public within the project boundary.

(C) A description of the current operation of the project, including any constraints that might affect the manner in which the project is operated.

(D) A discussion of the history of the project and record of programs to upgrade the operation and maintenance of the project.

(E) A summary of any generation lost at the project over the last five years because of unscheduled outages, including the cause, duration, and corrective action taken.

(F) A discussion of the licensee's record of compliance with the terms and conditions of the existing license, including a list of all incidents of noncompliance, their disposition, and any documentation relating to each incident.

(G) A discussion of any actions taken by the existing licensee related to the project which affect the public.

(H) A summary of the ownership and operating expenses that would be reduced if the project license were transferred from the existing licensee.

(I) A statement of annual fees paid under part I of the Federal Power Act for the use of any Federal or Indian lands included within the project boundary.

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(iii) *Information to be provided by an applicant who is not an existing licensee.* An applicant that is not an existing licensee must provide:

(A) The information specified in paragraph (c)(1) of this section.

(B) A statement of the applicant's plans to manage, operate, and maintain the project safely, including:

(1) A description of the differences between the operation and maintenance procedures planned by the applicant and the operation and maintenance procedures of the existing licensee;

(2) A discussion of any measures proposed by the applicant to implement the existing licensee's Emergency Action Plan, as described in subpart C of part 12 of this chapter, and any proposed changes;

(3) A description of the applicant's plans to continue safety monitoring of existing project instrumentation and any proposed changes; and

(4) A statement indicating whether or not the applicant is requesting the licensee to provide transmission services under section 15(d) of the Federal Power Act.

(1) Information to be Provided by an Applicant for New License: Filing Requirements

(i) *Information to be Supplied by All Applicants*

(A) Efficiency and Reliability

Southern California Edison Company (SCE) has extensive experience operating and maintaining its hydroelectric systems efficiently and reliably. SCE is responsible for generating, purchasing, transmitting, and distributing electricity to its customers. The Lundy Hydroelectric Project (Lundy Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 1390, is operated in conjunction with SCE's other generating resources to meet the electricity demand of its customers throughout the state of California.

(1) Increase Capacity or Generation at the Project

SCE currently has no plans to increase capacity or generation at the Project.

(2) Coordinate the Operation of the Project with any Upstream or Downstream Water Resource Projects

The Project is the uppermost water resource project on Mill Creek; there are no other upstream projects. Water exiting the powerhouse enters a short tailrace and is returned to Mill Creek via the Mill Creek Return Ditch (MCRD). Downstream of the Project, the Los Angeles Department of Water and Power (LADWP) owns and operates the Grant Lake Dam (a

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non-power dam). SCE does not directly coordinate operation of the Project with LADWP; however, LADWP is invited to the annual water management meeting, and they have access to the Mill Creek Accounting and Planning Tool (MCAPT) showing SCE's daily and forecasted water management of the Lundy Project system.

(3) Coordinate the Operation of the Project with Other Electrical Systems to Minimize the Cost of Production

All SCE generation facilities are coordinated through the SCE Energy Control Center to maximize generation while minimizing economic and environmental costs. SCE bids power from its retained generation facilities into markets governed by the California Independent System Operator (CAISO). Thus, electrical generation from the Project is coordinated with other generation throughout California.

(B) Need for Electricity Generated by the Project

The Lundy Project is used to respond to California Public Utility Commission (CPUC) and CAISO demands for power. Electricity demands can be market driven (i.e., energy needs and renewable load) or a response to the need for grid and electrical stability to Mono Basin when the source transmission line is de-energized (115-kilovolt Rush Creek/Casa Diablo line). The Casa Diablo line can be de-energized to protect public safety, because of weather events, or to support maintenance activities like pole replacements or line upgrades.

The Casa Diablo line is the only source transmission line into the Mono Basin from the CAISO grid. The Lundy Project provides a local source of backup power to June Lake, Lee Vining, Bridgeport, Mono City, and the U.S. Marine Corps Pickle Meadows Base should the Casa Diablo line be de-energized.

With the Lundy Project and Casa Diablo line operational during off-peak and peak conditions, there is enough electrical generation and capacity in the lines to feed load in the area. If a new license is not issued and the Project is no longer generating electricity, each time the Casa Diablo line is de-energized, SCE would have approximately 2,152 customers without power. Absent the Project to serve as backup to the Casa Diablo line, there could be significant impacts to customers.

