SOUTHERN CALIFORNIA EDISON
Energy for What's Ahead℠

**Wayne P. Allen**
Principal Manager
Regulatory Support Services

*Filed Electronically*

January 5, 2026

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

**Subject: Lundy Hydroelectric Project (FERC Project No. 1390) Initial Study Report**

Dear Secretary Reese:

In accordance with Section 5.15(c) of the Federal Energy Regulatory Commission (FERC or Commission) regulations,[1] Southern California Edison Company (SCE), licensee of the Lundy Hydroelectric Project No. 1390 (Project), hereby files this Initial Study Report (ISR) to provide FERC and relicensing participants an update regarding the progress made in implementing the 12 FERC-approved technical study plans associated with Project relicensing.

This ISR describes SCE's progress in implementing its relicensing studies and includes supporting documentation that summarizes SCE's overall progress to date and the results of the first season of studies conducted pursuant to FERC's January 2, 2025, Study Plan Determination (SPD).[2] This ISR also notes any variances from the study plans and schedules and proposed modifications for the second study season, as appropriate. A copy of this letter and the ISR has been posted to SCE's Lundy Project relicensing website at www.sce.com/lundy. The ISR will be available for review by appointment at the Bishop Creek Hydro Headquarters Office – 4000 E. Bishop Creek Road, Bishop, CA 93514.

**Background**

On February 23, 2024, SCE filed a Notice of Intent to seek a new license for the Project, together with a Pre-Application Document, which initiated the formal relicensing proceeding using FERC's Integrated Licensing Process.[3] On August 5, 2024, SCE filed a Proposed Study Plan (PSP) which included 12 studies to support the relicensing process.[4] On December 4, 2024, SCE filed a Revised Study Plan (RSP) that considered FERC's Scoping Documents and comments filed on

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1 18 C.F.R. § 5.15(c).

2 Study Plan Determination, Project No. 1390-069, Accession No. 20250102-3061 (issued Jan. 2, 2025).

3 Notice of Intent and Pre-Application Document, Project No. 1390-069, Accession No. 20240223-5045 (filed Feb. 23, 2024).

4 Proposed Study Plan, Project No. 1390-069, Accession No. 20240805-5082 (filed Aug. 5, 2024).

2244 Walnut Grove Avenue
Rosemead, CA 91770
626.302.9741
wayne.allen@sce.com

the PSP.[5] On January 3, 2025, FERC issued its SPD.[6] The following 12 study plans approved in the SPD are included in this ISR are :

- WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring
- WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring
- AQ-1 Fish Community Survey
- AQ-2 Fish Stranding Study
- TERR-1 General Botanical Resources Survey
- TERR-2 General Wildlife Survey
- REC-1 Recreation Use and Needs Assessment
- REC-2 Recreation Facilities Condition Assessment
- CUL-1 Cultural Resources – Archeology
- CUL-2 Cultural Resources – Built Environment
- TRI-1 Tribal Resources
- LAND-1 Project Lands and Roads Study

**ISR Public Meeting**

Pursuant to 18 CFR Section 5.15(c)(2), SCE has scheduled an ISR meeting to discuss overall progress of study plan implementation and relicensing participant comments. The meeting will be held virtually via Microsoft Teams. Meeting details are as follows:

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|---|---|
| Date: | January 15, 2026 |
| Time: | 8:00 a.m. – 12:00 p.m. PST |
| MS Teams: | Meeting ID: 286 376 018 422 3<br>Passcode: zM9hj694 |
| Dial In: | 207-248-8024,<br>Conference ID: 463 880 901# |

Refer to the Project relicensing website at www.sce.com/lundy for meeting updates, agenda, and meeting materials. The principal objectives of the meeting are to: (1) summarize overall progress in implementing the study plans with an overview of the data collected; (2) review the remaining schedule for study implementation; (3) review any variances from the study plans and schedule; and (4) provide relevant information to FERC and relicensing participants as they consider whether to recommend any proposed modifications to ongoing studies or new studies.

**Next Steps**

In accordance with the FERC-issued Process Plan and Schedule, SCE will file an ISR meeting summary with FERC by February 2, 2026. Relicensing participants will then have until March 4, 2026, to file comments, disagreements, and requests to amend the study plan. SCE has until April 3, 2026, to respond to such comments, and FERC's determination on these requests is expected by May 4, 2026.

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5 Revised Study Plan, Project No. 1390-069, Accession No. 20241204-5139 (filed Dec. 4, 2024).

6 Study Plan Determination, Project No. 1390-069, Accession No. 20250102-3061 (issued Jan. 2, 2025).

SCE will continue with data collection for a second study season (2025–2026) for ongoing/outstanding study elements and per FERC's resolution of any disagreements, if necessary. The results of the second study season will be provided in the Updated Study Report (USR) filed with FERC by January 4, 2027.

18 CFR Section 5.16(c) requires SCE to file a Preliminary Licensing Proposal (PLP) or Draft License Application (DLA) no later than 150 days prior to the deadline for filing its Final License Application (FLA). For this Project, the deadline for SCE to file its FLA is February 28, 2027, so the deadline for filing the PLP or DLA is October 1, 2026. SCE plans to prepare a DLA instead of a PLP, and FERC's regulations at 18 CFR § 5.16(c) require SCE to provide notice of its intent to prepare a DLA in the USR. However, SCE's USR in this proceeding will be filed in January 2027, *after* the deadline for filing the DLA. Thus, to provide advance notice to FERC and relicensing participants, SCE hereby provides notice under 18 CFR Section 5.16(c) of its intent to file a DLA in lieu of a PLP.

**Conclusion**

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

We look forward to our continued work with Commission staff and all relicensing participants toward the goal of a successful completion of the relicensing process.

Sincerely,

DocuSigned by:
Wayne Allen
106CF18A73D445F...

Wayne P. Allen

Principal Manager

| | |
|---|---|
| **Attachments:** | Distribution List |
| | ISR Meeting Agenda |
| | Transmittal Memo to Interested Parties |
| | Initial Study Report |

## DISTRIBUTION LIST

Lundy Distribution List January 2026

**FERC Service List**

Kelly Henderson, Attorney
Southern California Edison Company
PO Box 800
Rosemead, CA 91770-0800
kelly.henderson@sce.com

Wayne P Allen, Principal Manager
Southern California Edison Company
PO Box 100
Rosemead, CA 93605-0100
wayne.allen@sce.com

Nicolas von Gersdorff, Chief Dam Safety Engineer
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
nicolas.von@sce.com

Brittany Arnold
Southern California Edison Company
1 Pebbly Beach Rd
Avalon, CA 90704
brittany.arnold@sce.com

Mary Schickling, Senior Specialist
Southern California Edison Company
1 Pebbly Beach Rd
Avalon, CA 90704
mary.schickling@sce.com

Mono Lake Committee
Morrison & Foerster LLP
F. Bruce Dodge
319 Goodhill Rd
Kentfield, CA 94904
fbdodge@gmail.com

FERC Case Administration
Southern California Edison Company
2244 Walnut Grove Ave.
Rosemead, CA 91770
ferccaseadmin@sce.com

Martin Ostendorf, Compliance Manager
Southern California Edison Company
P.O. Box 100
54170 Mtn. Spruce Road
Big Creek, CA 93605
martin.ostendorf@sce.com

Cornelio Artienda, Senior Advisor
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
cornelio.artienda@sce.com

Mary M Richardson, Senior Advisor, Regulatory Affairs
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
mary.m.richardson@sce.com

Christy Fanous, Managing Director
Southern California Edison Company
P.O. Box NA
Rosemead, CA 91770
christine.fanous@sce.com

Kathleen Maloney Bellomo
People for Mono Basin Preservation
P.O. Box 217
532 E. Mono Lake Drive
Lee Vining, CA 93541
hydroesq@schat.net

Mono Lake Committee
Geoffrey McQuilkin
P.O. Box 29
Lee Vining, CA 93541-0029
geoff@monolake.org

Richard Roos-Collins
Water and Power Law Group PC
California Trout
2140 Shattuck Ave, Suite 801
Berkeley, CA 94704-1229
rrcollins@waterpowerlaw.com

**Federal Government/Representatives**

Executive Director
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001-2637

Bureau of Indian Affairs
1849 C Street NW MS 2624 MIB
Washington, DC 20240

National Park Service
Barbra_Rice@nps.gov
333 Bush Street,
San Francisco, CA 94104
barbara_rice@nps.gov

Sherri Lisius, Field Manager
U.S. Bureau of Land Management,
Bishop Field Office
351 Pacu Lane, Suite 200
Bishop, CA 93514
BLM_CA_Web_BI@blm.gov

Greg Haverstock
U.S. Bureau of Land Management
Bishop Field Office
351 Pacu Lane, Suite 200
Bishop, CA 93514
ghaverst@blm.gov

Jon Knight
Botany Technician
U.S. Department of Agriculture - Forest Service
351 Pacu Lane
Bishop, CA  93513
jonathan.knight@usda.gov

Regional Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Regional Engineer
Federal Energy Regulatory Commission
901 Market Street, Suite 350
San Francisco, CA 94103
frank.blackett@ferc.gov

Jeff Satrosta, Supervisor Natural Resource Specialist
U.S. Bureau of Land Management,
Bishop Field Office
351 Pacu Lane, Suite 200
Bishop, CA 93514
jstarost@blm.gov

Larry Primosch
U.S. Bureau of Land Management,
Bishop Field Office
351 Pacu Lane, Suite 200
Bishop, CA 93514
lprimosc@blm.gov

Lundy Distribution List January 2026

Michael Wiese, Hydrologist
U.S. Department of Agriculture - Forest Service
michael.wiese@usda.gov

Nathan Sill, Resources Staff Officer
U.S. Department of Agriculture - Forest Service,
Inyo National Forest
nathan.sill@usda.gov

U.S. Department of Agriculture - Forest Service
Stephanie Heller, Mono Lake District Ranger
stephanie.heller@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Jacqueline Beidl
jacqueline.beidl@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Dan Yarborough
daniel.yarborough@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
LeeAnn Murphy
leeann.murphy@usda.gov

U.S. Department of Agriculture - Forest Service
Wilfred Nabahe, Tribal Relations Program
Manager, Inyo National Forest
Wilfred.Nabahe@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Ashley Blythe Haverstock
ashley.blythehaverstock@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Sheila Irons
sheila.irons@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Adam Barnett, Public Services Staff Officer
adam.barnett@usda.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Dawn Alvarez
dawn.alvarez@usda.gov

U.S. Department of Agriculture - Forest Service,
Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592
Tristan Leong
tristan.leong@usda.gov

U.S. Fish and Wildlife Service
Reno Fish and Wildlife Office
1340 Financial Blvd.
Reno, NV 89502
Justin Barrett
justin_barrett@fws.gov

U.S. Department of Agriculture - Forest Service,
Inyo National Forest
351 Pacu Lane, Suite 200
Bishop, CA 93514
Kary Schlick
kary.schlick@usda.gov

U.S. Fish and Wildlife Service
Reno Fish and Wildlife Office
1340 Financial Blvd.
Reno, NV 89502
Anne Mankowski
anne_mankowski@fws.gov

U.S. Fish and Wildlife Service
Chad Mellison
chad_mellison@fws.gov

**State Government/Representatives**

California Dept. of Fish and Wildlife, Bishop Field Office
787 North Main Street, Suite 220
Bishop, CA 93514
Nick Buckmaster
nick.buckmaster@wildlife.ca.gov

California Dept. of Fish and Wildlife, Bishop Field Office
787 North Main Street, Suite 220,
Bishop, CA 93514
Patricia Moyer, Supervisor
patricia.moyer@wildlife.ca.gov

California Dept. of Fish and Wildlife, Bishop Field Office
787 North Main Street, Suite 220,
Bishop, CA 93514
Rose Banks
rose.banks@wildlife.ca.gov

California Dept. of Fish and Wildlife
James Erdman
james.erdman@wildlife.ca.gov

California Dept. of Fish and Wildlife
Beth Lawson
beth.lawson@wildlife.ca.gov

California Regional Water Quality Control Board
Bryan Muro
bryan.muro@waterboards.ca.gov

California Dept. of Fish and Wildlife
Inland Deserts Region
78078 Country Club Drive, Suite 109
Bermuda Dunes, CA 92203
Scott Wilson
scott.wilson@wildlife.ca.gov

California Dept. of Fish and Wildlife
Graham Meese, Senior Environmental Scientist for FERC and Water Rights
graham.meese@wildlife.ca.gov

California Dept. of Fish and Wildlife
Dana Scott, Environmental Scientist
dana.scott@wildlife.ca.gov

California Dept. of Fish and Wildlife
Heather Brashear, Region 6 South Water Rights Regional Coordinator
heather.brashear@Wildlife.ca.gov

California Regional Water Quality Control Board
Adam Cohen
adam.cohen@waterboards.ca.gov

California Dept. of Fish and Wildlife
Michael Tovar
michael.tovar@wildlife.ca.gov

California Regional Water Quality Control Board
Rajaa Hassan
rajaa.hassan@waterboards.ca.gov

**Local Government/Public Agency**

Inyo-Mono Regional Water Management Program
Holly Alpert, Ph.D., Program Manager
holly@inyo-monowater.org

Los Angeles Department of Water and Power
Saeed Jorat
saeed.jorat@ladwp.com

Los Angeles Department of Water and Power
300 Mandich Street, Bishop, CA 93514
Eric Tillemans
eric.tillemans@ladwp.com

Mono Basin Historical Society
129 Mattly Ave.
Lee Vining, CA 93541
John Warneke, Curator
curator@monobasinhistory.org

Mono County Fish and Wildlife Commission
Gaye Mueller, Chair
easternsierraartist@gmail.com

Los Angeles Department of Water and Power
Adam Perez
Adam.Perez@ladwp.com

Mono County Fish and Wildlife Commission
Jim King, Vice Chair
jkrclr@gmail.com

Lori Gillem, Watershed Resources Supervisor
Los Angeles Department of Water and Power
300 Mandich Street, Bishop, CA 93514
Lori.gillem@ladwp.com

Mono County Planning Commission
P.O. Box 347
Mammoth Lakes, CA 93546
Wendy Sugimura
wsugimura@mono.ca.gov

Mono County Planning Commission
437 Old Mammoth Road
Mammoth Lakes, CA 93546
comdev@mono.ca.gov

Paul McFarland
Mono County District 3 Supervisor
25 Bryant Street Annex II
Bridgeport, CA 93517
pmcfarland@mono.ca.gov

Access Fund
408 Home Street
Bishop, CA 93514
Katie Goodwin, CA Regional Director
katie@accessfund.org

Friends of the Inyo
621 W. Line St., Suite 201
Bishop, CA 93514
Wendy Schneider, Executive Director
wendy@friendsoftheinyo.org

American Whitewater
P.O. Box 455
5981 New River Road
Coloma, CA 95613
info@americanwhitewater.com

Lundy Distribution List January 2026

Sierra Club
Mark Bagley
2101 Webster St, Suite 1300
Oakland, CA 94612
markbagley02@gmail.com

Trout Unlimited
P.O. Box 7399
Mammoth Lakes, CA 93546
J. Strickland
jstrickland@tu.org

Mammoth Museum/Southern Mono Historical Society
5489 Sherwin Creek Road
Mammoth Lakes, CA 93546
info@mammothmuseum.org

California Native Plant Society
Bristlecone Chapter
P.O. Box 364
Bishop, CA 93515
Katie Quinlan
kquinlan16@gmail.com;
president@bristleconecnps.org

Friends of the River
1418 20th St., Suite 100
Sacramento, CA 95811
Jann Dorman, Executive Director
janndorman@friendsoftheriver.org

Friends of Mono Lake Reserve
P.O. Box 278
Bridgeport, CA 93517
fomlr@bodiefoundation.org

Sierra Nevada Conservancy, Mammoth Lakes
P.O. Box 9245
126 Old Mammoth Road, Suite 107
Mammoth Lakes, CA 93546
Matt Driscoll
matt.driscoll@sierranevada.ca.gov

Sierra Club, Toiyabe Chapter
2101 Webster St., Suite 1300
Oakland, CA 94612
chair@toiyabe.sierraclub.org

Ruby Allen
Rainbow Packers
P.O. Box 392
Bishop, CA 93151
rainbowpackers@aol.com

Haley Wragg, President
Lundy Lake Resort
P.O. Box 789
Lee Vining, CA 93541
lundylakeresort@gmail.com

Karyn Spears
Public Works Assistant
Mono County
74 N School Street
Bridgeport, CA 93517
kspears@mono.ca.gov

**Native American Tribes**

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Sandra Chapman, Chairperson
ssmiwuknation@gmail.com

Lundy Distribution List January 2026

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Tara Fouch-Moore, Council Secretary
secretary@southernsierramiwuknation.org

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Acacia Coats, Director-at-Large
director@southernsierramiwuknation.org

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
mariposamiwuk@sti.net

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

Clay River, Managing Director, Miwumati Family
Healing Center
American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
claymiwumati@gmail.com

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Nancy Dondero, Administrative Receptionist
ndondero21@gmail.com

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Waylon Coats, Vice Chairperson
vicechair@southernsierramiwuknation.org

American Indian Council of Mariposa County
(aka Southern Sierra Miwuk Nation)
P.O. Box 186
Mariposa, CA 95338
Jazzmyn Gegere (Brochini), Cultural Resource
Preservation Department Manager
preservation@southernsierramiwuknation.org

Antelope Valley Indian Community, Coville
Paiute Tribe
1023 Mountain Park Drive
Carson City, NV 89706
Georgia Grace “Gracie” Dick-Cluette
numugrace@gmail.com

Big Pine Paiute Tribe of Owens Valley
P.O. Box 700
Big Pine, CA 93513
Cheyenne Stone, Chairperson
cheyenne.stone@bigpinepaiute.org

Big Pine Paiute Tribe of Owens Valley
P.O. Box 700
Big Pine, CA 93513
Sally Manning, Environmental Director
s.manning@bigpinepaiute.org

Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514
Meryl Picard, Chairperson
meryl.picard@bishoppaiute.org

Lundy Distribution List January 2026

Raymond Andrews, Tribal Elder Mono Lake Kutzadika/Bishop Paiute Tribe
Mono Lake kutzadikaa Cultural Presrevation Association
P.O. Box 591
Bishop, CA 93515
kutzanuumu@yahoo.com

Bridgeport Indian Colony
P.O. Box 37
Bridgeport, CA 93517
Debbie Lundy-Painter, Cultural Coordinator
culture@bridgeportindiancolony.com

Fort Independence Indian Community of Paiute Indians
Sean Scruggs, Tribal Historic Preservation Officer
falconkeeper22@gmail.com

Lone Pine Paiute-Shoshone Tribe
P.O. Box 747
Lone Pine, CA 93545
Katherine Bancroft, Tribal Historic Preservation Officer
patsiata@yahoo.com

Big Pine Paiute Tribe of Owens Valley
P.O. Box 700
Big Pine, CA 93513
Jacqueline "Danelle" Gutierrez,
Tribal Historic Preservation Officer
d.gutierrez@bigpinepaiute.org

Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514
Darren Delgado, Tribal Historic Preservation Officer
darren.delgado@bishoppaiute.org

Bridgeport Indian Colony
P.O. Box 37
Bridgeport, CA 93517
Jeanette, Tribal Administrator
admin@bridgeportindiancolony.com

Bridgeport Indian Colony
P.O. Box 37
Bridgeport, CA 93517
Herbert Glazier, Chairperson
chair@bridgeportindiancolony.com

Fort Independence Indian Community of Paiute Indians
P.O. Box 67
Independence, CA 93526
Carl Dahlberg, Chairperson
carl@fortindependence.com

Lone Pine Paiute-Shoshone Tribe
P.O. Box 747
Lone Pine, CA 93545
Mary Wuester, Chairperson
chair@lppsr.org

Mono Lake Kutzadikaa Tribe
P.O. Box 177
Big Pine, CA 93513
Charlotte Lange, Chairperson
char54lange@gmail.com

Mono Lake Kutzadikaa Indian Community Cultural Preservation Association
P.O. Box 237
Lee Vining, CA 93541
Jocelyn Sheltraw, President
jsheltraw@monolaketribe.us

Lundy Distribution List January 2026

North Fork Rancheria of Mono Indians of California
P.O. Box 929
North Fork, CA 93643
Christina McDonald, Secretary
cmcdonald@nfr-nsn.gov

North Fork Mono Tribe of California
13396 Tollhouse Road
Clovis, CA 93619
Ron Goode, Chairman
rwgoode911@hotmail.com

Timbisha Shoshone Tribe
621 West Line St., Suite 109
Bishop, CA 93514
Margaret Cortez, Chairperson
one_mug@yahoo.com

Timbisha Shoshone Tribe
621 West Line St., Suite 109
Bishop, CA 93514
Thomas Romero, Environmental Department
environmental@timbisha.com

Mono Lake Kutzadikaa Indian Community Cultural Preservation Association
P.O. Box 237
Lee Vining, CA 93541
Dean Tonenna, Vice President
dtonenna@gmail.com

North Fork Rancheria of Mono Indians of California
P.O. Box 929
North Fork, CA 93643
Fred Beihn, Chairperson
fbeihn@nfr-nsn.gov

North Fork Rancheria of Mono Indians of California
P.O. Box 929
North Fork, CA 93643
Elaine Bethel-Fink, Tribal Member
efink@nfr-nsn.gov

Timbisha Shoshone Tribe
621 West Line St., Suite 109
Bishop, CA 93514
Sookaaki (Charlie) Charley, Tribal Administrator
administrator@timbisha.com

Timbisha Shoshone Tribe
621 West Line St., Suite 109
Bishop, CA 93514
Mandi Campbell, Tribal Historic Preservation Officer
THPO@timbisha.com

Tuolumne Band of Me-Wuk Indians
P.O. Box 669
Tuolumne, CA 95379
Jon Otterson, Tribal Administrator
jon@mewuk.com

Tuolumne Band of Me-Wuk Indians
P.O. Box 669
Tuolumne, CA 95379
Reba Fuller, Government Affairs Specialist
rfuller@mewuk.com

Tuolumne Band of Me-Wuk Indians
P.O. Box 669
Tuolumne, CA 95379
Andrea Reich, Chairperson
andrea@mewuk.com

Walker River Paiute Tribe
P.O. Box 220
Schurz, NV 89427
Sarah Twiss, Tribal Administrator
stwiss@wrpt.org

Washoe Tribe of Nevada and California
Serrell Smokey, Chairperson
919 U.S. Hwy 395 N
Gardnerville, NV 89410
serrell.smokey@washoetribe.us

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

Yosemite-Mono Lake Paiute Indian Community
Lucy Parker
P.O. Box 157
Lee Vining, CA 93541
lucy_basket4@yahoo.com

Utu Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation
25669 Highway 6 PMBI
Benton, CA 93512
Shane Saulque, Chairman
s.saulque@bentontribe.org

Walker River Paiute Tribe
P.O. Box 220
Schurz, NV 89427
Linzey Scott, Tribal Historic Preservation Officer
lscott@wrpt.org

Washoe Tribe of Nevada and California
919 U.S. Hwy 395 N
Gardnerville, NV 89410
TahoeLiaison@WashoeTribe.us

Yosemite-Mono Lake Paiute Indian Community
David Andrews
711 19th St.
Sparks, NV 89431
nayanake@comcast.net

**Other Organizations & Businesses**

Kleinschmidt Associates
Finlay Anderson, Principal Consultant
1500 NE Irving St Ste 550
Portland, OR 97232
finlay.anderson@kleinschmidtgroup.com

Kleinschmidt Associates
Angela Whelpley
141 Main Street
Pittsfield, ME 04967
angela.whelpley@kleinschmidtgroup.com

Vince White
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
Vince.white@sce.com

Matthew Woodhall, Project Lead
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
matthew.woodhall@sce.com

Audry Williams, Senior Advisor, Archaeology Program
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
Audry.williams@sce.com

Lundy Distribution List January 2026

Stillwater Sciences
Heather Neff, Senior Aquatic Ecologist
279 Cousteau Place #400
Davis, CA 95618
heather@stillwatersci.com

TEAM Engineering & Management, Inc.
459 W. Line St., Suite A
Bishop, CA 93514
Naomi Jensen, President/CEO
naomi@teamenvironmental.com

E Read Associates, Inc.
Edith Read, President
368 South Grand St.
Orange, CA 92866
marshmistress@msn.com

Farwestern
Jay King, President
2727 Del Rio Place, Suite A
Davis, CA 95618
jay@farwestern.com

Daniel Keverline
Southern California Edison Company
2244 Walnut Grove Ave
Rosemead, CA 91770
Daniel.keverline@sce.com

Mono Lake Committee
Robert Di Paolo
P.O. Box 29
Lee Vining, CA 93541-0029
robbie@monolake.org

Mono Lake Committee
Bartshe Miller
P.O. Box 29
Lee Vining, CA 93541-0029
bartshe@monolake.org

Mono Lake Committee
Teri Tracy
P.O. Box 29
Lee Vining, CA 93541-0029
ttracy@monolake.org

Aaron Stanton
Attorney
Shute Mihaly & Weinberger, LLP (on behalf of the Mono Lake Committee)
396 Hayes Street
San Francisco, CA 94102
stanton@smwlaw.com

Psomas
Brad Blood, Senior Biologist
5 Hutton Centre Drive, Suite 300
Santa Ana, CA 92707
bblood@psomas.com

Psomas
Allison Rudalevige, Senior Biologist
5 Hutton Centre Drive, Suite 300
Santa Ana, CA 92707
allison.rudalevige@psomas.com

Mike Connor
UC Davis
15061 Pleasant Valley Road
Penn Valley, CA  95946
jmconnor@ucdavis.edu

# SOUTHERN CALIFORNIA EDISON
# Lundy Hydroelectric Project
# (FERC Project No. 1390)

## INITIAL STUDY REPORT

SOUTHERN CALIFORNIA EDISON

Energy for What's Ahead®

January 2026

# SOUTHERN CALIFORNIA EDISON

## Lundy Hydroelectric Project
## (FERC Project No. 1390)

## INITIAL STUDY REPORT

Southern California Edison
2244 Walnut Grove Ave
Rosemond, CA 91770

January 2026

***Support from:***

Kleinschmidt

# ISR MEETING AGENDA

# Lundy Hydroelectric Project Relicensing

*Initial Study Report Meeting*

January 15, 2026, 8:00 a.m. – 12:00 p.m. PST
Virtual via Microsoft Teams
Meeting ID: 286 376 018 422 3
Passcode: zM9hj694

## Objectives

- Review Progress on Technical Studies
- Address stakeholder questions

| Duration (minutes) | Agenda Topic/Subtopic | Lead |
|---|---|---|
| 15 | **Welcome, Introductions, Meeting Objectives** | |
| | - Safety moment<br>- Introductions<br>- Regulatory and Process, Look Back and Look Ahead<br>- Meeting objectives | Matthew Woodhall<br>Finlay Anderson |
| 80 | **Water Quality and Aquatics Studies** | |
| | - WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring<br>- WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring<br>- AQ-1 Fish Community Survey<br>- AQ-2 Fish Stranding Study | Heather Neff<br>Christina Buck<br>Dirk Pederson |
| 30 | **Terrestrial Studies** | |
| | - TERR-1 General Botanical Resources Survey<br>- TERR-2 General Wildlife Survey | Allison Rudalevige<br>Steve Norton |
| 45 | **Recreation and Land Use Studies** | |
| | - REC-1 Recreation Use and Needs Assessment<br>- REC-2 Recreation Facilities Condition Assessment<br>- LAND-1 Project Lands and Roads Study | Angela Whelpley |
| 45 | **Cultural and Tribal Studies** | |
| | - CUL-1 Cultural Resources – Archaeology<br>- CUL-2 Cultural Resources – Built Environment<br>- TRI-1 Tribal Resources | Audry Williams |
| 15 | **Schedule and Next Steps** | |
| | - Project Schedule<br>- Deadlines and Next Steps | Finlay Anderson |
| 10 | **Final Q&A** | |

| | |
|---|---|
| | **Adjourn** |

# TRANSMITTAL MEMO TO INTERESTED PARTIES

All~

On January 5, 2026, Southern California Edison (SCE) filed the Initial Study Report (ISR) with the Federal Energy Regulatory Commission (FERC) as part of the relicensing process for the Lundy Hydroelectric Project (FERC No P-1390). The filing may be viewed electronically via FERC's online website: https://elibrary.ferc.gov/eLibrary/search by entering the docket number P-1390.

Additional information about the project and the relicensing process can be found at www.sce.com/lundy. The process is being managed by FERC utilizing the Integrated Licensing Process. The best way to be apprised of FERC's activities is to subscribe to the FERC docket using the docket number above.

SCE will host an ISR meeting to discuss the materials filed with FERC. Below are the meeting details:

| | |
|---|---|
| Date: | January 15, 2026 |
| Time: | 8:00 a.m. – 12:00 p.m. PST |
| MS Teams:<br><br><br><br>Dial In: | Meeting ID: 286 376 018 422 3<br>Passcode: zM9hj694<br><br>207-248-8024,<br>Conference ID: 463 880 901# |

I look forward to continuing working with you all on this effort – please reach out to me with any questions.

Matthew C. Woodhall

Southern California Edison

Generation-Regulatory Support Services

909-362-1764 - Cell

626-302-9596 - Office

SOUTHERN CALIFORNIA EDISON | Energy for What's Ahead℠

# INITIAL STUDY REPORT

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## Acronyms and Abbreviations

| | |
|---|---|
| ° | degree(s) |
| °C | degree(s) Celsius |
| µg/g ww | microgram per gram wet weight |
| µg/L | micrograms per liter |
| µS/cm | microsiemens per centimeter |

***A***

| | |
|---|---|
| ACHP | Advisory Council on Historic Preservation |
| ADA | Americans with Disabilities Act |
| ADCP | acoustic Doppler current profiler |
| amsl | above mean sea level |
| APE | Area of Potential Effects |
| AQ-1 | Fish Community Survey |
| AQ-2 | Fish Stranding Study |
| AT-10 | Air Temperature Monitoring Station |

***B***

| | |
|---|---|
| BLM | Bureau of Land Management |
| BSA | botanical study area |

***C***

| | |
|---|---|
| $CaCO_3$ | calcium carbonate |
| Cal-IPC | California Invasive Plant Council |
| CALVEG | California Vegetation Classification System |
| CCH | Consortium of California Herbaria |
| CDFG | California Department of Fish and Game |
| CDFW | California Department of Fish and Wildlife |
| CDPR | California Department of Parks and Recreation |
| CEDEN | California Environmental Data Exchange Network |
| CFR | Code of Federal Regulations |
| cfs | cubic feet per second |

| | |
|---|---|
| CM | County of Mono |
| CNDDB | California Natural Diversity Data Base |
| CNPS | California Native Plant Society |
| CPUE | catch per unit effort |
| CRPR | California Rare Plant Rank |
| CUL-1 | Cultural Resources – Archaeology |
| CUL-2 | Cultural Resources – Built Environment |

***D***

| | |
|---|---|
| DLA | Draft License Application |
| DO | dissolved oxygen |
| DPR | California Department of Parks and Recreation |
| DPR 523 | Department of Parks and Recreation 523 (form) |

***E***

| | |
|---|---|
| EA | EA Engineering, Science, and Technology, Inc. |
| eDNA | environmental DNA |

***F***

| | |
|---|---|
| FE | Federally Endangered |
| FERC | Federal Energy Regulatory Commission |
| FL | Fork Length |
| FP | Fully Protected |

***G***

| | |
|---|---|
| GIS | geographic information system |
| GPS | Global Positioning System |

***H***

| | |
|---|---|
| HPMP | Historic Properties Management Plan |

***I***

| | |
|---|---|
| ID | identification |

| | |
|---|---|
| ILP | Integrated Licensing Process |
| INF | Inyo National Forest |
| IPaC | Information for Planning and Consultation System |
| ISR | Initial Study Report |

***K***

| | |
|---|---|
| k | Fulton’s condition factor |

***L***

| | |
|---|---|
| LADWP | Los Angeles Department of Water and Power |
| LAND-1 | Project Lands and Roads Study |
| LiDAR | Light Detection and Ranging |
| LLR | Lundy Lake Resort |
| LRWQCB | Lahontan Region Water Quality Control Board |
| Lundy Project | Lundy Hydroelectric Project (FERC Project No. 1390) |

***M***

| | |
|---|---|
| MC | Mill Creek |
| MCRD | Mill Creek Return Ditch |
| mg/L | milligrams per liter |
| mm | millimeters |
| MPN | most probable number |

***N***

| | |
|---|---|
| NA | Not Available |
| NAHC | Native American Heritage Commission |
| NAVD 88 | North American Vertical Datum of 1988 |
| NHPA | National Historic Preservation Act |
| NOI | Notice of Intent |
| NPS | National Park Service |
| NRB | National Register Bulletin |
| NRHP | National Register of Historic Places |
| NRM | Natural Resource Manager |

| | |
|---|---|
| NTU | Nephelometric Turbidity Unit |

***O***

| | |
|---|---|
| O&M | operations and maintenance |
| OEHHA | California Office of Environmental Health Hazard Assessment |
| OHP | California Office of Historic Preservation |

***P***

| | |
|---|---|
| PAD | Pre-Application Document |
| pH | indicates acidity or alkalinity of a solution |
| PQL | practical quantitation limit |
| PQS | Professional Qualification Standards |
| Project | Lundy Hydroelectric Project (FERC Project No. 1390) |

***Q***

| | |
|---|---|
| QA/QC | quality assurance/quality control |
| qPCR | Quantitative Polymerase Chain Reaction |

***R***

| | |
|---|---|
| REC-1 | Recreation Use and Needs Assessment |
| REC-2 | Recreation Facilities Condition Assessment |

***S***

| | |
|---|---|
| s.u. | standard unit |
| SCC | Species of Conservation Concern |
| SCE | Southern California Edison [Company] |
| SCORP | Statewide Comprehensive Outdoor Recreation Plan |
| SD1 | Scoping Document 1 |
| SE | State Endangered |
| SHPO | State Historic Preservation Office |
| SM | Standard Methods |
| SPD | Study Plan Determination |
| SR | State Rare |

| | |
|---|---|
| SSC | Species of Special Concern |
| SWRCB | State Water Resources Control Board |

***T***

| | |
|---|---|
| TCP | Traditional Cultural Property/Place |
| TESP/IS | Threatened, Endangered, and Sensitive Plants/Invasive Species |
| TERR-1 | General Botanical Resources Survey |
| TERR-2 | General Wildlife Survey |
| TL | Total Length |
| TRI-1 | Tribal Resources |

***U***

| | |
|---|---|
| U.S. | United States |
| USC | United States Code |
| USEPA | U.S. Environmental Protection Agency |
| USFS | U.S. Forest Service |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| USR | Updated Study Report |

***W***

| | |
|---|---|
| WL | Watch List |
| WQ-1 | Lundy Lake and Mill Creek Water Quality Monitoring |
| WQ-2 | Lundy Lake and Mill Creek Water Temperature Monitoring |
| WSA | Wildlife Study Area |

# 1.0 INTRODUCTION AND BACKGROUND

## 1.1. INTRODUCTION

Southern California Edison (SCE) Company is the licensee, owner, and operator of the Lundy Hydroelectric Project (Lundy Project or Project), licensed under the Federal Energy Regulatory Commission (FERC) Project Number 1390. The Lundy Project is located on the eastern slope of the Sierra Nevada along Mill Creek, approximately 7.6 miles northwest of Lee Vining off Lundy Road, in Mono County, California. The Lundy Project has an installed capacity of 3 megawatts. The Lundy Project FERC license was issued on March 3, 1999, and expires on February 28, 2029. SCE is using FERC's Integrated Licensing Process (ILP) for the relicensing of the Lundy Project as outlined in 18 Code of Federal Regulations (CFR) Part 5.

This Initial Study Report (ISR) is being filed with FERC pursuant to 18 CFR § 5.15(c)(1) and provides interested parties with a summary of progress to date and data collected from the studies initiated in 2025. The 2026 ISR meeting (January 15, 2026, at 8 a.m. via Microsoft Teams) will provide an opportunity for interested parties to comment on the 2025 study progress.

## 1.2. STUDY PLAN IMPLEMENTATION

FERC issued their Study Plan Determination (SPD) for the Lundy Project on January 2, 2025. The SPD approved 12 study plans as part of the Lundy Project relicensing, as listed below.

- WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring
- WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring
- AQ-1 Fish Community Survey
- AQ-2 Fish Stranding Study
- TERR-1 General Botanical Resources Survey
- TERR-2 General Wildlife Survey
- REC-1 Recreation Use and Needs Assessment
- REC-2 Recreation Facilities Condition Assessment
- CUL-1 Cultural Resources – Archaeology
- CUL-2 Cultural Resources – Bulit Environment
- TRI-1 Tribal Resources
- LAND-1 Project Lands and Roads Study

## 1.3. Process Plan and Schedule

The Lundy Project follows the ILP schedule as outlined by FERC. Table 1.3-1 identifies the major milestones completed and those upcoming for the Lundy Project.

**Table 1.3-1. Lundy Project Relicensing Schedule**

| Responsible Entity | Milestone | Date | FERC Regulation |
|---|---|---|---|
| SCE | File Notice of Intent (NOI)/Pre-Application Document (PAD) with FERC | February 23, 2024 | 5.5, 5.6 |
| FERC | Notice of Commencement of Proceeding & Scoping Document 1 (SD1) issued | April 23, 2024 | 5.8 |
| FERC | Scoping and Site Visit | May 23, 2024 | 5.8(b)(viii) |
| All stakeholders | NOI/PAD/SD1 comments due | June 22, 2024 | 5.9 |
| SCE | File Proposed Study Plan | August 6, 2024 | 5.11 |
| All stakeholders | Study Plan comments due | November 4, 2024 | 5.12 |
| SCE | File Revised Study Plan | December 4, 2024 | 5.13 |
| FERC | Director's Study Plan Determination | January 3, 2025 | 5.13(c) |
| SCE | First Study Season | 2025 | 5.15(a) |
| SCE | Second Study Season | 2026 | 5.15(a) |
| **SCE** | **Initial Study Report** | **January 5, 2026** | **5.15(c)(1)** |
| All stakeholders | Initial Study Report Meeting | January 15, 2026 | 5.15(c)(2) |
| SCE | Initial Study Report Meeting Summary | February 2, 2026 | 5.15(c)(3) |
| All stakeholders | Disagreements/Requests to Amend Study Plan | March 4, 2026 | 5.15(c)(4) |
| All stakeholders | Responses to Disagreements/Amendment Requests | April 3, 2026 | 5.15(c)(5) |
| FERC | Director's Determination on Disagreements/Amendments | May 3, 2026 | 5.15(c)(6) |
| SCE | Preliminary Licensing Proposal (or Draft License Application) due | October 1, 2026 | 5.16(a)-(c) |
| All stakeholders | Comments on Preliminary Licensing Proposal (or Draft License Application) | December 30, 2026 | 5.16(e) |
| SCE | Updated Study Report due | January 4, 2027 | 5.15(f) |
| All stakeholders | Updated Study Report Meeting | January 18, 2027 | 5.15(f) |
| SCE | Updated Study Report Meeting Summary | February 2, 2027 | 5.15(f) |
| SCE | Final License Application filed | February 28, 2027 | 5.17 |
| All stakeholders | Disagreements/Requests to Amend Study Plan | March 4, 2027 | 5.15(f) |

| Responsible Entity | Milestone | Date | FERC Regulation |
|---|---|---|---|
| All stakeholders | Responses to Disagreements/Amendment Requests | April 5, 2027 | 5.15(f) |
| FERC | Director’s Determination on Disagreements/Amendments | May 3, 2027 | 5.15(f) |

## 1.4. NOTICE OF INTENT TO FILE A DRAFT LICENSE APPLICATION

Per 18 CFR § 5.16(c), SCE is required to indicate in the Updated Study Report (USR) whether it will file a Draft License Application (DLA) in lieu of a preliminary license proposal. Although the ILP regulations require this notification to be placed in the USR, the Process Plan and Schedule for the Lundy Project provides for the DLA to be filed prior to the USR. For that reason, SCE hereby notifies the Commission and relicensing participants of its intent to file a DLA for the relicensing of the Lundy Project by October 1, 2026.

## 1.5. CONSULTATION TO DATE

Below is a list of meetings held to support the relicensing effort.

- Introduction to Relicensing Meeting – December 5, 2023
- Public Scoping Meeting – May 14, 2024
- Site Visit – May 15, 2024
- Proposed Study Plan Meeting – September 3, 2024
- Initial Study Report Meeting – January 15, 2026

# 2.0 SUMMARY OF STUDIES

## 2.1. 2025 STUDIES

SCE initiated studies in 2025 as approved by FERC in its SPD (FERC, 2025). Table 2.1-1 provides the status of each study as of the filing date of this ISR, along with the anticipated completion schedule for studies that remain in progress. Interim reports were prepared for ongoing studies at the time of this ISR filing.

## Table 2.1-1. Lundy Project – 2025 Study Status

| Study Name | Status Update | Study Plan Variances | Proposed Study Modification |
|---|---|---|---|
| WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring | The year 1 data collection is complete; Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 3.0. As provided in the approved study plan, SCE will determine the need for additional data collection, once a determination of the water year has been made in Q2 of 2026 | • SCE added a Golden Mussel Assessment to the water quality monitoring effort.<br>• Two additional sampling events were conducted during June and July 2025 at MCBR-5, LMC-7, and MCRD-6.<br>• Site LPB-9 was added for stream water quality sampling.<br>• Fecal coliform could not be analyzed from the sample collected on August 13; an additional sampling event was conducted on September 19.<br>• A duplicate grab sample was not collected during the August sampling event.<br>• Several chlorophyll-*a* samples from spring and summer were analyzed outside of holding times; additional samples were collected in September 2025. | None |
| WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring | The year 1 data collection is complete; data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 4.0. As provided in the approved study plan, SCE will determine the need for additional data collection, once a determination of the water year has been made in Q2 of 2026 | None | None |
| AQ-1 Fish Community Survey | Field data collection is complete; Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 5.0. | None | None |

| Study Name | Status Update | Study Plan Variances | Proposed Study Modification |
|---|---|---|---|
| AQ-2 Fish Stranding Study | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 6.0. | • The target flow release schedule was modified from the example provided in the AQ-2 Revised Study Plan to better reflect flow release steps during typical operations when down-ramping from 150 cubic feet per second (cfs) to 5 cfs. | None |
| TERR-1 General Botanical Resources Survey | The 2025 data collection is complete. As described in the RSP, a second year of data will be collected in 2026. Results will be included in the DLA. For more details on this study, please see Section 7.0. | • The Botanical Study Area was expanded slightly to ensure all day use areas were incorporated.<br>• Because of the prolific presence of cheat grass (*Bromus tectorum*), it was infeasible to map individual populations; instead of mapping, biologists used a qualitative description to convey the abundance and extent of the species. | None |
| TERR-2 General Wildlife Survey | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 8.0. | • In anticipation of snow levels, all but one wildlife camera will be removed after a 3-month deployment; the remaining camera will be elevated on a tree and collected in 2026.<br>• Interviews of permanent Lundy Lake Lodge staff were conducted to anecdotally identify wildlife species in the area. | None |
| REC-1 Recreation Use and Needs Assessment | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 9.0. | • The Inn Fire in Mono City in May 2025 caused road closures and evacuations of the Project area, preventing the survey team from conducting the survey on May 25, 2025.<br>• Due to extenuating circumstances, 3 field dates had only one field technician conducting surveys. | None |
| REC-2 Recreation Facilities Condition Assessment | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more | • FERC's SPD recommended a temporary staff gage be installed near the boat launch on the west side of Lundy Lake; in | None |

| Study Name | Status Update | Study Plan Variances | Proposed Study Modification |
|---|---|---|---|
| | details on this study, please see Section 10.0. | consultation with the California Department of Fish and Wildlife (CDFW), it was agreed that the data currently collected at the USGS-approved gage located near the dam would adequately represent the lake levels for both the east and west sides of Lundy Lake. | |
| CUL-1 Cultural Resources – Archaeology | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 11.0. | None | None |
| CUL-2 Cultural Resources – Built Environment | Field data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 12.0. | None | None |
| TRI-1 Tribal Resources | Data collection is complete;<br>Data analysis is ongoing. Results will be included in the DLA. For more details on this study, please see Section 13.0. | None | Department of Parks and Recreation 523 (DPR 523) forms will not be prepared as part of the TRI-1 Study Report. However, with ongoing Tribal consultation, they may be prepared as part of the Historic Properties Management Plan process. |
| LAND-1 Project Lands and Roads Study | Data collection will continue in 2026. Results will be included in the DLA. For more details on this study, please see Section 14.0. | None | None |

## 2.2. REFERENCES

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

# 3.0 WQ-1 LUNDY LAKE AND MILL CREEK WATER QUALITY MONITORING

## 3.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a Water Quality Study (WQ-1) to evaluate current water quality in the Project reservoir (Lundy Lake) and Project-affected stream reaches. In its January 2, 2025 SPD, FERC approved the *WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring Study Plan* (SCE, 2024) with modification. The study was divided into three distinct components that include (1) reservoir and stream water quality sampling, (2) bacteriological sampling, and (3) fish tissue mercury sampling. All components of the study were implemented in 2025. This section includes preliminary results from reservoir and stream water quality sampling conducted between April 29 and August 19, 2025, and weekly bacteriological sampling events conducted between August 7 and September 19, 2025. Additional water quality data collected through October 2025[1,2] in support of the WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring Study (WQ-1 Study) will be included in a draft Technical Report that will inform the DLA.