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(1) Costs and Availability of Alternative Sources of Power

California has very aggressive decarbonization goals (90 percent carbon-free power by 2035 and 100 percent carbon-free power by 2045) and is adding a variety of zero-carbon resources both to meet clean energy goals and to increase reliability as electricity consumption has increased. Without this Project, equivalent new generation facilities would need to be built to meet these goals and targets. This Project provides energy, reliability capacity, and zero-carbon electricity. While the production of the facility varies by season and water year type, the daily production profile is consistent and does not depend on momentary weather patterns, as with wind and solar resources. The closest substitute for the Project would be another hydroelectric facility or new geothermal facility. The latest CAISO (2024) 20-Year Transmission Outlook includes the need for 5,000 megawatts (MW) of new incremental clean firm[1] resources, and the loss of facilities like the Project could add to this incremental need. A good reference for such costs is California's annual *Padilla Report* on costs of the Renewables Portfolio Standard Program (CPUC, 2024). Figure 5 of the 2024 report shows new geothermal and hydro at around $95 per megawatt-hour (MWh) (CPUC, 2024).

(2) Increase in Fuel, Capital, and Other Costs

As the Project would need to be replaced with a clean energy resource that meets California's carbon-neutrality goals and is Renewables Portfolio Standard eligible, there would likely not be an increase in fuel consumption. Another entity in California would need to build a new substitute facility at the costs referenced above in Section (i)(B)(1) to replace Project generation.

(3) Effect of Alternative Sources of Power

As covered in Section (i)(B)(1), the Project would need to be replaced by an equivalent zero-carbon resource and as such would incur the cost of that new facility and the likely consumption of greenfield for the new facility.

i. Customers, including Wholesale Customers

Alternative sources of power would have incremental costs to customers for the replacement of firm zero-

[1] Firm sources of power can generate 24 hours per day, 7 days per week, when needed.

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emitting resources. As stated in Section (i)(B)(1) above, the *Padilla Report* puts these costs at around $95 per MWh (CPUC, 2024).

ii. Operating and Load Characteristics

Alternative clean firm sources of power would have negligible impact on operating and load characteristics.

iii. Communities Served or to be Served

Alternative sources of clean firm power would come at additional cost, and such new facilities may have local environmental impacts in other communities.

(C) Need, Reasonable Cost, and Availability of Alternative Sources of Power

(1) Average Annual Cost of Power Produced by the Project

The Project's direct operation and maintenance expenses for 2025 were approximately $414,605. Additional Project operating expenses and capital costs for 2025 are shown in the table below.

Operation and Maintenance Costs (2025)	$414,605
Depreciation (2025)	$445,772
Property Taxes (Mono County, 2025)	$107,671
Administrative & General Expenses (Calculated from 2025 Net Book Value)	$948,763
Total	**$1,916,811**

(2) The Projected Resources Required by SCE to Meet Capacity and Energy Requirements

i. Energy and Capacity Resources as Separate Components of Total Resources Required

In 2025, the SCE system had a 16.8-gigawatt (GW) peak capacity procurement requirement and an energy procurement requirement associated with serving bundled customer load. SCE bundled customers' actual energy procured through the CAISO market in 2025 totaled 53.6 terawatt-hours (TWh). Of the 16.8 GW peak capacity procurement requirement, 2.4 GW was attributable to the required planning reserve

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margin. Actual energy procured may differ from the energy procurement requirement due to variations in load, market conditions, and other operational factors.

The Project provided 0.6 MW "net qualifying capacity" during the fourth quarter of 2025. The actual capacity and energy requirement were met by a variety of resources.

ii. Resource Analysis and System Reserve Margins

California maintains a minimum 15 to 17 percent capacity planning reserve margin. SCE meets its capacity and energy requirements through a relatively small "Utility Owned" portfolio, and the rest of the need is filled through various procurement processes, including demand response and energy efficiency procurement. Of the power delivered to customers in 2025, 41.5 percent was from eligible renewables, 14 percent nuclear, 5.1 percent natural gas, 4.7 percent large hydro, and 34.7 percent from unspecified market transactions. Over the term of the new license, some of these sources of power will be phased out to meet California's carbon-neutrality goals by 2045.