## 3.2. REVIEW OF EXISTING INFORMATION

Existing water quality data are primarily limited to data obtained from the following sources:

- Water quality data (including pH, water temperature, specific conductance, nutrients, suspended sediment, chloride, and sulfate) downloaded from the California Environmental Data Exchange Network (CEDEN) that were collected from Mill Creek on two dates in 2012 (CEDEN, 2023).
- Seasonal water quality data (hardness, total Kjeldahl nitrogen, total reactive phosphorus, pH, sulfate, chloride, nitrate, zinc, total dissolved solids, conductivity, and total suspended solids) collected by California Department of Fish and Game (CDFG) from Mill Creek between April and October 1991 (CDFG, 1996).
- Bacterial sampling data (*Escherichia coli* [*E. coli*] and fecal coliform) downloaded from CEDEN that were collected from Mill Creek in 2012 and 2013 (CEDEN, 2023).

[1] Per modifications proposed in the FERC SPD, a second year of water quality data will be collected during spring/summer/fall of 2026 if the preliminary water year type forecast on April 1, 2026, is different from water year 2025.

[2] A second year of fish tissue mercury sampling will be conducted in 2026, regardless of water year type, if samples collected during the first year (2025) of fish tissue mercury sampling contain methylmercury levels that exceed the U.S. Environmental Protection Agency Tissue Residue Criterion (0.3 milligram methylmercury per kilogram of fish; USEPA, 2001).

## 3.3. STUDY OBJECTIVES

The objective of the WQ-1 Study is to collect additional water quality data to characterize conditions in Lundy Lake and Project-affected stream reaches of Mill Creek. These data will also be used to evaluate potential effects of the Project on water quality in Lundy Lake and Mill Creek downstream of Lundy Dam and to assess consistency with water quality objectives in the Basin Plan (LRWQCB, 2019), California statewide numeric mercury objectives (SWRCB, 2017) and Office of Environmental Health Hazard Assessment (OEHHA) screening values (OEHHA, 2022) in the DLA.

### 3.3.1. STUDY AREA

The Study Area includes Lundy Lake, Mill Creek and South Fork Mill Creek upstream of Lundy Lake, Mill Creek from Lundy Dam to the Mill Creek Return Ditch (MCRD) outlet (Mill Creek Bypass Reach), Mill Creek between the MCRD outlet and Mono Lake (Lower Mill Creek), Lundy Powerhouse Tailrace, and MCRD (Figure 3.3-1). Study sites for the reservoir and stream water quality sampling, bacteriological sampling, and fish tissue mercury sampling study components are described in Section 3.4.

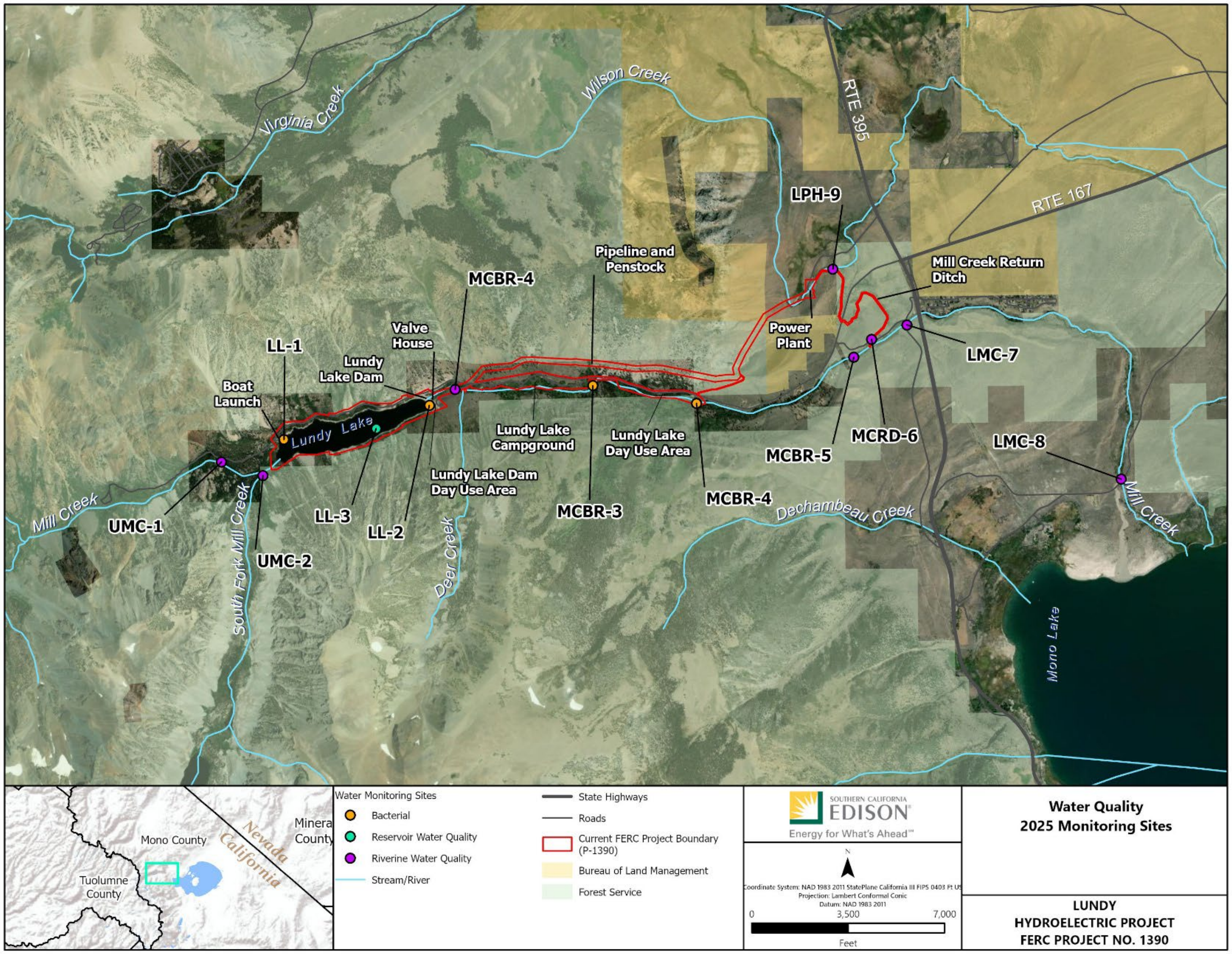



**Figure 3.3-1. Overview of the Project Area and Water Quality Study Sites.**

## 3.4. METHODS

For 2025, study implementation generally followed the methods described in the WQ-1 Final Technical Study Plan (SCE, 2024), with exceptions described in Section 3.5.

### 3.4.1. RESERVOIR AND STREAM WATER QUALITY SAMPLING

A total of nine sites were sampled as part of the reservoir and stream water quality sampling component, including one reservoir and eight stream sites (Figure 3.3-1). Water quality sampling site identification (ID), site description, location (latitude and longitude), and sampling dates are provided in Table 3.4-1.

Three seasonal sampling events were conducted to measure key indicators of water quality during spring (April 29 and 30, 2025), summer (August 18 and 19, 2025), and fall (October 20 and 21, 2025). Sampling occurred in the early spring to characterize seasonal runoff, during summer to characterize low flow and maximum reservoir stratification, and in the fall to characterize reservoir turnover and pre-winter conditions. Two additional sampling events were conducted during periods when the Lundy Powerhouse outflow was released into the MCRD[3] (June 9 and July 15, 2025) at three stream sites: Mill Creek upstream and downstream of the confluence with the MCRD (Site MCBR-5 and Site LMC-7, respectively), and MCRD upstream of the confluence with Mill Creek (Site MCRD-6). Sampling occurred to characterize potential effects of the MCRD on Mill Creek water quality.

At each site, in situ water quality (temperature, dissolved oxygen, pH, specific conductance, and turbidity) was measured and surface water grab samples were collected for subsequent laboratory analysis. Additionally, a vertical profile of in situ parameters was collected at Lundy Lake (Site LL-3) during each sampling event.

[3] MCRD was operating from approximately May 16 to July 20, 2025, and August 1 to 19, 2025.

**Table 3.4-1. Reservoir and Stream Water Quality Sampling Locations and Dates**

| Site Description | Site ID | Location Coordinates[a] (decimal degrees) | | Sample Date (2025) |
|---|---|---|---|---|
| | | Latitude | Longitude | |
| **Reservoir Site** | | | | |
| Lundy Lake | LL-3 | 38.029258 | -119.227235 | 4/30, 8/18, 10/21 |
| **Stream Sites** | | | | |
| Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek | UMC-1 | 38.026128 | -119.246765 | 4/29, 8/19, 10/20 |
| South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek | UMC-2 | 38.024740 | -119.241557 | 4/29, 8/19, 10/20 |
| Mill Creek immediately downstream of Lundy Lake | MCBR-4 | 38.033046 | -119.217218 | 4/29, 8/19, 10/20 |
| Mill Creek upstream of the confluence with the Mill Creek Return Ditch | MCBR-5 | 38.035697 | -119.166930 | 4/29, 6/9, 7/15, 8/19, 10/20 |
| Mill Creek Return Ditch upstream of the confluence with Mill Creek | MCRD-6 | 38.037452 | -119.164651 | 6/9, 7/15, 8/19 |
| Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old US Highway 395 Bridge[b] | LMC-7 | 38.038858 | -119.160189 | 6/9, 7/15, 8/19 |
| Mill Creek between Highway 395 and Mono Lake | LMC-8 | 38.023166 | -119.133456 | 4/29, 8/19, 10/20 |
| Lundy Powerhouse Tailrace | LPH-9 | 38.044527 | -119.169414 | 4/29, 8/19, 10/20 |

Note:
[a] Datum: World Geodetic System 84
[b] Mill Creek downstream of the confluence with MCRD (Site LMC-7) was not sampled during the spring and fall when there was no outflow to the MCRD because of the close proximity to the site upstream of MCRD (Site MCBR-5).

#### 3.4.1.1. In Situ Water Quality

In situ water temperature, dissolved oxygen (concentration and percent saturation), pH, specific conductance, and turbidity were measured using a multi-parameter water quality sonde (YSI EXO2, Yellow Springs Instruments). Quality assurance and quality control (QA/QC) activities included pre- and post-sampling calibration checks of the water quality sonde, following the manufacturer instructions, conducted each day of sampling or as appropriate for each sensor. Reservoir vertical profiles of in situ water quality were collected at 1-meter intervals near the location of maximum reservoir depth. A pre-Project topographic map and a sonar depth finder were used to locate the deepest area in Lundy Lake approximately 600 meters west of Lundy Dam (Figure 3.3-1). Stream in situ measurements were collected at a location that provides representative, homogeneous water quality conditions. Table 3.4-2 identifies in situ parameters, methods, and method detection limits that were evaluated.

**Table 3.4-2. In Situ Water Quality Methods**

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

°C = degrees Celsius; µS/cm = microsiemens per centimeter; USEPA = U.S. Environmental Protection Agency; mg/L = milligrams per liter; NTU = nephelometric turbidity unit; SM = Standard Methods

### 3.4.1.2. Analytical Water Quality

Surface water grab samples were collected simultaneously with in situ measurements described in Section 3.4.1.1. All water samples were analyzed for general chemistry, nutrients and productivity, and metals (Table 3.4-3). Reservoir surface water samples also included analysis for oil & grease.

Reservoir water grab samples were collected at two depths: (1) a subsurface grab sample collected at approximately 0.5-meter depth, and (2) a grab sample collected with a Van Dorn bottle approximately 0.5 to 1 meter above the bottom sediment. Stream grab samples were collected from a well-mixed area of the stream just below the water surface. Clean ambient water sampling techniques as prescribed by U.S. Environmental Protection Agency (USEPA) Method 1669 were used for trace metal collection, including handling and analysis of all metals in water samples (USEPA, 1996). To ensure sampling results are representative of site conditions, QA procedures included collection of one field blank, one equipment blank, and one field duplicate during water quality sampling events. Water used for field blanks was non-laboratory supplied and commercially available distilled water for all analytes except trace metal analytes which was laboratory-supplied reagent grade deionized water.

Each grab sample collected was placed in a laboratory-supplied container, labeled, preserved, and stored on ice until delivered to a state-certified water quality laboratory (California Laboratory Services, Rancho Cordova, California; McCampbell Analytical, Inc., Pittsburg, California). Samples were analyzed according to methods and target reporting limits included in Table 3.4-3. A chain-of-custody record was maintained for each sample container.

## Table 3.4-3. Analytical Parameters, Methods, and Reporting Limits for Water Samples

| Parameter | Laboratory Method | Reporting Limit or PQL |
|---|---|---|
| **General Chemistry and Minerals** | | |
| Calcium | USEPA 200.7 | 1.0 mg/L |
| Chloride | USEPA 300.0 | 0.50 mg/L |
| Hardness (as calcium carbonate) | USEPA 200.7 | 5.0 mg/L |
| Magnesium | USEPA 200.7 | 1.0 mg/L |
| Dissolved organic carbon | SM 5310 B | 1.0 mg/L |
| Total organic carbon | SM 5310 B | 1.0 mg/L |
| Potassium | USEPA 200.7 | 1.0 mg/L |
| Sodium | USEPA 200.7 | 1.0 mg/L |
| Sulfate as SO4 | USEPA 300.0 | 0.50 mg/L |
| Total alkalinity | SM 2320 B | 5 mg/L |
| Total dissolved solids | SM 2540 C | 10 mg/L |
| Total suspended solids | SM 2540 D | 2.5 mg/L |
| **Nutrients and Productivity** | | |
| Ammonia as N | SM 4500-NH3F2011 | 0.1 mg/L |
| Nitrate + nitrite as N | USEPA 300.0 | 0.4 mg/L |
| Orthophosphate as $PO_4$ | SM 4500-PE | 0.15 mg/L |
| Total Kjeldahl nitrogen | SM 4500-NH3F-2011 | 0.2 mg/L |
| Total phosphorous | SM 4500-PE | 0.05 mg/L |
| Chlorophyll-*a* | SM 10200H | 5 µg/L |
| **Metals and Oil and Grease** | | |
| CAM 17 metals (Title 22 Metals)[a] | USEPA 200.8; USEPA 245.1 | 0.5–20 µg/L |
| Oil and grease[b] | USEPA 1664 B | 5.0 mg/L |
| **Bacteria** | | |
| *Escherichia coli* | SM 9223 | 1.0 MPN/100 mL |
| Fecal coliform | SM 9221 | 1.8 MPN/100 mL |
| Total coliform | SM 9223 | 1.0 MPN/100 mL |

µg/L= microgram per liter; USEPA = U.S. Environmental Protection Agency; mg/L = milligram per liter; mL=milliliters, MPN = most probable number; N = nitrogen; P = phosphorus; $PO_4$ = phosphate; PQL = practical quantitation limit; SM = Standard Methods, $SO_4$ = sulfate anion

Notes:

[a] CAM 17 metals, and associated reporting limits, include total and dissolved metals: antimony (6.0 µg/L), arsenic (2.0 µg/L), barium (20 µg/L), beryllium (1.0 µg/L), cadmium (0.50 µg/L), chromium (1.0 µg/L),

cobalt (2.0 µg/L), copper (2.0 µg/L), lead (5.0 µg/L), mercury (0.20 µg/L), molybdenum (2.0 µg/L), nickel (2.0 µg/L), selenium (5.0 µg/L), silver (0.50 µg/L), thallium (1.0 µg/L), vanadium (3.0 µg/L), and zinc (10 µg/L).

[b] Oil and grease were analyzed in samples collected from the reservoir surface water only.

### 3.4.2. Bacteriological Sampling

Bacteriological sampling occurred at four recreation sites (two reservoir and two stream) (Figure 3.3-1). Water quality sampling site ID, site description, location (latitude and longitude), and sampling dates are provided in Table 3.4-4.

Surface grab samples were collected from the nearshore of Lundy Lake immediately adjacent to the recreation facilities and from the bank of Mill Creek downstream of the recreation facilities. Samples were collected weekly for 7 consecutive weeks during the summer surrounding Labor Day (August 7–September 19, 2025) (Table 3.4-4). To minimize the potential for inadvertent sample contamination, grab samples were collected in laboratory-supplied, sterilized bottles. A chain-of-custody record was maintained for each sample container.

**Table 3.4-4. Bacteriological Sampling Locations and Dates**

| Site Description | Site ID | Location Coordinates[a] (decimal degrees) | | Sample Date (2025) |
|---|---|---|---|---|
| | | Latitude | Longitude | |
| **Reservoir Sites** | | | | |
| Lundy Lake near the boat launch | Bac-LL-1 | 38.028292° | -119.238855° | 8/7, 8/13, 8/19, 8/28, 9/4, 9/11, 9/19 |
| Lundy Lake Dam Day Use Area | Bac-LL-2 | 38.031489° | -119.220498° | |
| **Stream Sites** | | | | |
| Lundy Campground on Mill Creek | Bac-MCBR-3 | 38.033239° | -119.199866° | 8/7, 8/13, 8/19, 8/28, 9/4, 9/11, 9/19 |
| Lundy Day Use Area on Mill Creek | Bac-MCBR-4 | 38.031332° | -119.186835° | |

[a] Datum: World Geodetic System 84

Immediately after collection, samples were placed on ice and delivered to a state-certified water quality laboratory (California Laboratory Services, Rancho Cordova, California). Samples were analyzed for *E. coli*, total coliform, and fecal coliform. Analysis was completed following the methods listed, and reporting limits provided in Table 3.4-3.

### 3.4.3. Fish Tissue Mercury Sampling

Fish sample collection occurred in Lundy Lake during reservoir fish surveys as part of AQ-1 Fish Community Survey (Section 5.0, *AQ-1 Fish Community Survey*) to conform to OEHHA requirements for development of fish consumption advisories and for comparability to California statewide numeric mercury objectives (i.e., Sport Fish[4]) (OEHHA, 2022; SWRCB, 2017). Target species in Lundy Lake included Trophic Level[5] 3 (rainbow trout [*Oncorhynchus mykiss*] and brook trout [*Salvelinus fontinalis*]) and Trophic Level 4 (brown trout [*Salmo trutta*]) fish. Physical characteristics were recorded for each individual fish, including the following: weight, total length, fork length, and presence of any physical abnormalities. Each fish was individually tagged, wrapped in aluminum foil, placed in a labeled zipper-closure bag, and placed in a freezer after collection. After transmittal to the analytical laboratory (San Jose State University Research Foundation, Marine Pollution Studies Lab, San Jose, California), samples were stored in an ultra-cold freezer at -20 degrees Celsius (°C) until processing.

Fish tissue samples were analyzed as individual samples. Fish tissue samples were processed by removing skin from an area above the lateral line and then extracting a 9- to 13-gram tissue "plug." Samples were weighed for percent moisture analysis and analyzed for total mercury (Table 3.4-5), as a proxy for methylmercury in fish.

**Table 3.4-5. Analytical Parameters, Methods, and Reporting Limits for Mercury in Fish Tissue Samples**

| **Parameter** | Laboratory Method | Target Reporting Limit |
|---|---:|---:|
| Total mercury | USEPA 7473 | 0.030 µg/g ww |

µg/g ww = microgram per gram wet weight; USEPA = U.S. Environmental Protection Agency

#### 3.4.4. Incidental Observations

Incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) were recorded (including location information) and reported in Section 3.7.4.

### 3.5. Study Plan Modifications

SCE is not proposing any modifications to WQ-1 as approved by FERC in its SPD (FERC, 2025).

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

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

## 3.6. Variances to Approved Methods

SCE encountered the following variances when implementing the WQ-1 study plan as approved by FERC in its SPD (FERC, 2025):

- Three seasonal sampling events to characterize the potential effects of return flows upon Mill Creek were included in the WQ-1 study plan. During the spring and fall sampling events, no water was released from the Lundy Powerhouse into the MCRD. Two additional sampling events were conducted during June and July 2025 at three stream sites: Mill Creek upstream (Site MCBR-5) and downstream (Site LMC-7) of the confluence with the MCRD, and the MCRD upstream of the confluence with Mill Creek (Site MCRD-6) to characterize the potential effects of return flows upon Mill Creek.

- A site in the MCRD was included to characterize outflow conditions during seasonal sampling events in the WQ-1 study plan. An additional stream water quality sampling site at the Lundy Powerhouse tailrace (Site LPH-9) was added to the seasonal sampling events because water was not released into the MCRD during two seasonal sampling events (spring and summer).

- To ensure sampling results are representative of site conditions, quality assurance procedures in the WQ-1 study plan included collection of one field duplicate during each water quality sampling event (spring, summer, fall). A duplicate grab sample was not collected during the reservoir and stream water quality summer (August) sampling event.

- All water samples were analyzed for chlorophyll-*a.* Of the 24 chlorophyll-*a* samples collected during the spring and summer seasonal water quality sampling events, 18 were analyzed outside of hold time due to laboratory processing delays. Additional chlorophyll-*a* samples were collected in September 2025 and analyzed within the hold time.

- In response to increasing 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 data, calcium, and alkalinity—as well as environmental Deoxyribonucleic acid (eDNA) samples from Lundy Lake. The vulnerability of Lundy Lake to the establishment of golden mussels was evaluated based on limnological parameters and eDNA results. Details on methods, results, and analysis associated with this study variance are included in Appendix A, Invasive Mussel Vulnerability Assessment for the Lundy Hydroelectric Project. The consultation record for WQ-1 appears in Appendix B. Consultation related to the variance included:

  - On June 17, 2025, SCE sent a memorandum to CDFW (Nick Buckmaster) that included the proposed modifications to the approved WQ-1 Study Plan and a request for concurrence.

  - On June 18, 2025, CDFW (Nick Buckmaster) noted there were no specific comments he had at the time.

- On June 30, 2025, CDFW (Graham Meese) provided comments on the memorandum to SCE.
- On July 23, 2025, SCE responded to CDFW's comments.

## 3.7. RESULTS

### 3.7.1. RESERVOIR AND STREAM WATER QUALITY

Preliminary reservoir results for the spring (April) and summer (August) sampling events are summarized in Section 3.7.1.1. The preliminary stream results for the two seasonal sampling events and two additional MCRD sampling events (June and July) are summarized in Section 3.7.1.2. Data collected during the fall (October) will be provided in the USR.

Sampling conducted during 2025 adhered to standard methods and QA/QC protocol criteria (for water quality sonde calibration, field blanks, equipment blanks, and field duplicates). In situ and analytical data that were outside the QA/QC limits (e.g., samples that exceeded the recommended hold times, analytes that were found in the associated blanks) were retained but labeled with the QA qualifier. In situ calibration logs, analytical laboratory reports, and additional QA/QC analysis (i.e., field blanks, duplicates, and equipment blanks) will be provided as appendices in Final WQ-1 Study Technical Report.

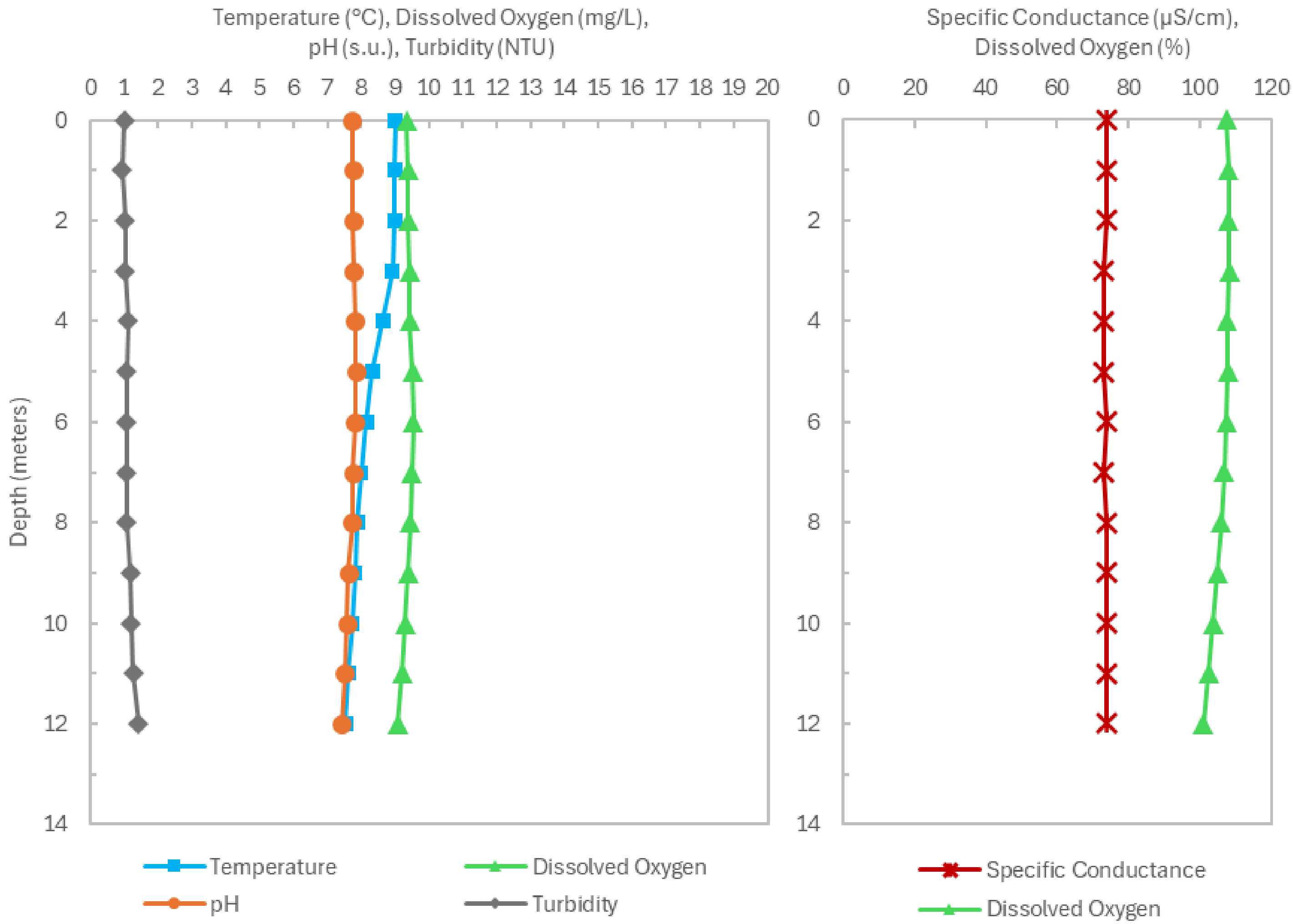
#### *3.7.1.1.* Lundy Lake

<u>IN SITU WATER QUALITY PROFILE MEASUREMENTS</u>

Lundy Lake exhibited seasonal variation, with a mixed water column (little to no variation) during April 2025 (spring) and stratified water column during August 2025 (summer) (Figure 3.7-1 and Figure 3.7-2). In April, water temperatures were cold (7.5–9.0 degrees Celsius [°C]) and dissolved oxygen measurements were high (9.1–9.5 milligrams per liter [mg/L]; 101–108 percent saturation [%]) throughout the water column (Figure 3.7-1). In August, Lundy exhibited thermal and chemical stratification with warmer temperatures (16.8–18.1°C) and higher dissolved oxygen (7.5–7.8 mg/L; 106–107%) in the epilimnion and cooler waters (11.4–14.8°C) with lower dissolved oxygen (2.6–8.0 mg/L; 32–105%) in the hypolimnion (Figure 3.7-2). Lundy Lake exhibited low turbidity (0.1–1.4 Nephelometric Turbidity Units [NTU]), low specific conductance (60-74 microsiemens per centimeter [µS/cm]), and near neutral pH (6.3-7.8 standard units [s.u.]) throughout the water column during both seasonal sampling events. Tabulated in situ water quality data from reservoir profiles are included in Appendix C.

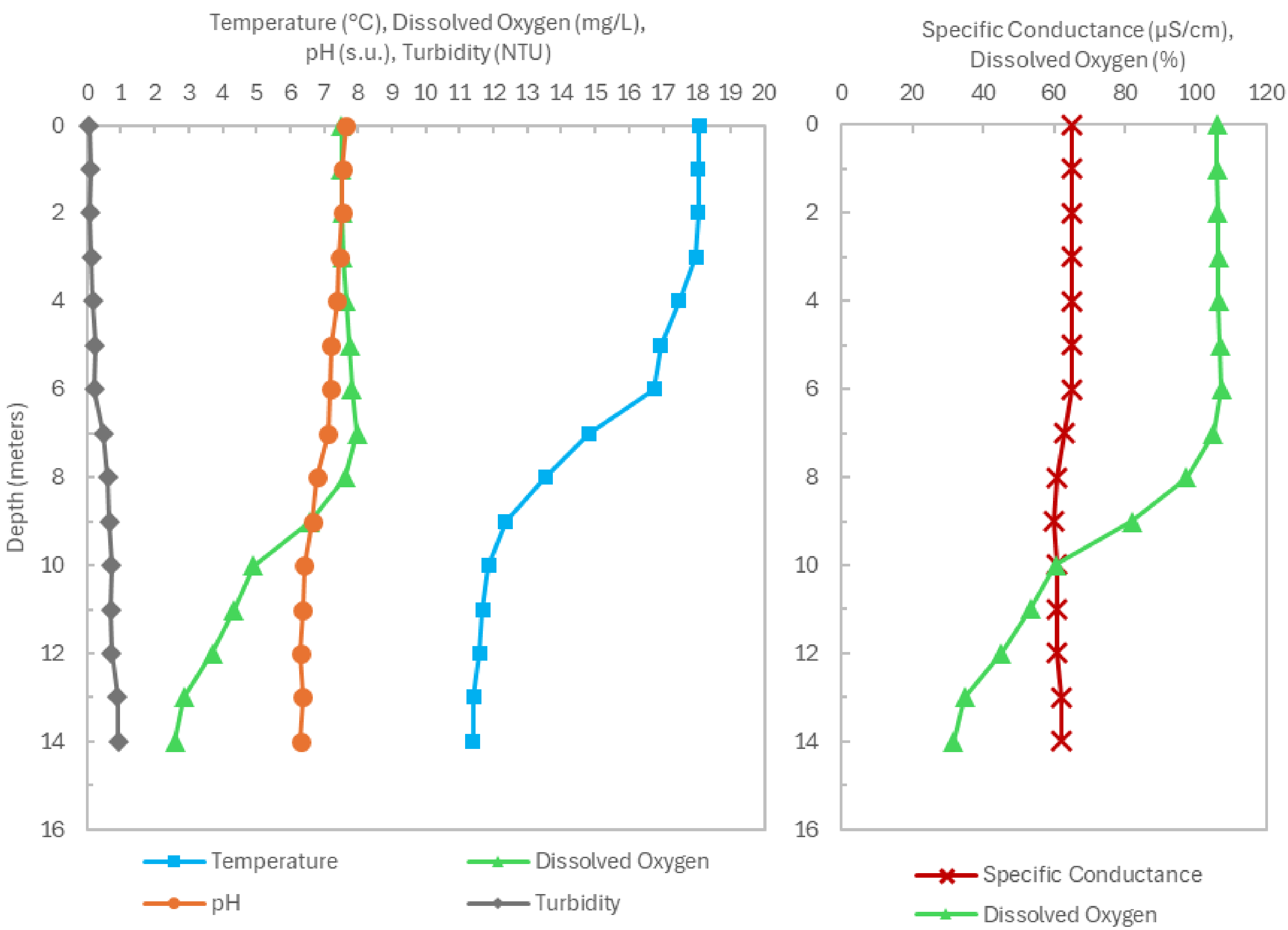
<u>ANALYTICAL WATER QUALITY</u>

Lundy Lake waters were clear (e.g., low turbidity, low total suspended solids) with low to moderate buffering capacity to pH changes (i.e. low total alkalinity, low hardness, and low to moderate concentrations of dissolved minerals) (Table 3.7-1). Nutrient concentrations were less than laboratory reporting limit and chlorophyll-*a* (a proxy for productivity) were low (≤ 10 mg/L) (Table 3.7-1). Metal concentrations were low; concentrations were similar or less than reporting limits with a few exceptions (arsenic and chromium) (Table 3.7-1). Oil and grease was not detected in samples collected near the surface of Lundy Lake.




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

**Figure 3.7-1. Reservoir In Situ Water Quality Vertical Profiles measured at Lundy Lake (Site LL-3), April 2025.**




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

**Figure 3.7-2. Reservoir In Situ Water Quality Vertical Profiles measured at Lundy Lake (Site LL-3), August 2025.**

## Table 3.7-1. Reservoir Analytical Water Quality Results, April and August 2025

| Parameter (unit) | Lundy Lake (Site LL-3) | | | |
|---|---|---|---|---|
| | Surface | Bottom | Surface | Bottom |
| **Date (2025)** | **4/30** | | **8/18[A]** | |
| **General Chemistry and Minerals** | | | | |
| Calcium (mg/L) | 12 | 9.7[E] | 10 | 11 |
| Chloride (mg/L) | 0.65 | 0.42[E,J] | 0.40[J] | 0.57[E] |
| Magnesium (mg/L) | 0.55[J] | 0.40[J] | 0.43[J] | 0.50[J] |
| Total organic carbon, dissolved (mg/L) | <0.54 | <0.54 | <0.54 | 0.66[J] |
| Total organic carbon (mg/L) | <0.54 | <0.54 | <0.54 | <0.54 |
| Potassium (mg/L) | 0.84[J] | 0.75[J] | 0.78[J] | 0.87[J] |
| Sodium (mg/L) | 1.9 | 1.3[E] | 1.5 | 1.8 |
| Sulfate as $SO_4$ (mg/L) | 14 | 11[E] | 13 | 15 |
| Hardness as calcium carbonate (mg/L) | 33 | 29 | 27 | 30 |
| Total alkalinity (mg/L) | 21 | 16 | 17 | 20[E] |
| Total dissolved solids (mg/L) | 58 | 49 | 51 | 53[E] |
| Total suspended solids (mg/L) | <2.5 | <2.5 | <2.5 | <2.5 |
| **Nutrients and Productivity** | | | | |
| Ammonia as N (mg/L) | <0.025 | 0.045[J] | <0.025 | <0.025 |
| Nitrate+nitrite as N (mg/L) | <0.053 | 0.063[J] | <0.053 | <0.053[E] |
| Orthophosphate as $PO_4$ (mg/L) | <0.0051 | <0.0051 | <0.0051 | <0.0051 |
| Total Kjeldahl Nitrogen (mg/L) | 0.084[J] | 0.092[E, J] | 0.15[J] | 0.11[E, J] |
| Total Phosphorus as P (mg/L) | <0.023 | <0.023 | <0.023 | <0.023 |
| Chlorophyll-*a* (µg/L) | 10[H] | 7.6[H] | <5.0[H] (<5.0)[A] | 7.5[H] (<5.0)[A] |
| **Metals** | | | | |
| Antimony (µg/L) | <0.34 | 0.67[J] | <0.34 | <0.34 |
| Arsenic (µg/L) | 3.4 | 3.6[E] | 5.0 | 3.7 |
| Barium (µg/L) | 9.7[J] | 9.2[J] | 7.7[J] | 9.4[J] |
| Beryllium (µg/L) | <0.31 | <0.31[QC-2H] | <0.31[QC-2H] | <0.31 |
| Cadmium (µg/L) | <0.17 | <0.17[E] | <0.17 | 0.38[J] |
| Chromium (µg/L) | <0.14 | 1.2[E] | 6.3 | <0.14[E] |
| Cobalt (µg/L) | <0.060 | 0.11[J] | <0.060 | <0.060 |
| Copper (µg/L) | 0.26[J] | 0.49[E, J] | 0.39[J] | 0.37[J] |
| Lead (µg/L) | 0.18[J] | <0.020[E] | <0.020 | 0.22[J] |

| Parameter (unit) | Lundy Lake (Site LL-3) | | | |
|---|---|---|---|---|
| | **Surface** | **Bottom** | **Surface** | **Bottom** |
| **Date (2025)** | **4/30** | | **8/18[A]** | |
| Mercury (µg/L) | <0.15 | <0.15 | <0.15 | <0.15 |
| Molybdenum (µg/L) | 2.0[J] | 1.0[E, J] | 2.0[J] | 2.0[J] |
| Nickel (µg/L) | <0.13 | <0.13 | 2.2 | <0.13 |
| Selenium (µg/L) | <0.75 | <0.75 | <0.75 | 1.0[J] |
| Silver (µg/L) | <0.070 | <0.070 | <0.070 | <0.070 |
| Thallium (µg/L) | 0.066[J] | <0.030[E] | <0.030 | 0.059[J] |
| Vanadium (µg/L) | <0.070 | <0.070 | <0.070 | <0.070 |
| Zinc (µg/L) | 0.55[J] | 3.8[E, J] | 2.6[J] | 0.60[E, J] |
| **Oil and Grease** | | | | |
| Oil and Grease (mg/L) | <1.0 | -- | <1.0 | -- |

-- = no data; µg/L = micrograms per liter; mg/L = milligrams per liter
Notes:
< indicates results were less than the method detection limit (i.e., results were reported as non-detect in laboratory reports).
[A] Additional chlorophyll-*a* samples were collected on September 18, 2025, to supplement samples collected on August 18, 2025, that were analyzed out of hold time. These values are included in parenthesis.
[E] Analyte was found in the associated equipment blank.
[J] Detected but below the Reporting Limit; therefore, result is an estimated concentration.
[H] Sample was analyzed out of hold time.
[QC-2H] The recovery of one continuing calibration verification was greater than the acceptance limit. However, all analytes in the associated samples were not-detected; therefore, a reanalysis was not performed.

#### 3.7.1.2. Mill Creek, Lundy Powerhouse Tailrace, and Mill Creek Return Ditch

IN SITU WATER QUALITY MEASUREMENTS

Water temperatures in Mill Creek, Lundy Powerhouse Tailrace, and MCRD were <20°C and dissolved oxygen was close to 100% saturation, pH was near neutral, specific conductance was low, and turbidity was low during all sampling events during April through August (Table 3.7-2). Stream water temperatures are described in Section 4.0, *WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring.*

ANALYTICAL WATER QUALITY

Mill Creek, Lundy Powerhouse Tailrace, and MCRD stream sites were characterized by clear water (e.g., low turbidity, low total suspended solids) with low to moderate buffering capacity (i.e. low total alkalinity, low hardness, and low to moderate minerals). Grab samples contained low nutrients and low chlorophyll. Dissolved minerals were low to moderate (Table 3.7-3). Nutrient levels and productivity indicators were low, as is typical in high-elevation stream and reservoir systems (Table 3.7-3). Metal concentrations were low or less than reporting limits with a few exceptions (arsenic and barium) (Table 3.7-3).

**Table 3.7-2. Stream In Situ Water Quality, April through August 2025**

| Stream Reach | Upstream of Lundy Lake | | | | Mill Creek Bypass Reach | | | | | | | | Lower Mill Creek | | | | | | Downstream of Lundy Powerhouse | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (Site UMC-1) | | South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (Site UMC-2) | | Mill Creek immediately downstream of Lundy Lake (Site MCBR-4) | | Mill Creek upstream of the confluence with the Mill Creek Return Ditch (Site MCBR-5) | | | | Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old US Highway 395 Bridge (Site LMC-7) | | | | Mill Creek between Highway 395 and Mono Lake (Site LMC-8) | | Lundy Powerhouse Tailrace (Site LPH-9) | | | Mill Creek Return Ditch upstream of the confluence with Mill Creek (Site MCRD-6) | | |
| **Date (2025)** | **4/29** | **8/19** | **4/29** | **8/19** | **4/29** | **8/19** | **4/29** | **6/9** | **7/25** | **8/19** | **4/29** | **6/9** | **7/25** | **8/19** | **4/29** | **8/19** | **4/29** | **7/25** | **8/19** | **6/9** | **7/25** | **8/19** |
| Water temperature (°C) | 5.8 | 10.0 | 6.1 | 10.2 | 7.9 | 16.3 | 6.0 | 15.1 | 17.2 | 13.1 | 6.2 | 14.6 | 16.9 | 17.2 | 5.7 | 15.0 | 7.9 | 15.7 | 17.6 | 12.7 | 16.9 | 19.3 |
| Dissolved oxygen (mg/L) | 9.4 | 8.5 | 9.3 | 8.3 | 9.2 | 7.4 | 9.9 | 7.7 | 7.5 | 8.1 | 9.9 | 7.8 | 7.5 | 7.4 | 10.0 | 8.0 | 9.5 | 7.7 | 7.4 | 8.5 | 7.7 | 7.6 |
| Dissolved oxygen (% Saturation)[a] | 101 | 100 | 100 | 98 | 103 | 99 | 102 | 99 | 101 | 99 | 102 | 99 | 100 | 99 | 101 | 100 | 103 | 101 | 100 | 103 | 103 | 107 |
| pH (s.u.) | 7.5 | 7.7 | 7.4 | 7.1 | 7.8 | 7.6 | 7.7 | 7.4 | 7.6 | 8.0 | 7.6 | 7.1 | 7.5 | 7.9 | 7.5 | 7.7 | 7.7 | 7.5 | 8.1 | 7.5 | 7.7 | 7.8 |
| Specific conductance (µS/cm) | 79 | 76 | 77 | 75 | 74 | 66 | 76 | 66 | 69 | 73 | 76 | 63 | 66 | 68 | 76 | 69 | 74 | 59 | 65 | 60 | 60 | 65 |
| Turbidity (NTU) | 1.3 | 2.2 | 1.4 | 1.9 | 1.3 | 0.2 | 2.7 | 3.2 | 1.7 | 1.2 | 2.8 | 4.5 | 1.7 | 1.0 | 3.5 | 1.1 | 1.2 | 0.5 | 0.8 | 1.6 | 0.5 | 0.2 |

°C = degree Celsius; mg/L = milligram per liter; s.u. = standard unit; µS/cm = microsiemen per centimeter; NTU = Nephelometric Turbidity Unit
Notes:
[a] Raw dissolved oxygen readings were corrected with temperature and local barometric pressure.

**Table 3.7-3. Stream Analytical Water Quality Results, April through August 2025**

| Stream Reach | Upstream of Lundy Lake | | | | Mill Creek Bypass Reach | | | | | | Lower Mill Creek | | | | | Downstream of Lundy Powerhouse | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (Site UMC-1) | | South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (Site UMC-2) | | Mill Creek immediately downstream of Lundy Lake (Site MCBR-4) | | Mill Creek upstream of the confluence with the Mill Creek Return Ditch (Site MCBR-5) | | | | Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old US Highway 395 Bridge (Site LMC-7) | | | Mill Creek between Highway 395 and Mono Lake (Site LMC-8) | | Lundy Powerhouse Tailrace (Site LPH-9) | | Mill Creek Return Ditch upstream of the confluence with Mill Creek (Site MCRD-6) | | |
| **2025 Date** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **6/9** | **7/15** | **8/19[A]** | **6/9** | **7/15** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **6/9** | **7/15** | **8/19[A]** |
| **General Chemistry and Minerals** | | | | | | | | | | | | | | | | | | | | |
| Calcium (mg/L) | 12 | 12 | 12 | 12 | 10 | 9.6 | 10 | 9.1 | 7.9[F] | 10 | 9.2 | 9.3[F] | 10 | 10 | 9.7 | 11 | 9.4 | 9.3 | 9.5[F] | 9.6 |
| Chloride (mg/L) | 0.43[F, J] | 0.37[F, J] | 0.44[F, J] | 0.38[F, J] | 0.48[F, J] | 0.41[F, J] | 0.53[F] | 0.47[F, J] | 0.47[F, J] | 0.47[F, J] | 0.45[F, J] | 0.45[F, J] | 0.42[F, J] | 0.53[F] | 0.42[F, J] | 0.48[F, J] | 0.39[F, J] | 0.44[F, J] | 0.41[F, J] | 0.39[F, J] |
| Magnesium (mg/L) | 0.49[J] | 0.57[J] | 0.47[J] | 0.49[J] | 0.48[J] | 0.45[J] | 0.90[J] | 0.66[J] | 0.86[J] | 1.0 | 0.58[J] | 0.74[J] | 0.66[J] | 0.91[J] | 0.66[J] | 0.51[J] | 0.41[J] | 0.39[J] | 0.40[J] | 0.41[J] |
| Total organic carbon, dissolved (mg/L) | <0.54 | <0.54[F] | <0.54 | <0.54[F] | <0.54 | <0.54[F] | <0.54 | 0.68 | <0.54 | <0.54[F] | <0.54 | <0.54 | <0.54[F] | <0.54 | <0.54[F] | <0.54 | <0.54[F] | <0.54 | <0.54 | <0.54[F] |
| Total organic carbon (mg/L) | <0.54 | <0.54[F] | <0.54 | <0.54[F] | 1.0 | <0.54[F] | <0.54 | 1.2 | <0.54 | <0.54[F] | <0.54 | 0.66[J] | <0.54[F] | <0.54 | <0.54[F] | <0.54 | <0.54[F] | 0.94 | <0.54 | <0.54[F] |
| Potassium (mg/L) | 0.73[J] | 0.97[J] | 0.83[J] | 0.92[J] | 0.75[J] | 0.83[J] | 1.1 | 0.74[J] | 0.72[J] | 0.93[J] | 0.92[J] | 0.48[J] | 0.91[J] | 0.63[R] | 0.88[J] | 0.66[J] | 0.80[J] | 0.75[J] | 0.97[QC-2H, J] | 0.83[J] |
| Sodium (mg/L) | 1.3 | 1.4 | 1.4 | 1.4 | 1.9 | 1.7 | 2.9 | 2.1[F] | 2.5[F] | 3.2 | 1.8[F] | 2.1[F] | 2.1 | 2.9 | 2.0 | 2.0 | 1.4 | 1.4[F] | 1.1[F] | 1.4 |
| Sulfate as SO4 (mg/L) | 18 | 17 | 17 | 15 | 14 | 12 | 12 | 11[F] | 11[F] | 10 | 11[F] | 11[F] | 12 | 12 | 11 | 14 | 13 | 12[F] | 12[F] | 13 |
| Hardness as calcium carbonate (mg/L) | 32 | 32 | 32 | 31 | 28 | 26 | 30 | 25 | 23 | 30 | 25 | 26 | 28 | 30 | 27 | 29 | 25 | 25 | 25 | 26 |
| Total alkalinity (mg/L) | 17[F] | 17[F] | 18[F] | 20[F] | 19[F] | 18[F] | 25[F] | 20[F] | 22[F] | 26[F] | 18[F] | 22[F] | 20[F] | 25[F] | 22[F] | 22[F] | 17[F] | 16[F] | 13[F] | 17[F] |
| Total dissolved solids (mg/L) | 53 | 51 | 55 | 54 | 52 | 47 | 54 | 49 | 51 | 59 | 46 | 48 | 53 | 53 | 53 | 51 | 45 | 42 | 43 | 46 |
| Total suspended solids (mg/L) | 7.1[F] | 4.5 | <2.5 | 3.9 | <2.5 | <2.5 | 4.6 | 7.9 | <2.5 | 2.6 | 6.4 | 4.4 | 12 | 5.6 | <2.5 | <2.5 | <2.5 | <2.5[QRL-2] | <2.5 | <2.5 |
| **Algal Nutrients and Productivity** | | | | | | | | | | | | | | | | | | | | |
| Ammonia as N (mg/L) | 0.046[F, J] | <0.025[F] | 0.054[F, J] | <0.025[F] | 0.037[F, J] | <0.025[F] | 0.047[F, J] | 0.087[F, J] | <0.025[F] | <0.025[F] | 0.071[F, J] | <0.025[F, J] | <0.025[F] | 0.050[F, J] | <0.025[F] | 0.027[F, J] | 0.097[F] | 0.068[F, R, J] | 0.037[F, J] | 0.52[F] |
| Nitrate+nitrite as N (mg/L) | 0.069[J] | 0.16[J] | 0.069[J] | 0.090[J] | <0.053 | 0.097[J] | <0.053 | <0.055 | <0.053 | 0.054[J] | <0.055 | <0.053 | <0.053 | <0.053 | 0.055[J] | <0.053 | 0.078[J] | <0.055 | <0.053 | <0.053 |
| Orthophosphate as PO4 (mg/L) | <0.0051 | <0.0051 | <0.0051 | 0.012[J] | <0.0051 | <0.0051 | <0.0051 | 0.021[J] | 0.12[F, J] | 0.021[J] | <0.0051 | 0.082[F, J] | <0.0051 | <0.0051 | <0.0051 | <0.0051 | <0.0051 | <0.0051 | 0.064[F, J] | <0.0051 |
| Total Kjeldahl nitrogen (mg/L) | 0.14[F, J] | 0.077[F, J] | 0.11[F, J] | 0.12[F, J] | 0.18[F, J] | 0.074[F, J] | 0.12[F, J] | 0.12[F, J] | 0.23[F, R] | 0.097[F, J] | 0.18[F, J] | 0.76[F] | 0.12[F, J] | 0.17[F, R, J] | 0.093[F, J] | 0.17[F, J] | 0.19[F, J] | 0.24[F, R] | 0.46[F] | 0.51[F] |
| Total Phosphorus as P (mg/L) | 0.025[J] | 0.086 | <0.023 | 0.074 | <0.023 | <0.023 | <0.023 | 0.041[J] | <0.023 | 0.023[J] | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 | <0.023 |

| Stream Reach | Upstream of Lundy Lake | | | | Mill Creek Bypass Reach | | | | | | Lower Mill Creek | | | | | Downstream of Lundy Powerhouse | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mill Creek upstream of Lundy Lake and the confluence with South Fork Mill Creek (Site UMC-1) | | South Fork Mill Creek upstream of Lundy Lake and the confluence with Mill Creek (Site UMC-2) | | Mill Creek immediately downstream of Lundy Lake (Site MCBR-4) | | Mill Creek upstream of the confluence with the Mill Creek Return Ditch (Site MCBR-5) | | | | Mill Creek downstream of the confluence with the Mill Creek Return Ditch at the old US Highway 395 Bridge (Site LMC-7) | | | Mill Creek between Highway 395 and Mono Lake (Site LMC-8) | | Lundy Powerhouse Tailrace (Site LPH-9) | | Mill Creek Return Ditch upstream of the confluence with Mill Creek (Site MCRD-6) | | |
| **2025 Date** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **6/9** | **7/15** | **8/19[A]** | **6/9** | **7/15** | **8/19[A]** | **4/29** | **8/19[A]** | **4/29** | **8/19[A]** | **6/9** | **7/15** | **8/19[A]** |
| Chlorophyll-a (µg/L) | <5.0[H] | <5.0[H] (<5.0)[A] | <5.0[H] | <5.0[H] (<5.0)[A] | 9.6[H] | <5.0[H] (6.2)[A] | <5.0[H] | <5.0 | <5.0 | <5.0 (<5.0)[A] | 5.6 | <5.0 | <5.0[H] | <5.0[H] | <5.0[H] (<5.0)[A] | 9.3[H] | <5.0[H] | 7.2 | <5.0 | <5.0[H] |
| **Metals** | | | | | | | | | | | | | | | | | | | | |
| Antimony (µg/L) | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34[F] | <0.34 | <0.34 | <0.34[F] | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34 | <0.34[F] | <0.34 |
| Arsenic (µg/L) | 0.81[F, J] | 3.0 | 5.1[F] | 8.5 | 3.2[F] | 4.2 | 2.3[F] | 2.8 | 3.0[R] | 2.4 | 4.0 | 3.6 | 3.8 | 1.4[F,R, J] | 3.3 | 3.6[F] | 4.2 | 4.3[R] | 3.7 | 4.7 |
| Barium (µg/L) | 9.4[J] | 12[J] | 10[J] | 9.9[J] | 9.1[J] | 7.7[J] | 25 | 23 | 26[F] | 27 | 17[J] | 20[F] | 14[J] | 25 | 16[J] | 10[J] | 7.3[J] | 8.4[J] | 7.1[F, J] | 7.2[J] |
| Beryllium (µg/L) | <0.31[QC-2H] | <0.31 | <0.31[QC-2H] | <0.31 | <0.31[QC-2H] | <0.31 | <0.31[QC-2H] | <0.31[QC-2H] | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31[QC-2H] | <0.31 | <0.31[QC-2H] | <0.31 | <0.31 | <0.31 | <0.31 |
| Cadmium (µg/L) | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17[F] | <0.17 | <0.17 | <0.17[F] | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17 | <0.17[F] | <0.17 |
| Chromium (µg/L) | <0.14 | 0.83[F,J] | <0.14 | 0.64[F,J] | <0.14 | 0.48[F,J] | <0.14 | <0.14[F] | 0.35[F,J] | 0.55[F] | 0.17[F,J] | 0.42[F,J] | 0.45[F,J] | <0.14 | 0.29[F,J] | <0.14 | 0.36[F,J] | 0.24[F,J] | 0.37[F,J] | 0.29[F,J] |
| Cobalt (µg/L) | <0.060 | 0.25[J] | <0.060 | 0.13[J] | <0.060 | <0.060 | <0.060 | 0.091[J] | 0.060[J] | <0.060 | 0.074[J] | 0.068[J] | <0.060 | <0.060 | <0.060 | <0.060 | <0.060 | <0.060 | <0.060 | <0.060 |
| Copper (µg/L) | 0.13[J] | 1.3[J] | 0.59[J] | 0.60[J] | 0.25[J] | 0.23[J] | 0.31[J] | 0.41[F,J] | 0.46[F, J] | 0.20[J] | 0.37[F] | 0.60[F,J] | 0.30[J] | 0.40[J] | 0.33[J] | 0.18[J] | 0.30[J] | 0.27[F, R, J] | 0.44[F,J] | 0.27[J] |
| Lead (µg/L) | 0.050[J] | 0.60[J] | 0.26[J] | 0.30[J] | 0.14[J] | <0.020 | 0.15[J] | 0.33[J] | 0.23[F, J] | <0.020 | 0.26[J] | 0.22[F, J] | <0.020 | 0.19[J] | <0.020 | 0.13[J] | <0.020 | 0.12[J] | 0.088[F, J] | <0.020 |
| Mercury (µg/L) | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | ND | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 |
| Molybdenum (µg/L) | 1.0[F, J] | 1.1[J] | 1.4[F, J] | 1.4[J] | 1.9[F, J] | 1.5[J] | 2.0[F] | 1.9[F, J] | 2.5[F] | 2.0 | 1.6[F, J] | 1.8[F, J] | 1.7[J] | 2.1[F] | 2.2 | 1.9[F, J] | 1.4[J] | 1.2[F, J] | 1.3[F, J] | 1.3[J] |
| Nickel (µg/L) | <0.13 | 0.46[J] | <0.13 | 0.19[J] | <0.13 | 0.16[J] | <0.13 | 0.17[F, J] | <0.13 | <0.13 | 0.20[F, J] | <0.13 | 0.21[J] | <0.13 | 0.15[J] | <0.13 | 0.19[J] | 0.17[F, J] | <0.13 | 0.16[J] |
| Selenium (µg/L) | 2.3[J] | 3.3[F, J] | 2.9[J] | 1.0[F, J] | <0.75 | <0.75[F] | <0.75 | <0.75 | 1.5[J, R] | 1.3[F, J] | <0.75 | <0.75 | 1.3[F, J] | <0.75 | 1.9[F, J] | <0.75 | <0.75[F] | <0.75 | <0.75 | 1.3[F, J] |
| Silver (µg/L) | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 |
| Thallium (µg/L) | 0.032[F, J] | <0.030 | <0.030[F] | <0.030 | 0.031[F, J] | <0.030 | 0.031[F, J] | <0.030[F] | 0.12[F, J, R] | <0.030 | 0.030[F, J] | 0.054[F, J] | <0.030 | 0.047[F, R, J] | 0.11[J] | 0.036[F, J] | <0.030 | <0.030[F] | 0.059[F, J] | <0.030 |
| Vanadium (µg/L) | <0.070 | <0.070 | 0.085[J] | <0.070 | <0.070 | <0.070 | 0.46[J] | 0.10[J] | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | 0.40[R, J] | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 | <0.070 |
| Zinc (µg/L) | 0.31[J] | 2.8[F, J] | 0.64[J] | 1.9[F, J] | 0.42[J] | 0.66[F, J] | 0.84[J] | 1.9[F, J] | 4.0[F, J] | 1.0[F, J] | 2.0[F, J] | 4.2[F, J] | 0.71[F, J] | 0.75[J] | 1.2[F, J] | 0.47[J] | 0.65[F, J] | 1.2[F, R, J] | 3.0[F, J] | 0.62[F, J] |

µg/L = microgram per liter; mg/L = milligrams per liter; N = nitrogen; P = phosphorus; PO4 = phosphate; SO4 = sulfate anion

Notes:

< indicates results were less than the method detection limit (i.e., results were reported as non-detect in laboratory reports).

[A] Additional chlorophyll-*a* samples were collected on September 18, 2025, to supplement samples collected on August, 18, 2025, that were analyzed out of hold time. These values are included in parenthesis.

[F] Analyte was found in the associated field blank.

[H] Sample was analyzed out of hold time.

[J] Detected but below the Reporting Limit; therefore, result is an estimated.

[QC-2H] The recovery of one continuing calibration verification was greater than the acceptance limit. However, all analytes in the associated samples were not-detected; therefore, a reanalysis was not performed.

[QRL-2] Elevated reporting limits due to limited sample volume.

[R] Relative percent difference of field duplicate exceeded 20%.

### 3.7.2. Bacteria

Bacteria sampling occurred in seven consecutive weeks surrounding Labor Day (September 1). Samples were collected in Lundy Lake near the boat launch (Site Bac-LL-1), at the Lundy Lake Dam Day Use Area (Site Bac-LL-2), Lundy Campground (Site Bac-MCBR-3), and the Lundy day use area on Mill Creek (Site Bac-MCBR-4). Bacteria levels in Mill Creek were greater than Lundy Lake (Table 3.7-4). At 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 Lake Day Use Area on September 11, 2025. At Mill Creek recreation sites, *E. coli* and fecal coliform levels were higher during August than during September. Mill Creek Bacteria laboratory reports will be provided with the Final WQ-1 Technical Report.

**Table 3.7-4. Bacteriological Sampling Results, 2025**

| Analyte (units) | Date (2025) | Lundy Lake | | Mill Creek | |
|---|---|---|---|---|---|
| | | Bac-LL-1 | Bac-LL-2 | Bac-MCBR-3 | Bac-MCBR-4 |
| *Escherichia coli* (MPN/100 mL) | 8/7 | <1 | <1 | 13.4 | 21.6 |
| | 8/13 | <1 | <1 | 18.5 | 17.3 |
| | 8/19 | <1 | <1 | 24.9 | 23.1 |
| | 8/28 | <1 | 1.0 | 2.0 | 7.5 |
| | 9/4 | <1 | <1 | 4.1 | 6.3 |
| | 9/11 | <1 | 9.7 | 3.1 | 5.2 |
| | 9/19 | <1 | <1 | 7.4 | 8.6 |
| Fecal coliform (MPN/100 mL) | 8/7 | <1.8 | <1.8 | 2.0 | 110 |
| | 8/13 | --[a] | --[a] | --[a] | --[a] |
| | 8/19 | <1.8 | 1.8 | 11 | 130 |
| | 8/28 | 2.0 | <1.8 | 6.8 | 11 |
| | 9/4 | <1.8 | <1.8 | 7.8 | 7.8 |
| | 9/11 | <1.8 | 33 | 4.5 | 6.8 |
| | 9/19 | <1.8 | <1.8 | 7.8 | 8.6 |
| Total coliform (MPN/100 mL) | 8/7 | 96.0 | 290.9 | 579.4 | 770.1 |
| | 8/13 | 920.8 | 770.1 | 770.1 | 980.4 |
| | 8/19 | 155.3 | 95.9 | 344.1 | 517.2 |
| | 8/28 | 387.3 | 435.2 | 1,986.3 | 158.5 |
| | 9/4 | 1,413.6 | 488.4 | 1,299.7 | 1,119.9 |
| | 9/11 | 1,046.2 | 461.1 | 1,732.9 | 1,299.7 |
| | 9/19 | 920.8 | 161.6 | >2,419.6 | 2,419.6 |

-- = no data, MPN = most probably number, < =less than the practical quantitation limit, > = greater than the quantitation limit

Note:

[a] Grab samples collected for bacteriological analysis on August 13, 2025, were not analyzed for fecal coliform due to insufficient sample volume

### 3.7.3. Mercury in Fish Tissue

Two fish species, brown trout and rainbow trout, were captured in Lundy Lake on August 25 and 26, 2025. Details of all fish captured are presented in Section 5.0, *AQ-1 Fish Community Survey*. Physical characteristics of fish captured in Lundy Lake are summarized in Table 3.7-5. Mercury in fish tissue will be provided in the USR.

**Table 3.7-5. Summary of Physical Characteristics of Fish Captured in Lundy Lake**

| Species | Total Number of Fish | Size Range (total length [millimeters]) | Weight (grams) |
|---|---:|---:|---:|
| Rainbow trout | 3 | 308–420 | 286–759 |
| Brown trout | 9 | 179–317 | 53–318 |

### 3.7.4. Incidental Observations

Didymo observations are described in Section 4.0, *WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring.*

## 3.8. Discussion

Laboratory analysis, quality control review, and analysis of water quality data is ongoing. Additional study results will be provided in the USR in 2027.

## 3.9. References

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

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USEPA (United States Environmental Protection Agency). 1996. *Method 1669 Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*. July 1996.

# WQ-1 APPENDICES

# APPENDIX A
# INVASIVE MUSSEL VULNERABILITY ASSESSMENT FOR THE LUNDY HYDROELECTRIC PROJECT

# INVASIVE MUSSEL VULNERABILITY ASSESSMENT FOR THE LUNDY HYDROELECTRIC PROJECT

## INTRODUCTION

During the study planning process, Southern California Edison (SCE) identified the need to conduct a Water Quality Study (WQ-1) to evaluate current water quality in the Lundy Hydroelectric Project (Lundy Project or Project) reservoir (Lundy Lake) and Project-affected stream reaches. Since issuance of the Study Plan DeterminationSPD on January 2, 2025, new information has emerged regarding detections of the non-native golden mussel (*Limnoperna fortunei*) in California. Recent discussions among resource agencies in California have highlighted the vulnerability of regional waterbodies to potential golden mussel introduction and establishment. Based on historical calcium concentrations, Lundy Lake was identified as being potentially susceptible to golden mussel establishment. SCE has been working with California Department of Fish and Wildlife (CDFW) to understand how the agency is responding to the recent detection of golden mussels and to implement recommendations to prevent future introductions and spread of golden mussels, including early detection monitoring, outreach and education, and assessment of vulnerability (CDFW et al., 2025; CDFW, 2020).

SCE collected additional water quality data as part of the WQ-1 to inform an invasive mussel vulnerability assessment. This vulnerability assessment describes the study area, methods for collecting additional water quality data and sampling for environmental Deoxyribonucleic acid [eDNA] analysis, and methods for conducting opportunistic visual surveys of aquatic invasive mussel presence. In addition to assessing the suitability of Lundy Lake's waters to sustain golden mussels, suitability for zebra mussels (*Dreissena polymorpha)* and quagga mussels (*Dreissena rostriformis bugensis)* was assessed using preliminary water quality data (i.e., temperature, pH, calcium) collected between April 29 and October 20, 2025. Data analysis is ongoing and additional continuous water temperature data collected in Lundy Lake through spring 2026 in support of the vulnerability assessment will be included in a technical report that will inform the Final License Application.

## STUDY AREA

The study area includes Lundy Lake (Figure A-1), and three sites in Lundy Lake were co-located with WQ-1 study sites, including two edge-water locations—Lundy Lake near the boat Launch (Site LL-1) and Lundy Lake Dam Day Use Area (Site LL-2)—and one location near the deepest part of Lundy Lake (Site LL-3) (Figure A-1).

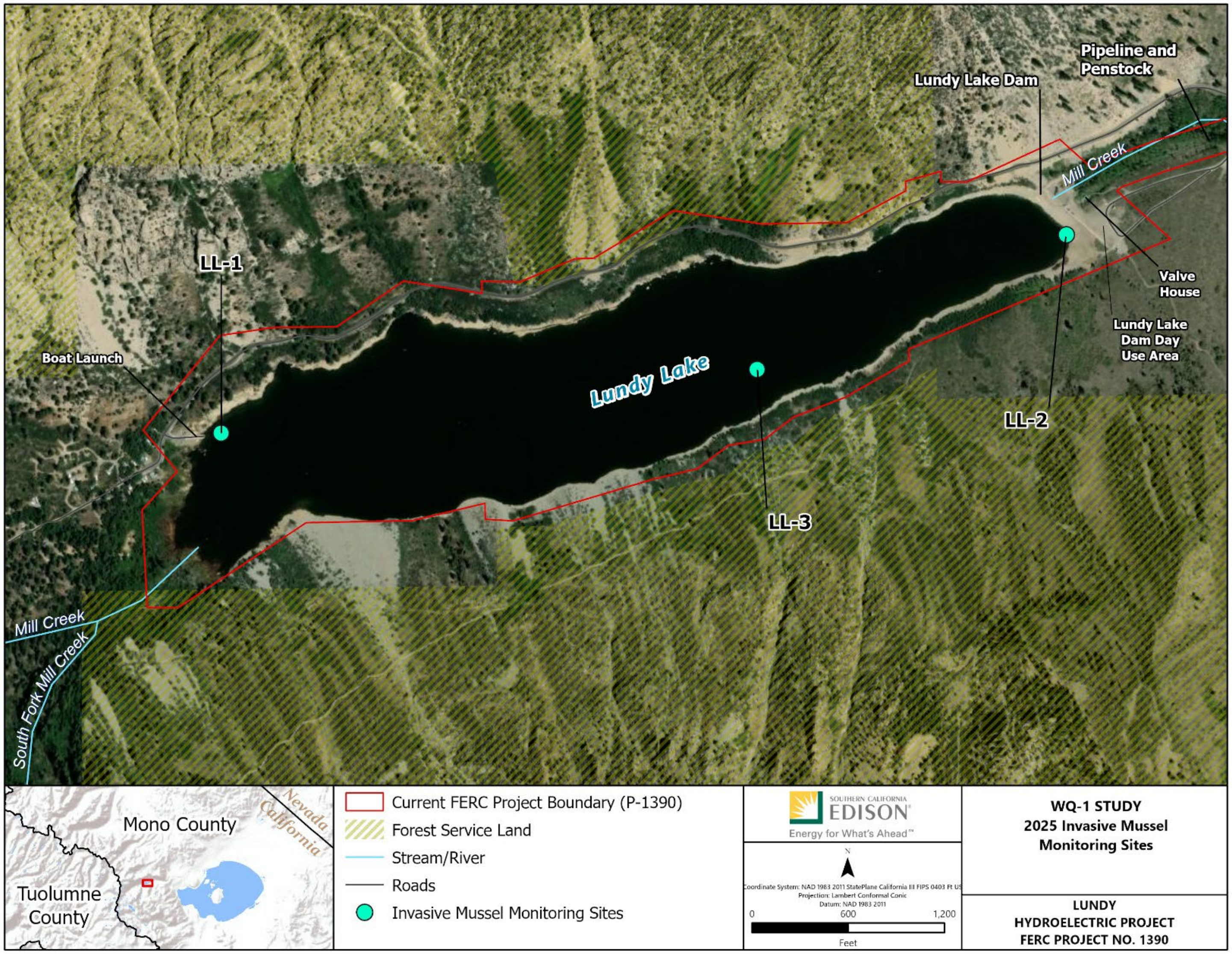


**Figure A-1. Overview of Lundy Lake and Golden Mussel Study Sites.**

## INVASIVE MUSSEL BACKGROUND

Three freshwater invasive mussel species have been identified in California—golden mussel, quagga mussel, and zebra mussel. The golden mussel belongs to the genus *Limnoperna* and has a distinct life history and water quality requirements. Quagga and zebra mussels are from the same genus, *Dreissena*, and are known as dreissenid mussels. These two species have a similar life history and water quality requirements; therefore, the discussion of these two species is consolidated in the same section of this vulnerability assessment. All three invasive mussel species pose significant threats to California's aquatic ecosystems and water conveyance infrastructure, including hydropower infrastructure and operations (e.g., clogging pipes and pumps) (Xu et al., 2015).

### DISTRIBUTION IN CALIFORNIA

#### GOLDEN MUSSELS

The golden mussel is native to the Pearl River basin in southern China and invasive to North America. Primarily transported through ocean-going ship traffic, golden mussels were introduced to several countries in southeast Asia, South America, and more recently in North America.

The first confirmed detection of golden mussels in North America was in California’s Sacramento–San Joaquin Delta (Port of Stockton, California) and O’Neill Forebay (part of the San Luis Joint-Use Complex) in October 2024 (CDFW, 2025a). The introduction pathway of golden mussels into California was likely from international ships to the Port of Stockton. In early 2025, golden mussels were found in the lower San Joaquin River and upper Sacramento–San Joaquin Delta region, including Contra Costa, Sacramento, San Joaquin, and Alameda counties (Figure A-2). The survival of golden mussels in the State Water Project has facilitated rapid translocation of the species from Merced County to western King and Kern counties. As of October 2025, golden mussels have been confirmed in approximately 102 locations throughout the Sacramento-San Joaquin Delta and the California Aqueduct (Figure A-2; CDFW, 2025a). During this time, CDFW and other local agencies conducted more than 800 surveys throughout California, including in the Sacramento River, and these surveys did not detect golden mussels outside of waterbodies associated with the Sacramento-San Joaquin Delta and California State Water Project. Survey results were reported to the CDFW Invasive Species Program (CDFW, 2025a). The closest documented golden mussel population occurs in the San Joaquin River (near Stockton, California) and O’Neill Forebay (near Los Banos, California), approximately 115 miles from Lundy Lake (Figure A-2).

#### QUAGGA AND ZEBRA MUSSELS

Quagga and zebra mussels are native to the Black and Caspian seas in Europe and are invasive to North America. These mussels were first discovered in North America in the 1980s and have caused considerable economic and environmental damage in the Great

 

Lakes, Mississippi River basin, and other waterbodies in the eastern and mid-western United States.

In early 2007, quagga mussels were detected for the first time in the west, specifically in the Colorado River basin. Later that year, quagga mussels were found in a reservoir in Southern California. Zebra mussels were first detected at San Justo Reservoir in San Benito County in 2008. As of September 2025, quagga and zebra mussels have been confirmed in 44 locations, which are primarily in Southern California counties, including San Diego, Riverside, Orange, Los Angeles, and Ventura (Figure A-2; CDFW, 2025b). The closest established dreissenid (quagga and zebra) mussel population occurs at the San Justo Reservoir and Ridgemark Golf Course in San Benito County, approximately 140 miles from the study area (Figure A-2).

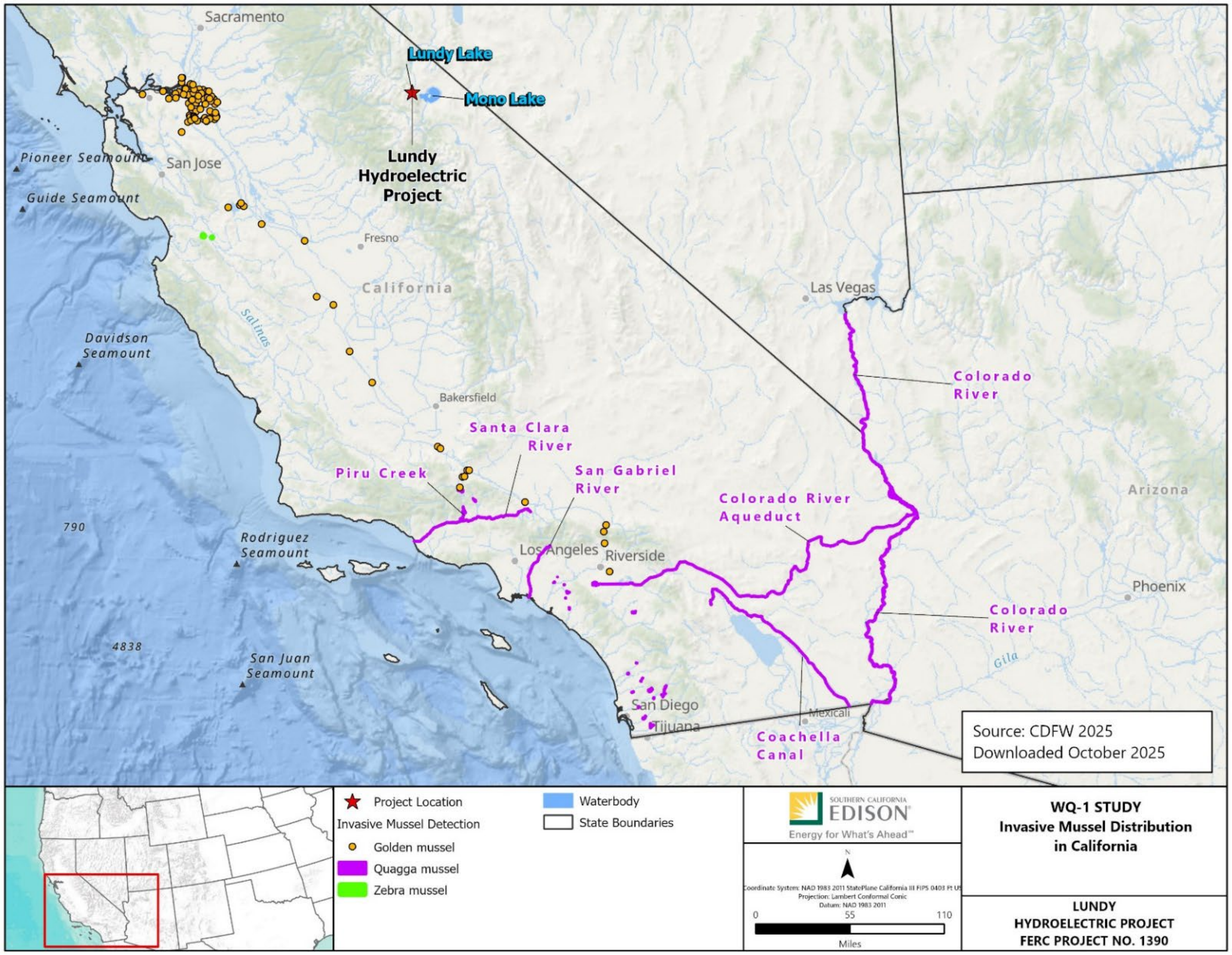


**Figure A-2. Location of Lundy Lake Hydroelectric Project Area and Proximity to Known Invasive Mussel-Infested Waterbodies in California as of October 2025.**

## PHYSICAL TOLERANCES

Invasive mussel colonization requires water quality conditions suitable for all life stages, including spawning, larval development and settlement, juvenile growth and development, and adult survival. The survival and establishment of invasive mussels can be limited by calcium concentrations, pH, and water temperature (Whittier et al., 2008; Cohen and Weinstein, 1998, 2001; Liu et al., 2024). Adult life stages can tolerate a wider range of conditions, but the larval stage is less resilient and may be the limiting life stage for colonization of waterbodies. Cold water temperatures can limit reproduction, and freezing temperatures can cause mortality to individuals (Cohen, 2008; Liu et al., 2024). Additionally, low calcium concentrations may reduce individual growth rates, promote shell loss, and reduce larval production (Cohen and Weinstein, 2001; Liu et al., 2024). These effects are compounded by low pH values because the solubility of calcium carbonate increases as pH decreases, resulting in shell thinning (Claudi and Prescott, 2011). The thresholds for individual survival and colony establishment vary by invasive mussel species. The literature indicates that golden mussels can survive in a broader range of environmental conditions (e.g., waters with lower calcium) (CDFW, 2024); however, thresholds for colonization in California reservoirs are poorly understood due to the recent discovery of the species in California.

CDFW (2024, 2025c) distributed initial guidelines for defining golden mussel habitat suitability based on available literature for water temperature, calcium, and pH. Table A-1 presents the likelihood of golden mussel establishment based on those CDFW guidelines as well as the likelihood of quagga and zebra mussel establishment based on literature values. A literature review is currently in progress to further evaluate golden mussel tolerances to water quality conditions.

**Table A-1. Likelihood of Invasive Mussel Establishment for Various Water Quality Conditions**

| Parameter | Likelihood of Golden Mussel[a] Establishment | | | | Likelihood of Quagga and Zebra Mussel[b] Establishment | | |
|---|---|---|---|---|---|---|---|
| | Very Low | Low | Moderate | High | Low | Moderate | High |
| Minimum and maximum temperature (degrees Celsius) | <5 or >40 | 5–15 or 35–40 | 16–26 or 32–35 | 26–32 | <15 or >32 | 16–26 | 26–32 |
| Calcium (mg/L) | <3 | 3–5 | 5–10 | >10 | <15 | 15–25 | >25 |
| pH (standard units) | -- | <5 or >10 | 5–7 | 7–10 | <5 | 5–7 | 7–9 |

< = less than; > = greater than; -- = no data available; mg/L = milligram per liter

Note:

[a] Potential for invasive mussel establishment was based on guidance provided by CDFW (2024, 2025c). Dissolved oxygen was not included in these documents; pH was based on the suitable pH ranges for golden mussel calcification provided by CDFW (2025c). The optimal range (7–10) was defined as *high*, suitable values less than the optimal range (5–7) were defined as *moderate*, and values outside these ranges were defined as *low*.

[b] Literature values from Cohen and Weinstein (1998), Cohen (2008), and CDFW (2024).

## FIELD AND LABORATORY METHODS

Data collection in Lundy Lake as part of the WQ-1 Study modification included collection of supplemental in situ water quality data, continuous water temperature data, eDNA sample analysis, and opportunistic visual surveys. Water quality sampling site identification (ID), site description, location (latitude and longitude), sampling parameters, and dates are provided in Table A-2.

**Table A-2. Sampling Locations and Dates**

<table>
<tr><th rowspan="2">Site Description</th><th rowspan="2">Site ID</th><th rowspan="2">Location (latitude / longitude)[a]</th><th colspan="4">Sampling Parameter and Dates (2025)</th></tr>
<tr><th>In Situ Water Quality</th><th>Analytical Water Quality</th><th>Continuous Water Temperature[b]</th><th>Environmental DNA</th></tr>
<tr><td>Lundy Lake near the boat launch</td><td>LL-1</td><td>38.028292 / -119.238855</td><td rowspan="2">NA</td><td rowspan="2">7/15, 8/18, 10/21</td><td>7/15–7/30, 8/18–10/21</td><td>4/30, 8/18, 10/20</td></tr>
<tr><td>Lundy Lake Dam Day Use Area</td><td>LL-2</td><td>38.031489 / -119.220498</td><td>7/16–7/21, 8/19–10/14, 10/20–10/21</td><td>7/15, 8/18, 10/20</td></tr>
<tr><td>Lundy Lake[c]</td><td>LL-3</td><td>38.029258 / -119.227235</td><td>4/30, 7/15, 8/18, 9/18, 10/21</td><td>4/30, 7/15, 8/18, 9/18, 10/21</td><td>7/16–10/21</td><td>NA</td></tr>
</table>

NA = not applicable (no samples collected), DNA = deoxyribonucleic acid
Note:
[a] Unit = decimal degrees; datum = World Geodetic System 84
[b] Data gaps exist in the continuous water temperature data record for Site LL-1 and Site LL-2 due to lake level fluctuations and represent times when the loggers were out of the water.
[c] In situ and analytical water quality data collected on April 30, August 18, and October 21, 2025, were collected under the WQ-1 Study.

### WATER QUALITY

#### IN SITU WATER QUALITY

In situ water quality measurements (i.e., spot measurements and profiles) and surface water grab sampling occurred at three sites (LL-1, LL-2, and LL-3) during five sampling events between April 30, 2025, and October 21, 2025 (Table A-2). In situ water temperature, dissolved oxygen, pH, and specific conductance were measured using a multi-parameter water quality sonde (YSI EXO2, Yellow Springs Instruments).

Table A-3 identifies in situ parameters, methods, and method detection limits that were evaluated. Quality assurance and quality control activities, which included pre- and post-sampling calibration checks of the sonde, followed the manufacturer instructions and were conducted each day of sampling or as appropriate for each sensor.

**Table A-3. In Situ Water Quality Methods**

| Parameter | Method | Method Detection Limit |
|---|---|---|
| Water temperature | USEPA 170.1 | 0.1°C |
| Dissolved oxygen | SM 4500-O | 0.1 mg/L |
| Specific conductance | SM 2510 A | 0.1 µS/cm |
| pH | SM 4500-H | 0.1 standard unit |

°C = degree Celsius; µS/cm = microsiemen per centimeter; USEPA = U.S. Environmental Protection Agency; mg/L = milligram per liter; SM = Standard Method

ANALYTICAL WATER QUALITY

Surface water grab samples were collected at both edge-water sites (LL-1 and LL-2) and the reservoir site (LL-3), surface water grab samples were collected simultaneously with in situ measurements (Section 4.1.1). Water samples were analyzed for calcium and alkalinity concentrations (Table A-4).

Each grab sample collected was placed in a laboratory-supplied container, labeled, preserved, and stored on ice until delivered to a state-certified water quality laboratory (California Laboratory Services, Rancho Cordova, California). Samples were analyzed according to methods and target reporting limits included in Table A-4. A chain-of-custody record was maintained for each sample container.

**Table A-4. Analytical Parameters, Methods, and Reporting Limits for Water Samples**

| Parameter | Laboratory Method | Reporting Limit or PQL |
|---|---|---|
| Calcium | USEPA 200.7 | 1.0 mg/L |
| Total alkalinity | SM 2320 B | 5 mg/L (as $CaCO_3$) |

USEPA = U.S. Environmental Protection Agency; mg/L = milligram per liter; PQL = practical quantitation limit; SM = Standard Methods

CONTINUOUS WATER TEMPERATURE

Five continuous water temperature data loggers were deployed across three sites in Lundy Lake, including a vertical array (three loggers at Site LL-3—one each at the surface, middle, and bottom) and two edge-water loggers (one at Site LL-1 and one at Site LL-2) (Figure A-1, Figure A-2). The array was deployed near the deepest part of the reservoir, and the edge-water loggers were deployed on the shoreline at a maximum depth of 5 feet to reflect surface conditions.

Loggers were deployed at each site on July 15 and 16, 2025. Factory-calibrated water-temperature data loggers (Onset HOBO Pro V2) were tested for accuracy per manufacturer's instructions and placed inside protective housings. Water temperature readings were recorded at 15-minute intervals. Loggers were serviced, cleaned, and downloaded approximately monthly between July and October 2025. Additionally, loggers at the edge-water sites were serviced approximately weekly between August and September 2025 to minimize time the loggers were out of the water due to fluctuating lake water levels. Loggers will remain deployed without maintenance between October 2025 and spring 2026.

Water temperature data downloaded during field visits were transferred to Microsoft Excel workbooks and reviewed. Data quality review included identification of periods when the loggers were not recording water temperatures due to servicing, lake level decreases, and other factors (e.g., removal from the lake by recreators). Periods of anomalous water temperature data (e.g., large shifts in the daily minimum to maximum range) were compared with air temperature and field deployment records to determine whether the loggers were reading air or water temperatures.

#### ENVIRONMENTAL DNA AND VISUAL OBSERVATIONS

Surface water sampling for eDNA was conducted from the shoreline at Site LL-1 and Site LL-2 during three monitoring events in 2025 (Table A-2). The eDNA samples were collected using a peristaltic pump in the field and following standard protocols (Blankenship and Schumer, 2022; Bergman et al., 2016; Laramie et al., 2015). Triplicate samples (i.e., filters) were collected at each study site to improve detection probability and reduce the potential for false negatives (i.e., the target species being present but not detected). Up to 1.1 liters of surface water were filtered through a 0.45-micrometer Millipore Sterivex™ filter using a peristaltic pump. Negative controls were collected once during each sampling event by filtering 1 liter of distilled water (non-laboratory-grade/commercially available distilled water) prior to sample collection. After filtration, filters were stored on ice during transport (e.g., during field work) and transferred to a freezer until samples were delivered to the laboratory for analysis.

Genidaqs (West Sacramento, California) performed genetic analysis. DNA was analyzed with quantitative polymerase chain reaction (qPCR) using previously published assays to detect golden mussel (Ito and Shibaike, 2021) and quagga/zebra mussels (Gingera et al., 2017). One common aquatic fish species in Lundy Lake (rainbow trout [*Oncorhynchus mykiss*]) was analyzed as an internal positive control (Duda et al., 2021). Laboratory personnel followed best practices for eDNA extraction and created and analyzed an extraction negative and qPCR negative with every extraction batch and qPCR plate (Miya et al., 2016). Samples were analyzed in triplicate and with an internal positive control (i.e., non-target species voucher specimen genomic DNA or GBlock synthetic DNA) to ensure samples were not inhibited (i.e., a negative result signified DNA was not detected; it was not an indication of a failed qPCR reaction).

Opportunistic visual surveys for invasive mussels were performed concurrently with the eDNA sample collection near the boat launch and Lundy Dam Day Use Area at Lundy Lake. Hard and soft surfaces were inspected visually for invasive mussels following survey methods included in CDFW (2021) protocols.

### SUITABILITY OF RESERVOIR WATERS TO SUSTAIN INVASIVE MUSSELS

To evaluate the suitability of Lundy Lake's water chemistry conditions for invasive mussel establishment, three parameters (calcium, pH, and water temperature) were summarized and compared with water quality thresholds for golden mussels, quagga, and zebra mussels (Table A-1).

Dissolved oxygen, specific conductance,[6] and alkalinity were collected and summarized but not included in the assessment. If additional guidance from CDFW or the literature review indicates that current dissolved oxygen, specific conductance, alkalinity, or other conditions are limiting mussel establishment, the parameters will be included in future suitability assessments.

## RESULTS

### WATER QUALITY

Preliminary water quality data are summarized in Table A-5. Tabulated in situ data, tabulated analytical data, laboratory reports, and in situ reservoir profiles (i.e., dissolved oxygen and specific conductivity), which are not provided in this assessment, will be provided in the Final WQ-1 Study Technical Report.

**Table A-5. Water Quality Data Summarized (Minimum–Maximum) by Sampling Location, 2025**

| Parameter | Depth | Lundy Lake near Boat Launch (Site LL-1) | Lundy Lake Dam Day Use Area (Site LL-2) | Lundy Lake (Site LL-3) |
|---|---:|---:|---:|---:|
| Temperaturea (degrees Celsius) | Surface | 8.0–23.0 | 5.5–22.0 | 9.4–18.6 |
| | Middle | -- | -- | 9.5–18.3 |
| | Bottom | -- | -- | 8.7–13.2 |
| Dissolved oxygenb (mg/L) | All | 8.0–8.4 | 7.7–8.3 | 2.3–9.5 |
| pHb (standard units) | All | 7.34–7.4 | 7.58–7.64 | 5.8–7.8 |
| Specific conductivityb (µS/cm) | All | 66–70 | 66–67 | 58–74 |
| Calcium (mg/L) | All | 8.7–11 | 7.5–11 | 8.5–12 |
| Total alkalinity (mg/L) as CaCO3 | All | 17–21 | 15–20 | 16–21 |

-- = no data; µS/cm = microsiemen per centimeter; $CaCO_3$ = calcium carbonate, mg/L = milligram per liter
Notes:
[a] Minimum and maximum water temperatures were calculated using continuous 15-minute interval data collected throughout the reporting period.
[b] Edge-water in situ measurements were only collected on September 10, 2025, and October 21, 2025.

[6] Golden mussels, quagga, and zebra mussels are all freshwater species.

### ENVIRONMENTAL DNA AND VISUAL OBSERVATIONS

No golden mussels, quagga mussels, or zebra mussels were observed during the surface surveys at Lundy Lake study sites. In addition, based on laboratory analysis of surface water samples, no eDNA was detected at any of the sampling locations. Laboratory reports will be provided as appendices in Final WQ-1 Study Technical Report.

### SUITABILITY OF RESERVOIR WATERS TO SUSTAIN INVASIVE MUSSELS

#### GOLDEN MUSSELS

CDFW (2024, 2025c) distributed initial guidelines for defining golden mussel habitat suitability based on available literature (Table A-1). Calcium and pH concentrations collected at Lundy Lake sites in 2025 were within the moderate-to-high likelihood for golden mussel establishment thresholds (Figure A-3, Figure A-4). Water temperatures at water-edge and reservoir sampling locations during the summer were within the moderate likelihood for golden mussel establishment threshold (Figure A-4 , Figure A-5). Spring and fall water temperatures throughout the water column in Lundy Lake were cooler and within the low likelihood for establishment threshold (Figure A-4 , Figure A-5).