iii. Effects of Efficiency and Load Management Measures

SCE has robust demand response, energy efficiency, and customer self-generation programs. Some of these programs are "load modifiers," and others are supply resources.

iv. Cost and Merits of Project Alternatives

Energy generated by the Project displaces energy that would otherwise be generated by gas-fired units in the short term and reduces the need for new clean firm resources in the longer term. Currently, aside from power generated by its own sources, SCE purchases the power needed to serve its customers from qualifying facilities, independent power producers, CAISO, the California Department of Water Resources (under contracts with other third parties), and other utilities. If the Project were to cease operations, new, incremental clean firm resources would need to be built to replace the characteristics of the Project.

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(D) Effect on Industrial Facilities

SCE does not use the power associated with the Project for its own industrial facility or related operations, except for local operational support (e.g., station light and power).

(E) Tribal Need for the Project on a Reservation

SCE is not a Tribe, nor is the Project on a Tribal reservation.

(F) Effect on Transmission System

(1) Redistribution of Power Flows and Cost Impacts

There are no transmission lines within SCE's transmission system that are regulated under the Project license. However, a 15-foot-long, 2.4-kilovolt interconnection line conveys power from the Lundy Powerhouse turbines to the No. 1 transformer located in the non-Project switchyard, where it joins the transmission and distribution system.

SCE assessed the impact on the transmission system if a new license to operate the Project is not issued. As stated above, the only alternative source of power to the Project is the Casa Diablo transmission line. If a new license is not issued and the Lundy Project is no longer generating electricity, each time the Casa Diablo line is de-energized SCE would have approximately 2,152 customers without power. Absent the Project to serve as backup to the Casa Diablo line, there could be significant impacts to the transmission system and SCE customers.

(2) Advantages of Transmission System

As stated above, there are no transmission lines within SCE's transmission system that are regulated under the Project's license. However, SCE's interconnection with the broader transmission system provides additional reliability as a source of power for local SCE customers in the event that the Casa Diablo line is not in service.

(3) Single-Line Diagrams

A single-line design drawing of the Project showing system transmission (not regulated under the Project) is considered Critical Energy Infrastructure Information (CEII) under FERC's CEII regulations at Title 18 of the Code of Federal Regulations (CFR), Section 388.113. SCE has filed a single-line design

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diagram of the Project as CEII. SCE requests that FERC maintain this diagram in a non-public file and withhold from public disclosure per applicable regulations.

(G) Statement of the Need for Modifications

In preparation for relicensing the Project, SCE conducted additional analysis to identify long-term options for the Project. The Proposed Action in this application represents SCE's recommendations that allow continued operation of the Project.

Under the Proposed Action, hydroelectric operations at the Project would continue under FERC jurisdiction consistent with conditions identified in a new FERC license. Estimated costs associated with the Proposed Action are included in Exhibit A.

(H) Statement of Conformance if No Modifications are Proposed

The Project would conform with comprehensive plans for improving or developing the waterway and for other beneficial public uses as defined in Section 10(a)(1) of the Federal Power Act. Reviews of existing plans to ensure consistency are found in Exhibit E *Environmental Report* of this application.

Project facilities and operations, including mitigation measures proposed in Exhibit E, are best adapted to a comprehensive plan for Mill Creek based on a balance among environmental protection, water supply, recreation, and the commerce and utilization of a low-cost, non-polluting source of energy. The Project, as proposed in this application for a new license, accounts for existing and potential uses of Mill Creek, including recreation, economically viable hydroelectric generation, energy conservation in the context of the national interest in non-polluting and non-fossil fuel alternatives, public safety, and various aspects of environmental protection, including the prevention of significant detrimental effects to fish and wildlife resources.

Identification and review of the potentially relevant comprehensive plans indicate that relicensing of the Project would not conflict with the goals or objectives of any such plans. The Project adopts measures to ensure public safety, protect the environment, enhance recreation opportunities, and operate for maximum efficiency and reliability, and thus provides a variety of benefits.

(I) Financial and Personnel Resources

SCE's source and extent of financing and annual revenues are sufficient to meet the continuing operation and maintenance needs

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of the Project. For specific financial information, refer to FERC Form No. 1, which is provided to FERC annually.