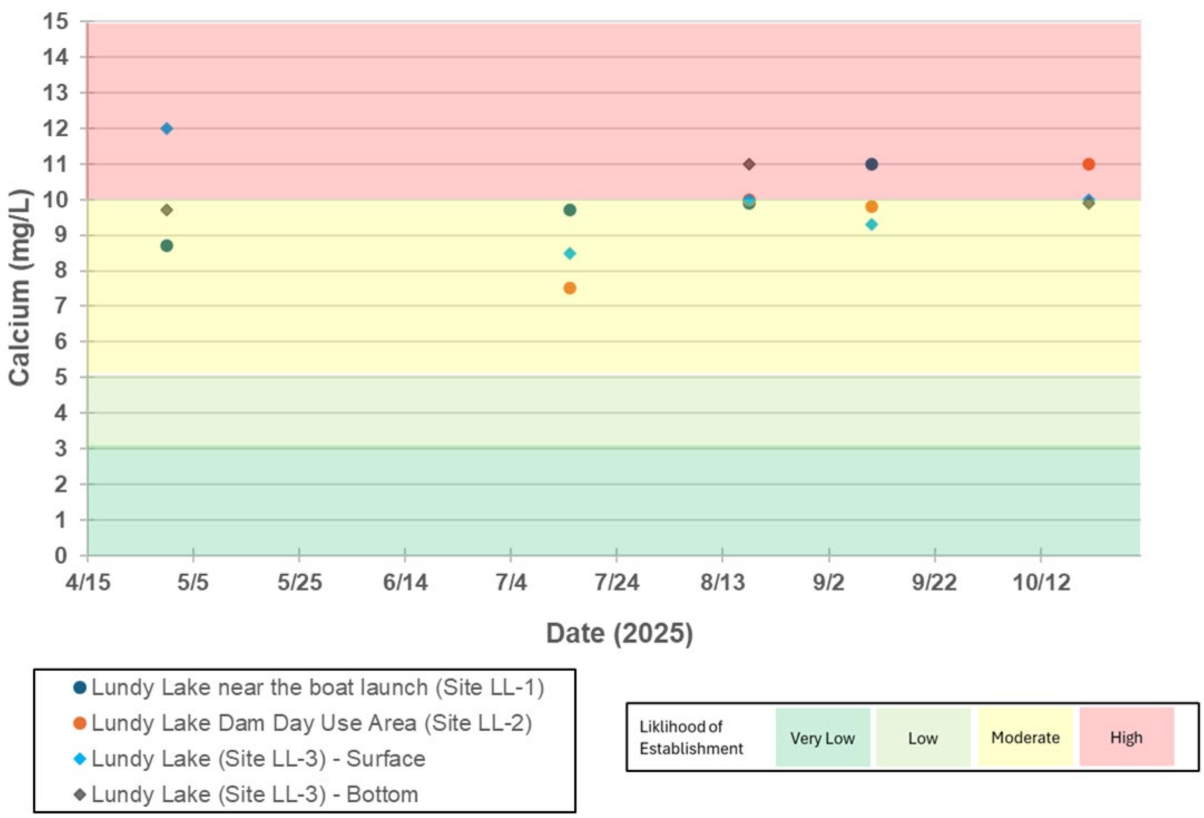


**Figure A-3. Likelihood of Golden Mussel Establishment in Lundy Lake Based on Calcium Data, 2025.**

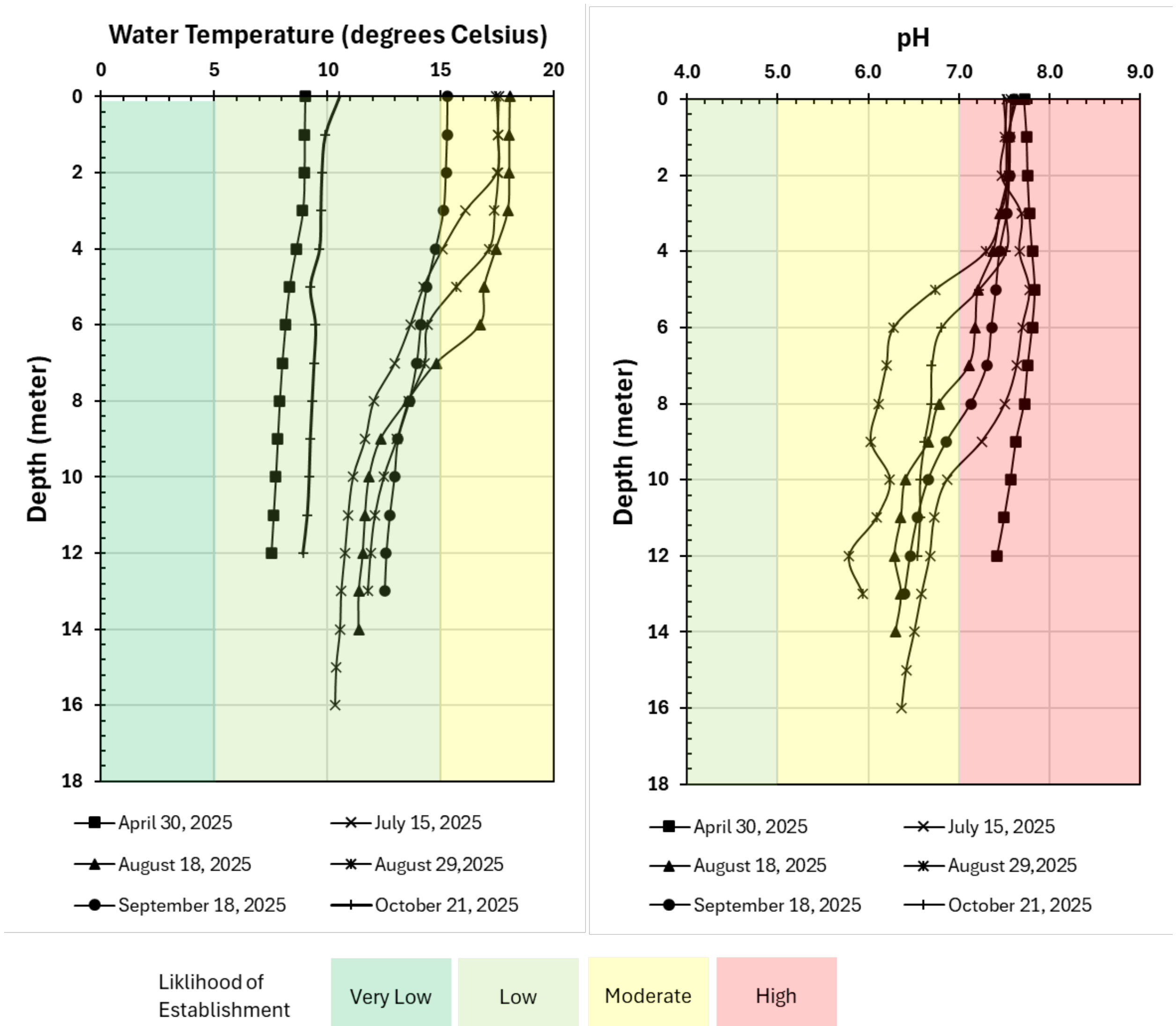


**Figure A-4. Likelihood of Golden Mussel Establishment in Lundy Lake Based on Water Temperature and pH Vertical Profiles, 2025.**

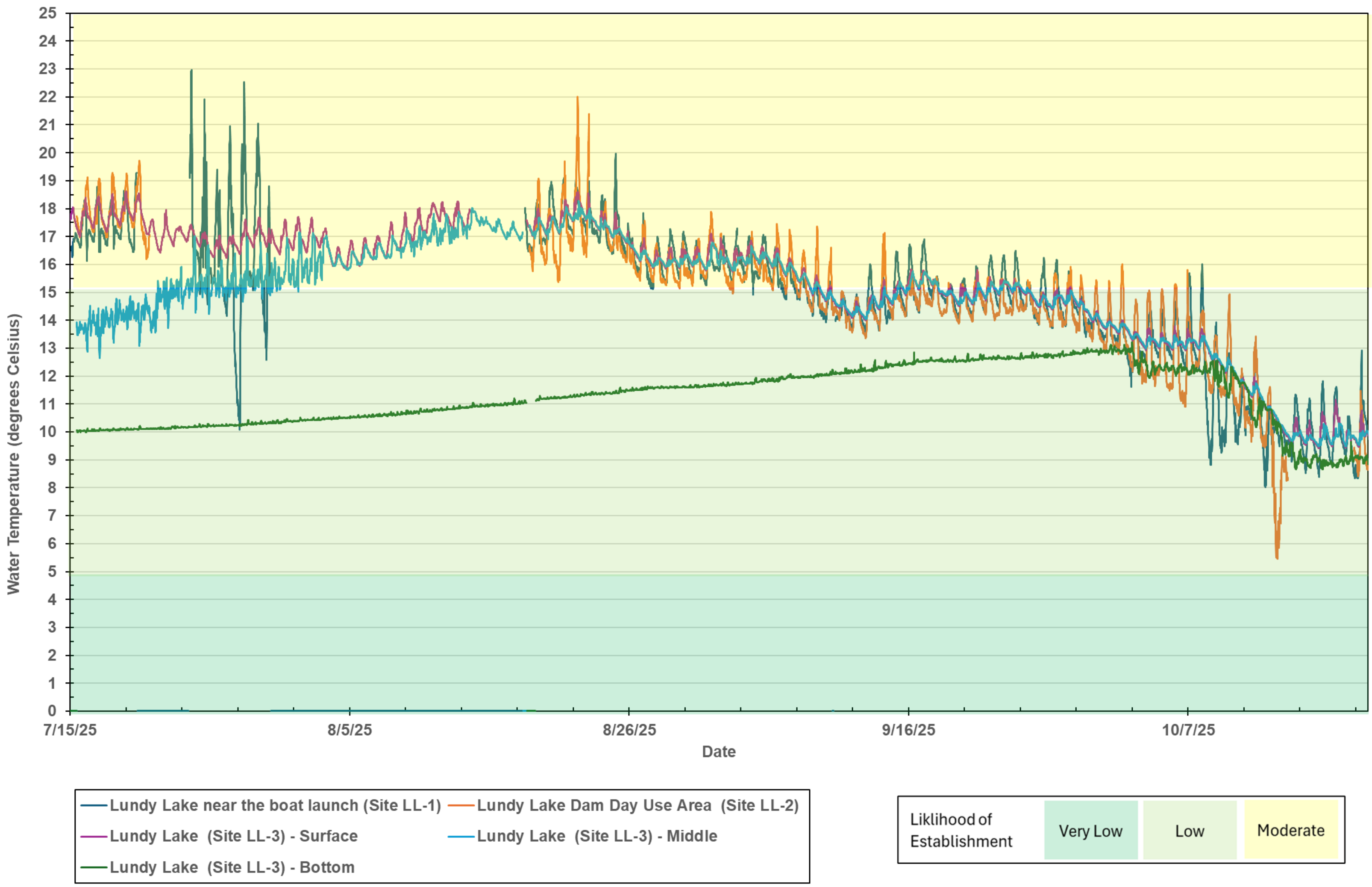


**Figure A-5. Likelihood of Golden Mussel Establishment in Lundy Lake Based on Continuous Water Temperature, 2025.**

### QUAGGA AND ZEBRA MUSSELS

Calcium concentrations in Lundy Lake collected during 2025 were within the low likelihood for quagga and zebra mussel establishment threshold (Figure A-6). pH concentrations collected were within the moderate-to-high likelihood for golden mussel establishment thresholds (Figure A-7). Water temperatures during the summer were within the moderate likelihood for golden mussel establishment threshold (Figure A-7, Figure A-8). Spring and fall water temperatures in Lundy Lake were cooler and within the low likelihood for establishment threshold (Figure A-7, Figure A-8).

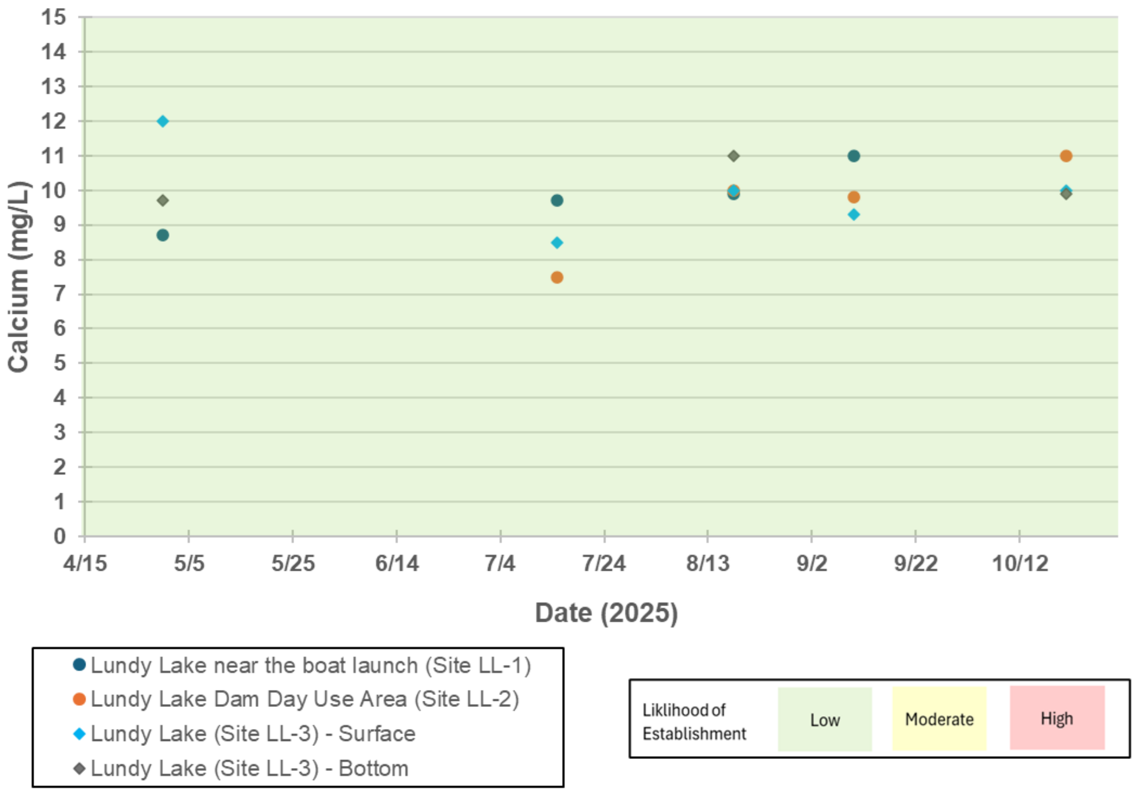


**Figure A-6. Likelihood of Quagga and Zebra Mussel Establishment in Lundy Lake Based on Calcium Data, 2025.**

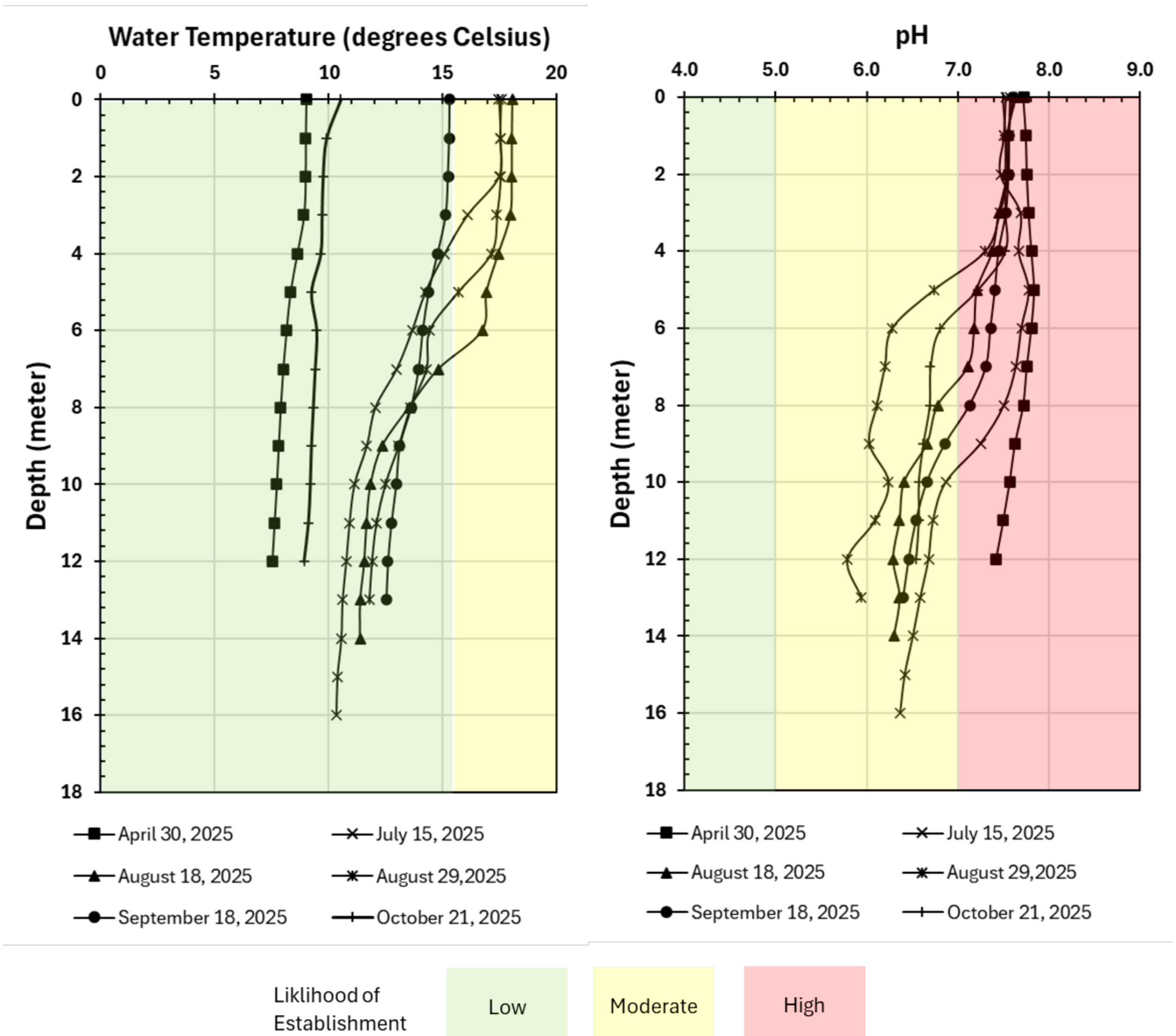


**Figure A-7. Likelihood of Quagga and Zebra Mussel Establishment in Lundy Lake Based on Water Temperature and pH Vertical Profiles, 2025.**

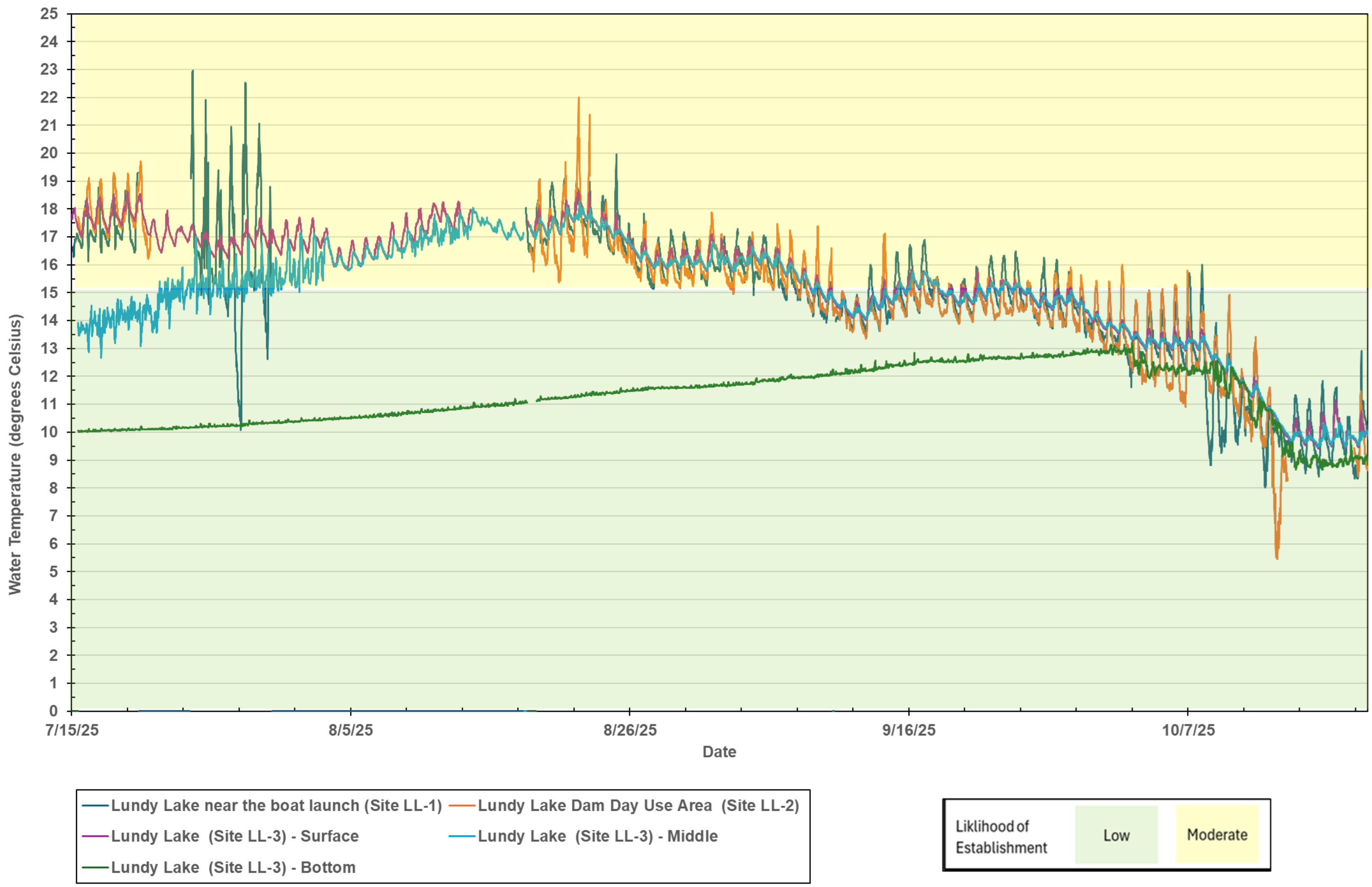


**Figure A-8. Likelihood of Quagga and Zebra Mussel Establishment in Lundy Lake Based on Continuous Water Temperature, 2025.**

## DISCUSSION

As of October 2025, no occurrences of golden mussels, quagga mussels, or zebra mussels have been documented in the eastern Sierras, including Lundy Lake (Figure A-2). Comparison of currently available water quality data with calcium, pH, and water temperature thresholds indicates a moderate likelihood that golden mussels could become established in Lundy Lake during summer months with this likelihood decreasing in fall as water temperatures decline.

Calcium concentrations in Lundy Lake would be able to support golden mussels year-round; however, several factors (e.g., cooler water temperatures, seasonal reservoir level fluctuations) may limit the success of establishment. Analysis of data collected during 2025 and a literature review to further evaluate golden mussel temperature tolerances are ongoing. This information will be incorporated into the vulnerability assessment.

Additional data to be incorporated into the vulnerability assessment includes continuous water temperature monitoring data collected between October 2025 and spring 2026, as well as documentation obtained through recreational survey questionnaires. For recreation surveys conducted under the REC-1 Study, additional boater questions were added to 1) assess awareness of the golden mussel; and 2) identify the last three waterbodies where their watercraft were launched prior to visiting Lundy Lake.

Water quality conditions in Lundy Lake indicate a low likelihood for quagga and zebra mussel establishment based on low calcium concentrations (Figure A-6). These results are consistent with a 2017 vulnerability assessment for Lundy Lake (SCE, 2017) and a 1998 study that evaluated the risk of California waterbodies based on calcium thresholds (Cohen, 2008). The results of the 1998 study suggest that the Sierra Nevada Mountain regions are unsuitable for the establishment of quagga and zebra mussel colonization based on calcium thresholds (Cohen, 2008). Outcomes of this vulnerability assessment will be included in the WQ-1 Technical Report and evaluated as part of the License Application.

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# APPENDIX B
# WQ-1 CONSULTATION RECORD

| | |
|---|---|
| **From:** | Finlay Anderson |
| **To:** | Nick.Buckmaster@wildlife.ca.gov; "Meese, Graham@Wildlife" |
| **Cc:** | Matthew Woodhall; Angela Whelpley |
| **Subject:** | Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study |
| **Date:** | Tuesday, June 17, 2025 3:25:56 PM |
| **Attachments:** | WQ-1_Memo to CDFW-Proposed Study Plan Modification - Golden Mussel_REV 0_20250617.pdf<br>Outlook-Logo__Desc |

Hi Nick and Graham --

I and the Stillwater team have been working with Matt to make sure we are collecting information that would be used to inform our understanding of the potential for Golden mussels to get established in the lake. We've made some changes to the Water Quality Study as well as the addition of some questions in our recreation survey approach.

The attached memo outlines the changes and requests concurrence so that we can document for FERC the basis for changes we are making. Happy to get together and talk as well if necessary. Because the study is already under way, we'd love to sew up our consultation by the end of the month, if possible?

Thanks

FMA

**Finlay Anderson**
**Principal Consultant**
Kleinschmidt
O: 971.345.0517 C: 503.329.3586
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# TECHNICAL MEMORANDUM

| | |
|---|---|
| **To:** | Nick Buckmaster, California Department of Fish and Wildlife (CDFW); Graham Meese (CDFW) |
| **From:** | Finlay Anderson (Kleinschmidt Associates) |
| **Cc:** | Heather Neff (Stillwater Sciences); Matthew Woodhall (Southern California Edison) |
| **Date:** | June 17, 2025 |
| **Re:** | Lundy Lake Golden Mussel Risk Assessment |

## 1.0 BACKGROUND

Southern California Edison (SCE) is the licensee of the Lundy Hydroelectric Project (Federal Energy Regulatory Commission [FERC] No. 1390), the license for which expires in 2029. SCE has initiated relicensing studies in anticipation of filing an Application for New License in March 2027. The Lundy Lake and Mill Creek Water Quality Study (WQ-1, Attachment 1) was initiated in the spring of 2025. The study was developed in consultation with the California Department of Fish and Wildlife (CDFW) pursuant to the Integrated Licensing Process (ILP) study plan development process, and FERC approved the study plan in its January 3, 2025 Study Plan Determination (SPD). This memorandum outlines proposed changes to the WQ-1 study and invites CDFW's comment and concurrence on the changes.

Since the SPD, resource agencies have elevated discussions in California around the vulnerability of regional water bodies to the spread of the golden mussel (*Limnoperna fortunei*), an invasive non-native bivalve detected in the Sacramento-San Joaquin Delta in October 2024. Lundy Lake was identified as potentially being at risk for golden mussel establishment based on calcium levels. SCE has been working with CDFW to understand how the agency is responding to the recent detection of golden mussel and to implement recommendations to prevent future introductions and spread of golden mussel, including early detection monitoring, outreach and education, and assessment of vulnerability (CDFW et al. 2025, CDFW 2020).

## 2.0 MODIFICATIONS TO WQ-1

SCE's relicensing team is modifying the WQ-1 study to include collection of additional water quality data and aquatic invasive mussel monitoring (i.e., environmental deoxyribonucleic acid [eDNA]) that will be used to characterize existing water quality conditions, in addition to assessing Lundy Lake's vulnerability to the introduction of golden mussel based on the lake's limnology and eDNA results. Outcomes of the study modification will be included in the WQ-1 Technical Report and evaluated as part of the License Application.

SCE has authorized changes to the WQ-1 study, which will involve collection of continuous water temperature data, supplemental in situ water quality data, and eDNA samples in Lundy Lake, including the following:

- Up to five continuous water temperature data loggers will be deployed in Lundy Lake, including a vertical array (surface and bottom) near the dam and up to two edgewater locations. Loggers will be deployed from approximately July to late September/early October.
- Water quality data sampling will include collection of additional in situ (water temperature, dissolved oxygen, specific conductivity, and pH) measurements at Lundy Lake, including reservoir profiles and near the boat launch. SCE will collect up to three additional in situ measurements beyond what is already planned under the WQ-1 study (between May and October).
- Sampling for invasive mussel eDNA will be conducted from the shoreline at the Lundy Lake Boat Launch during three monitoring events (approximately May, July/August, and September/October) in 2025. Samples will be analyzed for golden mussel and quagga (*Dreissena rostriformis bugensis*) and zebra (*D. polymorpha*) mussel eDNA using assays available by Genidaqs (Sacramento, California). One common aquatic fish species in these reservoirs (e.g., rainbow trout) will be analyzed as internal positive controls. At each monitoring location, triplicate samples (i.e., three filters) and one blank will be collected.

Water chemistry, in situ, and water temperature data collected in Lundy Lake and Mill Creek during 2025 will inform a vulnerability assessment that identifies the potential for invasive mussels (golden, zebra, and quagga) to survive and colonize based on available literature and CDFW guidelines. SCE recognizes that this modification to the WQ-1 study does not include the analysis and development of all elements required to satisfy the recommendations for the vulnerability assessment from CDFW Code Section 2302 and CCR Title 14 Section 672.1(b), including identification of potential introduction pathways or potential actions (e.g., signage, watercraft inspections, boat/trailer tagging program, signage) that SCE may implement to prevent or mitigate introductions via the pathways. These steps, if necessary, will be included if the vulnerability assessment finds that Lundy Lake is at risk of golden mussel colonization based on water quality conditions. The recreation surveys being administered as part of the REC-1 study are being modified to add, opportunistically, questions for boaters about 1) their awareness of the golden mussel; and 2) the last three waterbodies where they have launched their watercraft prior to visiting Lundy Lake.

## 3.0 REQUEST FOR CONCURRENCE

This addition to the study plan will be presented as a “modification” to the approved WQ-1 study, and water quality data will be included in the Interim Study Report in January 2026. CDFW’s comments and recommendations on this approach will be included as part of the consultation record. SCE notes that these changes are already in the process of being implemented, but we are open to further discussions as needed. The relicensing process is in its first year; SCE will continue to collaborate in future phases of this effort as new information becomes available.

Please provide comments to Finlay Anderson (Finlay.Anderson@kleinschmidtgroup.com) and Matthew Woodhall (Matthew.Woodhall@sce.com) by July 1, 2025. We are happy also to talk by phone if that would be helpful.

## 4.0 REFERENCES

CDFW (California Department of Fish and Wildlife). 2020. Guidance for Developing a Dreissenid Mussel Prevention Program. August 25, 2020. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=140345&inline

CDFW, California State Parks, California Department of Water Resources, California State Lands Commission, California Department of Food and Agriculture, California State Water Resources Control Board, United States Bureau of Reclamation, and United States Fish and Wildlife Service. 2025. State of California Golden Mussel Response Framework. April 14, 2025. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=231231

| | |
|---|---|
| **From:** | Meese, Graham@Wildlife |
| **To:** | Finlay Anderson; Buckmaster, Nick@Wildlife |
| **Cc:** | Matthew Woodhall; Angela Whelpley |
| **Subject:** | RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study |
| **Date:** | Tuesday, June 17, 2025 7:05:06 PM |

Hi Finlay,
I will review and discuss this memo with Nick and we will reach out if there is anything we'd like to discuss.

Best,

Graham

**From:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>
**Sent:** Tuesday, June 17, 2025 12:25 PM
**To:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study



Hi Nick and Graham --

I and the Stillwater team have been working with Matt to make sure we are collecting information that would be used to inform our understanding of the potential for Golden mussels to get established in the lake. We've made some changes to the Water Quality Study as well as the addition of some questions in our recreation survey approach.

The attached memo outlines the changes and requests concurrence so that we can document for FERC the basis for changes we are making. Happy to get together and talk as well if necessary. Because the study is already under way, we'd love to sew up our consultation by the end of the month, if possible?

Thanks

FMA

**Finlay Anderson**
**Principal Consultant**
Kleinschmidt

O: 971.345.0517  C: 503.329.3586

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| | |
|---|---|
| **From:** | Buckmaster, Nick@Wildlife |
| **To:** | Finlay Anderson; Meese, Graham@Wildlife |
| **Cc:** | Matthew Woodhall; Angela Whelpley |
| **Subject:** | RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study |
| **Date:** | Wednesday, June 18, 2025 11:05:52 AM |

This seems pretty straightforward. I have no specific comments at this time, other than the request that if any monitoring effort detects a QZM or GM that SCE notify DFW within 48. I think that's required under Fish and Game code for QZM anyway.

Nick Buckmaster
Fisheries Supervisor
Bishop, CA 93514
(cell) 760-920-8391

**From:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>
**Sent:** Tuesday, June 17, 2025 12:25 PM
**To:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study



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FMA

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| | |
|---|---|
| **From:** | Meese, Graham@Wildlife |
| **To:** | Buckmaster, Nick@Wildlife; Finlay Anderson |
| **Cc:** | Matthew Woodhall; Angela Whelpley; Meese, Graham@Wildlife |
| **Subject:** | RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study |
| **Date:** | Monday, June 30, 2025 7:24:30 PM |

Hi Finlay,

Thank you for providing us the opportunity to comment on the changes to the WQ-1 Study to address the vulnerability of Lundy Lake to golden mussels. I've included our comments on the memo below. Please let us know if you have any questions or would like to coordinate further on any of these comments or requests.

Best,

Graham

1. General Comment: Given that this is a modification to the approved AQ-1 study, CDFW recommends that all interested parties that have participated in this FERC relicensing project have the opportunity to provide comments.
2. CDFW recommends that in addition to the vertical array of continuous water temperature monitoring loggers, additional loggers be deployed on the bottom of the lake to capture the lowest temperatures that the lake reaches during the winter months.
3. Can you please provide an updated map of all the water quality sampling locations, including those approved in AQ-1 and the proposed additional sites?
4. CDFW recommends taking shallow and deep, grab samples for water quality chemistry analysis, as described in AQ-1, at each of the new proposed additional water quality monitoring sites where in situ water quality measurements will be taken.
5. CDFW recommends adding additional eDNA sample locations throughout the lake to ensure these samples capture the potential presence of golden mussels within Lundy Lake.
6. If eDNA results in a positive result for golden mussels, CDFW recommends that SCE conduct a plankton tow to confirm presence and assess the relative veliger densities within the water column.
7. What method is SCE using to assess vulnerability and what metrics and ranges of water chemistry, in situ water quality, and temperature will be used in the vulnerability assessment?

---

**From:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>
**Sent:** Wednesday, June 18, 2025 8:06 AM
**To:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley

<Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study

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**To:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study



Hi Nick and Graham --

I and the Stillwater team have been working with Matt to make sure we are collecting information that would be used to inform our understanding of the potential for Golden mussels to get established in the lake. We've made some changes to the Water Quality Study as well as the addition of some questions in our recreation survey approach.

The attached memo outlines the changes and requests concurrence so that we can document for FERC the basis for changes we are making. Happy to get together and talk as well if necessary. Because the study is already under way, we'd love to sew up our consultation by the end of the month, if possible?

Thanks

FMA

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Kleinschmidt

O: 971.345.0517  C: 503.329.3586

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| | |
|---|---|
| **From:** | Finlay Anderson |
| **To:** | Meese, Graham@Wildlife; Buckmaster, Nick@Wildlife; Cohen, Adam@Waterboards; Muro, Bryan@Waterboards |
| **Cc:** | Matthew Woodhall; Angela Whelpley |
| **Subject:** | Re: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study |
| **Date:** | Wednesday, July 23, 2025 6:46:38 PM |
| **Attachments:** | REC-2 Memo to CDFW-Proposed Study Plan Modification.pdf<br>Outlook-Logo _ Desc |

Graham -- Thank you for your comments on SCE proposed modifications to the Water Quality Study (see attached memo). SCE is implementing the revised program and have incorporated your comments as described in the table below. We will be able to drill down as necessary in January at the ISR meeting.

Adam and Bryan - circulating this to you for your awareness.

Thanks
FMA

| | | |
|---|---|---|
| 1 | General Comment: Given that this is a modification to the approved AQ-1 study, CDFW recommends that all interested parties that have participated in this FERC relicensing project have the opportunity to provide comments. | SCE views this extra effort as primarily within the purview of CDFW and its management responsibilities; SCE will provide our memo with response to comments to the Water Board in case they have additional suggestions and will include this in the Initial Study Report (ISR). At this stage, if additional discussion is needed, that would be the appropriate venue in the context of FERC's criteria at 18 CFR § 5.15(d) and (e).<br><br>Note that the study being modified is the Water Quality Study (WQ-1) which applies to responses below where AQ-1 is referenced. |
| 2 | CDFW recommends that in addition to the vertical array of continuous water temperature monitoring loggers, additional loggers be deployed on the bottom of the lake to capture the lowest temperatures that the lake reaches during the winter months | SCE will implement this recommendation. Up to two water temperature loggers will remain near the bottom of Lundy Lake over winter (through spring 2026). |
| 3 | Can you please provide an updated | Study maps will be updated and provided in |

| | | |
|---|---|---|
| | map of all the water quality sampling locations, including those approved in AQ-1 and the proposed additional sites? | the ISR. Figure 4.3-1 in the WQ-1 Study Plan shows one reservoir water quality site near the deepest part of the lake. At this location, the vertical array of water temperature loggers (up to 3 loggers) will be deployed, up to 5 *in situ* profiles (including those already proposed under WQ-1) will be recorded, and up to 8 (5 near surface and 3 deep water) calcium and alkalinity samples will be collected.<br><br>Two edgewater sites have been added to support the Golden Mussel assessment: one at the Lundy Lake Boat Launch and one at the Lundy Dam Day Use Area. The following data will be collected at these two edgewater sites: eDNA (up to 3 sampling events per site), continuous temperature, *in situ* water quality (up to 4 sampling events per site), and calcium and alkalinity (up to 4 sampling events per site). |
| 4 | CDFW recommends taking shallow and deep, grab samples for water quality chemistry analysis, as described in AQ-1, at each of the new proposed additional water quality monitoring sites where in situ water quality measurements will be taken. | SCE agrees with this recommendation and will collect additional grab samples near Lundy Lake Boat Launch and Lundy Dam Day Use Area during summer and fall WQ-2 sampling events. Because these are edgewater sites, samples will be collected from just below the water surface. These samples will be analyzed for calcium and alkalinity to inform the Golden Mussel vulnerability assessment. |
| 5 | CDFW recommends adding additional eDNA sample locations throughout the lake to ensure these samples capture the potential presence of golden mussels within Lundy Lake. | Environmental deoxyribonucleic acid (eDNA) sampling will focus on areas where mussels are most likely to be introduced. SCE will add one additional eDNA sampling location near the Lundy Dam Day Use Area, where recreation may occur and the hard substrate is more conducive to potential establishment of mussels. Because Lundy Lake is a relatively small lake, two eDNA sampling locations should provide sufficient information to inform early detection of Golden Mussels. |

| | | |
|---|---|---|
| 6 | If eDNA results in a positive result for golden mussels, CDFW recommends that SCE conduct a plankton tow to confirm presence and assess the relative veliger densities within the water column. | SCE agrees with this recommendation. Plankton tows and sample collection will follow methods described in the *CDFW Quagga/Zebra Mussel Plankton Tow Sampling Protocol* (CDFW 2021). |
| 7 | What method is SCE using to assess vulnerability and what metrics and ranges of water chemistry, in situ water quality, and temperature will be used in the vulnerability assessment? | As described in the June 17, 2025 letter to CDFW, SCE will assess vulnerability for colonization based on CDFW (2024) guidelines and habitat suitability metrics. SCE acknowledges that CDFW's understanding of the Golden Mussel invasion is rapidly evolving. Therefore, SCE will include in the ISR a literature review of water quality thresholds for the species to evaluate survival potential. Furthermore, opportunistic data is being collected from recreation surveys to assess the risk of introduction by watercraft. The need for additional information can be discussed at the ISR meeting. |

**References**


CDFW (California Department of Fish and Wildlife). 2021. Quagga/Zebra Mussel Plankton Tow Sampling Protocol. September 2021. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=4954&inline

CDFW. 2024. Golden mussel habitat suitability. Golden mussel update presented by CDFW on November 22, 2014.



**Finlay Anderson**
**Principal Consultant**
Kleinschmidt
O: 971.345.0517  C: 503.329.3586

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---

**From:** Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Sent:** Monday, June 30, 2025 4:24 PM

**To:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Subject:** RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study

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---

**From:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>
**Sent:** Wednesday, June 18, 2025 8:06 AM
**To:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Meese, Graham@Wildlife

<Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** RE: Lundy Lake - Golden Mussel Assessment and Modifications to Water Quality Study

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**To:** Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
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FMA

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# APPENDIX C
# TABULATED RESERVOIR IN SITU DATA

## Table C-1. Tabulated Reservoir In Situ Profile Data, April and August 2025

| Location | Date (2025) | Depth (meter) | Temperature (°C) | Dissolved Oxygen (mg/L) | Dissolved Oxygen (%)[a] | Specific Conductance (µS/cm) | pH (s.u.) | Turbidity (NTU) |
|---|---:|---:|---:|---:|---:|---:|---:|---:|
| Lundy Lake (Site LL-3) | 4/30 | 0 | 9.0 | 9.3 | 108 | 74 | 7.7 | 1.0 |
| Lundy Lake (Site LL-3) | 4/30 | 1 | 9.0 | 9.4 | 108 | 74 | 7.8 | 1.0 |
| Lundy Lake (Site LL-3) | 4/30 | 2 | 9.0 | 9.4 | 108 | 74 | 7.8 | 1.0 |
| Lundy Lake (Site LL-3) | 4/30 | 3 | 8.9 | 9.4 | 108 | 73 | 7.8 | 1.0 |
| Lundy Lake (Site LL-3) | 4/30 | 4 | 8.6 | 9.4 | 108 | 73 | 7.8 | 1.1 |
| Lundy Lake (Site LL-3) | 4/30 | 5 | 8.3 | 9.5 | 108 | 73 | 7.8 | 1.1 |
| Lundy Lake (Site LL-3) | 4/30 | 6 | 8.1 | 9.5 | 108 | 74 | 7.8 | 1.1 |
| Lundy Lake (Site LL-3) | 4/30 | 7 | 8.0 | 9.5 | 107 | 73 | 7.8 | 1.1 |
| Lundy Lake (Site LL-3) | 4/30 | 8 | 7.9 | 9.5 | 106 | 74 | 7.7 | 1.1 |
| Lundy Lake (Site LL-3) | 4/30 | 9 | 7.8 | 9.4 | 105 | 74 | 7.6 | 1.2 |
| Lundy Lake (Site LL-3) | 4/30 | 10 | 7.7 | 9.3 | 104 | 74 | 7.6 | 1.2 |
| Lundy Lake (Site LL-3) | 4/30 | 11 | 7.6 | 9.2 | 102 | 74 | 7.5 | 1.3 |
| Lundy Lake (Site LL-3) | 4/30 | 12 | 7.5 | 9.1 | 101 | 74 | 7.4 | 1.4 |
| Lundy Lake (Site LL-3) | 8/18 | 0 | 18.1 | 7.5 | 106 | 65 | 7.6[Q] | 0.1 |
| Lundy Lake (Site LL-3) | 8/18 | 1 | 18.1 | 7.5 | 106 | 65 | 7.5[Q] | 0.1 |
| Lundy Lake (Site LL-3) | 8/18 | 2 | 18.1 | 7.5 | 106 | 65 | 7.5[Q] | 0.1 |
| Lundy Lake (Site LL-3) | 8/18 | 3 | 18.0 | 7.6 | 106 | 65 | 7.5[Q] | 0.1 |
| Lundy Lake (Site LL-3) | 8/18 | 4 | 17.5 | 7.6 | 107 | 65 | 7.4[Q] | 0.2 |
| Lundy Lake (Site LL-3) | 8/18 | 5 | 16.9 | 7.8 | 107 | 65 | 7.2[Q] | 0.3 |
| Lundy Lake (Site LL-3) | 8/18 | 6 | 16.8 | 7.8 | 107 | 65 | 7.2[Q] | 0.2 |
| Lundy Lake (Site LL-3) | 8/18 | 7 | 14.8 | 8.0 | 105 | 63 | 7.1[Q] | 0.5 |
| Lundy Lake (Site LL-3) | 8/18 | 8 | 13.5 | 7.6 | 97 | 61 | 6.8[Q] | 0.6 |
| Lundy Lake (Site LL-3) | 8/18 | 9 | 12.4 | 6.6 | 82 | 60 | 6.7[Q] | 0.7 |
| Lundy Lake (Site LL-3) | 8/18 | 10 | 11.9 | 4.9 | 60 | 61 | 6.4[Q] | 0.7 |

| **Location** | **Date (2025)** | **Depth (meter)** | **Temperature (°C)** | **Dissolved Oxygen (mg/L)** | **Dissolved Oxygen (%)[a]** | **Specific Conductance (µS/cm)** | **pH (s.u.)** | **Turbidity (NTU)** |
|---|---|---|---|---|---|---|---|---|
| Lundy Lake (Site LL-3) | 8/18 | 11 | 11.7 | 4.4 | 53 | 61 | 6.4[Q] | 0.7 |
| Lundy Lake (Site LL-3) | 8/18 | 12 | 11.6 | 3.7 | 45 | 61 | 6.3[Q] | 0.7 |
| Lundy Lake (Site LL-3) | 8/18 | 13 | 11.4 | 2.9 | 35 | 62 | 6.4[Q] | 0.9 |
| Lundy Lake (Site LL-3) | 8/18 | 14 | 11.4 | 2.6 | 32 | 62 | 6.3[Q] | 0.9 |

°C = degrees Celsius; mg/L = milligrams per liter; s.u. = standard units; µS/cm = microsiemens per centimeter; NTU = Nephelometric Turbidity Units

Note:

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

[Q] pH measurements were qualified based on the instrument’s post-sampling calibration check results.

# 4.0 WQ-2 LUNDY LAKE AND MILL CREEK WATER TEMPERATURE MONITORING

## 4.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a Water Temperature Study (WQ-2) to evaluate current water temperatures in the Project reservoir (Lundy Lake) and Project-affected stream reaches. In its January 2, 2025 SPD, FERC approved the *WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring Study Plan* (SCE, 2024) with modification. This section includes preliminary results from water temperature data collected in Project-affected stream reaches from April 8 through August 18, 2025. Additional water temperature data collected through spring 2026[7] in support of the WQ-2 Lundy Lake and Mill Creek Water Temperature Study (WQ-2 Study) will be included in a draft Technical Report that will inform the DLA. Water temperature in Lundy Lake (i.e., reservoir profiles) is described in Section 3.0, *WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring*.

## 4.2. REVIEW OF EXISTING INFORMATION

Lundy Dam impounds Mill Creek and forms Lundy Lake. An approximately 12,000 feet pipeline/flowline and 3,000 feet penstock carries a maximum of 70 cfs of flow from Lundy Lake to Lundy Powerhouse before water is distributed to water rights holders via the Wilson System or returned to Mill Creek via the Mill Creek Return Ditch (MCRD). Existing water temperature information is limited to data obtained from the following sources:

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

## 4.3. STUDY OBJECTIVES

The objective of the WQ-2 Study is to collect water temperature data to characterize conditions in Lundy Lake and Project-affected stream reaches of Mill Creek. These data will also be used to evaluate potential effects of the Project on water temperatures in Mill Creek and to assess consistency with water temperature objectives included in the Basin Plan (LRWQCB, 2019). Mill Creek has a designated beneficial use of Cold Freshwater Habitat (COLD) under the Basin Plan (LRWQCB, 2019), which requires that temperature must not adversely affect designated beneficial uses.

[7] Per modifications proposed in the FERC SPD, a second year of water temperature data will be collected during summer/fall of 2026 if the preliminary water year type forecast on April 1, 2026 is different from water year 2025.

### 4.3.1. Study Area

The study area includes Mill Creek upstream of Lundy Lake, Mill Creek between Lundy Lake and the MCRD outlet (Lundy Dam Bypass Reach), Lundy Powerhouse Tailrace, MCRD, and Mill Creek between the MCRD outlet and Mono Lake (Lower Mill Creek).

Nine sites were selected for water temperature monitoring within the study area. One site was selected for air temperature monitoring near Mill Creek at the approximate mid-point between upstream and downstream monitoring locations. Study sites were determined in the field based on accessibility, representative locations (e.g., thalweg, multiple channel width mixing zones downstream of tributaries or other flow inputs), and deployment suitability (e.g., presence of anchor points, avoidance of sediment deposits). Study sites are described in Table 4.3-1 and shown in Figure 4.3-1.