SCE has personnel resources necessary to meet license obligations for the Project. A variety of training resources and approaches are used, including classroom training, workshops, textbooks, on-the-job training, web-based training, and safety training for all personnel. Safety training is conducted through a combination of regularly scheduled monthly meetings, crew meetings, on-the-job training, and special programs, as needed. The training covers SCE's Occupational Safety, Health, and Fire Prevention rules and hazardous materials handling, as well as programs mandated by governmental agencies such as the California Occupational Safety and Health Division, FERC standards of conduct and training related to compliance with FERC license articles, and environmental and cultural protection programs. Many of these compliance training courses are provided annually.

Job knowledge and skills training programs are available for management, supervisor/administrative, clerical, and craft employees with apprenticeship training programs established for selected job classifications. Individual training needs are evaluated continually, and employees are subsequently scheduled into existing programs offered within SCE or into appropriate outside training programs.

Employees are also encouraged to further their education through the educational assistance program, which provides financial assistance for eligible employees who participate in job-related courses, correspondence programs, and degree and/or certificate programs sponsored by accredited institutions.

(J) Notification of Proposed Expansion of Project Lands

Proposed modifications include adding lands necessary for Project O&M activities, removal of areas that are not necessary for O&M activities, slight adjustments where the existing FERC Project Boundary imperfectly captures the Project activity or facility (e.g., alignment with current MCRD centerline), and correction of mapping errors arising from updated spatial data and tools. Changes are reflected in Exhibit G *Project Maps* of this License Application.

(K) Electricity Consumption Efficiency Improvement Program

(1) Energy and Electrical Conservation

SCE is actively engaged in energy efficiency, conservation, and environmentally beneficial programs. Successful program

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offerings include customer incentives, online tools, information and education, and cooperative effort with third-party contractors and other utilities. The CPUC ordered the California Investor-Owned Utilities to procure energy efficiency programs that are designed and implemented by third parties. As a result, each Investor-Owned Utility entered contracts with certain vendors, who were selected through competitive solicitation processes. Additionally, customers now receive energy efficiency services, products, compensation, and/or installation directly or indirectly from these third parties. Example programs include Instant Rebates, Comfortably California, Illuminate California, Statewide Midstream Water Heating Program, and Willdan Energy Efficiency Programs targeting commercial, industrial, and multi-family customers.

SCE's website describes a variety of products to help customers manage energy use via the web, mobile app, or sensors. A suite of online tools gives customers the ability to track energy costs and analyze usage. In addition, other information is disseminated to customers, and energy classes and workshops are offered at Energy Education Centers in Irwindale and Tulare, California. Detailed information regarding energy efficiency and conservation programs is provided on SCE's website at www.sce.com.

(2) Compliance of Energy Conservation Programs

Regulatory compliance and reporting of SCE's energy efficiency programs is tracked through collection, reporting, and verification of information on the programs' performance. The results of the performance of the programs are filed annually with the CPUC.

(L) List of Indian Tribes and Addresses

The following Indian Tribal contacts are believed by SCE to potentially have an interest in the Project, although no Project facilities are located on any Tribal lands:

Antelope Valley Indian Community, Coville Paiute Tribe
P.O. Box 47
Coleville, CA 96107

Big Pine Paiute Tribe of Owens Valley
P.O. Box 700
Big Pine, CA 93513

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Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514

Bridgeport Paiute Indian Colony
P.O. Box 37
Bridgeport, CA 93517

Fort Independence Indian Community of Paiute Indians
P.O. Box 67
Independence, CA 93526

Lone Pine Paiute-Shoshone Tribe
P.O. Box 747
Lone Pine, CA 93545

Mono Lake Kootzaduka'a Tribe
P.O. Box 117
Big Pine, CA 93513

North Fork Mono Tribe of California
13396 Tollhouse Road
Clovis, CA 93619

North Fork Rancheria of Mono Indians
P.O. Box 929
North Fork, CA 93643

Southern Sierra Miwuk Nation
P.O. Box 186
Mariposa, CA 95338

Timbisha Shoshone Tribe
621 W Line St., Suite 109
Bishop, CA 93514

Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
P.O. Box 669
Tuolumne, CA 95379

Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation
25669 Highway 6
Benton, CA 93512

Walker River Paiute Tribe
P.O. Box 220
Schurz, NV 89427

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Washoe Tribe of Nevada and California
919 U.S. Highway 395 N
Gardnerville, NV 89410

Yerington Paiute Tribe of the Yerington Colony and Campbell Ranch
171 Campbell Lane
Yerington, NV 89447

Yosemite-Mono Lake Paiute Indian Community
P.O. Box 157
Lee Vining, CA 93541

(ii) *Information to be Provided by an Applicant Licensee*

(A) Information Specified in Paragraph (c)(1) of this Section

As required by 18 CFR § 5.18(c)(1)(ii)(A), this Exhibit H contains the information specified in 18 CFR § 5.18(c)(1). This information appears in Section (1)(i) of this Exhibit H, above.

(B) Safe Management, Operation, and Maintenance

(1) Operation during Flood Conditions

To ensure safe management, operation, and maintenance of the Project during flood and high-flow events, a Station Order Binder is maintained at the powerhouse. This document includes individual site-specific plans (Station Orders) outlining actions and considerations for high water flow events at each station and/or its associated head and tail works. The Station Orders provide contingency planning and response to both planned and unplanned Project high water flow events.

During periods of high flow (150 cfs or more), various measures are implemented to prevent water damage to infrastructure and equipment, including the following:

- Low-level outlets are opened.
- The powerhouse is operated at maximum hydraulic capacity (all units at full load) to minimize flooding.
- Areas at SCE facilities prone to flooding are sandbagged.
- Storm doors at SCE facilities are closed.
- Sump pumps at SCE facilities are checked/installed.

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(2) Warning Devices for Downstream Public Safety

The Project is classified as a "high hazard" facility. The following include warning devices and notifications used to ensure downstream public safety:

- SCE participates in National Dam Safety Awareness Day to promote public awareness of dam safety and the risks associated with living and recreating near dams.

- SCE coordinates with the Inyo County Office of Emergency Services and Mono County Office of Emergency Services to notify the public (residents, recreationists, and businesses as applicable), who could potentially be impacted by a dam failure, with public safety advisory letters and public/educational meetings when deemed necessary. Additionally, SCE distributes public safety advisory flyers to land management agencies with recreation facilities, which may be impacted by dam safety emergency events, for posting and distribution annually.

- SCE provided funding to the Mono County Sheriff's Office for the Internet Public Alerting System to June Lake residents downstream of dams. The system provides notification directly to affected residents' cell phones without having to call each individual person separately.

(3) Changes Affecting the Emergency Action Plan

Pursuant to 18 CFR § 12.20(a), SCE maintains an individual Emergency Action Plan (EAP) for the Lundy Project and operates the dam in accordance with the EAP. The purpose of the EAP is to reduce the risk of loss of human life or injury and to minimize property damage in the event of a dam safety emergency or flooding caused by large releases from the dam. The EAP defines procedures to aid in identifying unusual circumstances that may endanger the dam, as well as defining responsibilities and procedures for mitigative actions conducted by SCE. In addition, the EAP identifies the responsibilities of local, county, state, and federal public safety agencies and the processes of notifications in the event of potential, impending, or actual failure of the dam. The EAP may also be used to provide notification when release of naturally occurring high flows may create major flooding

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downstream of Lundy Lake. SCE filed their annual EAP update on December 19, 2025.

(4) Monitoring Devices

The Project includes the following instrumentation monitoring programs and devices to detect equipment failure:

- Leakage weirs
- Crack monitoring
- Dam face discoloration/seepage monitoring
- Headwater gages
- Downstream dam gages
- Deflection and alignment survey monuments

Operators are dispatched to investigate and respond to alarms, as needed. SCE inspects monitoring devices as part of routine operation and maintenance activities. If issues are identified, they are corrected as soon as discovered to ensure safe and reliable operation.

(5) Employee and Public Safety

There were no lost-time accidents involving employees recorded at the Project within the last 10 years.

There are no known records of injury or death to the public within the Project Boundary within the last 10 years.