**Table 4.3-1. Water and Air Temperature Monitoring Sites**

| Site ID | Site Name | Location Coordinates[a] (decimal degrees) | |
|---|---|---|---|
| | | Latitude | Longitude |
| **Water Temperature** | | | |
| UMC-1 | Mill Creek upstream of Lundy Lake[b] | 38.025307 | -119.239981 |
| MCBR-2 | Mill Creek downstream of Lundy Lake | 38.032981 | -119.216404 |
| MCBR-3 | Mill Creek downstream of the confluence with Deer Creek | 38.032928 | -119.214933 |
| MCBR-4 | Mill Creek upstream of the confluence with Mill Creek Return Ditch | 38.035525 | -119.167877 |
| LPH-6 | Lundy Powerhouse Tailrace | 38.044303 | -119.170267 |
| MCRD-7 | Mill Creek Return Ditch upstream of the confluence with Mill Creek | 38.037542 | -119.164644 |
| LMC-5 | Mill Creek downstream of the confluence with Mill Creek Return Ditch | 38.039056 | -119.160119 |
| LMC-8 | Mill Creek near Mono City | 38.038842 | -119.145792 |
| LMC-9 | Mill Creek near Mono Lake | 38.023100 | -119.133336 |
| **Air Temperature** | | | |
| AT-10 | Air Temperature Monitoring Station | 38.034153 | -119.215346 |

Notes:
[a] Datum: World Geodetic System 84
[b] Site is downstream of the confluence with South Fork Mill Creek.

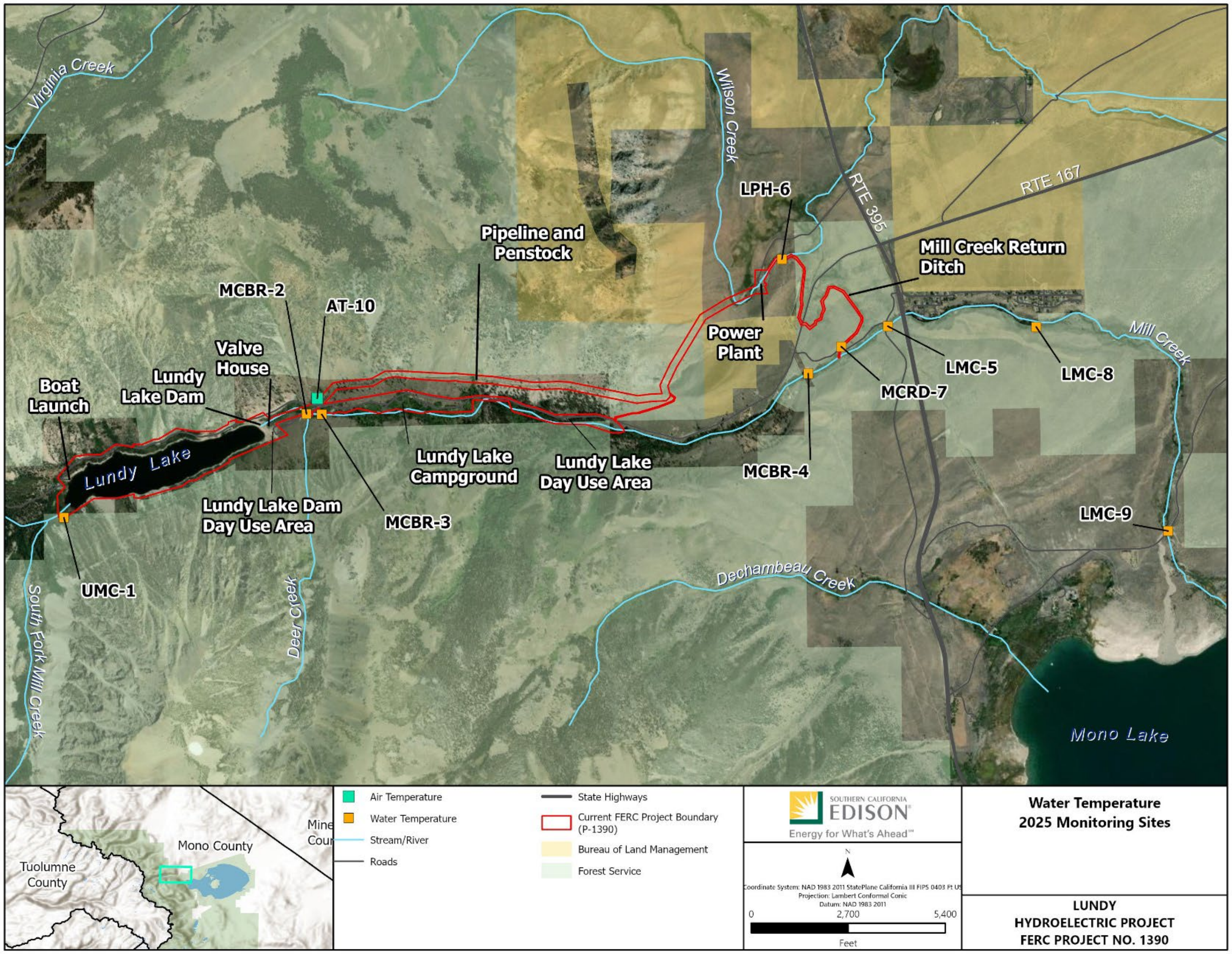



**Figure 4.3-1. Water Temperature Monitoring Sites.**

## 4.4. METHODS

### 4.4.1. WATER TEMPERATURE

Water temperature loggers were installed at each site on April 8 and 9, 2025. Factory-calibrated water-temperature data loggers (Onset HOBO Pro V2) were tested for accuracy per manufacturer's instructions, placed inside protective housings and installed near the thalweg in locations representative of the main channel (Table 4.3-1, Figure 4.3-1). Duplicate loggers were installed for redundancy in the event of equipment loss, malfunction, or vandalism. Loggers installed at each site were randomly assigned as Logger A and Logger B. Water temperature readings were recorded at 15-minute intervals. Loggers were serviced, cleaned, and downloaded approximately monthly between April and October 2025. Loggers will remain deployed without maintenance between October 2025 and spring 2026.

Water temperature data downloaded during field visits were transferred to Microsoft Excel workbooks and reviewed. Data quality review included identification of periods when the loggers were not within the wetted stream channel due to servicing, low or no streamflow (e.g., no flow in the MCRD), or other factors (e.g., removal from the stream during electrofishing). Periods of anomalous water temperature data (e.g., large shifts in the daily minimum to maximum range) were compared with air temperature and duplicate water temperature data to determine whether the loggers were reading air or water temperatures. Water temperature data collected on Logger A served as the primary data for analysis, and Logger B served as a back-up in the event of any data loss or exclusion.

Following data review, validated water temperature data were used to calculate daily mean values based on the average of all 15-minute readings for a given day, and maxima or minima as the maximum or minimum temperature reading for a given day.

### 4.4.2. INCIDENTAL OBSERVATIONS

Incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) were noted (including location information) and reported in Section 4.7.2.

## 4.5. STUDY PLAN MODIFICATIONS

SCE is not proposing any modifications to WQ-2 as approved by FERC in its SPD (FERC, 2025).

## 4.6. VARIANCES TO APPROVED METHODS

SCE encountered no variances when implementing the WQ-2 study plan as approved by FERC in its SPD (FERC, 2025).

## 4.7. RESULTS

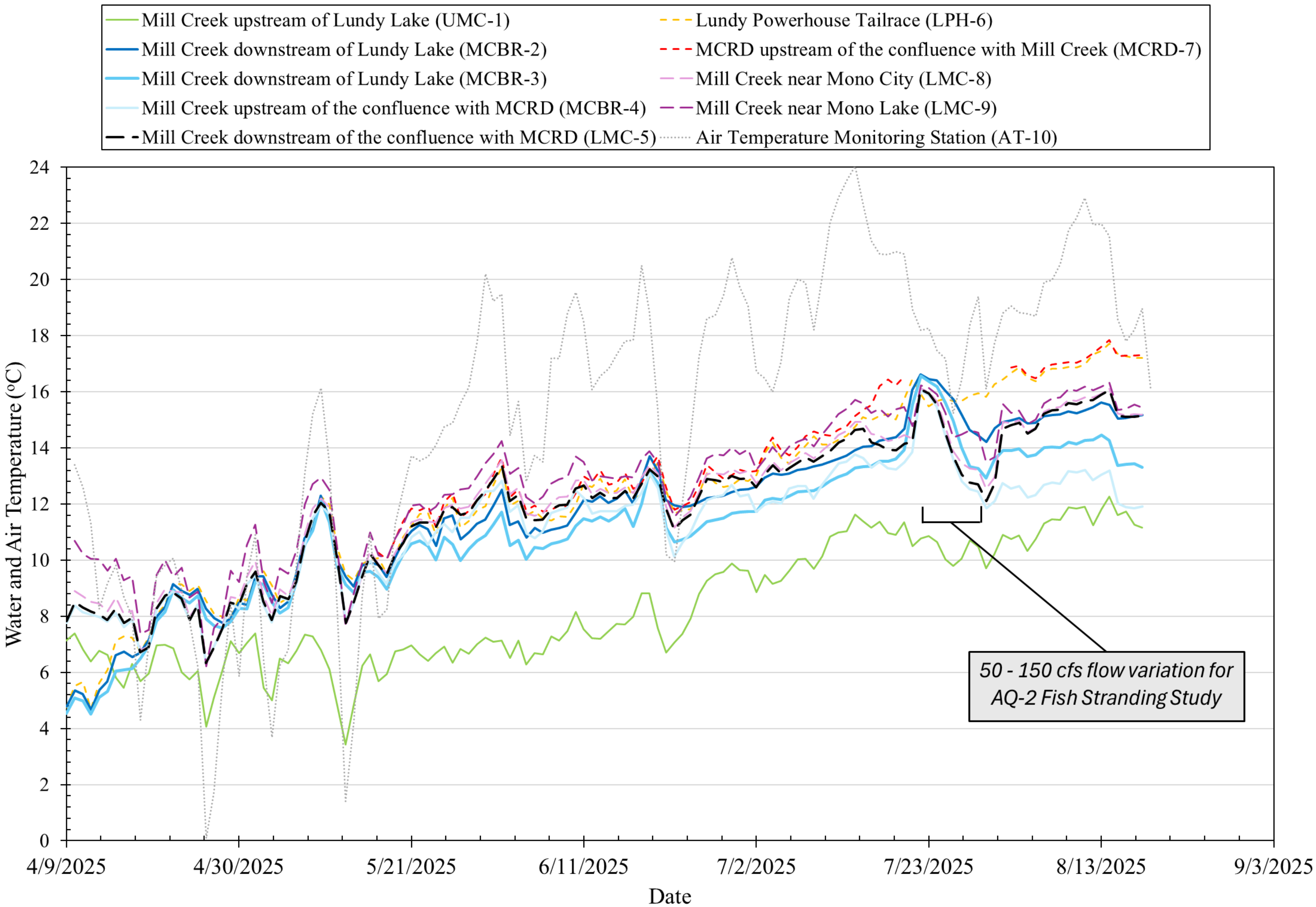
### 4.7.1. WATER TEMPERATURE

Water temperature data were collected between April 8, 2025, and August 19, 2025, within Mill Creek upstream of Lundy Lake (Site UMC-1), the Lundy Dam Bypass Reach (Site MCBR-2, Site MCBR-3, and Site MCBR-4), Lundy Powerhouse Tailrace (Site LPH-6), the MCRD (Site MCBR-7), and Lower Mill Creek downstream of the MCRD (Site LMC-5, Site LMC-8, and Site LMC-9), and air temperature data were collected at Site AT-10. These data were summarized as mean daily maximum, minimum, and average. Mean daily water temperatures for each site are plotted in Figure 4.7-1 and mean daily maximum, minimum, and average water temperature summarized by month are provided in Table 4.7-1. Mean daily maximum, minimum, and average water temperature plotted by site are provided in Appendix D.

Water temperatures exhibited seasonal variations with cooler temperatures observed in the spring and higher temperatures observed in the summer following seasonal thermal variability (i.e., air temperatures). Mean daily water temperatures were coolest at Mill Creek upstream of Lundy Lake (Site UMC-1) and warmest at Mill Creek near Mono Lake (Site LMC-9), the MCRD upstream of the confluence with Mill Creek (Site MCRD-7), and Lundy Powerhouse Tailrace (Site LPH-6) (Figure 4.7-1 and Table 4.7-1). In Mill Creek, the highest maximum daily water temperature (20.0°C) occurred on August 14, 2025, at Mill Creek near Mono Lake (Site LMC-9) (Table 4.7-1).

Water temperatures at the sites on Mill Creek downstream of Lundy Lake exhibited less thermal variation during cooler spring months compared with warmer summer months, except during a short period from July 22 to 28, 2025, when stream flows were high (approximately 5–150 cfs) during the field work for the *AQ-2 Fish Stranding Study* (Section 6.0). During this period, water temperatures increased at all Mill Creek sites downstream of Lundy Lake and water temperatures were more similar across these sites.

Final water temperature monitoring data collected through spring 2027 will be filed as part of the USR.




Note: The Mill Creek Return Ditch was in operation from May 16–July 20, 2025, and August 1–19, 2025.

**Figure 4.7-1. Mean Daily Water Temperatures at WQ-2 Water Temperature Study Sites, April–August 2025.**

## Table 4.7-1. Average, Minimum, and Maximum Water and Air Temperatures by month, April–August 2025

| Site Description (Site ID) | April 2025[a] | May 2025 | June 2025 | July 2025[b] | August 2025[c] |
|---|---|---|---|---|---|
| **Monthly Water Temperature (°C) (average [minimum to maximum])[d]** | | | | | |
| Mill Creek upstream of Lundy Lake (UMC-1) | 6.3 (2.3–10.9) | 6.4 (2.0–11.7) | 7.8 (3.7–13.9) | 10.4 (5.7–15.8) | 11.3 (7.0–15.4) |
| Mill Creek downstream of Lundy Lake (MCBR-2) | 7.1 (2.6–10.7) | 10.3 (8.0–13.7) | 12.0 (10.0–14.7) | 14.2 (12.1–17.6) | 15.2 (14.3–16.6) |
| Mill Creek downstream of Deer Creek (MCBR-3) | 6.8 (2.5–10.8) | 9.9 (7.5–13.6) | 11.3 (9.1–14.4) | 13.5 (11.1–17.6) | 13.9 (12.0–15.9) |
| Mill Creek upstream of the confluence with MCRD (MCBR-4) | 7.9 (3.5–12.3) | 10.2 (5.4–16.2) | 11.8 (7.1–16.4) | 13.2 (8.9–17.6) | 12.5 (9.2–16.3) |
| Lundy Powerhouse Tailrace (LPH-6) | 7.3 (3.1–10.4) | 10.6 (8.1–14.7) | 12.3 (10.3–14.8) | 14.9 (11.4–18.1) | 17.0 (15.2–18.7) |
| MCRD upstream of the confluence with Mill Creek (MCRD-7)[e] | NA | 11.6 (8.4–14.5) | 12.6 (10.1–15.9) | 14.8 (11.3–21.9) | 17.1 (15.2–19.2) |
| Mill Creek downstream of the confluence with the MCRD (LMC-5) | 8.0 (3.5–12.1) | 10.4 (5.6–15.6) | 12.3 (9.3–16.1) | 13.8 (9.4–17.6) | 15.2 (12.3–17.7) |
| Mill Creek near Mono City (LMC-8) | 8.2 (3.2–12.2) | 10.6 (5.5–15.7) | 12.5 (9.1–16.3) | 14.0 (9.6–17.8) | 15.3 (12.3–18.0) |
| Mill Creek near Mono Lake (LMC-9) | 9.2 (1.9–18.7) | 11.2 (5.0–18.4) | 13.0 (8.8–17.7) | 14.7 (9.6–20.0) | 15.6 (11.7–20.0) |
| **Monthly Air Temperature (ºC) (average [minimum to maximum])** | | | | | |
| Monitoring Station (AT-10) | 7.9 (-4.5–23.1) | 11.6 (-4.1–30.3) | 16.6 (-1.2–32.9) | 19.2 (5.4–35.3) | 19.9 (7.3–35.7) |

°C = degrees Celsius; NA = data not available

Notes:

a Temperature monitoring began on April 8; statistics only represent the period from April 8, 2025, to April 30, 2025.

b July statistics include data collected during flow variations (50–150 cfs) for the AQ-2 Fish Stranding Study from July 22 to 28, 2025.

c The temperature download occurred on August 19, 2025; statistics only represent the period from August 1, 2025, to August 19, 2025. This column will be updated in future reports when data for the entirety of August are available.

d Monthly average, minimum, and maximum water temperatures were calculated using continuous 15-minute interval data collected throughout the reporting period.

e Statistics are limited to periods when the Mill Creek Return Ditch was operating; the temperature logger was submerged from approximately May 16, 2025, to July 20, 2025, and from August 1, 2025, to August 19, 2025.

### 4.7.2. Incidental Observations

*Didymosphenia geminata* (Didymo), an invasive diatomaceous algae, was observed during 2025 field work at five water temperature monitoring sites (Table 4.7-2 and Figure 4.7-2). Samples were collected at a subset of sites and examined under a compound microscope to confirm identification.

**Table 4.7-2. 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 |

**Figure 4.7-2. *Didymosphenia geminata* at Site LPH-6, April 2025 (left) and August 2025 (right).**

## 4.8. Discussion

Analysis of water temperature data is ongoing. Additional study results will be provided in the USR in 2027.

### 4.9. References

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

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

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

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

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

SCE (Southern California Edison). 2024. *Final Technical Study Plans*. Lundy Hydroelectric Project, FERC Project No. 1390. December 2024.

# WQ-2 APPENDICES

# APPENDIX D
# WATER TEMPERATURE FIGURES

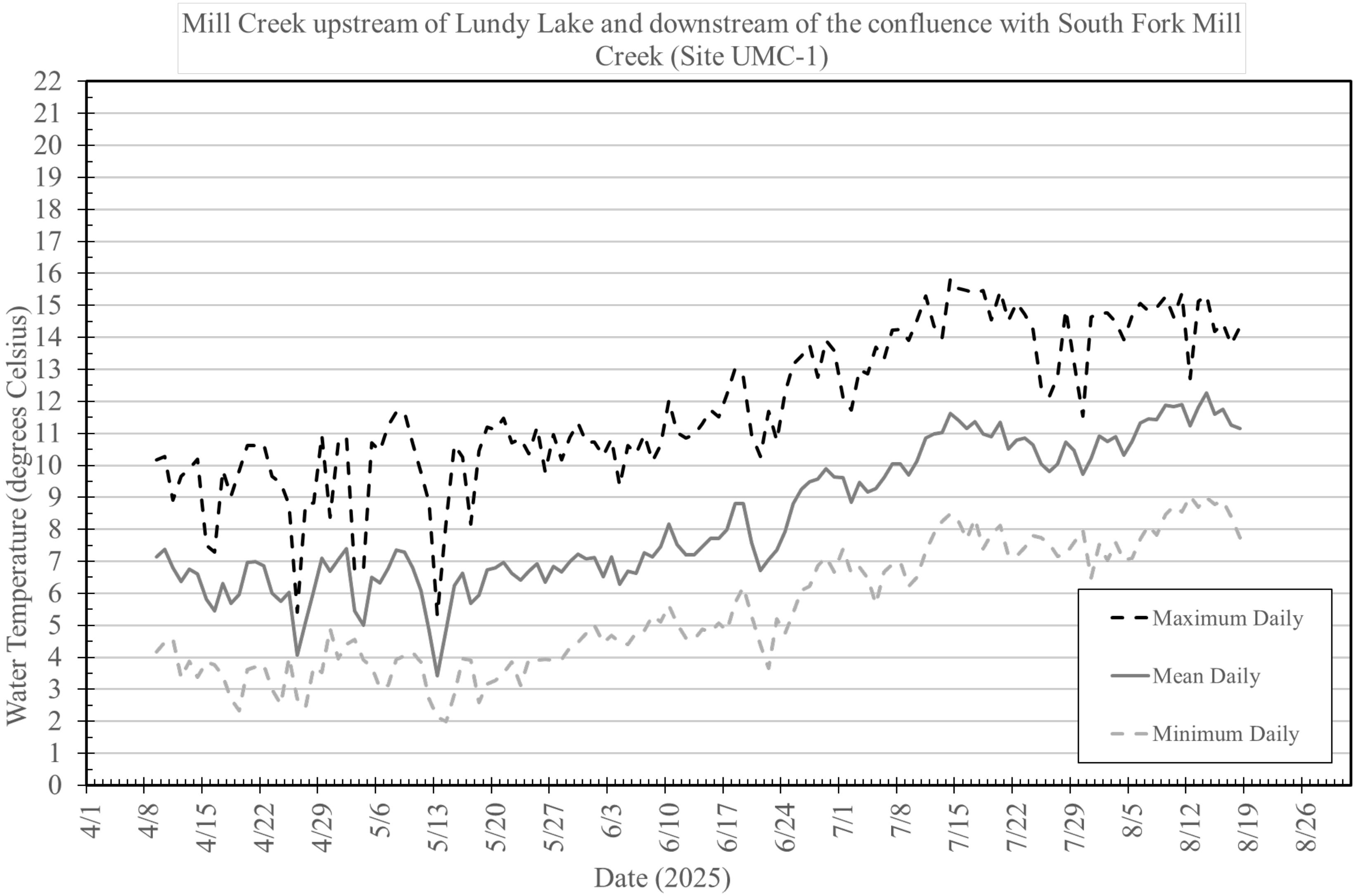



**Figure D-1. Maximum, Man, and Minimum Daily Water Temperatures, Mill Creek Upstream of Lundy Lake and Downstream of the Confluence with South Fork Mill Creek (Site UMC-1), April–August 2025.**

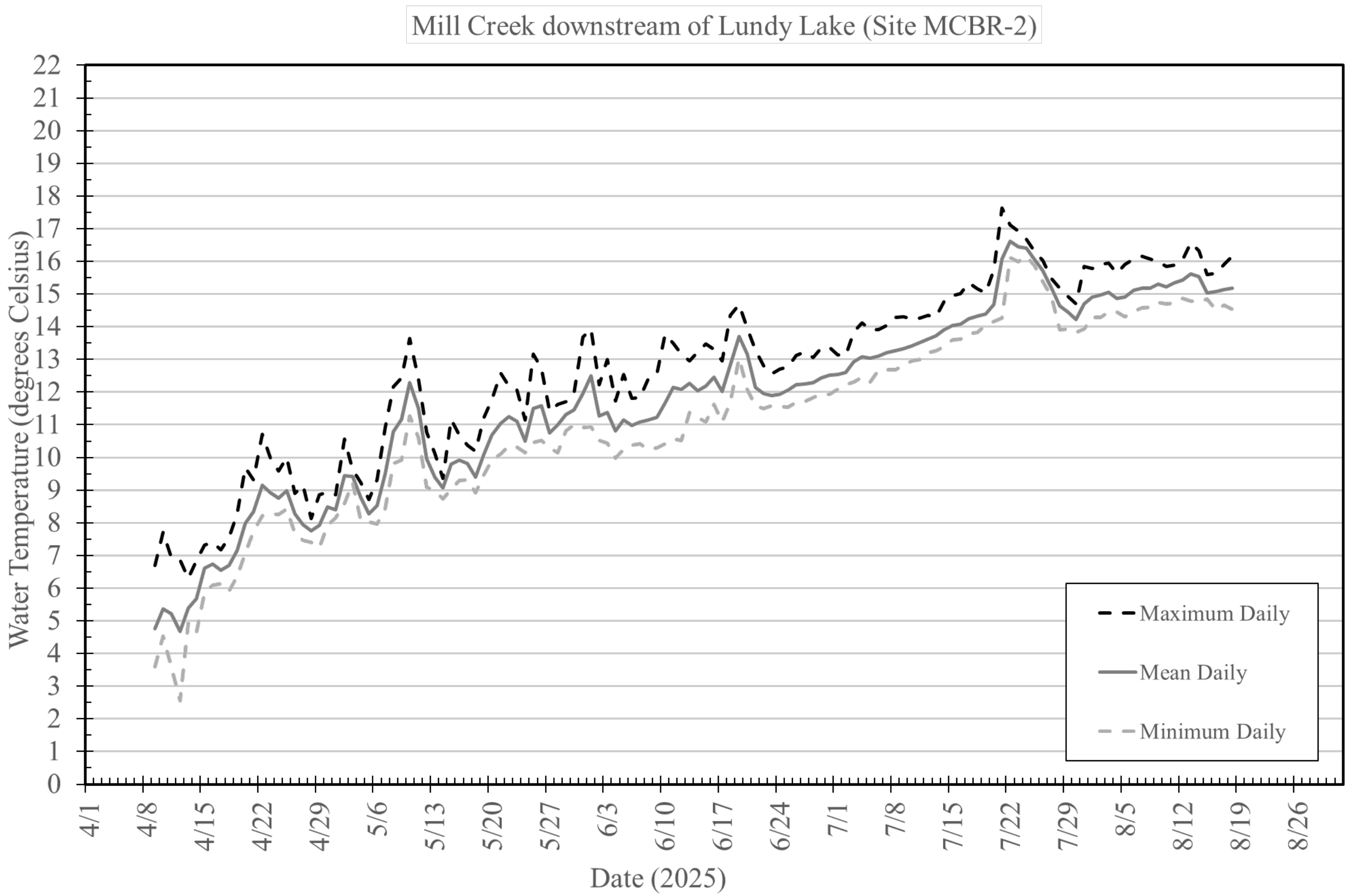



**Figure D-2. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Downstream of Lundy Lake (Site MCBR-2), April–August 2025.**

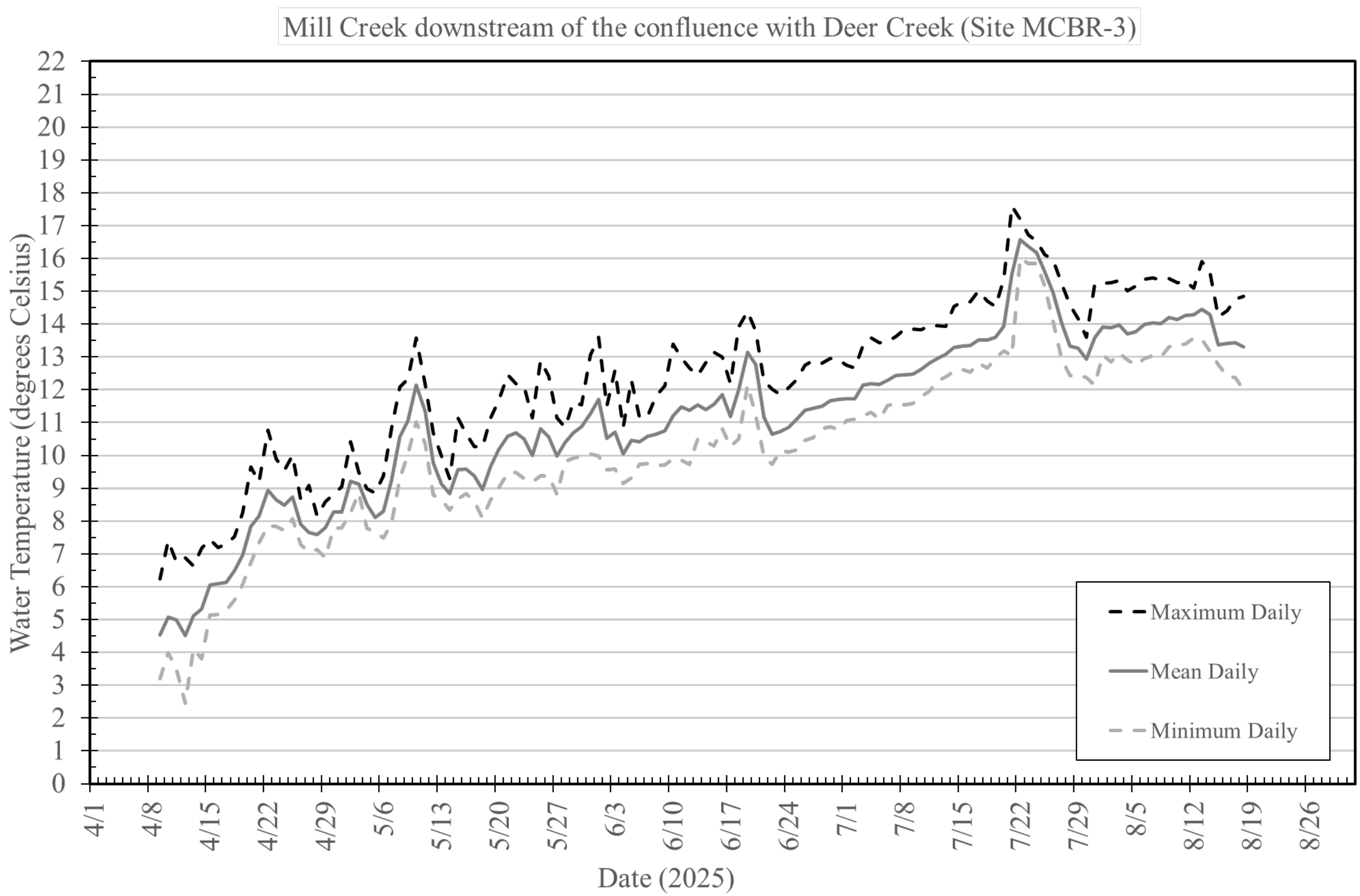



**Figure D-3. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Downstream of the Confluence with Deer Creek (Site MCBR-3), April–August 2025.**

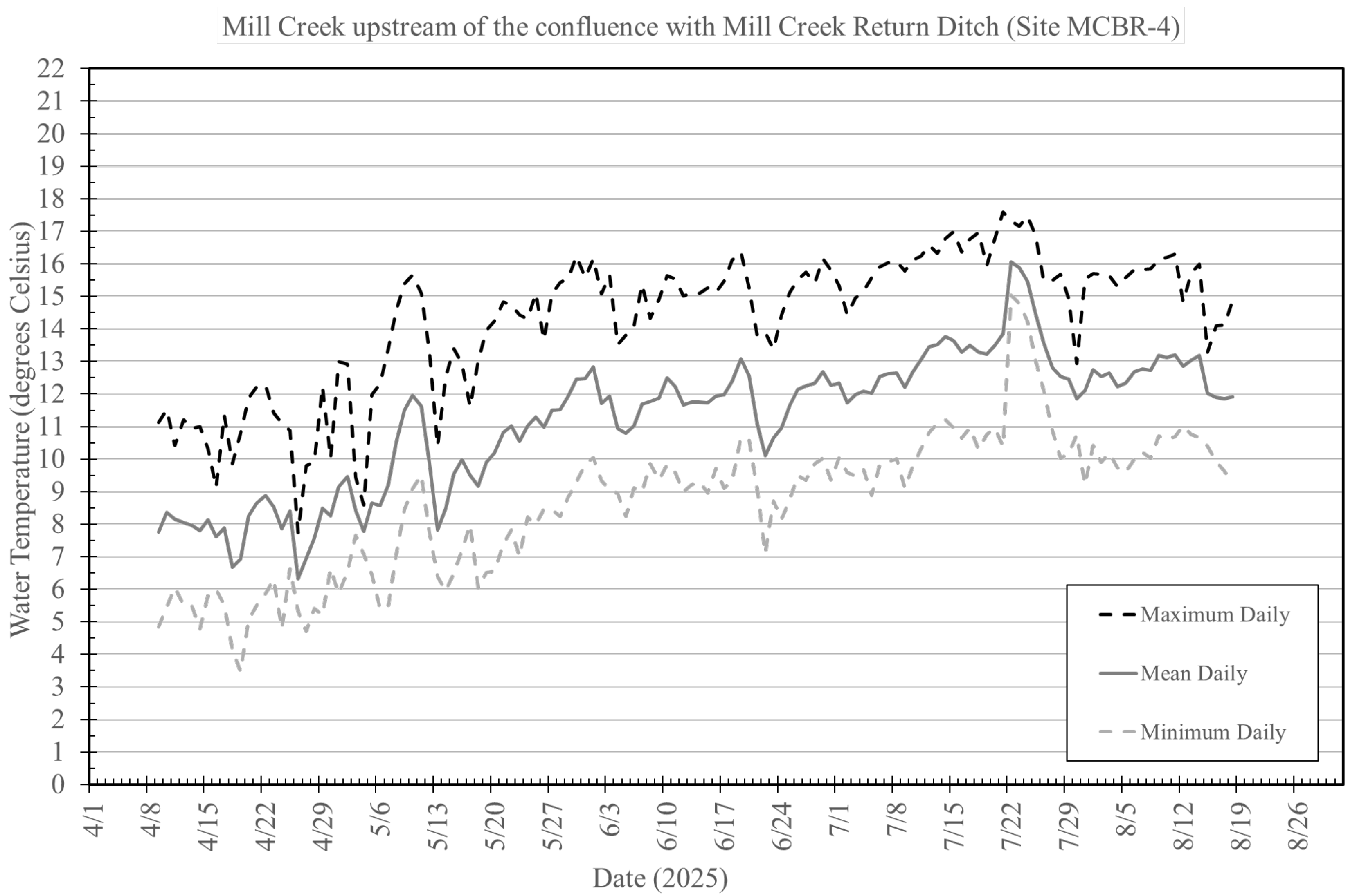



**Figure D-4. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Upstream of the Confluence with Mill Creek Return Ditch (Site MCBR-4), April–August 2025.**

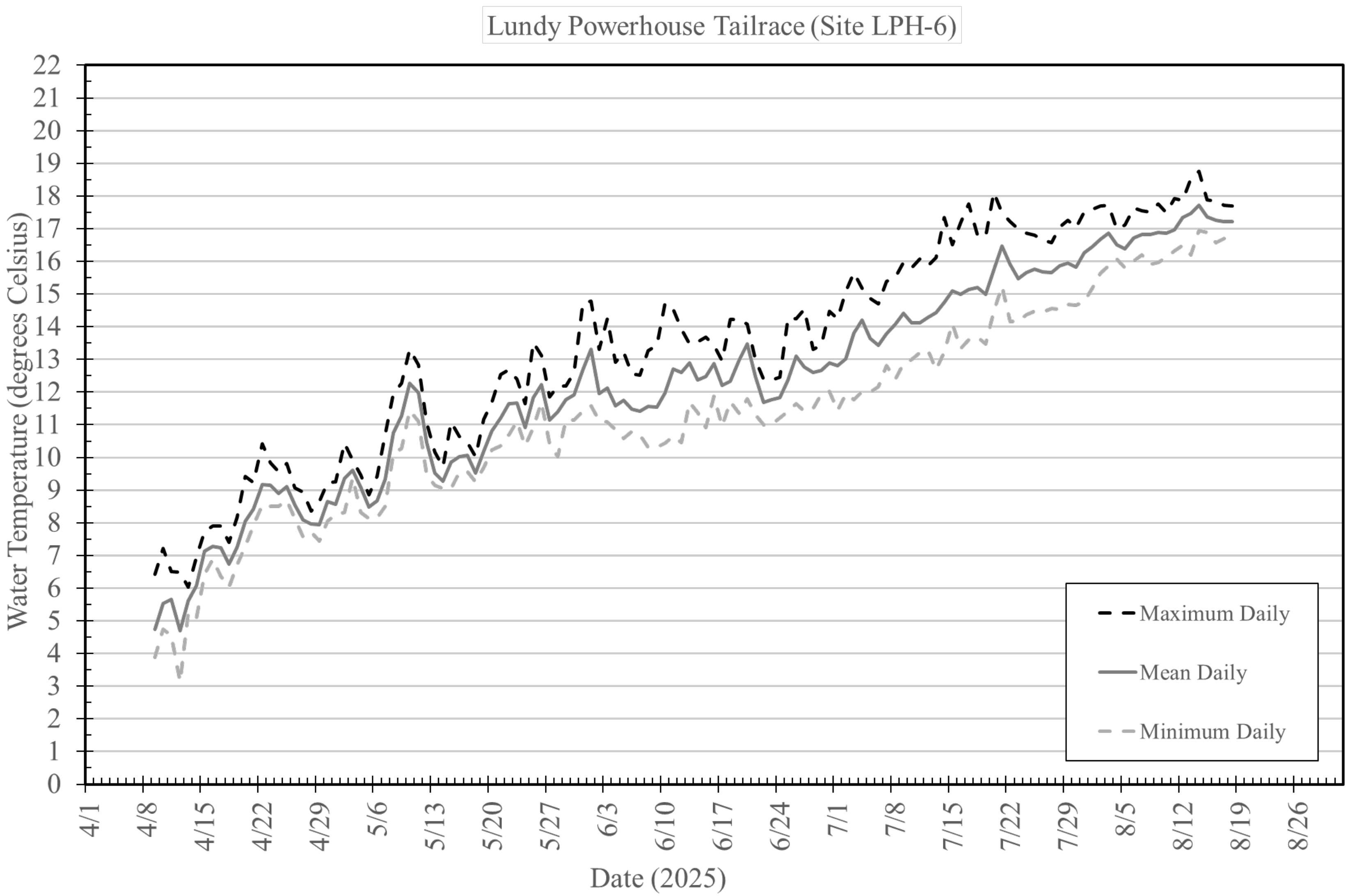



**Figure D-5. Maximum, Mean, and Minimum Daily Water Temperatures, Lundy Powerhouse Tailrace (Site LPH-6), April–August 2025.**

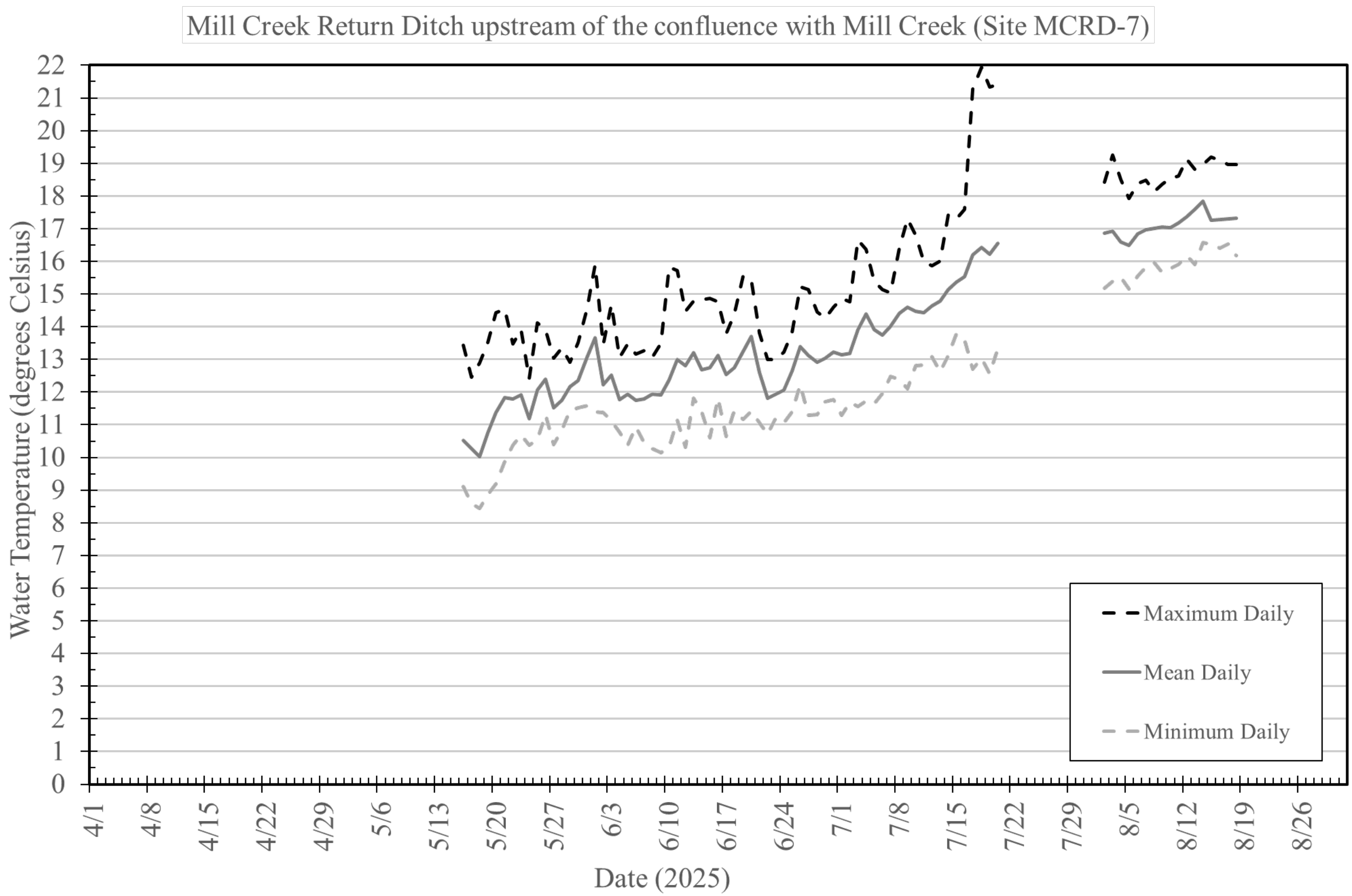



**Figure D-6. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Return Ditch Upstream of the Confluence with Mill Creek (Site MCRD-7), April–August 2025.**

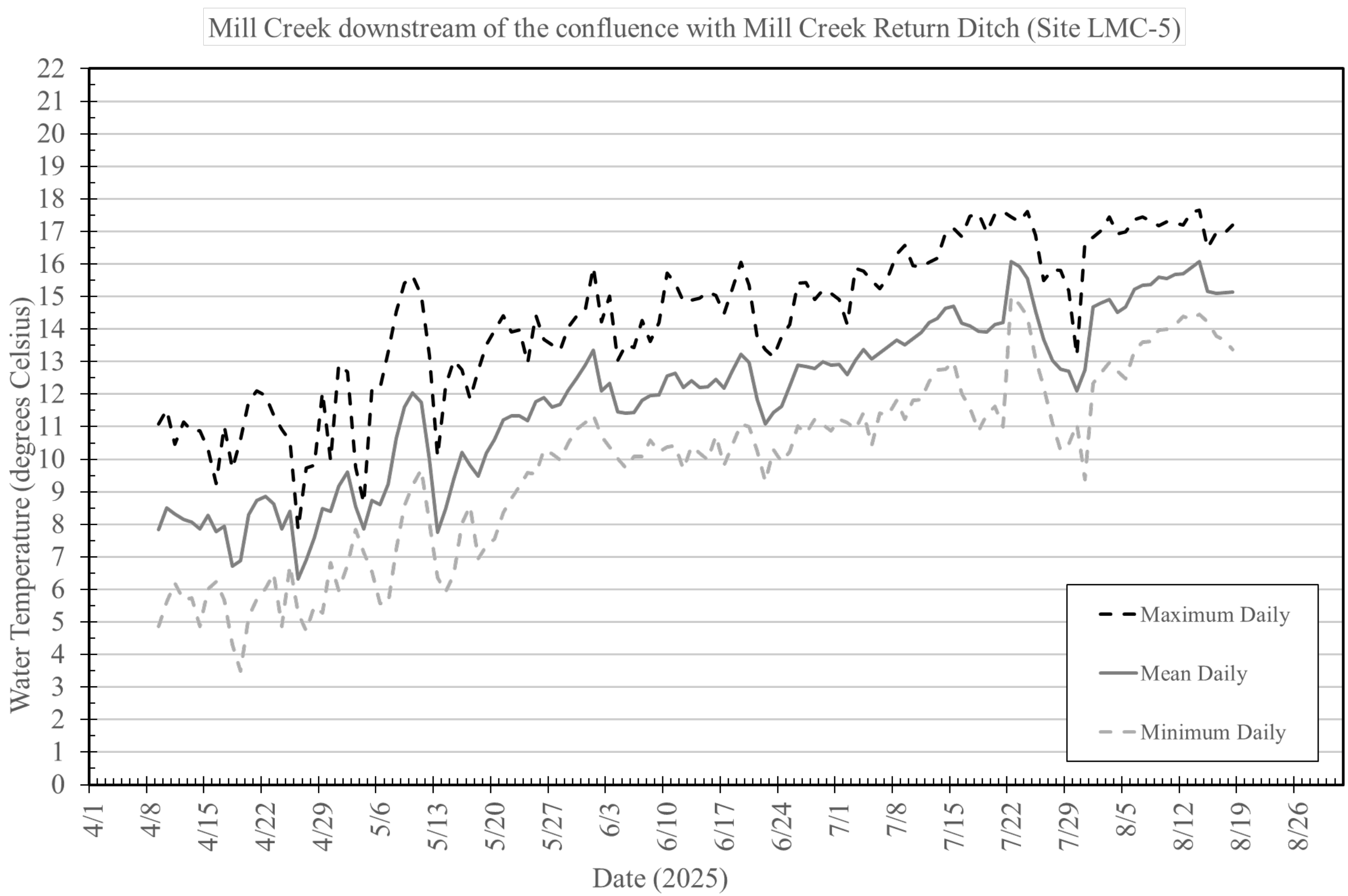



**Figure D-7. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Downstream of the Confluence with Mill Creek Return Ditch (Site LMC-5), April–August 2025.**

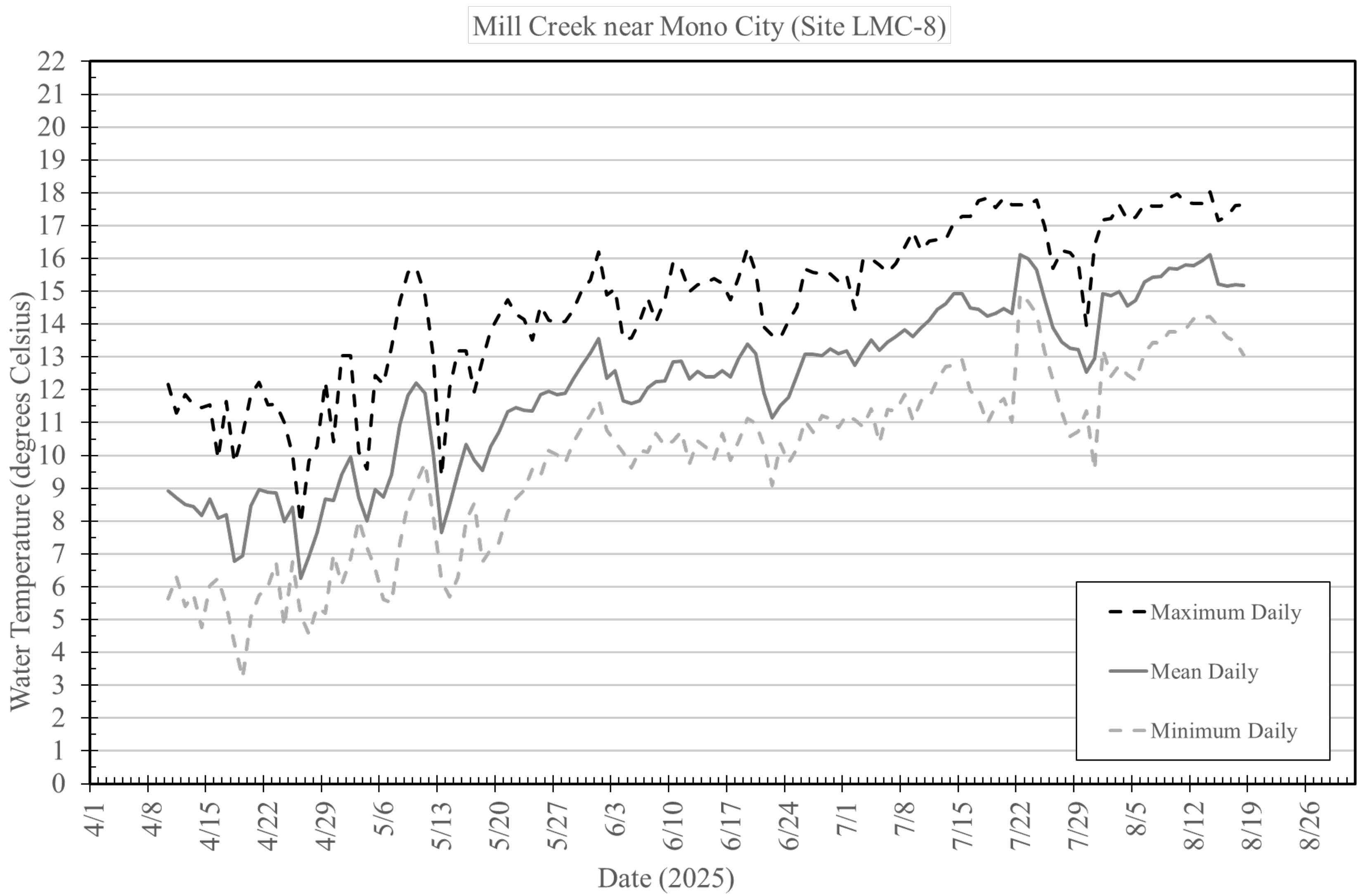



**Figure D-8. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek near Mono City (Site LMC-8), April–August 2025.**

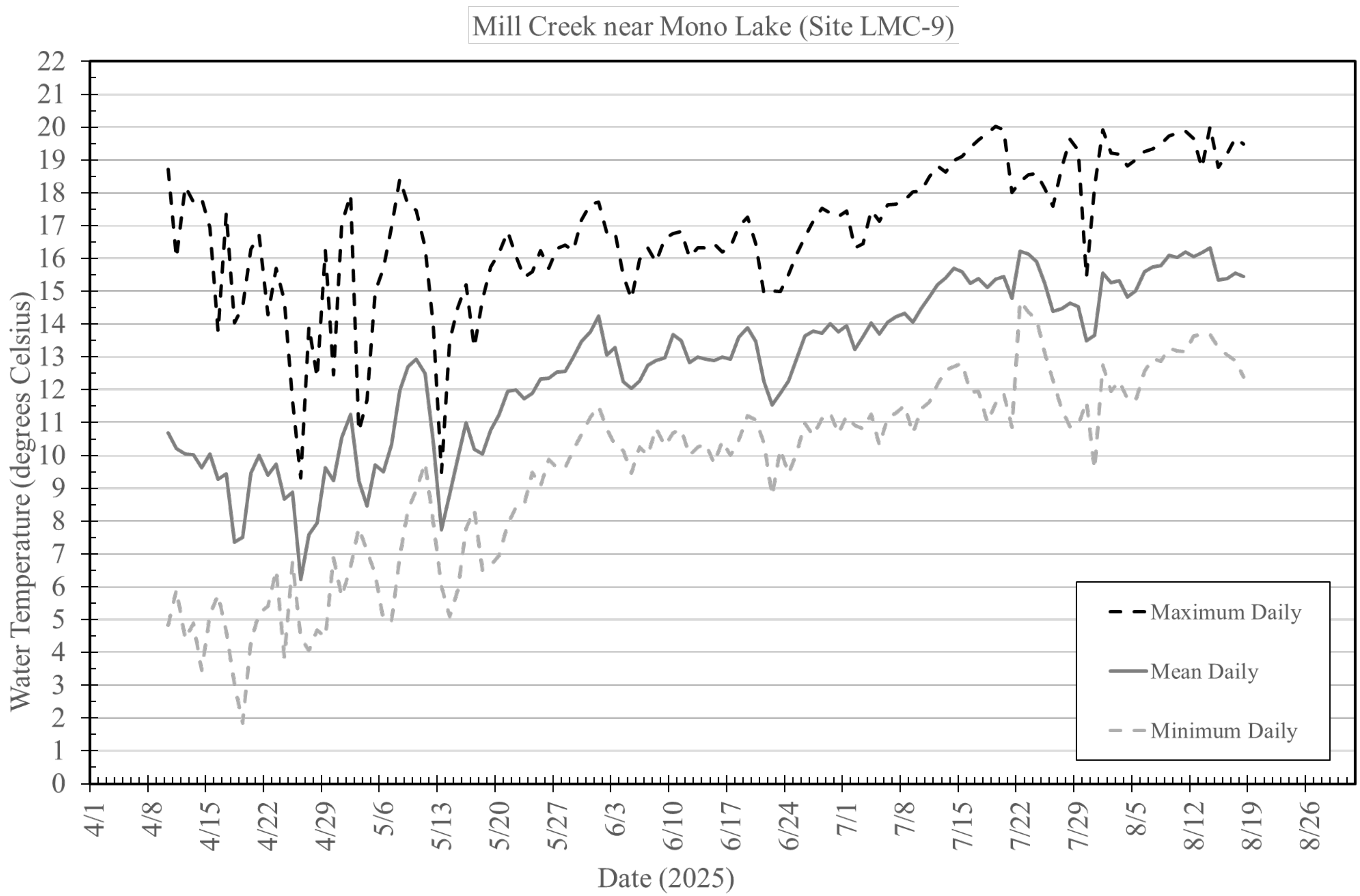



**Figure D-9. Maximum, Mean, and Minimum Daily Water Temperatures, Mill Creek Near Mono Lake (Site LMC-9), April–August 2025.**

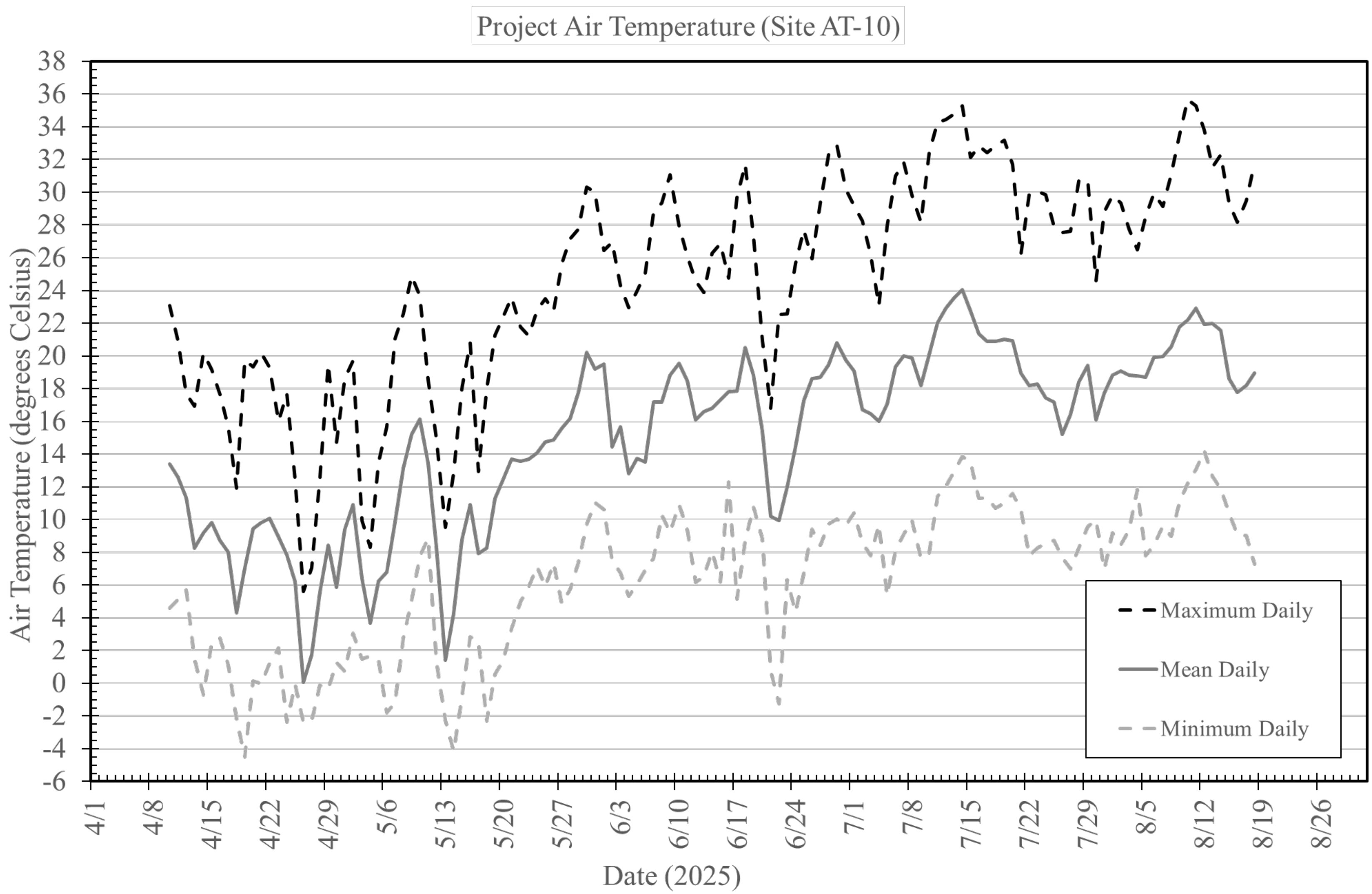



**Figure D-10. Maximum, Mean, and Minimum Daily Air Temperatures (Site AT-10), April–August 2025.**

# 5.0 AQ-1 FISH COMMUNITY SURVEY

## 5.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a Fish Population Study (AQ-1) to evaluate fish populations within the Project reservoir (Lundy Lake) and Project-affected stream reaches of Mill Creek. In its January 2, 2025 SPD, FERC approved the *AQ-1 Fish Community Survey Study Plan* (SCE, 2024). This section includes methods and preliminary results of the AQ-1 Fish Community Survey Study (AQ-1 Study). All field components of the AQ-1 Study were implemented, including stream and reservoir fish surveys, in 2025. Analysis of the data is ongoing, and completed results will be summarized in a draft Technical Report that will inform the DLA.

## 5.2. REVIEW OF EXISTING INFORMATION

Historically, the Mill Creek watershed and other tributaries to Mono Lake were fishless (FERC, 1992; Moyle, 2002). Currently, non-native introduced trout species, including brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*), are found throughout Lundy Lake and Mill Creek downstream of Lundy Dam. The California Department of Fish and Wildlife (CDFW) conducts annual stocking of sterile rainbow trout within Lundy Lake and Mill Creek to support a put-and-take fishery (CDFW, 2024).

Historical information on the abundance and age-class distribution of fish populations within Lundy Lake and Mill Creek downstream of Lundy Dam is limited to data obtained from the following sources:

- CDFG (California Department of Fish and Game). 1996. Mill Creek Stream Evaluation. July 1996. Report 96-1, Volume 1, 163 pp.
- EA (EA Engineering, Science, and Technology, Inc.). 1986. Instream Flow and Fisheries Studies for the Mill Creek Hydroelectric Project. Southern California Edison Company, Rosemead, California. June.
- EA. 1988. East Side Sierra Hydroelectric Relicensing Studies: Fish Populations in the Mill Creek Hydroelectric Project. Southern California Edison Company, Rosemead, California. January.
- FERC (Federal Energy Regulatory Commission). 1992. Final Environmental Assessment for Hydropower License. Lundy FERC Project No. 1390-001. California. Federal Energy Regulatory Commission, Office of Hydropower Licensing, Washington, D.C.
- Sada, D. 2000. Native Fishes. In Sierra East. Edge of the Great Basin, edited by Genny Smith, pp. 246-264. University of California Press, Berkeley.

## 5.3. STUDY OBJECTIVES

The goal of the AQ-1 Study is to supplement the existing information to characterize abundance, distribution, and structure of recreational fish populations within Lundy Lake and Project-affected stream reaches of Mill Creek. To address this goal, this study was designed with the following objectives:

- Assess existing recreational fish populations within Lundy Lake and Project-affected stream reaches of Mill Creek; and
- Conduct a literature review to evaluate the potential for flow releases in the fall and winter to influence brown trout populations in Mill Creek.

### 5.3.1. STUDY AREA

The study area includes Lundy Lake and Mill Creek from Lundy Dam downstream to Highway 395. This section of the watershed ranges in elevation from approximately 6,900 to 7,800 feet above mean sea level. Fish population sampling was conducted at three stream electrofishing sites in Mill Creek (Table 5.3-1 and Figure 5.3-1) within the following reaches:

- Two sites in the bypass reach between Lundy Dam and Mill Creek Return Ditch (MCRD) (Site MC-1 and Site MC-2); and
- One site between MCRD and 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 (Table 5.3-1 and Figure 5.3-2).

## Table 5.3-1. Mill Creek and Lundy Lake Fish Community Study Sites, 2025

| Waterbody | Method | Study Site | Location Coordinates[a] (latitude/longitude) | |
|---|---|---|---|---|
| | | | Start[b] | End[b] |
| Mill Creek | Stream Electrofishing | MC-1 | 38.03295/ -119.21415 | 38.03296/ -119.21463 |
| | | MC-2 | 38.03123/ -119.18518 | 38.03123/ -119.18600 |
| | | MC-3 | 38.03740/ -119.16218 | 38.03763/ -119.16302 |
| Lundy Lake | Reservoir Electrofishing | LL-EF1 | 38.03059/ -119.22302 | 38.03143/ -119.22106 |
| | | LL-EF2 | 38.03067/ -119.22914 | 38.03019/ -119.23033 |
| | | LL-EF3 | 38.02727/ -119.23700 | 38.02659/ -119.23848 |
| | Reservoir Gill Net[c] | LL-1A | 38.03090/ -119.22548 | 38.03111/ -119.22546 |
| | | LL-1J | 38.03096/ -119.22612 | 38.03103/ -119.22614 |
| | | LL-2A | 38.02791/ -119.22961 | 38.02771/ -119.22948 |
| | | LL-2J | 38.02792/ -119.22923 | 38.02784/ -119.22918 |
| | | LL-3A | 38.02957/ -119.23388 | 38.02990/ -119.23389 |
| | | LL-3J | 38.02966/ -119.23511 | 38.02973/ -119.23514 |

Notes:
[a] Decimal degrees; datum: World Geodetic System 84
[b] The stream study sites start and end coordinates are at the downstream and upstream locations, respectively.
[c] Adult gill nets are indicated by an “A” and Juvenile nets by a “J” in the site name.

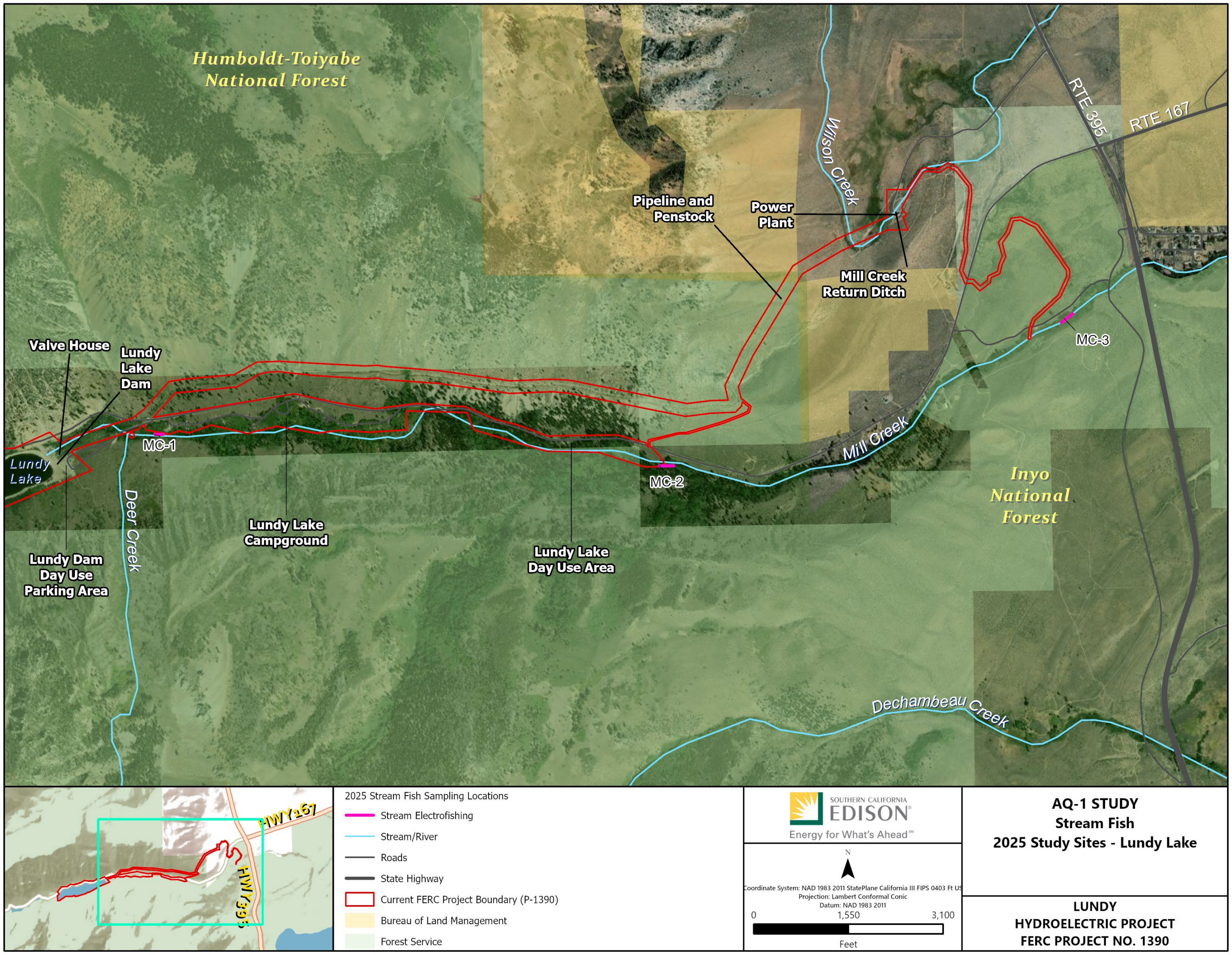



**Figure 5.3-1. Mill Creek Fish Community Study Sites, 2025.**

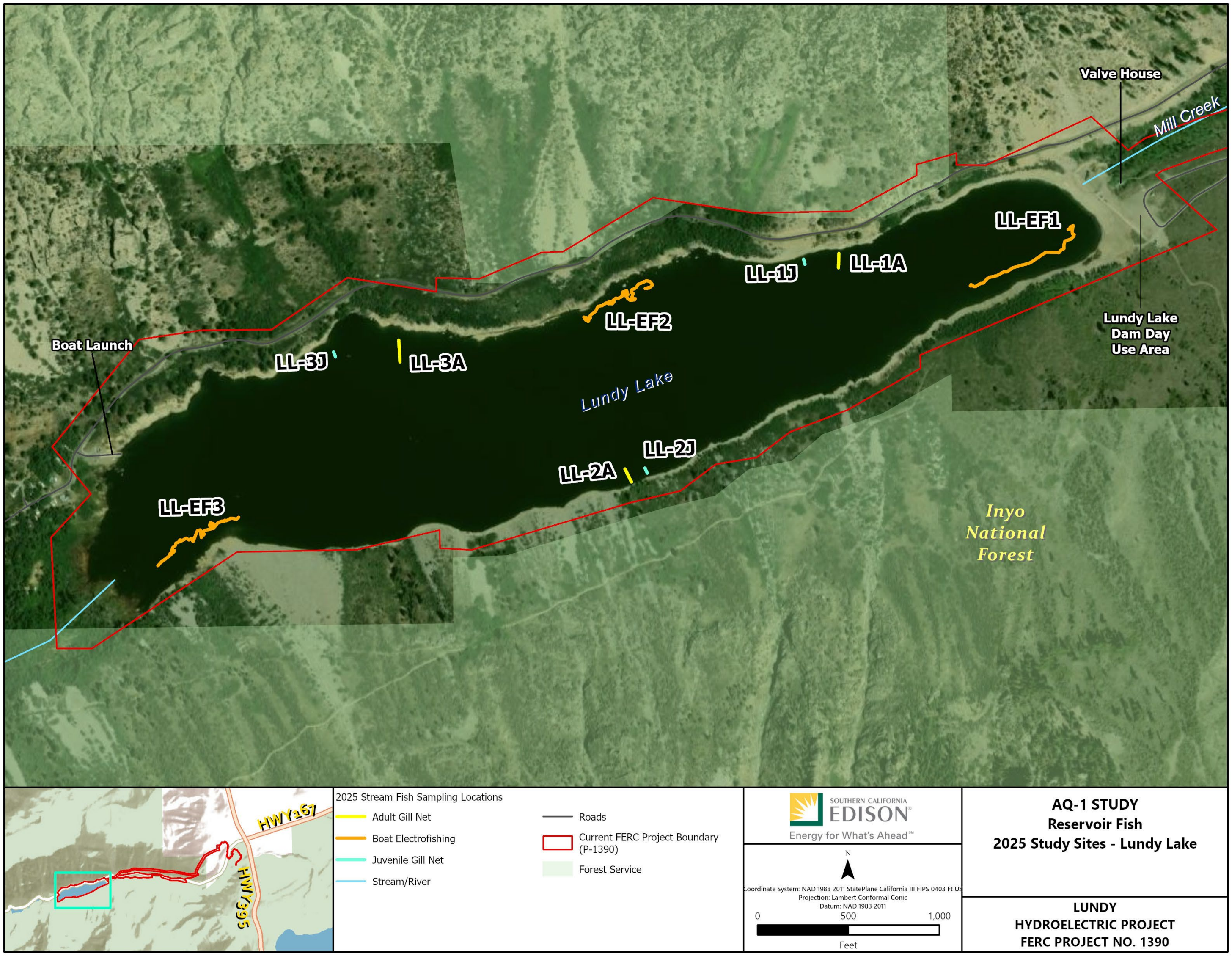



**Figure 5.3-2. Lundy Lake Fish Community Study Sites, 2025.**

## 5.4. METHODS

### 5.4.1. STREAM FISH SURVEYS

#### 5.4.1.1. Electrofishing

Stream fish surveys were conducted from August 27 to 29, 2025. Survey methods included multiple-pass depletion backpack electrofishing at each study site consistent with procedures described by Reynolds (1996).

Study sites were approximately 88 to 92 meters long and separated by block nets in two segments to improve sampling efficiency. Fifty-foot block nets with 1/8-inch-diameter mesh were used to prevent fish migration into and out of the study site and to facilitate an accurate assessment of the sample population. The electrofishing crew consisted of two biologists using Smith-Root Inc. LR-24 backpack electrofishers and two to four netters, depending on the width of the wetted stream channel within the study site. Backpack electrofishers used direct current with settings ranging from 200 volts to 340 volts depending on site conditions (i.e., conductivity).

The electrofishing crew began sampling at the downstream block net and proceeded slowly and deliberately upstream, moving from the center of the channel out to the stream margin, and then back to the center. As fish were captured (netted), they were placed in buckets with aerated ambient stream water. A minimum of three passes were conducted within each segment. Fish were measured on a wetted measuring board and weighed using a digital scale before being released. Fish data recorded included species identification, fork length (FL) in millimeters (mm), total length (TL) in mm, and weight in grams (g). All trout were inspected for visual abnormalities, visual markings, or fin erosion, which could suggest fish of hatchery origin. Scale samples were collected from 20 brown trout at each study site and six brook trout at Site MC-1 across a variety of sizes greater than or equal to 50 mm FL to assess age and growth relationships. After processing, fish were placed in an aerated bucket of cool stream water. Fish in the recovery bucket were regularly transferred to a live car composed of 1/8-inch-diameter mesh netting located in the stream outside the study site to be held until the completion of the survey. After completion of the survey, all fish were released back into the stream at the area of capture.

Habitat characteristics and water quality parameters were measured at all study sites at the time of sampling. Each segment was characterized by habitat type (e.g., pool, run, or riffle). The length of each segment was measured along the thalweg to the nearest one-tenth of a meter, and the mean width of each sampling segment was calculated by measuring the width of the wetted channel to the nearest 0.1 meter at six or more evenly spaced transects. The area of each sampling segment was calculated by multiplying the site length by mean width. The maximum depth and the stream discharge of the sample site were recorded. Dominant and subdominant substrate types along with fish cover were visually estimated at each sample segment. Water temperature, dissolved oxygen, pH, electrical conductivity, and specific conductance were measured using a calibrated multiparameter sonde (YSI EXO2, Yellow Springs Instruments) at the time of sampling.

#### 5.4.1.2. Stream Fish Analysis

Data collected during the stream fish surveys were entered into an Excel database for data reduction, tabulation, and summary.

Species composition and size distribution of fish were evaluated at all study sites.

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

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

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

where:

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

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

Mean fish condition was calculated from individual condition values for each species.

### 5.4.2. Reservoir Fish Surveys

Reservoir fish surveys were conducted using a combination of gill netting and boat electrofishing techniques (described in the following sections). Captured fish were placed in an aerated container with ambient reservoir water for processing. Fish were measured on a wetted measuring board and weighed using a digital scale before being released. Fish data recorded included species identification, FL, TL, and weight. All trout were inspected for visual abnormalities, visual markings, or fin erosion, which could suggest fish of hatchery origin. Scale samples were collected from up to 20 fish of each sportfish species to assess age composition. After processing, all fish were allowed to recover in an aerated container with ambient reservoir water and were then released back into the reservoir.

In addition to fish data, the survey crew recorded the gear type used and general location conditions for each study site including Global Positioning System (GPS) coordinates. Water quality (i.e., water temperature, dissolved oxygen, pH, conductivity, and specific conductivity) was measured approximately 1.5 meters below the water's surface using a calibrated multiparameter sonde (YSI™ EXO2, Yellow Springs Instruments).

#### 5.4.2.1. Gill Netting

Gill nets with variably sized mesh for adults and juveniles were used to collect fish species to assess composition and distribution in Lundy Lake. Gill nets were deployed in Lundy Lake perpendicular to the reservoir shoreline and submerged along the gradient of the reservoir bottom. The sample locations were selected to cover a range of habitat conditions within Lundy Lake, including both shallow- and deep-water areas and locations distributed along the length of the reservoir.

Adult-sized mesh gill nets, consisting of mesh sizes ranging from 0.75 inch to 2.50 inches, measured between approximately 75 and 120 feet long by 6 feet tall. Juvenile-sized mesh gill nets, consisting of three 10-foot panels with mesh sizes of 0.25, 0.50, and 0.75 inch, measured 30 feet long and 6 feet deep. Gill nets were set for two, approximately 4.2 to 5.4-hour net-set periods. Gill nets were deployed in the afternoon and consecutively fished until nighttime to facilitate good coverage and to separate diel periods.

In addition to the general site conditions discussed in Section 5.4.2, time of deployment, minimum and maximum water depths, and net type were recorded at each gill net station.

#### 5.4.2.2. Shoreline Boat Electrofishing

Shoreline boat electrofishing was conducted using standard methods (Reynolds, 1996). Sampling was conducted at night when fish are more likely to be found in shallow-water habitat to increase capture probability. Equipment used included a 14-foot Zodiac boat equipped with a Smith-Root Inc. 1.5-kilovolt-ampere electrofisher control box, two anode booms, and a cathode array. During sampling, electrofisher settings were set to direct current at 400 volts.

Electrofishing stations were approximately 260 meters in length and located in areas representing a diversity of nearshore habitats. Sampling stations were documented using GPS tracking. Electrofisher “time on” was recorded for each sampling location and a consistent pace and effort was employed at all sites. Fish and environmental data were collected using the same methods as described in Section 5.4.2.1.

### 5.4.3. LITERATURE REVIEW

A literature review is currently in progress to synthesize available information on the potential influence of high magnitude releases (i.e., greater than 60 cfs) in the fall or winter from Lundy Dam on brown trout populations in Mill Creek. Sources of information that are being considered in this review include, but may not be limited to, the following:

1. McBain and Trush, Inc., and Ross Taylor and Associates. 2010. *Mono Basin Stream Restoration and Monitoring Program: Synthesis of Instream Flow Recommendations to the State Water Resources Control Board and the Los Angeles Department of Water and Power Final Report*. April 20.

2. George, S. D., B. P. Baldigo, A. J. Smith, G. R. Robinson. 2015. "Effects of Extreme Floods on Trout Populations and Fish Communities in a Catskill Mountain River." *Freshwater Biology*, 60, 2511–2522.

3. Strange E. M., P. B. Moyle, and T. C. Foin. 1992. "Interactions between Stochastic and Deterministic Processes in Stream Fish Community Assembly." *Environmental Biology of Fishes*, 36, 1–15.

4. Warren D. R., A. G. Ernst, and B. P. Baldigo. 2009. "Influence of Spring Floods on Year Class Strength of Fall- and Spring-Spawning Salmonids in Catskill Mountain Streams." T*ransactions of the American Fisheries Society*, 138, 200–210.

#### 5.4.4. Incidental Observations

Incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) were noted (including location information) and reported in Section 5.7.3.

### 5.5. Study Plan Modifications

SCE is not proposing any modifications to AQ-1 as approved by FERC in its SPD (FERC, 2025).

### 5.6. Variances to Approved Methods

SCE encountered no variances when implementing the AQ-1 study plan as approved by FERC in its SPD (FERC, 2025).

### 5.7. Results

#### 5.7.1. Stream Fish Results

##### 5.7.1.1. Fish Species Composition and Distribution

Two species of fish were observed during the stream fish sampling effort—brown trout and brook trout (Figure 5.7-1). Brown trout were the most abundant species captured during the sampling efforts and were found throughout all study sites (Figure 5.7-1). Brook trout were uncommon during the sampling efforts and were only captured at the upstream most study site (MC-1) (Figure 5.7-1).

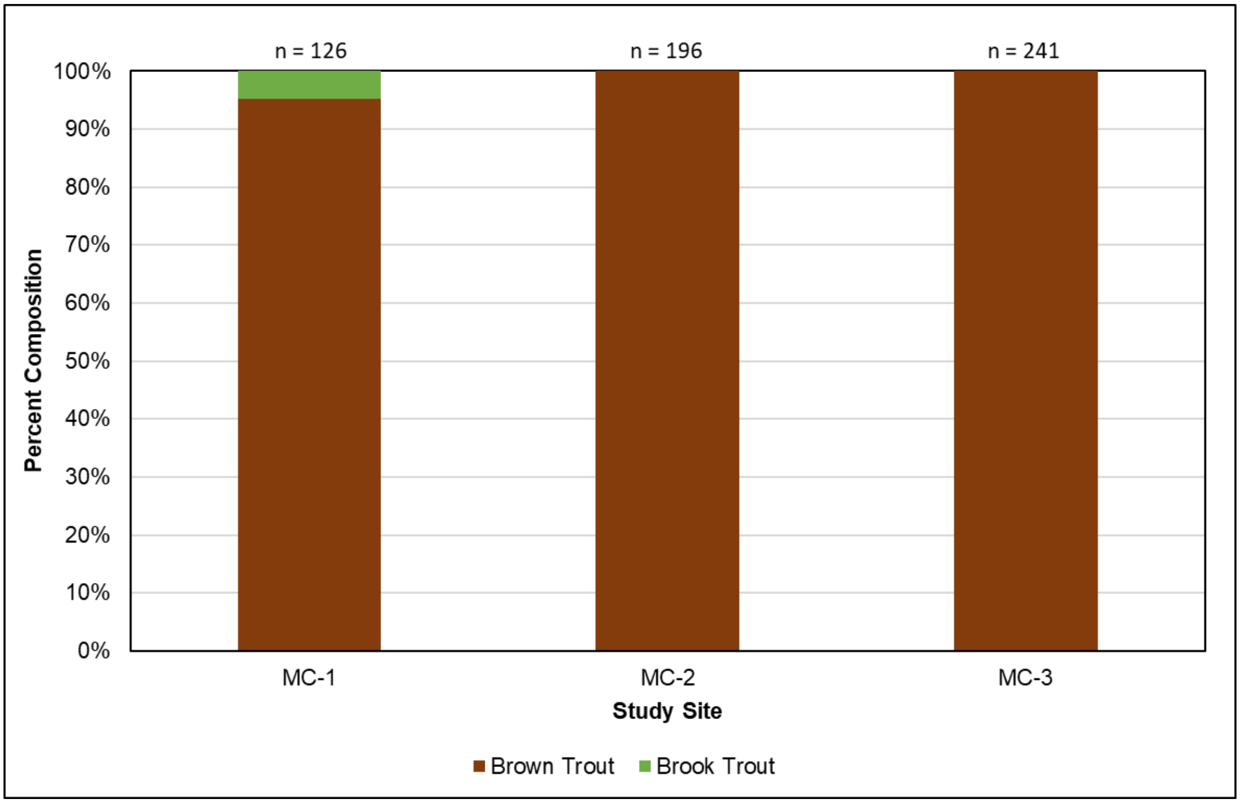



**Figure 5.7-1. Mill Creek Fish Species Composition, August 2025.**

#### 5.7.1.2. Density and Biomass

Estimates of all fish (brown and brook trout combined) density were lowest at the upstream study site (MC-1) and highest at the downstream study site (MC-3), while estimates for biomass were similar between the upstream and downstream study sites and lowest at the middle study site (MC-2) (Table 5.7-1, Figure 5.7-2 and Figure 5.7-3). Brook trout were only captured at the upstream study site (MC-1) whereas brown trout were captured at all study sites.

## Table 5.7-1. Mill Creek Fish Population Estimated Density and Biomass, August 2025

| Study Site | Site Length (meter) | Avg. Site Width (meter) | Trout Species | Depletion Pattern[a] | Total Captured | Density (fish per acre) | | | Biomass (pounds per acre) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Est. | Lower 95% C.I. | Upper 95% C.I. | Est. | Lower 95% C.I. | Upper 95% C.I. |
| MC-1 | 92.4 | 3.9 | Brook | 3, 3, 0 | 6 | 74 | 46 | 102 | 5.6 | 3.5 | 7.8 |
| | | | Brown | 86, 21, 13 | 120 | 1,414 | 1,344 | 1,484 | 175.0 | 166.3 | 183.6 |
| | | | All trout | 89, 24, 13 | 126 | 2,288 | 2,175 | 2,401 | 180.6 | 171.7 | 189.6 |
| MC-2 | 79.9 | 5.2 | Brown | 128, 50, 18 | 196 | 2,041 | 1,940 | 2,141 | 117.6 | 111.8 | 123.4 |
| MC-3 | 87.5 | 4.3 | Brown | 169, 48, 24 | 241 | 2,703 | 2,606 | 2,801 | 171.3 | 165.1 | 177.5 |

Avg. = average, Est. = estimate, C.I. = confidence interval

Note:

[a] Depletion pattern refers to the decline in catch across successive electrofishing passes (pass 1–3) under a multiple pass depletion methodology.

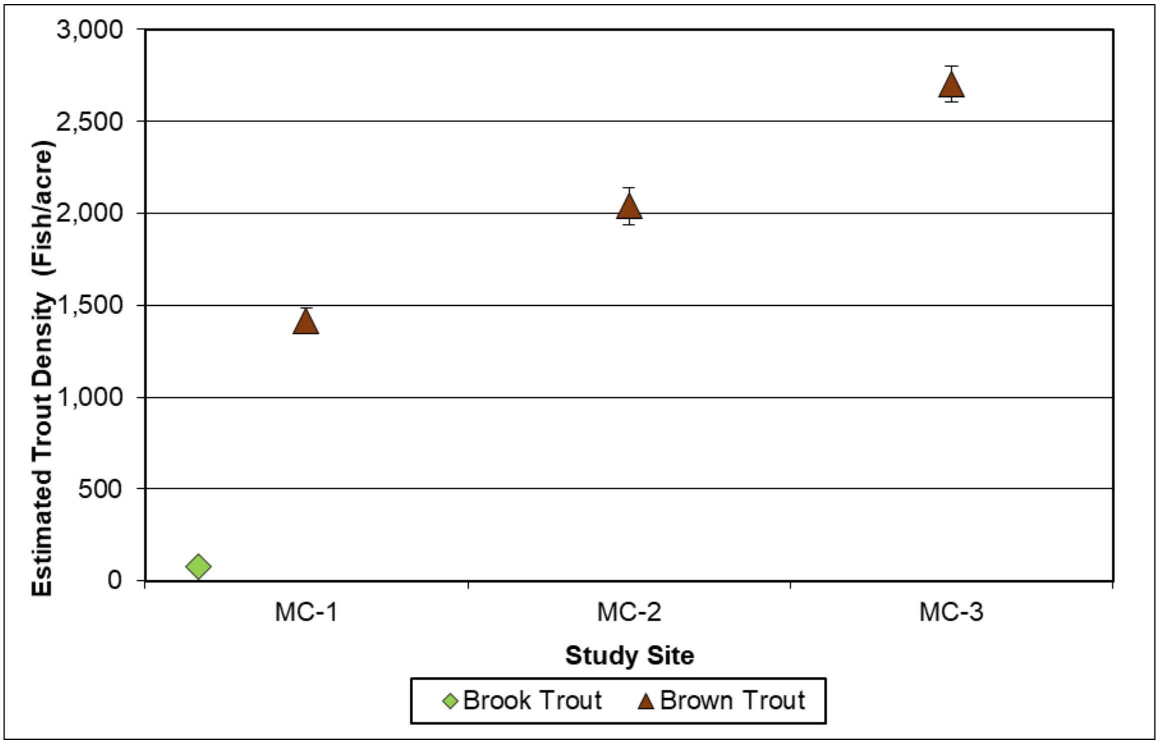



**Figure 5.7-2. Estimated Trout Density (with 95-percent Confidence Intervals) at Mill Creek Fish Study Sites, August 2025.**

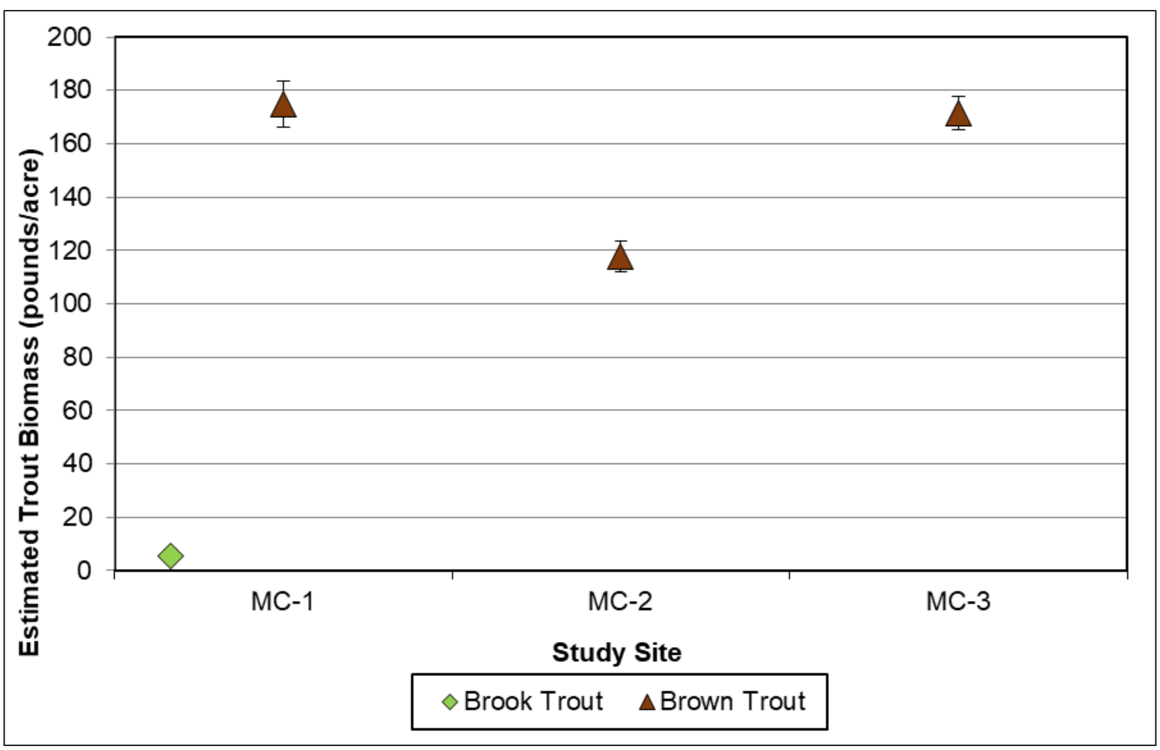



**Figure 5.7-3. Estimated Trout Biomass (with 95-percent Confidence Intervals) at Mill Creek Fish Study Sites, August 2025.**

#### 5.7.1.3. Age Class Distribution

Analysis of data is ongoing and includes age-class evaluations from scale samples collected during the AQ-1 Study. Results will be provided in the USR.

#### 5.7.1.4. Fish Condition

Condition factors (k-values) of fish captured in 2025 ranged from 0.86 to 1.84. The mean condition factor for brook trout was 1.07, and the mean condition factor for brown trout ranged from 1.13 to 1.15 (Table 5.7-2), indicating that trout were generally in good condition based on condition factors reported from other Sierra Nevada streams and more broadly.[8] Length and weight data for all fish captured in Mill Creek during this study are provided in Appendix E.

**Table 5.7-2. Trout Condition (k-value) Calculated for Fish Captured in Mill Creek, August 2025**

| Study Site | Trout Species | Number Captured | Mean k-Value | k-Value Range |
|---|---|---|---|---|
| MC-1 | Brook | 6 | 1.07 | 0.86-1.18 |
| | Brown | 120 | 1.14 | 0.94-1.34 |
| MC-2 | Brook | 0 | -- | -- |
| | Brown | 196 | 1.13 | 0.82-1.52 |
| MC-3 | Brook | 0 | -- | -- |
| | Brown | 241 | 1.15 | 0.88-1.84 |

Note:
[a] Fish less than 70-millimeter fork length were excluded from k-value calculations due to the sensitivity of the scale during poor weather conditions.

#### 5.7.1.5. Habitat Conditions

Habitat conditions across all study sites were defined by high-gradient stream channels with predominantly riffle and run habitats, infrequent pool habitats, and consistently large substrates composed primarily of boulder and cobble (Table 5.7-3). Photographs were taken to document the specific location of the top and bottom block nets for each study segment and provide a general overview of the study site are included in Appendix F.

Water quality conditions measured during the study indicated oxygenated stream conditions with water temperatures between 12°C and 15°C (Table 5.7-4). Stream discharge during the fish survey effort ranged between 2.7 and 18.5 cfs.

[8] Condition factors in western Sierra Nevada streams typically range from 0.8 to 2.0, with a mean condition factor of approximately 1.2 (Beak, 1991; EA, 1987; 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) cites broader ranges (0.5 to 2.0); however, the condition depends on the sampling season, species, species of trout, state of sexual maturity, and the way fish length is defined (e.g., fork length, total length, or standard length), which is not often documented with the results.

## Table 5.7-3. Habitat Conditions at Mill Creek Fish Study Sites, August 2025

| Survey Date (2025) | Study Site | Habitat Type (%) | | | | | Substrate [a] | | Discharge (cfs) |
|---|---|---|---|---|---|---|---|---|---|
| | | Pool | Run | Low Gradient Riffle | High Gradient Riffle | Cascade | Dom | Sub | |
| 8/27 | MC-1 | 10.0 | 30.0 | 20.0 | 37.0 | 3.0 | COB | BLD | 2.7 |
| 8/28 | MC-2 | 0.0 | 25.0 | 0.0 | 75.0 | 0.0 | BLD | COB | 18.5 |
| 8/29 | MC-3 | 5.0 | 50.0 | 25.0 | 20.0 | 0.0 | BLD | COB | 11.6 |

cfs = cubic feet per second, Dom = dominant, Sub = subdominant
Notes:
[a] Substrate codes: COB = cobble, BLD = boulder

## Table 5.7-4. Water Quality at Mill Creek Fish Study Sites, August 2025

| Survey Date (2025) | Study Site | Water Temperature (°C) | Dissolved Oxygen | | Conductivity (µS/cm) | pH (s.u.) |
|---|---|---|---|---|---|---|
| | | | (%)[a] | (mg/L) | | |
| 8/27 | MC-1 | 14.7 | 103 | 7.9 | 81.0 | 7.5 |
| 8/28 | MC-2 | 12.2 | 103 | 8.6 | 60.4 | 7.3 |
| 8/29 | MC-3 | 13.6 | 101 | 8.3 | 56.8 | 7.6 |

°C = degree Celsius; % sat. = percent saturation; mg/L = milligram per liter; µS/cm = microsiemens per centimeter; s.u. = standard unit
Notes:
[a] Raw dissolved oxygen readings were corrected with temperature and local barometric pressure.

### 5.7.2. Reservoir Fish Results

Surveys occurred from August 25 through August 26, 2025. Adult and juvenile gill nets were deployed, and boat electrofishing was conducted in Lundy Lake.