(C) Current Operations and Constraints

The Project includes a dam and the associated reservoir—Lundy Lake; a water conveyance system; the Lundy Powerhouse; and ancillary facilities. The Project reservoir provides storage for lake recreation during the summer and allows electricity generation at the Lundy Powerhouse. Water exiting the powerhouse enters a short tailrace and is returned to Mill Creek.

Refer to Exhibit A for a complete description of Project operations.

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(D) Project History and Upgrades

Project developments were constructed during the following timeframes:

Lundy Dam	Completed in 1913.
Lundy Powerhouse	Constructed in 1911. Rebuilt in 1967.

Since issuance of the current license, the Project has undergone the following upgrades and modifications:

1999	SCE initiated the Farmer's Gate Flowline Restoration project to improve the inlet to the farmer's gate flowline and extend the flowline by 20 feet in the upstream direction.
2001	Reservoir rapid rise instrumentation was installed downstream of the dam. Barriers were added along the top of the core wall to prevent people from walking on top of the core wall.
2002	Riprap was added at the base of the dam around the valve house. SCE added a new flowline gate valve and a new valve house approximately 100 feet downstream of the dam. A new guard valve and air vent were added just downstream of the new gate valve.
2003	SCE repaired leakage in the flowline vent pipe near the old upper gate valve. Plates were welded around the valve body. The bottom end of the vent pipe was capped and welded shut. The gate valve was disabled (decommissioned), and the vent pipe was abandoned. This repair reduced leakage that was occurring out of this area of the dam.
2009	SCE constructed a new intake structure with a pneumatic-operated valve. An HDPE liner was pulled through the flowline, extending from the intake to the gatehouse just downstream of the dam.
2010	An electric motor-operated gate valve (Valve No. 3) was added in the Lundy Powerhouse flowline at the minimum release point located downstream of the dam.
2014	A Cipolletti weir was installed at the existing Parshall flume.

(E) Unscheduled Outages

A summary of generation lost at the Project over the last 5 years because of unscheduled outages, including the cause, duration, and corrective action taken, is provided in Table H-2.

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(F) Record of Compliance with Terms and Conditions of Existing License

FERC issued a new license to SCE for the Project on March 3, 1999. Project-specific license articles mandated by FERC and conditions submitted by USFS under Section 4(e) of the Federal Power Act are included in the License Order. SCE is responsible for complying with requirements of the FERC license, subsequent orders and amendments issued to date, findings of FERC inspections, findings of other inspections under 18 CFR § 12, as well as other FERC directives, information requests, or inquiries. SCE has not been cited for a license violation during the current license term and has never received a Notice of Violation from FERC related to the Project. SCE's compliance history related to inspections, incident reports, and temporary variances for minimum instream flow, reservoir levels, and ramping rates is summarized below. The complete compliance record for the Project for the current license term can be found on FERC's eLibrary.

(1) Inspections

Over the term of the existing license, SCE has participated in FERC environmental inspections, operations inspections, and dam safety/operation inspections. SCE has addressed any subsequent FERC directives and items identified during the inspections as requiring attention in a timely fashion and filed written documentation with FERC.

Lundy Dam is an unattended facility. The reservoir level and flows downstream of the dam is remotely monitored by the supervisory control and data acquisition system from SCE's Bishop Control Center, which is staffed continuously. When the ground is not snow covered, hydrographers visit the dams at least monthly to perform visual inspections and read the instrumentation.

FERC conducts two types of inspections of the Project to verify license compliance: (1) dam safety inspections and (2) environmental inspections. Because Lundy Dam is considered to have high hazard potential, dam safety inspections are conducted annually by FERC's Division of Dam Safety. FERC's most recent Dam Safety Inspection Report was filed on March 31, 2026.

An Independent Consultant under contract with SCE inspects the Project dam every 5 years in compliance with 18 CFR Part 12 Subpart D—Review, Inspection, and Assessment by

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Independent Consultant. The Subpart D safety inspections are intended to identify any actual or potential deficiencies of Project facilities or adequacy of Project maintenance, surveillance, or methods of operation that might endanger public safety. A 18 CFR Part 12 Subpart D inspection took place for the Project in 2023.