#### 5.7.2.1. Fish Species Composition

A total of 91 fish representing three species were captured during the 2025 reservoir surveys. The fish species captured included brown trout, rainbow trout, and mountain whitefish (*Prosopium williamsoni*) (Figure 5.7-4 and Figure 5.7-5). Of the fish captured, brown trout were the most abundant, followed by mountain whitefish, with rainbow trout being the least abundant. Most rainbow trout captured showed signs of hatchery origin (e.g., worn fins). The high relative abundance of brown trout and mountain whitefish suggests self-sustaining populations for these species.

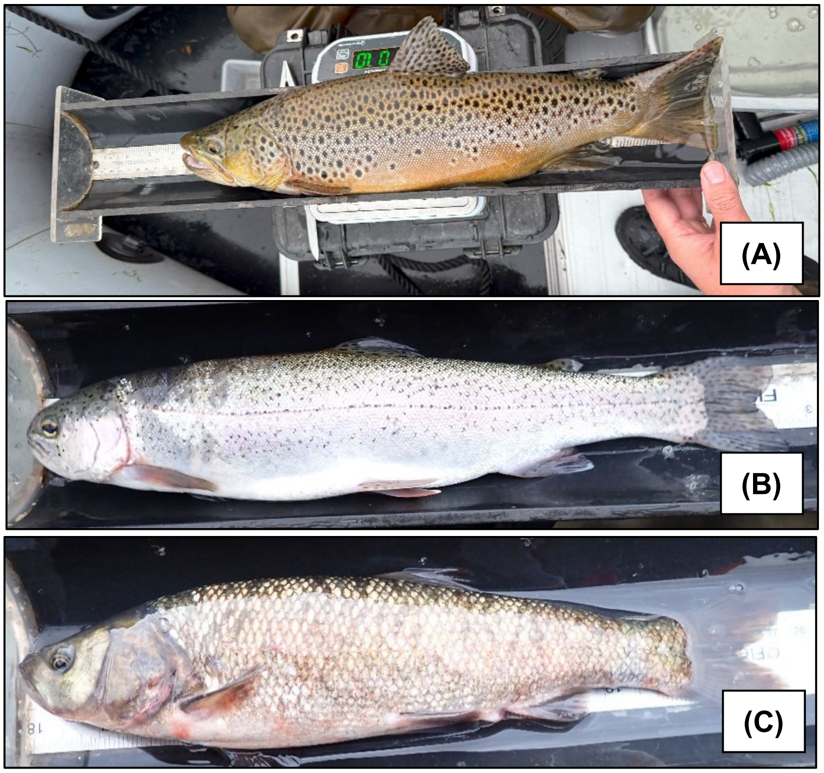



**Figure 5.7-4. Fish Species Captured in Lundy Lake: Brown Trout (A), Rainbow Trout (B), and Mountain Whitefish (C), August 2025.**

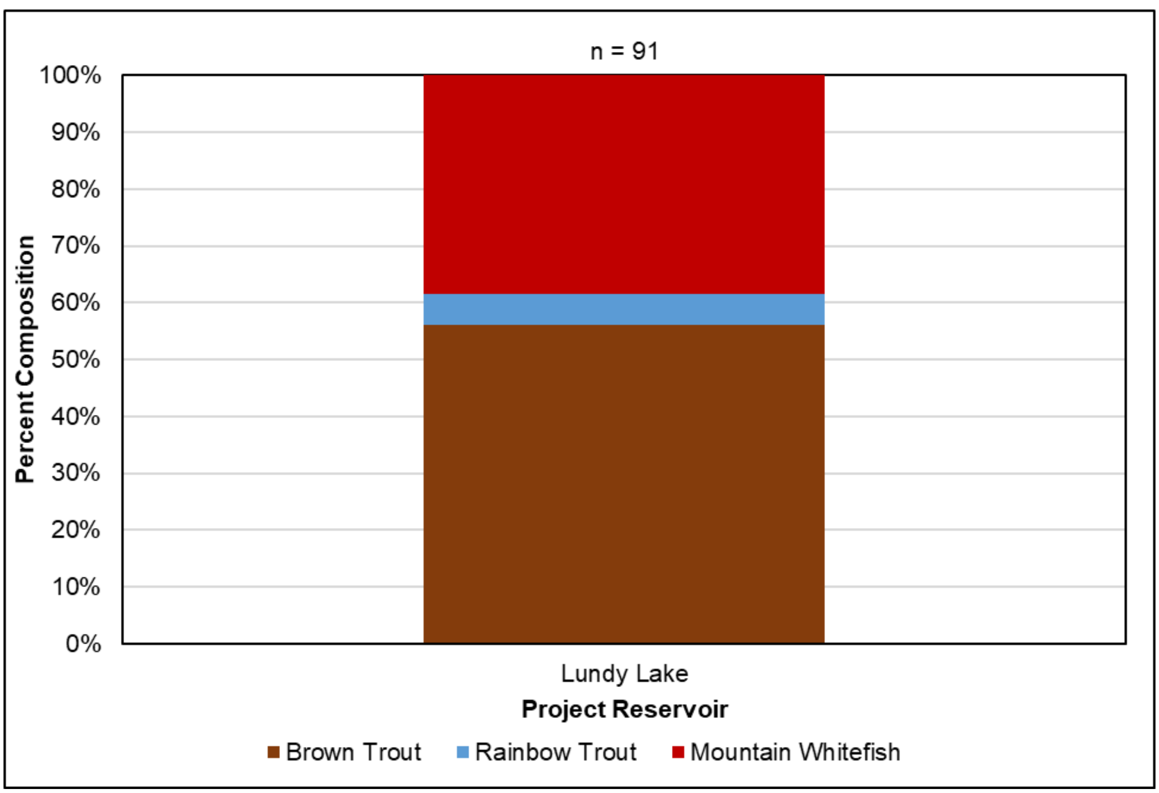



**Figure 5.7-5. Lundy Lake Fish Species Composition, August 2025.**

The catch per unit effort (CPUE) for fish captured was variable by gear type (Table 5.7-5) and was higher for boat electrofishing than for gill netting.

**Table 5.7-5. Catch Per Unit Effort by Survey Method for Fish Species Captured in Lundy Lake, August 2025**

| Method | No. of Sample Sites | Sample Area ($ft^2$) | Sample Time (hours) | CPUE x 1,000 (fish/[$ft^2$ x hour]) | | |
|---|---|---|---|---|---|---|
| | | | | Brown Trout | Rainbow Trout | Mountain Whitefish |
| Gill net | 3 | 2,220 | 55.6 | 0.32 | 0.01 | 0.26 |
| Boat electrofishing | 3 | 15,320 | 0.31 | 2.32 | 0.84 | 0.63 |

CPUE = catch per unit effort; $ft^2$ = square feet

### 5.7.2.2. Age Class Distribution

Analysis of sampling data is ongoing and includes age-class evaluations from scale samples collected during Study AQ-1. Results will be provided in the USR.

### 5.7.2.3. Fish Condition

Mean condition factors (k-values) of all trout species captured in Lundy Lake in 2025 ranged from 1.07 to 1.09, indicating trout were generally in good condition (Table 5.7-6). Length and weight data for all fish captured in Lundy Lake during this study are provided in Appendix G.

**Table 5.7-6. Fish Condition for Trout Captured in Lundy Lake, August 2025**

| Trout Species | Number Captured | Mean k-Value | k-value Range |
|---|---|---|---|
| Brown | 51 | 1.07 | 1.00–1.17 |
| Rainbow | 5 | 1.09 | 0.92–1.49 |

mm = millimeter

### 5.7.2.4. Site Conditions

Surface waters throughout Lundy Lake were cool and oxygenated. Water quality conditions in Lundy Lake are summarized in Table 5.7-7 and tabulated data are provided in Appendix H.

**Table 5.7-7. Water Quality Conditions at Fish Sampling Locations in Lundy Lake, August 2025**

| Survey Date (2025) | Survey Method | Water Temperature (°C) | | Dissolved Oxygen (%) | | Dissolved Oxygen (mg/L) | | Specific Conductivity (µS/cm) | | pH (s.u.) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | min | max | min | max | min | max | min | max | min | max |
| 8/25 | Gill net | 17.0 | 17.7 | 108 | 108 | 7.8 | 7.8 | 67 | 67 | 7.5 | 7.7 |
| 8/26 | Boat electrofishing | 16.6 | 16.8 | 107 | 110 | 7.8 | 8.0 | 67 | 67 | 7.6 | 7.6 |

°C = degree Celsius; % = percent saturation; mg/L = milligram per liter; µS/cm = microsiemens per centimeter; s.u. = standard unit

### 5.7.3. Incidental Observations

No special-status species, aquatic invasive species were observed during fish community survey efforts.

## 5.8. Discussion

Analysis of fish community data is ongoing. Study results will be provided in the USR in 2027.

## 5.9. References

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# AQ-1 APPENDICES

# APPENDIX E
# MILL CREEK FISH CAPTURE DATA

## Table E-1. Study AQ-1 Mill Creek Fish Capture Data, August 2025

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 60 | 62 | 2.8 | -- | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 62 | 65 | 2.6 | BRN-11 | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 75 | 80 | 5.4 | BRN-05 | 1.28 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 76 | 80 | 5.2 | -- | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 76 | 80 | 5.0 | BRN-13 | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 80 | 85 | 5.6 | BRN-12 | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 121 | 127 | 19.0 | -- | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 125 | 131 | 22.6 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 125 | 132 | 22.8 | -- | 1.17 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 125 | 134 | 23.0 | -- | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 126 | 133 | 22.8 | -- | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 129 | 135 | 23.0 | BRN-01 | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BK | 130 | 135 | 23.6 | BK-01 | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 130 | 137 | 26.0 | -- | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 133 | 140 | 27.2 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 135 | 141 | 26.6 | -- | 1.08 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 136 | 144 | 27.4 | -- | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 138 | 146 | 29.0 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 138 | 145 | 31.0 | -- | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 140 | 146 | 28.6 | BRN-06 | 1.04 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 141 | 149 | 32.4 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 143 | 150 | -- | BRN-07 | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 146 | 153 | 34.2 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 148 | 156 | 38.0 | BRN-04 | 1.17 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 148 | 155 | 37.2 | -- | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 148 | 153 | 38.8 | -- | 1.20 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 148 | 157 | 41.4 | -- | 1.28 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 150 | 159 | 36.0 | -- | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 153 | 162 | 38.8 | -- | 1.08 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 153 | 162 | 41.2 | -- | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BK | 154 | 161 | 42.2 | BK-02 | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 155 | 163 | 41.4 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 159 | 166 | 43.8 | BRN-08 | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 159 | 166 | 41.2 | -- | 1.03 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 163 | 175 | 46.8 | -- | 1.08 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 168 | 176 | 48.8 | BRN-09 | 1.03 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 169 | 175 | 54.0 | -- | 1.12 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 170 | 175 | 52.8 | -- | 1.08 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 175 | 185 | 54.6 | -- | 1.02 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 176 | 186 | 58.2 | BRN-02 | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 176 | 185 | 66.0 | -- | 1.21 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 184 | 191 | 74.4 | -- | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 185 | 191 | 69.2 | BRN-03 | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 187 | 195 | 75.4 | -- | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 189 | 197 | 89.8 | BRN-14 | 1.33 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 190 | 198 | 78.2 | -- | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 195 | 204 | 71.8 | -- | 0.97 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 199 | 205 | 79.6 | -- | 1.01 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 201 | 209 | 100.4 | BRN-15 | 1.24 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 220 | 226 | 130.2 | BRN-16 | 1.22 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 231 | 240 | 148.2 | BRN-10 | 1.20 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 234 | 241 | 146.0 | -- | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 240 | 247 | 156.6 | -- | 1.13 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 1 | BRN | 283 | 293 | 247.0 | BRN-17 | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 61 | 66 | 2.4 | -- | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 65 | 70 | 3.6 | -- | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 88 | 91 | 8.4 | -- | 1.23 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 113 | 119 | 16.8 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 127 | 134 | 20.2 | -- | 0.99 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 128 | 135 | 26.2 | -- | 1.25 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 132 | 139 | 27.6 | -- | 1.20 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 148 | 155 | 36.2 | -- | 1.12 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BK | 160 | 167 | 48.2 | BK-04 | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BK | 177 | 183 | 56.0 | BK-03 | 1.01 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 183 | 190 | 61.0 | -- | 1.00 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 185 | 195 | 77.6 | -- | 1.23 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 187 | 192 | 72.2 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 190 | 197 | 73.0 | -- | 1.06 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 2 | BRN | 239 | 246 | 140.4 | -- | 1.03 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 65 | 68 | 3.0 | -- | -- |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 117 | 123 | 18.2 | -- | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 137 | 145 | 33.0 | -- | 1.28 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 143 | 150 | 27.4 | -- | 0.94 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 154 | 162 | 35.8 | -- | 0.98 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 205 | 216 | 102.6 | -- | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 239 | 245 | 173.4 | -- | 1.27 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 240 | 248 | 160.2 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Lower | 3 | BRN | 245 | 253 | 161.4 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 70 | 74 | 4.0 | -- | -- |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 71 | 74 | 4.4 | -- | 1.23 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 79 | 84 | 6.2 | -- | 1.26 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BK | 118 | 124 | 14.2 | BK-5 | 0.86 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 118 | 125 | 20.2 | -- | 1.23 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 121 | 127 | 18.4 | -- | 1.04 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 124 | 132 | 21.0 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 127 | 133 | 22.8 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 129 | 135 | 23.2 | -- | 1.08 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 134 | 142 | 26.4 | -- | 1.10 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 135 | 143 | 29.0 | -- | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 140 | 148 | 29.8 | -- | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 140 | 147 | 30.6 | -- | 1.12 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 141 | 148 | 31.2 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 144 | 149 | 30.8 | -- | 1.03 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 145 | 152 | 33.8 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 146 | 154 | 34.6 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 147 | 155 | 37.6 | -- | 1.18 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 149 | 156 | 35.4 | -- | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 155 | 165 | 39.2 | -- | 1.05 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 155 | 162 | 46.0 | -- | 1.24 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 172 | 182 | 56.6 | -- | 1.11 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 174 | 184 | 62.4 | -- | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 175 | 184 | 62.2 | -- | 1.16 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 181 | 189 | 34.2 | -- | 0.58 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 206 | 212 | 99.4 | -- | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 210 | 218 | 106.8 | -- | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 212 | 224 | 100.8 | -- | 1.06 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 221 | 231 | 128.2 | -- | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 227 | 235 | 130.4 | -- | 1.12 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 227 | 234 | 136.6 | -- | 1.17 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 229 | 237 | 137.8 | -- | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 234 | 241 | 132.8 | -- | 1.04 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 246 | 252 | 169.4 | BRN-19 | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 1 | BRN | 253 | 260 | 185.8 | BRN-18 | 1.15 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BK | 127 | 136 | 23.4 | BK-6 | 1.14 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 127 | 134 | 23.8 | -- | 1.16 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 134 | 141 | 28.2 | -- | 1.17 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 138 | 147 | 31.2 | BRN-20 | 1.19 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 144 | 149 | 36.6 | -- | 1.23 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 152 | 160 | 47.2 | -- | 1.34 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 153 | 162 | 38.4 | -- | 1.07 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 161 | 170 | 50.6 | -- | 1.21 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 2 | BRN | 185 | 193 | 80.4 | -- | 1.27 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 3 | BRN | 131 | 137 | 29.2 | -- | 1.30 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 3 | BRN | 148 | 159 | 35.4 | -- | 1.09 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 3 | BRN | 223 | 230 | 129.2 | -- | 1.17 |
| 8/27/2025 | Mill Creek | MC-1 | Upper | 3 | BRN | 266 | 272 | 195.8 | BRN-21 | 1.04 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 45 | 46 | 1.4 | BRN-19 | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 51 | 53 | 2.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 55 | 57 | 2.2 | BRN-10 | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 55 | 57 | 2.0 | BRN-11 | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 55 | 57 | 2.2 | BRN-18 | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 55 | 57 | 6.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 60 | 63 | 2.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 62 | 66 | 3.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 65 | 68 | 3.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 65 | 68 | 3.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 65 | 68 | 3.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 66 | 70 | 4.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 67 | 69 | 3.4 | BRN-14 | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 68 | 72 | 4.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 70 | 74 | 4.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 70 | 72 | 3.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 70 | 74 | 4.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 74 | 76 | 5.6 | BRN-12 | 1.38 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 95 | 100 | 9.2 | BRN-17 | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 95 | 97 | 9.2 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 96 | 100 | 10.4 | -- | 1.18 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 100 | 102 | 10.8 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 105 | 118 | 14.0 | -- | 1.21 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 105 | 118 | 11.2 | -- | 0.97 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 105 | 110 | 15.2 | -- | 1.31 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 106 | 108 | 11.8 | -- | 0.99 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 107 | 113 | 14.8 | -- | 1.21 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 111 | 120 | 16.8 | -- | 1.23 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 111 | 116 | 16.0 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 112 | 116 | 15.2 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 113 | 115 | 16.6 | BRN-1 | 1.15 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 113 | 119 | 15.4 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 114 | 117 | 15.6 | BRN-15 | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 114 | 120 | 16.4 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 115 | 119 | 17.2 | BRN-9 | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 115 | 120 | 16.8 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 115 | 120 | 16.4 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 115 | 122 | 18.2 | -- | 1.20 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 115 | 122 | 16.0 | -- | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 118 | 122 | 17.8 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 119 | 124 | 20.6 | BRN-7 | 1.22 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 120 | 124 | 18.4 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 120 | 123 | 19.4 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 120 | 127 | 19.0 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 124 | 131 | 21.0 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 124 | 131 | 21.8 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 125 | 130 | 19.8 | -- | 1.01 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 125 | 132 | 21.8 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 126 | 131 | 23.6 | BRN-8 | 1.18 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 126 | 135 | 21.6 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 127 | 134 | 25.0 | -- | 1.22 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 129 | 133 | 23.8 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 130 | 136 | 23.2 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 131 | 134 | 24.4 | -- | 1.09 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 132 | 136 | 25.6 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 134 | 137 | 26.0 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 135 | 139 | 26.6 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 140 | 145 | 33.8 | -- | 1.23 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 141 | 144 | 33.0 | -- | 1.18 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 141 | 150 | 35.6 | -- | 1.27 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 144 | 148 | 33.0 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 145 | 151 | 34.6 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 147 | 153 | 36.2 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 147 | 154 | 38.6 | -- | 1.22 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 154 | 161 | 45.6 | BRN-4 | 1.25 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 156 | 160 | 42.8 | -- | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 158 | 163 | 46.4 | -- | 1.18 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 159 | 167 | 40.6 | -- | 1.01 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 163 | 172 | 49.4 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 169 | 173 | 50.8 | BRN-16 | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 178 | 188 | 61.6 | -- | 1.09 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 183 | 190 | 79.6 | BRN-6 | 1.30 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 184 | 193 | 72.2 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 190 | 196 | 76.0 | BRN-3 | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 190 | 200 | 78.4 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 190 | 197 | 77.2 | -- | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 192 | 198 | 76.6 | BRN-5 | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 200 | 204 | 91.4 | BRN-2 | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 234 | 239 | 120.4 | BRN-13 | 0.94 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 1 | BRN | 314 | 323 | 301.0 | BRN-20 | 0.97 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 58 | 62 | 2.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 59 | 62 | 2.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 59 | 62 | 2.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 61 | 65 | 3.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 61 | 65 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 66 | 71 | 3.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 71 | 75 | 4.4 | -- | 1.23 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 98 | 104 | 10.0 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 107 | 114 | 14.6 | -- | 1.19 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 108 | 114 | 15.6 | -- | 1.24 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 113 | 120 | 15.4 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 113 | 121 | 18.8 | -- | 1.30 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 114 | 120 | 15.8 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 115 | 122 | 16.4 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 115 | 120 | 17.6 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 115 | 122 | 17.2 | -- | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 117 | 123 | 16.6 | -- | 1.04 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 118 | 126 | 18.4 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 120 | 127 | 19.2 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 121 | 128 | 21.4 | -- | 1.21 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 122 | 130 | 20.8 | -- | 1.15 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 127 | 135 | 25.0 | -- | 1.22 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 128 | 134 | 22.6 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 129 | 137 | 24.2 | -- | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 129 | 137 | 21.6 | -- | 1.01 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 131 | 139 | 24.6 | -- | 1.09 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 131 | 139 | 24.8 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 135 | 142 | 27.2 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 146 | 154 | 30.8 | -- | 0.99 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 148 | 156 | 41.0 | -- | 1.27 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 155 | 165 | 39.8 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 2 | BRN | 171 | 182 | 59.8 | -- | 1.20 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 58 | 61 | 2.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 65 | 70 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 68 | 71 | 3.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 70 | 73 | 4.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 111 | 119 | 16.4 | -- | 1.20 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 113 | 119 | 16.0 | -- | 1.11 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 121 | 129 | 20.6 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 140 | 147 | 32.6 | -- | 1.19 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 190 | 197 | 74.4 | -- | 1.09 |
| 8/28/2025 | Mill Creek | MC-2 | Lower | 3 | BRN | 205 | 215 | 92.2 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 55 | 58 | 2.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 59 | 62 | 3.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 60 | 63 | 2.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 61 | 64 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 62 | 66 | 3.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 63 | 66 | 3.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 63 | 65 | 3.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 64 | 66 | 3.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 65 | 69 | 3.6 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 66 | 70 | 4.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 68 | 71 | 3.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 70 | 74 | 3.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 71 | 75 | 4.2 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 72 | 75 | 2.8 | -- | 0.75 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 72 | 76 | 4.4 | -- | 1.18 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 72 | 76 | 4.8 | -- | 1.29 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 100 | 106 | 11.8 | -- | 1.18 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 108 | 113 | 13.8 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 108 | 113 | 13.4 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 110 | 115 | 17.0 | -- | 1.28 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 114 | 120 | 17.6 | -- | 1.19 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 115 | 120 | 16.0 | -- | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 116 | 122 | 17.8 | -- | 1.14 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 116 | 121 | 17.0 | -- | 1.09 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 119 | 125 | 20.2 | -- | 1.20 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 121 | 130 | 20.0 | -- | 1.13 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 123 | 130 | 19.2 | -- | 1.03 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 125 | 131 | 22.4 | -- | 1.15 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 127 | 134 | 23.8 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 129 | 135 | 24.1 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 129 | 135 | 23.0 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 132 | 139 | 27.0 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 134 | 141 | 25.4 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 143 | 150 | 33.6 | -- | 1.15 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 145 | 154 | 33.6 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 145 | 151 | 36.2 | -- | 1.19 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 146 | 152 | 33.4 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 154 | 163 | 29.8 | -- | 0.82 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 156 | 164 | 40.4 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 159 | 166 | 44.2 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 160 | 169 | 43.8 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 185 | 195 | 72.4 | -- | 1.14 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 189 | 199 | 79.2 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 190 | 199 | 83.0 | -- | 1.21 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 198 | 206 | 83.2 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 205 | 214 | 99.8 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 209 | 219 | 96.4 | -- | 1.06 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 1 | BRN | 218 | 225 | 114.4 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 50 | 53 | 1.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 58 | 61 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 59 | 62 | 2.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 60 | 64 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 60 | 63 | 2.4 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 63 | 66 | 3.2 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 69 | 73 | 5.0 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 103 | 108 | 12.2 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 115 | 121 | 17.8 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 117 | 122 | 17.2 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 118 | 124 | 18.0 | -- | 1.10 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 120 | 128 | 20.0 | -- | 1.16 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 121 | 127 | 18.6 | -- | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 127 | 133 | 22.2 | -- | 1.08 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 161 | 171 | 46.8 | -- | 1.12 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 163 | 173 | 46.8 | -- | 1.08 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 195 | 203 | 79.0 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 2 | BRN | 239 | 249 | 134.4 | -- | 0.98 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 56 | 59 | 2.8 | -- | -- |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 71 | 75 | 4.8 | -- | 1.34 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 71 | 75 | 4.2 | -- | 1.17 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 74 | 76 | 4.8 | -- | 1.19 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 113 | 121 | 15.2 | -- | 1.05 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 120 | 126 | 18.4 | -- | 1.07 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 125 | 132 | 23.6 | -- | 1.21 |
| 8/28/2025 | Mill Creek | MC-2 | Upper | 3 | BRN | 211 | 221 | 108.4 | -- | 1.15 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 51 | 53 | 1.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 52 | 55 | 1.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 53 | 56 | 1.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 55 | 57 | 2.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 56 | 59 | 2.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 56 | 58 | 1.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 57 | 60 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 58 | 61 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 58 | 61 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 60 | 64 | 2.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 61 | 64 | 2.2 | BRN-10 | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 62 | 65 | -- | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 62 | 65 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 64 | 68 | 2.6 | BRN-15 | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 64 | 67 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 64 | 68 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 65 | 70 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 66 | 70 | 3.0 | BRN-16 | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 66 | 69 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 67 | 70 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 68 | 71 | 3.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 70 | 74 | 5.4 | BRN-1 | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 70 | 75 | 3.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 71 | 75 | 4.2 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 74 | 77 | 4.6 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 75 | 78 | 4.2 | -- | 1.00 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 75 | 79 | 4.2 | -- | 1.00 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 75 | 79 | 5.2 | -- | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 75 | 80 | 4.2 | -- | 1.00 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 77 | 82 | 5.6 | -- | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 78 | 83 | 6.0 | -- | 1.26 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 98 | 113 | 14.0 | -- | 1.49 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 98 | 104 | 11.4 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 103 | 108 | 11.6 | -- | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 104 | 109 | 10.6 | -- | 0.94 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 105 | 107 | 12.6 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 105 | 110 | 12.0 | -- | 1.04 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 108 | 115 | 15.0 | -- | 1.19 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 109 | 115 | 13.8 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 109 | 115 | 16.2 | -- | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 109 | 115 | 14.6 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 110 | 116 | 16.6 | BRN-2 | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 114 | 121 | 16.2 | BRN-13 | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 114 | 122 | 18.2 | BRN-18 | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 121 | 16.2 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 122 | 17.4 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 122 | 16.2 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 122 | 16.8 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 122 | 16.6 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 115 | 122 | 17.2 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 116 | 123 | 18.2 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 116 | 123 | 17.2 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 116 | 124 | 16.8 | -- | 1.08 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 117 | 123 | 19.6 | -- | 1.22 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 118 | 125 | 18.4 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 119 | 125 | 18.6 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 120 | 127 | 20.0 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 120 | 127 | 20.8 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 120 | 129 | 20.2 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 123 | 130 | 20.8 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 124 | 133 | 22.8 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 125 | 132 | 22.0 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 125 | 133 | 21.6 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 125 | 133 | 21.4 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 126 | 134 | 23.4 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 129 | 136 | 22.6 | -- | 1.05 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 129 | 136 | 23.4 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 130 | 137 | 23.4 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 131 | 136 | 24.2 | -- | 1.08 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 132 | 140 | 26.2 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 132 | 141 | 26.4 | -- | 1.15 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 132 | 139 | 25.6 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 133 | 140 | 26.8 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 134 | 144 | 29.0 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 134 | 142 | 27.8 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 134 | 142 | 24.0 | -- | 1.00 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 134 | 140 | 26.2 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 135 | 144 | 27.2 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 137 | 146 | 28.8 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 139 | 149 | 28.0 | -- | 1.04 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 141 | 148 | 29.8 | BRN-3 | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 144 | 151 | 32.4 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 145 | 152 | 46.6 | BRN-17 | 1.53 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 145 | 154 | 36.6 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 146 | 155 | 34.2 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 150 | 160 | 40.4 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 153 | 164 | 42.2 | -- | 1.18 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 153 | 162 | 39.0 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 155 | 162 | 39.4 | -- | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 157 | 166 | 45.4 | BRN-14 | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 161 | 169 | 42.2 | BRN-9 | 1.01 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 161 | 171 | 43.6 | BRN-12 | 1.05 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 162 | 171 | 46.0 | -- | 1.08 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 163 | 172 | 53.8 | -- | 1.24 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 164 | 176 | 47.2 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 164 | 171 | 50.4 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 165 | 175 | 56.4 | BRN-11 | 1.26 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 173 | 183 | 59.8 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 174 | 182 | 61.6 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 175 | 183 | 59.6 | BRN-7 | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 180 | 192 | 67.4 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 186 | 195 | 71.8 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 186 | 195 | 78.8 | -- | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 186 | 195 | 71.0 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 186 | 195 | 80.4 | -- | 1.25 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 186 | 199 | 73.6 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 194 | 204 | 85.2 | BRN-4 | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 195 | 213 | 89.2 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 196 | 206 | 86.0 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 198 | 210 | 27.2 | -- | 0.35 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 205 | 213 | 101.6 | BRN-20 | 1.18 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 219 | 229 | 108.8 | BRN-19 | 1.04 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 252 | 261 | 157.0 | BRN-6 | 0.98 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 269 | 276 | 217.2 | BRN-8 | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 1 | BRN | 294 | 304 | 298.4 | BRN-5 | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 50 | 52 | 1.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 54 | 56 | 1.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 55 | 58 | 1.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 58 | 61 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 59 | 63 | 2.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 59 | 63 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 61 | 65 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 64 | 67 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 65 | 70 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 66 | 69 | 3.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 67 | 70 | 3.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 70 | 74 | 3.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 70 | 74 | 4.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 73 | 77 | 4.2 | -- | 1.08 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 77 | 81 | 5.2 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 102 | 107 | 10.8 | -- | 1.02 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 103 | 110 | 14.0 | -- | 1.28 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 103 | 108 | 12.0 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 110 | 117 | 16.4 | -- | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 110 | 116 | 14.6 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 111 | 117 | 13.2 | -- | 0.97 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 112 | 119 | 15.2 | -- | 1.08 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 128 | 136 | 21.8 | -- | 1.04 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 129 | 138 | 23.4 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 130 | 138 | 26.6 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 130 | 139 | 26.4 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 131 | 139 | 26.6 | -- | 1.18 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 134 | 142 | 28.0 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 137 | 145 | 28.8 | -- | 1.12 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 148 | 154 | 31.6 | -- | 0.98 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 148 | 155 | 36.0 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 169 | 178 | 53.8 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 171 | 181 | 65.2 | -- | 1.30 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 182 | 193 | 67.4 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 186 | 198 | 73.4 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 187 | 198 | 81.2 | -- | 1.24 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 2 | BRN | 222 | -- | 126.4 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 68 | 72 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 80 | 89 | 3.6 | -- | 0.70 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 97 | 102 | 10.2 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 110 | 117 | 15.4 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 110 | 114 | 11.8 | -- | 0.89 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 119 | 126 | 19.6 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 121 | 128 | 18.8 | -- | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 135 | 144 | 30.0 | -- | 1.22 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 143 | 152 | 31.8 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 147 | 153 | 35.6 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 171 | 182 | 55.2 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 191 | 202 | 80.6 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 198 | 207 | 89.6 | -- | 1.15 |
| 8/29/2025 | Mill Creek | MC-3 | Lower | 3 | BRN | 274 | 284 | 231.8 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 50 | 52 | 1.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 51 | 53 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 57 | 59 | 2.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 57 | 60 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 58 | 61 | 2.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 60 | 63 | 2.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 60 | 63 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 62 | 65 | 2.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 64 | 66 | 3.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 65 | 68 | 3.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 66 | 70 | 4.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 68 | 71 | 3.8 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 68 | 71 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 68 | 70 | 4.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 69 | 73 | 4.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 69 | 72 | 4.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 71 | 73 | 6.6 | -- | 1.84 |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 72 | 77 | 4.8 | -- | 1.29 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 74 | 78 | 6.4 | -- | 1.58 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 75 | 78 | 5.4 | -- | 1.28 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 78 | 81 | 6.4 | -- | 1.35 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 80 | 84 | 6.4 | -- | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 89 | 94 | 8.8 | -- | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 110 | 114 | 14.2 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 115 | 123 | 18.4 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 115 | 119 | 19.0 | -- | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 116 | 123 | 17.4 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 120 | 127 | 20.8 | -- | 1.20 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 121 | 126 | 21.4 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 121 | 128 | 20.4 | -- | 1.15 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 123 | 130 | 21.6 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 124 | 130 | 20.2 | -- | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 126 | 133 | 22.4 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 127 | 134 | 22.6 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 127 | 135 | 24.0 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 128 | 133 | 23.2 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 135 | 142 | 30.6 | -- | 1.24 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 135 | 146 | 28.2 | -- | 1.15 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 137 | 145 | 31.4 | -- | 1.22 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 138 | 146 | 32.0 | -- | 1.22 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 139 | 148 | 31.6 | -- | 1.18 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 145 | 152 | 33.8 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 147 | 155 | 33.6 | -- | 1.06 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 147 | 158 | 36.8 | -- | 1.16 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 161 | 172 | 49.0 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 164 | 175 | 51.4 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 165 | 174 | 49.6 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 172 | 182 | 57.2 | -- | 1.12 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 178 | 186 | 63.8 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 180 | 191 | 51.2 | -- | 0.88 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 192 | 201 | 64.0 | -- | 0.90 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 199 | 209 | 86.2 | -- | 1.09 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 208 | 219 | 99.8 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 1 | BRN | 246 | 255 | 165.4 | -- | 1.11 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 48 | 50 | 1.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 64 | 67 | 3.4 | -- | -- |

| Survey Date | Stream | Site | Segment | Pass No. | Species Code | Fork Length (mm) | Total Length (mm) | Weight (g) | Scale Sample ID | Fulton's Condition Factor (k-Value)[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 66 | 70 | 4.6 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 73 | 76 | 4.8 | -- | 1.23 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 112 | 119 | 17.4 | -- | 1.24 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 116 | 123 | 19.8 | -- | 1.27 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 125 | 134 | 23.6 | -- | 1.21 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 131 | 139 | 28.2 | -- | 1.25 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 147 | 155 | 36.0 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 152 | 157 | 28.0 | -- | 0.80 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 2 | BRN | 198 | 209 | 100.4 | -- | 1.29 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 49 | 51 | 1.2 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 64 | 66 | 3.4 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 64 | 67 | 3.0 | -- | -- |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 75 | 78 | 4.8 | -- | 1.14 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 80 | 84 | 5.8 | -- | 1.13 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 114 | 120 | 15.8 | -- | 1.07 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 122 | 130 | 21.2 | -- | 1.17 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 129 | 136 | 25.6 | -- | 1.19 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 181 | 191 | 65.2 | -- | 1.10 |
| 8/29/2025 | Mill Creek | MC-3 | Upper | 3 | BRN | 181 | 189 | 73.4 | -- | 1.24 |

-- = no data; BK = brook trout; BRN = brown trout; g = gram; mm = millimeter

Notes:

[a] Fish less than 70-millimeter fork length were excluded from k-value calculations due to the sensitivity of the scale during poor weather conditions.

# APPENDIX F
# FISH COMMUNITY SURVEY SITE PHOTOGRAPHS

**Figure F-1. Study AQ-1 Mill Creek Electrofishing Site MC-1, Upstream Net of Lower Segment, August 27, 2025. Photograph Looking Upstream.**

**Figure F-2. Study AQ-1 Mill Creek Electrofishing Site MC-1, Downstream Net of Lower Segment, August 27, 2025. Photograph Looking Upstream.**

**Figure F-3. Study AQ-1 Mill Creek Electrofishing Site MC-1, Downstream Net of Upper Segment, August 27, 2025. Photograph Looking Upstream.**

**Figure F-4. Study AQ-1 Mill Creek Electrofishing Site MC-1, Upstream Net of Upper Segment. Photograph Looking Upstream, August 27, 2025.**

**Figure F-5. Study AQ-1 Mill Creek Electrofishing Site MC-1, Overview of Upper Segment, August 27, 2025. Photograph Looking Downstream.**

**Figure F-6. Study AQ-1 Mill Creek Electrofishing Site MC-1, Overview of Upper Segment, August 27, 2025. Photograph Looking Upstream.**

**Figure F-7. Study AQ-1 Mill Creek Electrofishing Site MC-1, Overview of Lower Segment, August 27, 2025. Photograph Looking Downstream.**

**Figure F-8. Study AQ-1 Mill Creek Electrofishing Site MC-1, Site Overview of Lower Segment, August 27, 2025. Photograph Looking Upstream.**

**Figure F-9. Study AQ-1 Mill Creek Electrofishing Site MC-2, Upstream Net of Lower Segment. Photograph Looking Upstream, August 28, 2025.**

**Figure F-10. Study AQ-1 Mill Creek Electrofishing Site MC-2, Downstream Net of Lower Segment, August 28,2025. Photograph Looking Upstream.**

**Figure F-11. Study AQ-1 Mill Creek Electrofishing Site MC-2, Upstream Net of Upper Segment, August 28, 2025. Photograph Looking Downstream.**

**Figure F-12. Study AQ-1 Mill Creek Electrofishing Site MC-2, Downstream Net of Upper Segment, August 28, 2025. Photograph Looking Upstream.**

**Figure F-13. Study AQ-1 Mill Creek Electrofishing Site MC-2, Overview of Upper Segment, August 28, 2025. Photograph Looking Downstream.**

**Figure F-14. Study AQ-1 Mill Creek Electrofishing Site MC-2, Overview of Upper Segment, August 28, 2025. Photograph Looking Downstream.**

**Figure F-15. Study AQ-1 Mill Creek Electrofishing Site MC-2, Overview of Lower Segment, August 28, 2025. Photograph Looking Downstream.**

**Figure F-16. Study AQ-1 Mill Creek Electrofishing Site MC-2, Overview of Lower Segment, August 28, 2025. Photograph Looking Downstream.**

**Figure F-17. Study AQ-1 Mill Creek Electrofishing Site MC-3, Upstream Net of Lower Segment, August 29, 2025. Photograph Looking Downstream.**

**Figure F-18. Study AQ-1 Mill Creek Electrofishing Site MC-3, Downstream Net of Lower Segment, August 29, 2025. Photograph Looking Upstream.**

**Figure F-19. Study AQ-1 Mill Creek Electrofishing Site MC-3, Upstream Net of Upper Segment, August 29, 2025. Photograph Looking Upstream.**

**Figure F-20. Study AQ-1 Mill Creek Electrofishing Site MC-3, Downstream Net of Upper Segment, August 29, 2025. Photograph Looking Downstream.**

**Figure F-21. Study AQ-1 Mill Creek Electrofishing Site MC-3, Overview of Upper Segment, August 29, 2025. Photograph Looking Downstream.**

**Figure F-22. Study AQ-1 Mill Creek Electrofishing Site MC-3, Overview of Upper Segment, August 29, 2025. Photograph Looking Downstream.**

**Figure F-23. Study AQ-1 Mill Creek Electrofishing Site MC-3, Overview of Lower Segment, August 29, 2025. Photograph Looking Upstream.**

**Figure F-24. Study AQ-1 Mill Creek Electrofishing Site MC-3, Overview of Lower Segment, August 29, 2025. Photograph Looking Downstream.**

# APPENDIX G
# LUNDY LAKE FISH CAPTURE DATA

## Table G-1. Study AQ-1 Lundy Lake Fish Capture Data, August 2025

| Date | Reservoir | Site | Sample Method (e-fish/ gillnet) | Sample Period (day/night) | Fish Species | Fork Length (mm) | Total Length (mm) | Weight (g) | Fulton's Condition Factor (k-value) | Scale Sample ID | Origin (wild / hatchery) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Day | -- | -- | -- | -- | -- | -- | -- |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Day | BRN | 171 | 179 | 52.5 | 1.05 | BRN-L1 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Day | BRN | 306 | 317 | 317.6 | 1.11 | BRN-L2 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Day | BRN | 281 | 294 | 267.4 | 1.21 | BRN-L3 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Day | RBT | 359 | 370 | 462.4 | 1.00 | RBT-L1 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Day | MW | 248 | 267 | 225.6 | | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Day | BRN | 290 | 303 | 238.8 | 0.98 | BRN-L4 | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Day | BRN | 276 | 288 | 216.5 | 1.03 | BRN-L5 | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Day | -- | -- | -- | -- | -- | -- | -- |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Day | MW | 260 | 278 | 228.8 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Day | MW | 229 | 245 | 184.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Day | BRN | 490 | 508 | 1750 | 1.49 | BRN-L6 | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | MW | 125 | 138 | 30.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | MW | 118 | 126 | 25 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | MW | 108 | 116 | 17.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | BRN | 250 | 266 | 170 | 1.09 | BRN-L7 | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | BRN | 269 | 285 | 206.2 | 1.06 | BRN-L8 | Wild |
| 8/25/2025 | Lundy Lake | LL-1J | Gillnet | Night | BRN | 288 | 302 | 226.2 | 0.95 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 215 | 230 | 141.8 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 198 | 215 | 121.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 170 | 181 | 79.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 380 | 396 | 706 | 1.29 | BRN-L10 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 274 | 290 | 195 | 0.95 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 274 | 290 | 221.2 | 1.08 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 305 | 318 | 305.2 | 1.08 | BRN-L9 | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 265 | 279 | 188.2 | 1.01 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 266 | 279 | 203.2 | 1.08 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 270 | 286 | 204 | 1.04 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 195 | 208 | 114 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 276 | 290 | 236 | 1.12 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 180 | 193 | 98.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | MW | 180 | 195 | 95.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 278 | 290 | 197.4 | 0.92 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-1A | Gillnet | Night | BRN | 238 | 252 | 159.2 | 1.18 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 252 | 265 | 162 | 1.01 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 204 | 215 | 94.4 | 1.11 | BRN-L11 | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 265 | 275 | 182.6 | 0.98 | -- | Wild |

| Date | Reservoir | Site | Sample Method (e-fish/ gillnet) | Sample Period (day/night) | Fish Species | Fork Length (mm) | Total Length (mm) | Weight (g) | Fulton's Condition Factor (k-value) | Scale Sample ID | Origin (wild / hatchery) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 250 | 265 | 178.4 | 1.14 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 261 | 271 | 173 | 0.97 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2A | Gillnet | Night | BRN | 175 | 184 | 58 | 1.08 | BRN-L12 | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 95 | 103 | 12.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 130 | 140 | 30.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 120 | 130 | 23.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | BRN | 249 | 261 | 175.2 | 1.13 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | BRN | 266 | 279 | 200.2 | 1.06 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 135 | 145 | 37.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 130 | 140 | 34.8 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 110 | 121 | 25.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 99 | 105 | 13.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 90 | 100 | 12.6 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 130 | 139 | 34.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 126 | 134 | 31.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 100 | 109 | 13.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 111 | 119 | 21.6 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-2J | Gillnet | Night | MW | 137 | 146 | 39 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 252 | 266 | 163 | 1.02 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 280 | 296 | 224.8 | 1.02 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | MW | 100 | 109 | 13.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 259 | 275 | 179.6 | 1.03 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 254 | 268 | 175 | 1.07 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 294 | 307 | 273.6 | 1.08 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 270 | 286 | 212.2 | 1.08 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | BRN | 220 | 232 | 126.6 | 1.19 | BRN-L14 | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | MW | 110 | 120 | 20.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | MW | 105 | 110 | 13.2 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | MW | 110 | 119 | 21 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3J | Gillnet | Night | MW | 95 | 110 | 11.4 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | MW | 225 | 245 | 177 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 280 | 295 | 225.2 | 1.03 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | MW | 215 | 233 | 180 | -- | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 248 | 265 | 168.8 | 1.11 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 285 | 301 | 245.6 | 1.06 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 280 | 296 | 257.4 | 1.17 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 285 | 300 | 218.6 | 0.94 | -- | Wild |
| 8/25/2025 | Lundy Lake | LL-3A | Gillnet | Night | BRN | 256 | 267 | 166.2 | 0.99 | BRN-L13 | Wild |

| Date | Reservoir | Site | Sample Method (e-fish/ gillnet) | Sample Period (day/night) | Fish Species | Fork Length (mm) | Total Length (mm) | Weight (g) | Fulton's Condition Factor (k-value) | Scale Sample ID | Origin (wild / hatchery) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/26/2025 | Lundy Lake | LL-EF1 | E-Fish | Night | -- | -- | -- | -- | -- | -- | -- |
| 8/26/2025 | Lundy Lake | LL-EF2 | E-Fish | Night | BRN | 146 | 153 | 32.4 | 1.04 | BRN-15 | Wild |
| 8/26/2025 | Lundy Lake | LL-EF2 | E-Fish | Night | BRN | 249 | 263 | 172.2 | 1.12 | BRN-16 | Wild |
| 8/26/2025 | Lundy Lake | LL-EF2 | E-Fish | Night | BRN | 265 | 281 | 191.8 | 1.03 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF2 | E-Fish | Night | BRN | 260 | 275 | 179 | 1.02 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF2 | E-Fish | Night | MW | 195 | 209 | 110.8 | -- | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 275 | 289 | 212.4 | 1.02 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 261 | 275 | 198.6 | 1.12 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 205 | 219 | 92 | 1.07 | BRN-17 | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 120 | 130 | 20.4 | 1.18 | BRN-18 | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | MW | 89 | 100 | 11.6 | -- | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 265 | 280 | 196.6 | 1.06 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | MW | 78 | 86 | 7.6 | -- | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 155 | 166 | 42.2 | 1.13 | BRN-19 | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | BRN | 270 | 285 | 200.4 | 1.02 | -- | Wild |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | RBT | 302 | 319 | 288.2 | 1.05 | RT-01 | Hatchery |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | RBT | 294 | 308 | 285.8 | 1.12 | RT-02 | Hatchery |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | RBT | 388 | 405 | 642.2 | 1.10 | RT-03 | Hatchery |
| 8/26/2025 | Lundy Lake | LL-EF3 | E-Fish | Night | RBT | 402 | 420 | 758.8 | 1.17 | RT-04 | Hatchery |

-- = no data; BRN = brown trout; e-fish = electrofish; g = gram; mm = millimeter; MW = mountain whitefish; RBT = rainbow trout

# APPENDIX H
# LUNDY LAKE WATER QUALITY DATA

## Table H-1.  Study AQ-1 Lundy Lake Water Quality Data, August 2025

| Reservoir | Site | Gear Type | Sample Period (Day/Night) | Water Temperature (°C) | Dissolved Oxygen | | Specific Conductivity (µS/cm) | pH (s.u.) | Water Depth (feet) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (%)[a] | (mg/L) | | | Max | Avg | Min |
| Lundy Lake | LL-1J | Gillnet | Day | 17.5 | -- | -- | 67 | 7.5 | 35 | 20 | 10 |
| Lundy Lake | LL-1A | Gillnet | Day | 17.5 | -- | -- | 67 | 7.5 | 43 | 30 | 15 |
| Lundy Lake | LL-2A | Gillnet | Day | 17.5 | -- | -- | 67 | 7.5 | 35 | 25 | 10 |
| Lundy Lake | LL-2J | Gillnet | Day | 17.5 | -- | -- | 67 | 7.5 | 20 | 15 | 13 |
| Lundy Lake | LL-3J | Gillnet | Day | 17.7 | -- | -- | 67 | 7.6 | 25 | 15 | 10 |
| Lundy Lake | LL-3A | Gillnet | Day | 17.6 | -- | -- | 67 | 7.6 | 28 | 20 | 12 |
| Lundy Lake | LL-1J | Gillnet | Night | 17.2 | -- | -- | 67 | 7.7 | 26 | 20 | 12 |
| Lundy Lake | LL-1A | Gillnet | Night | 17.2 | -- | -- | 67 | 7.7 | 42 | 30 | 15 |
| Lundy Lake | LL-2A | Gillnet | Night | 17.3 | 108 | 7.8 | 67 | 7.6 | 40 | 30 | 13 |
| Lundy Lake | LL-2J | Gillnet | Night | 17.2 | 108 | 7.8 | 67 | 7.6 | 20 | 15 | 13 |
| Lundy Lake | LL-3J | Gillnet | Night | 17.2 | 108 | 7.8 | 67 | 7.7 | 25 | 15 | 10 |
| Lundy Lake | LL-3A | Gillnet | Night | 17.3 | 108 | 7.8 | 67 | 7.7 | 28 | 20 | 10 |
| Lundy Lake | LL-EF1 | E-Fish | Night | 16.8 | 108 | 7.9 | 67 | 7.6 | 10 | 5 | 2 |
| Lundy Lake | LL-EF2 | E-Fish | Night | 16.7 | 110 | 8.0 | 67 | 7.6 | 10 | 5 | 2 |
| Lundy Lake | LL-EF3 | E-Fish | Night | 16.6 | 107 | 7.8 | 67 | 7.6 | 6 | 5 | 2 |

-- = no data; % = percent saturation; °C = degrees Celsius; µs/cm = microsiemens per centimeter; e-fish = electrofish; mg/L = milligrams per liter; s.u. = standard units

Note:

[a] Raw dissolved oxygen readings were corrected with temperature and local barometric pressure.