(2) Incident Reporting

SCE has filed nine incident/deviation reports with FERC over the term of the existing license (1999–2025). In all cases, SCE notified FERC in a timely manner of the incident and filed a written incident report. The incident reports filed by SCE satisfy the requirements of 18 CFR § 12.10. None of these incidents resulted in serious damage to public or private property, and they were not considered a license violation by FERC. The filing date and summary of the incidents are listed below.

- Seven incident reports (from 2013–2019) were related to sinkholes.
- May 20, 2020 Notification: Instream Flow Deficiency License Article 404 and Minimum Flow Release Plan.
- April 16, 2021 Notification: Instream Flow Deficiency License Article 404 and Minimum Flow Release Plan.

(3) Instream Flow, Reservoir Levels, and Ramping Rates

SCE maintains minimum flows in Mill Creek in accordance with USFS Section 4(e) Condition No. 5 (*Minimum Streamflow Requirements*).

The U.S. Geological Survey (USGS) maintains a contract with SCE to review streamflow records at several gages to comply with the requirements of Article 404 (minimum instream flows) and other FERC orders (e.g., November 15, 2007). SCE monitors and measures: (1) the minimum flow release to Mill Creek below Lundy Dam; (2) the total flow in Mill Creek below Lundy Dam; and (3) Lundy Lake elevations. The Amended Settlement Agreement (SCE et al., 2022) specifies that SCE will also measure and record the rate of water flow at the (4) Lundy Powerhouse Tailrace; (5) Upper Conway Ditch; (6) splitter box release to the Wilson System; and (7) MCRD near the confluence with Mill Creek. Another gage, (8) at the top of the MCRD below the splitter box, was added since the

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Streamflow Gaging Plan has been amended and will be added to the plan as part of the new license application.

FERC's Order Issuing the License, dated March 3, 1999, provided for a minimum instream flow of 4 cubic feet per second (cfs) as measured at the Mill Creek Gage (USGS Gage No. 10287069), just upstream of Deer Creek. This requirement was the subject of the original 2005 Settlement Agreement with water rights holders, and a subsequent license amendment modified the flow to be consistent with the water rights.

Since the 2007 Order Amending License and Dismissing Requests for Rehearing, SCE's minimum flow requirement is (a) 1.0 cfs on an average monthly basis, but not less than 0.75 cfs on an average daily basis, or (b) the inflow to the Lundy Project reservoir, whichever is less, as measured at either the existing Mill Creek Gage located just upstream of the mouth of Deer Creek (USGS Gage No. 10287069) and/or the release point on the Lundy Project flowline.

Additionally, SCE's minimum flow requirements below Lundy Dam were reduced to the extent that the seepage and accretion flow is greater than 3 cfs. If seepage and accretion flows are above 3 cfs, SCE must only release the water necessary to achieve a 4 cfs flow at the gage noted above.

As included in Article 404, the minimum flow release may be intentionally, temporarily modified, if required for safety reasons, by operating emergencies beyond the licensee's control, or upon agreement between the licensee, USFS, and the California Department of Fish and Wildlife (formerly the California Department of Fish and Game), for short periods. If the flow is so modified or discontinued, the licensee shall notify FERC as soon as feasible but no later than 10 days after the licensee discovers each such intentional or unintentional incident.

Flow requirements are described in greater detail in the Draft License Agreement Exhibit E, Section 8.3 *Water Resources*.

(G) Actions Related to the Project that may Affect the Public

Owner's Dam Safety Program

SCE maintains a Corporate Dam and Public Safety Program to ensure continued safe operations of its dams and hydroelectric facilities in a manner that complies with regulatory requirements and

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SCE's corporate safety policies. The Owner's Dam Safety Program protects life, property, lifelines, and the environment by ensuring the safety of dams. SCE conducts an annual internal review of the Owner's Dam Safety Program in addition to an external 5-year audit.

SCE files Dam Safety Surveillance and Monitoring Plans (DSSMPs) and Dam Safety Surveillance and Monitoring Reports (DSSMRs) for Lundy Dam. The DSSMP provides the details about how SCE monitors and evaluates the performance of the dam, and the DSSMR analyzes, evaluates, and interprets the dam safety surveillance and monitoring data and provides findings on the overall performance of the dam. On March 13, 2026, SCE filed its 2026 DSSMP and 2025 DSSMR for Lundy Dam.

Public Safety Plan

SCE maintains a Public Safety Plan for the Project that identifies the location of public safety measures and signage at Project facilities. The Public Safety Plan is reviewed and updated annually, as necessary. The following include Project features aimed at protecting public health and safety:

- **Signage**: SCE uses signs to warn the public of hazardous areas and potentially dangerous conditions. For example, danger and warning signs are located near facilities that may pose a danger to the public (e.g., powerhouse, switchyard, and water release points).

- **Physical Restraining Devices**: SCE uses various devices to restrict public access to hazardous areas, including the following:

  - Fences and locked gates limiting access to the powerhouse complex; around the tailrace, substation, and transformer yards; and along Project dams.

  - Grates/trashracks on dam intakes structures.

  - Boat barriers along dam spillways.

Environmental Training Program

SCE has implemented several internal sustainability programs, including supporting low effect development and sustainable landscaping programs, workplace recycling, and environmentally friendly supply chain practices (SCE, 2023a).

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SCE provides access to environmental training for the public though its Energy Education Centers program. Trainings focus on energy management and efficiency technologies. In-person instruction, courses, and workshops are held at Energy Education Centers in Irwindale and Tulare. Online learning is also available. Lessons are open to the public and free to attend. The Irwindale Center features a full-scale, operational demonstration for an energy-saving home, which the public can visit (SCE, 2023b).

(H) Summary of the Ownership and Operating Expenses That Would Be Reduced If the License Were Transferred

SCE is applying for a long-term license to continue to maintain and operate the Project. Additionally, there is no competing application to take over the Project. Because there is no proposal to transfer the Project license, this section is not applicable to the Project.

(I) Annual Fees for Federal or Native American Lands

The annual fees for FERC Bill Year 2025, paid under Part I of the Federal Power Act, were $1,593 (use of U.S. lands) and $11,364 (administrative charges).

No Native American lands are included within the FERC Project Boundary.

(iii) *Information to be Provided by an Applicant Who is Not an Existing Licensee*

SCE is an existing licensee; therefore, this section is not applicable.

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(2) References

CAISO (California Independent System Operator). 2024. 20 Year Transmission Outlook. Accessed: August 2026. Retrieved from: https://www.caiso.com/documents/2024-20-year-transmission-outlook-jul-31-2024.pdf

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Lange, C. 2024. Notification of spelling change for the Mono Lake Kootzaduka'a Tribe. Letter: To Whom It May Concern from Charlotte Lange, Chairperson, December 3, 2024. Copy on file, Stantec, Bishop, California.

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SCE; U.S. Department of Agriculture, Forest Service; U.S. Department of the Interior, Bureau of Land Management; California Department of Fish and Wildlife; Mono Lake Committee; California Trout; and American Rivers. 2022. *First Amendment to the Lundy Hydroelectric Project Settlement Agreement*. May 2022.

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TABLES

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Table H-1. Summary of Lundy Project Generation (2000–2025)

Year	Total Annual Net Generation (MWh)
2025	6,659
2024	7,256
2023	11,343
2022	5,714
2021	4,116
2020	4,531
2019	13,212
2018	9,035
2017	16,799
2016	7,722
2015	4,285
2014	4,324
2013	4,838
2012	2,230
2011	13,050
2010	9,190
2009	3,642
2008	4,894
2007	4,417
2006	13,459
2005	12,668
2004	8,685
2003	8,392
2002	7,725
2001	7,598
2000	9,163
Total Generation, Historical Operations (2000–2025)	**204,947**
Average Annual Generation, Historical Operations (2000–2025)	**7,883**

MWh = megawatt hours

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Table H-2. Unscheduled Outages (2021–2025)

Date	Duration	Cause	Corrective Action
2021			
None	--	--	--
2022			
6/3/2022	2.5 hours	Plant trouble: Communication router lost power	Replacement router installed
6/7/2022-6/15/2022	8 days	Plant trouble: Unit #1 high bearing alarm	Alarm cleared, unit returned to service
2023			
10/13/2023-10/19/2023	6 days	Plant trouble: Unit #2 relayed off due to exciter trouble	Unit returned to service
2024			
11/23/2024-12/4/2024	11 days	Plant trouble: Unit #2 relayed, exciter trouble alarm	Alarm cleared, unit returned to service
2025			
None	--	--	--

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