# 6.0 AQ-2 FISH STRANDING STUDY

## 6.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a fish stranding study in Mill Creek (between Lundy Dam and the Mill Creek Return Ditch [MCRD]) in areas with high stranding risk. In its January 2, 2025 SPD, FERC approved the *AQ-2 Fish Stranding Study Plan* (SCE, 2024). This section includes methods and preliminary results of the AQ-2 Fish Stranding Study (AQ-2 Study). All field components of AQ-2 Study were implemented in 2025, including site selection and water surface elevation monitoring. Analysis of the data is ongoing, and completed results will be summarized in a draft Technical Report that will inform the DLA.

## 6.2. REVIEW OF EXISTING INFORMATION

The risk of stranding is determined by multiple factors, including the life history of the species present, the magnitude and rate of surface water elevation change, and channel bed and bank configuration. The fish community within the study area was sampled periodically between 1986 and 1996 (EA, 1986, 1988; Sada and Knapp, 1993; CDFG, 1996). Non-native brown trout (*Salmo trutta*) were the most prevalent species downstream of the dam (CDFG, 1996). Rainbow trout (*Oncorhynchus mykiss*) were also found in Mill Creek downstream of the dam, albeit in much fewer numbers. Sterile rainbow trout accounted for most contemporary stocking efforts (2017–2022; CDFW, unpublished data).

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

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

## 6.3. STUDY OBJECTIVES

The goals of the AQ-2 Study are to identify areas of high-stranding risk for fish in Mill Creek between Lundy Dam and the MCRD and to assess stranding potential resulting from Project operations. The objectives of this study include the following:

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

### 6.3.1. STUDY AREA

The study area includes a 3.3-mile section of Mill Creek from Lundy Dam downstream to the MCRD confluence (i.e., Lundy Dam Bypass Reach). Locations of the six study sites were selected to represent the range of channel characteristics within the study area. One additional site was established downstream of the MCRD to assess stranding risk in lower Mill Creek.

## 6.4. METHODS

### 6.4.1. STUDY APPROACH

Three steps comprised the approach for this study: (1) site selection, (2) water surface elevation monitoring, and (3) evaluation of stranding risk.

### 6.4.2. SITE SELECTION

Available information (e.g., 2022 Light Detection and Ranging [LiDAR] data, hydrology, aerial photography) was used to evaluate stream channel and habitat characteristics in Mill Creek and inform site selection. Geomorphic reaches within the study area were identified by examining channel gradient, planform, dominant bed material, and valley-bottom confinement, which helped distinguish sub-reaches with varying geomorphic characteristics. These characteristics relate to differences in stream habitat and stranding risk, with steep and confined channels generally having lower stranding risk compared with low-gradient and less-confined channels.

Study sites were selected during a field reconnaissance effort on April 28 to May 1, 2025. The objective was to identify locations that were representative of the different geomorphic reaches within the study area, were distributed throughout the study area, and that represented the diversity of habitat present.

### 6.4.3. Water Surface Elevation Monitoring

Water surface elevation monitoring was conducted in two phases during summer 2025: the first phase included transect placement and stage recorder (HOBO Water Level Logger U20L-001-04) installation, and the second phase included data collection during target flow releases.

During the first phase of monitoring, conducted July 7–11, 2025, releases into Mill Creek were controlled at a safely wadable flow (approximately 10 cfs or less). One transect was established at each study site, and channel topography along the transect was surveyed within the bankfull channel, which included the wetted perimeter at the highest target flow (150 cfs). Transects were established in areas with representative habitat for the geomorphic reach that intersected locations of potentially high-stranding risk. Transects generally ran perpendicular to flow and extended to the top of both banks. At sites with more complex topography and hydraulics (e.g., within a beaver pond complex), transects were segmented (i.e., composed of multiple straight lines) to best characterize habitat conditions and stranding risk. Transect installation consisted of surveying cross-section topography along the transect and water surface reference elevations with a real-time kinematic global navigation satellite system or robotic total station (both instruments were used to survey). Cross-section topography surveys were conducted in sufficient detail (2.5-foot spacing on average) to accurately capture channel topography and characterize channel geometry, following standard survey procedures established by the U.S. Department of Agriculture, Forest Service (Harrelson et al. 1994). The cross-section surveys at each transect captured the bankfull elevation on both banks, the edge of water, and the thalweg elevation. Cross-section endpins consisting of capped rebar were installed on each bank as needed and surveyed to ensure sites could be reoccupied. Stage recorder locations and water surface elevation references were surveyed to correct water level data and document instrument positions.

During the second phase of monitoring, over a 7-day period (July 22–28, 2025) SCE released seven target flows that spanned the range of flows within SCE’s ability to control, from approximately 150 to 5 cfs (See Section 6.7). Target flow releases were changed each evening and allowed to stabilize overnight. Stream discharge was measured using a Teledyne RDI River Pro 1,200 kHz Acoustic Doppler Curren Profiler (ADCP) or Sontek Flowtracker at locations near the upstream and downstream ends of the study area during each target flow release. Stage recorders continuously documented changes in water surface elevation at each monitoring transect over the range of target flow releases. Water surface elevation was surveyed in areas along transects that became isolated or disconnected from conditions at the stage recorder, and opportunistic observations of fish stranding or entrapment were noted. Photographs were taken to document wetted channel conditions and aquatic habitat conditions at the different target flow releases in the vicinity of study sites, as well as conditions related to the risk of stranding or entrapment.

#### 6.4.4. Evaluation of Stranding Risk

The risk of stranding or entrapment associated with changes in water surface elevation between target flows was evaluated for each site by calculating the percentage of wetted perimeter that was dewatered along transects at each site. Wetted perimeter at 150 cfs was assumed to be 100 percent because this flow rate is the maximum controlled flow release at Lundy Dam and was the highest flow monitored during the study.

Because bank slope is also a strong determinant of stranding risk (Crew et al., 2017), the bank slope of inundated wetted perimeters that was dewatered between each target flow was also characterized for each site. For each cross section and flow change, the slope of each surveyed segment within the wetted perimeter was calculated and assigned to one of four categories: 0–1 percent, 1–3 percent, 3–6 percent, and greater than 6 percent. The percentage by length of segments within each slope category were calculated for each target flow step. These percentages were summarized for each cross section and visualized as stacked bar charts across the range of flows.

Bed substrate characteristics and the presence of complex structure (e.g., woody debris, vegetation) are also determinants of stranding risk and were documented for each site.

In addition to taking measurements of water surface elevation and channel topography, which was used to evaluate stranding risk potential based on physical channel characteristics, opportunistic visual surveys for stranded fish were conducted at each site across the range of flows targeted during the study period.

#### 6.4.5. Incidental Observations

Any incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) during Project studies were noted (including location information) and reported in Section 6.7.4.

### 6.5. Study Plan Modifications

SCE is not proposing any modifications to AQ-2 as approved by FERC in its SPD (FERC, 2025).

### 6.6. Variances to Approved Methods

SCE encountered the following variances when implementing the AQ-2 study plan as approved by FERC in its SPD (FERC, 2025):

- Prior to field data collection, the target flow release schedule was changed from the example provided in the Revised Study Plan based on additional input from SCE operators and stakeholders to better reflect flow release steps that may be expected during typical operations when down-ramping from the maximum controlled release of 150 cfs to approximately 5 cfs (Table 6.6-1).

- March through April 2025 – SCE coordination with Robert Di Paolo (Mono Lake Committee), Bartshe Miller (Mono Lake Committee), Graham Meese (CDFW), and Ryan Cooper (CDFW) to revise the Target Flow Release Schedule as described in Section 6.7.

- In addition, in consultation with CDFW and stakeholders, opportunistic visual surveys were performed to locate fish that became entrapped during the study and could be susceptible to stranding, and when possible to relocate these fish to perennial habitats. Visual surveys were conducted in the vicinity of study sites and expanded to include sections of Reaches 8 and 9 near Mono City.
  - July 17, 2025 – Web meeting with Graham Meese (CDFW) to review field plan for stranding study prior to implementation. Discussed the potential for stranding in reaches downstream of Highway 395 and CFDW requested field crew to bring equipment (e.g., dip nets) to relocate fish in case fish were observed stranded or entrapped.

- July 22–28, 2025 – correspondence with Graham Meese (CDFW) via phone to provide updates on visual observation surveys near Mono City.

**Table 6.6-1. Target Flow Modification**

| Sampling Day | Flow Target in FERC-approved Study Plan (cfs) | Revised Flow Target (cfs) |
|---|---|---|
| Day 1 | 150 | 150 |
| Day 2 | 100 | 110 |
| Day 3 | 65 | 70 |
| Day 4 | 40 | 30 |
| Day 5 | 25 | 20 |
| Day 6 | 12 | 10 |
| Day 7 | 5 | 5 |

cfs = cubic feet per second

## 6.7. RESULTS

### 6.7.1. SITE SELECTION

Nine geomorphic reaches were identified in Mill Creek from Lundy Dam to Mono Lake, including six reaches within the study area and three reaches in lower Mill Creek downstream of the study area (Figure 6.7-1, Table 6.7-1). Seven study sites were identified during field reconnaissance, including six within the study area and one in lower Mill Creek (Figure 6.7-1, Table 6.7-1).

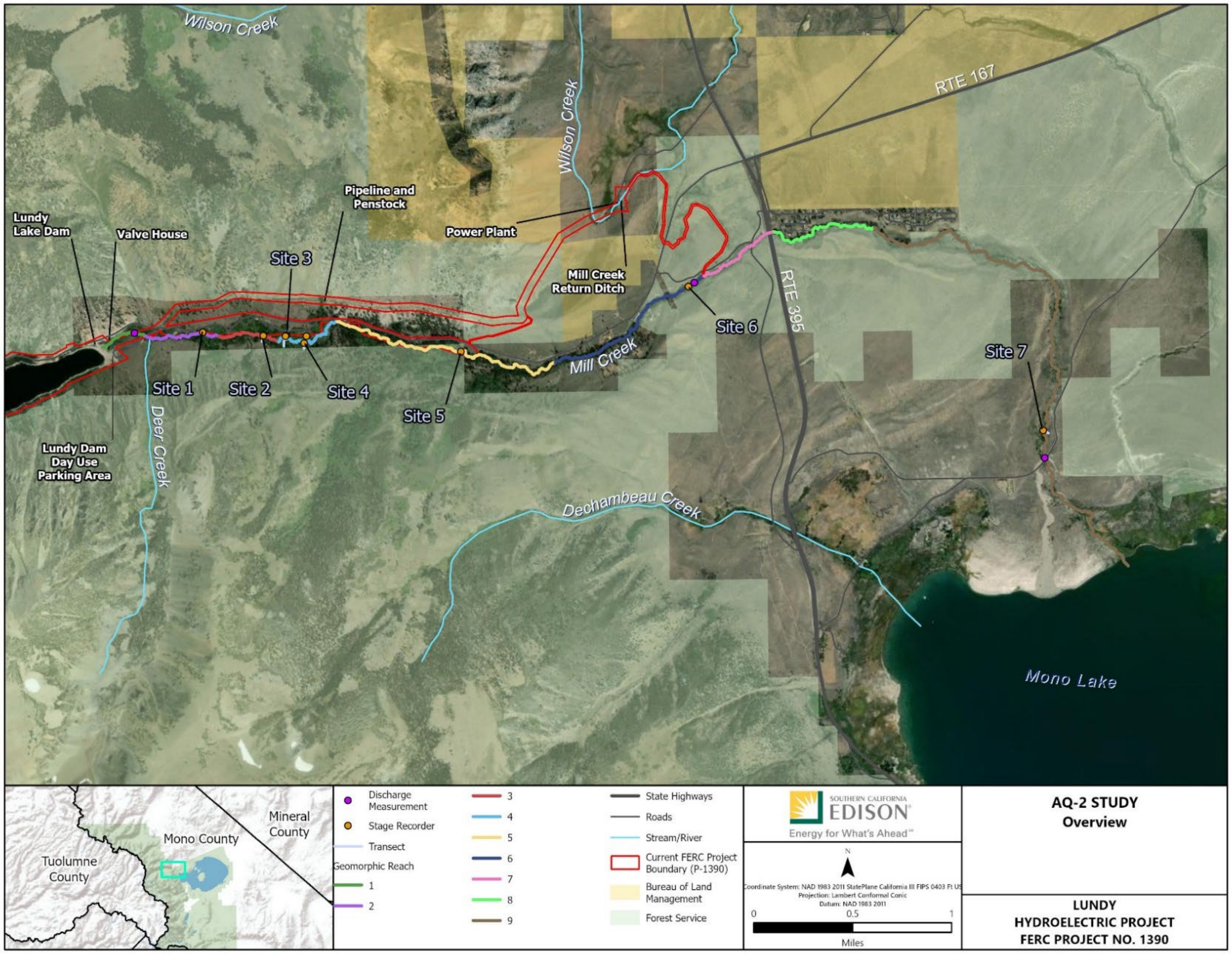



**Figure 6.7-1. Mill Creek Stranding Risk Study Sites, 2025.**

## Table 6.7-1. 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 |
| 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 Highway 395 crossing, disturbed reach that is highly influenced by Highway 395 alteration | None |
| 8 | 25,279 ft (4.8 mi) | 29,396 ft (5.6 mi) | 3.3 | 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

### 6.7.2. Stranding Risk

Site-specific water surface elevation data and transect topography collected during the study were used to evaluate stranding risk. Relationships were developed between target flows and the proportion of channel cross-sectional length that became dewatered or disconnected between each target flow. Stream discharge measurements were collected at each target flow and indicated that flow releases were close to the targets. Target flows and measured observed flows at Mill Creek below Lundy Dam (USGS gage No. 10287069) for periods when field surveys were performed during the study are presented in Table 6.7-2.

**Table 6.7-2. Target Flows and Observed Flows During the Study Period**

| Sampling Date (2025) | Flow Target (cfs) | Observed Flow (cfs)[a] |
|---|---:|---:|
| 7/22 | 150 | 147 |
| 7/23 | 110 | 116 |
| 7/24 | 70 | 75 |
| 7/25 | 30 | 28 |
| 7/26 | 20 | 15 |
| 7/27 | 10 | 9 |
| 7/28 | 5 | 5 |

cfs = cubic feet per second
[a] Observed flows were calculated as the average of 15-minute discharge data collected at Mill Creek below Lundy Dam between 8:00 and 16:00 each day.

#### 6.7.2.1. Site 1

Site 1 was the most upstream sampling location and located within Reach 2, approximately 1,300 feet downstream of the confluence of Deer Creek and Mill Creek and USGS Gage No. 10287069 (Figure 6.7-1). The reach was characterized by a confined valley bottom and steep bank slopes (Table 6.7-1). Channel bed material was dominated by gravel (50 percent) and cobble (40 percent) substrates. Instream and riparian zones were heavily structured with small and large wood and both woody (e.g., willow) and herbaceous (e.g., grasses and sedges) vegetation (Appendix I). Water was generally contained within the active channel width at 150 and 110 cfs; however, some bank overtopping created a few areas of low-velocity habitat (Appendix I).

Changes in wetted perimeter were greatest from 110 to 30 cfs (Figure 6.7-2 and Figure 6.7-3). Most dewatered habitat along the transect was relatively high gradient (greater than 6 percent), indicating relatively low stranding risk (Figure 6.7-4). High stranding risk habitat (from 0 to 1 percent gradient) occurred between 70 and 30 cfs (Figure 6.7-2 through Figure 6.7-4). No fish were observed stranded or entrapped at Site 1 during the 7-day study period. Overall, stranding risk in Reach 2 appeared to be low due to relatively steep banks and a single thread channel.

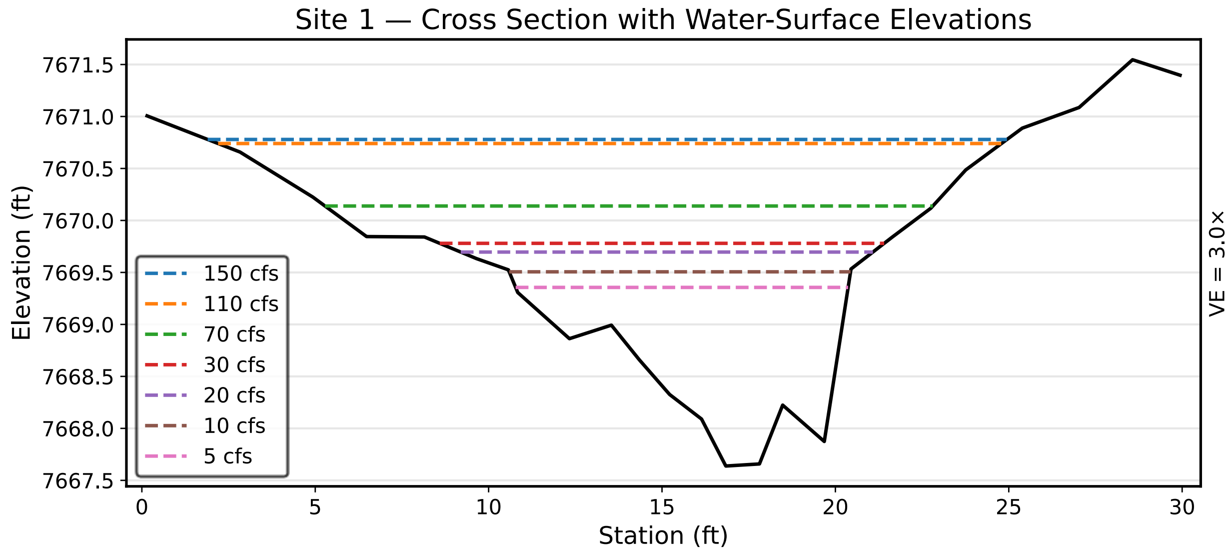
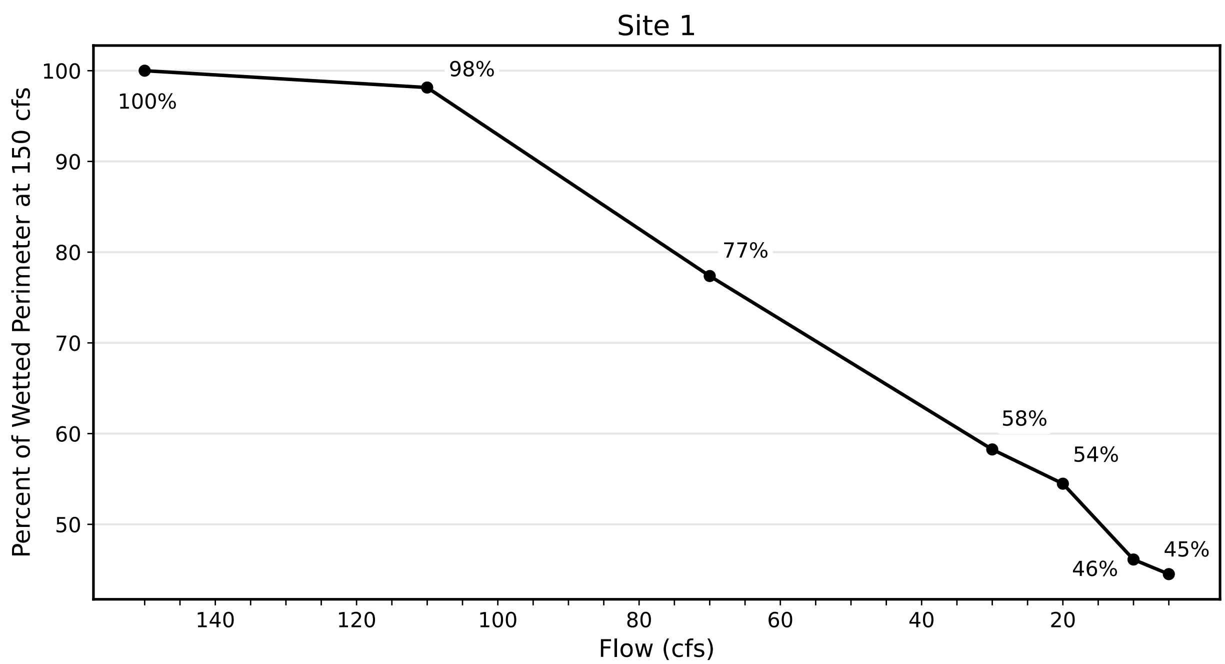



**Figure 6.7-2. Channel Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 1, July 2025.**




Notes: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

**Figure 6.7-3. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 1, July 2025.**

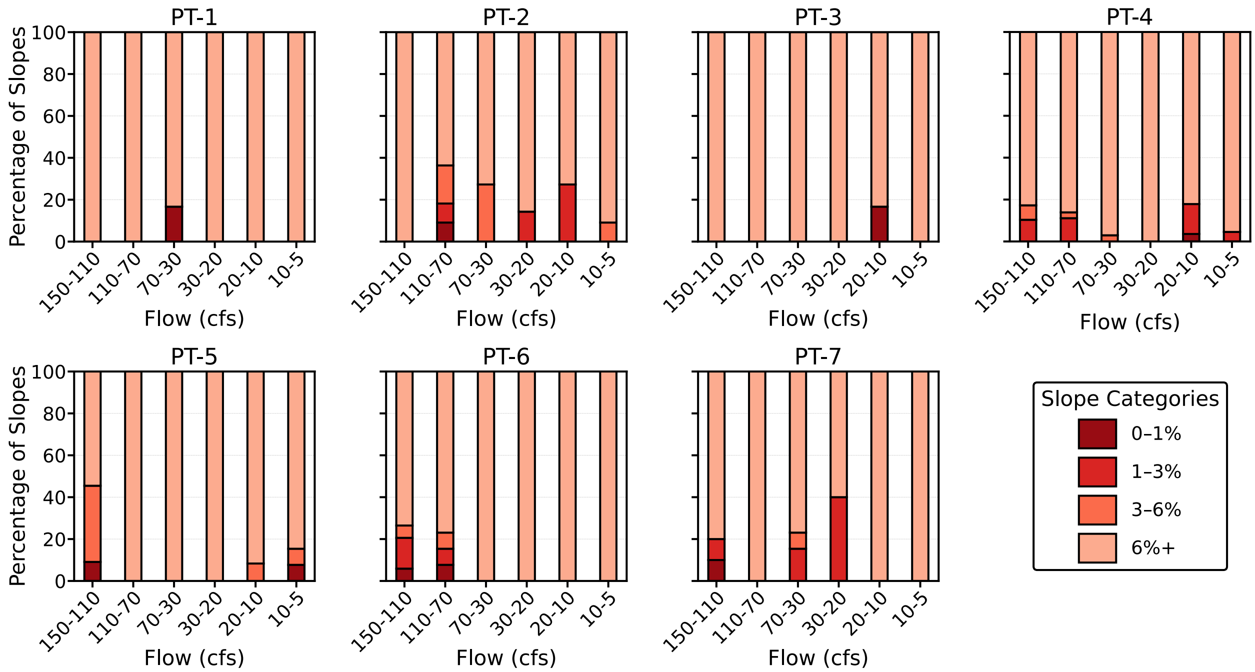


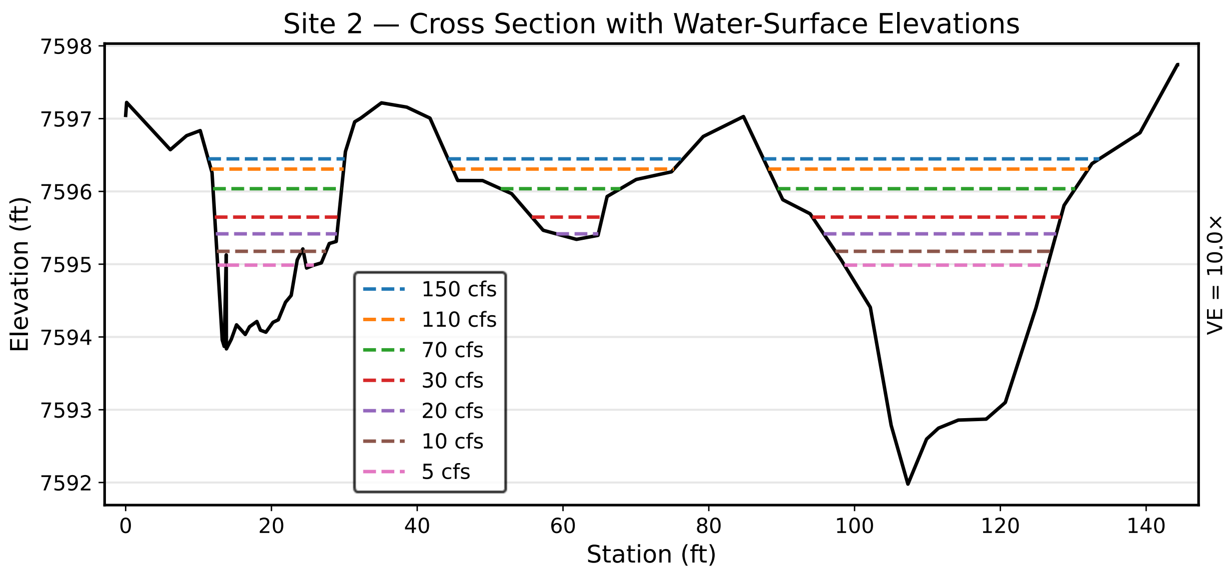

**Figure 6.7-4. Proportion (percent) of Transect Wetted Perimeter Within Slope Categories that Corresponds to Stranding Risk and Was Dewatered Between Target Flows During Down-Ramping for Each Site, July 2025.**

### 6.7.2.2. Site 2

Site 2 was located within Reach 3, approximately 700 feet upstream of a beaver pond complex (Figure 6.7-1). The reach was characterized by a wider valley bottom than Reaches 1 and 2 and a more complex channel planform with multiple flow paths (Table 6.7-1). Channel bed material was dominated by gravel (50 percent) and cobble (50 percent), with minimal instream vegetation. A backwater side channel was present downstream of Site 2 at flows above 30 cfs, which provided low-velocity habitat that was heavily structured (Appendix I).

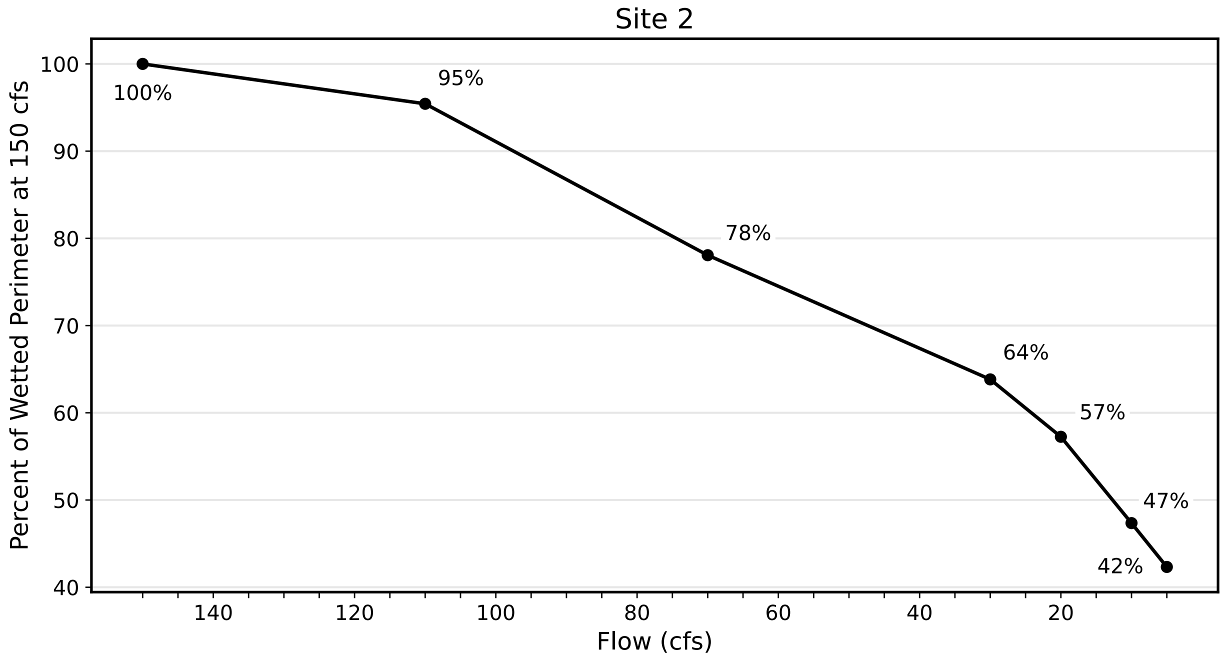
Two side-channels were present along river right of the main channel. These side-channels were heavily structured with instream vegetation and large wood and were dominated by gravel and cobble substrates (Appendix I). Flow velocity in the side channels was slower relative to the main channel. Flow in the main channel was mostly confined to the active channel width at 150 and 110 cfs. The middle side channel, which was relatively shallow and only marginally incised, was reduced to a series of disconnected pools and rifles at 110 cfs and was mostly dewatered at 70 cfs. Continuous surface flow in the river right-most side channel persisted down to 30 cfs, at which the upstream point of connection to the main channel dewatered and presented a barrier to fish movement. However, the downstream end of the river right-most side channel remained connected to the main channel down to 5 cfs.

Changes in wetted perimeter between target flows at Site 2 were greatest from 110 to 30 cfs (Figure 6.7-5 and Figure 6.7-6) and most pronounced in the side channels between transect stationing 40 to 80 feet and 85 to 135 feet. Habitat with high to moderate potential stranding risk (from 0 to 6 percent gradient) occurred between 110 and 5 cfs (Figure 6.7-4). No fish were observed stranded or entrapped at Site 2 during the 7-day study period. Overall, stranding risk in Reach 3 appeared to be low to moderate due to multiple channels with relatively steep banks and complex habitat and flow paths.




Note: The vertical axis is exaggerated by a factor of 10 to facilitate readability.

**Figure 6.7-5. Channel Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 2, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

**Figure 6.7-6. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 2, July 2025.**

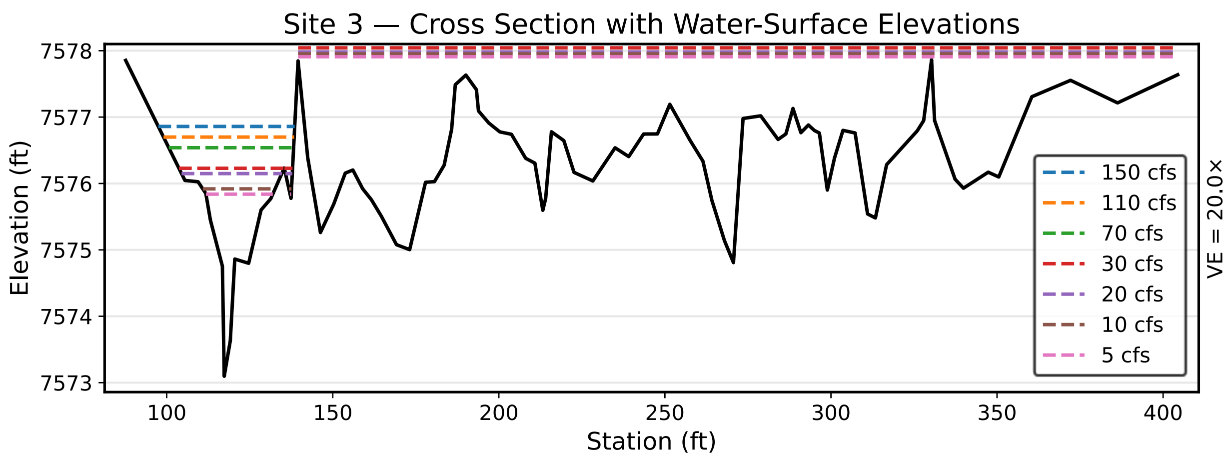
#### 6.7.2.3. Site 3

Site 3 was located within Reach 4, which was characterized by a wide valley bottom that supported an extensive complex of beaver dams and ponds intermixed with short, low-gradient stream sections (Figure 6.7-1; Table 6.7-1). The valley bottom in Reach 4 expanded substantially from the relatively narrow and confined reaches upstream. The transect at Site 3 was located immediately upstream of a single, large beaver dam that impounded and slowed water across the majority of valley bottom. Stream banks were relatively low-gradient, and the channel bed material was composed primarily of fine sediment (80 percent) in ponded areas. Gravel substrate was confined to areas with more concentrated flow and accounted for approximately 12 percent of the bed material at Site 3. In addition to the beaver dams, stands of dead willow and small and large wood accumulations contributed to habitat complexity within the reach (Appendix I).

Changes in wetted perimeter between target flows were minimal in the beaver pond, which occupied most of the site and the transect. The transect included a relatively small stream channel along the river left bank (between stationing 100 to 145 feet) (Figure 6.7-7 and Figure 6.7-8). Minor changes in wetted perimeter at the river left channel were observed between target flows, with the most pronounced change occurring from 20 to 10 cfs (Figure 6.7-7 and Figure 6.7-8).

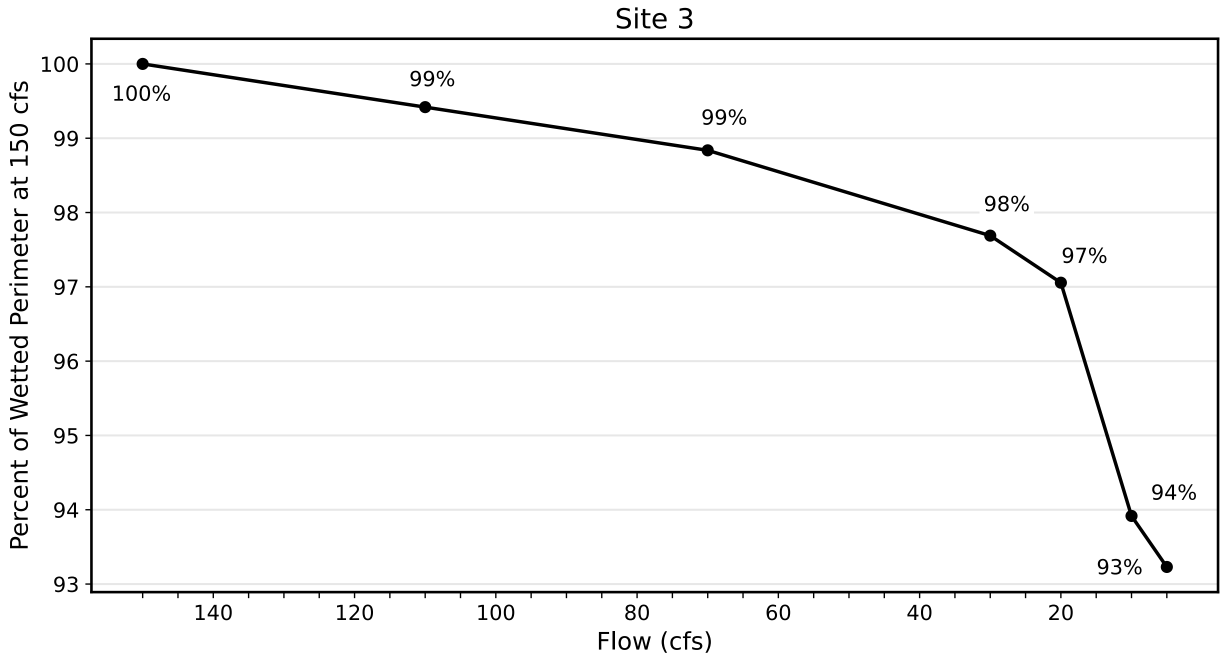
Overall, stranding potential was low in the beaver pond because the pond remained "full" with relatively little change in water surface elevation. Dewatered habitat with relatively high stranding risk at Site 3 was limited to areas with low gradient (0 percent to 1 percent) on the left bank of the small channel, which occurred between 20 and 10 cfs (Figure 6.7-4). Downstream of the beaver pond (and transect), an isolated pool formed at 5 cfs. When spill from the upstream beaver pond ceased, the pool became disconnected, creating potential for fish entrapment (Appendix I).

Hundreds of salmonids of multiple size classes were visually observed at Site 3 during field surveys, but no fish were observed stranded or entrapped during the 7-day study period.




Note: The vertical axis is exaggerated by a factor of 20 to facilitate readability.

**Figure 6.7-7. Channel-Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 3, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

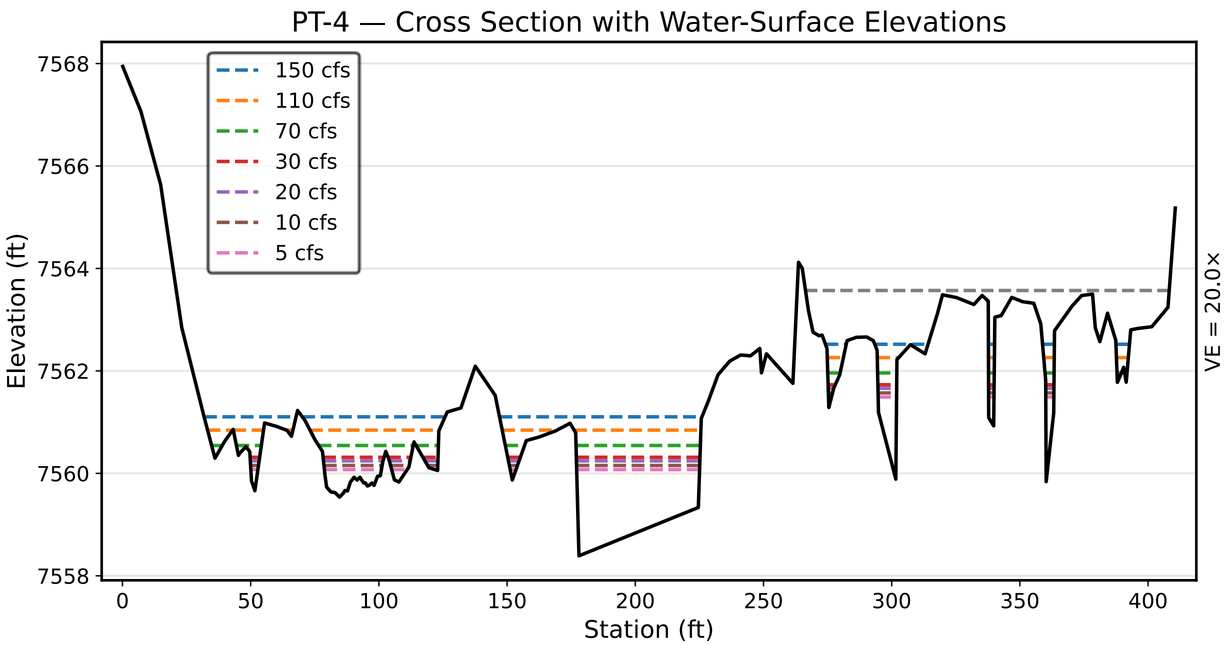
**Figure 6.7-8. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 3, July 2025.**

#### 6.7.2.4. Site 4

Site 4 was located within Reach 4, approximately 600 feet downstream of Site 3 (Figure 6.7-1; Table 6.7-1). Site 4 was composed of a series of smaller beaver dams, compared with the one large beaver dam at Site 3, each with unique pond configurations within the greater beaver pond complex. The beaver pond complex was bordered by a series of runs and riffles along river left. Channel bed material was dominated by gravel (54 percent) and cobble (34 percent) substrates, with interspersed patches of fine sediments (12 percent). Beaver dams, willow stands, small and large wood accumulations, and patches of inundated sedges provided structural complexity to aquatic habitats near Site 4 (Appendix I).

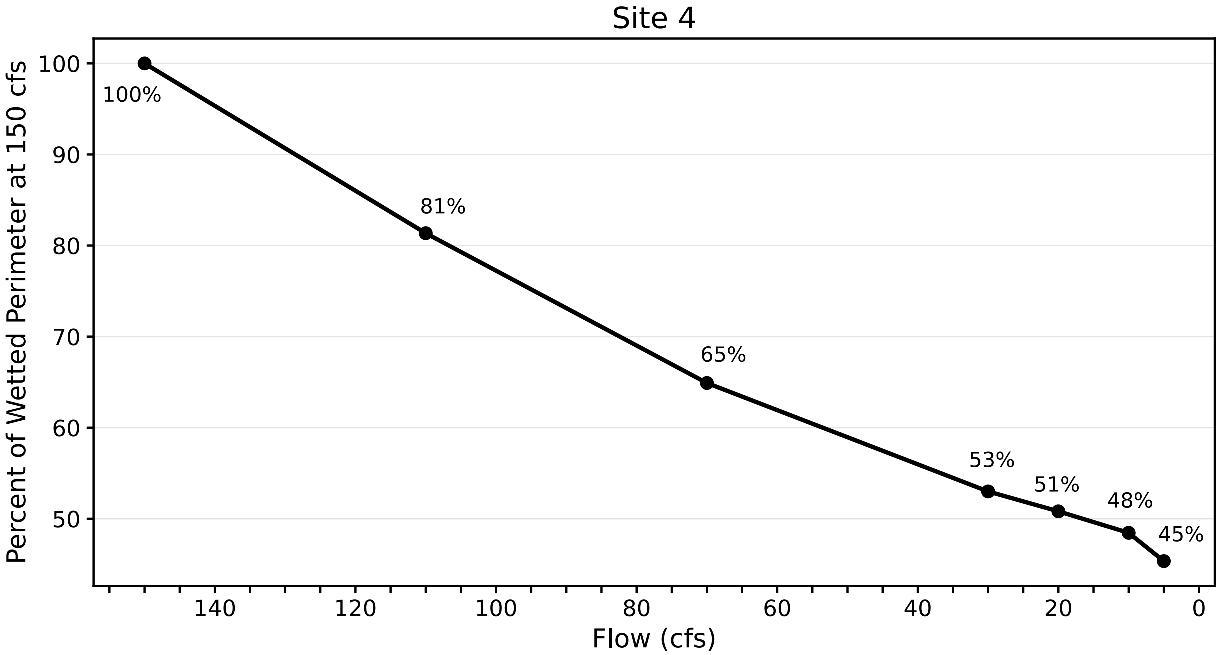
Changes in wetted perimeter between target flows at Site 4 were generally consistent across the range of target flows evaluated (150 to 5 cfs) (Figure 6.7-9 and Figure 6.7-10). Areas of moderate to high stranding risk (bank slopes less than 6 percent) were observed at Site 4 between 150 and 30 cfs and between 20 and 5 cfs, with the greatest stranding risk observed between 150 and 70 cfs and 20 to 10 cfs (Figure 6.7-4).

On the day before Day 1 of the flow evaluation (see Table 6.7-2), the flow release from Lundy Dam was increased to the maximum target flow release of 150 cfs and held at this level through most of the day and overnight. During this initial flow release period, a series of beaver dams near Site 4 failed, which resulted in a rapid decrease in water surface elevation over a relatively large area that was previously inundated. In total, approximately 158 individual fish were observed entrapped in small pools generally associated with the beaver dams (Appendix I). When and where possible, rescue attempts were made to return fish to perennial habitats.




Note: The vertical axis is exaggerated by a factor of 20 to facilitate readability. The gray dashed line between stations 260 and 400 is the estimated water surface elevation of the beaver pond at Site 4 before a series of beaver dams failed. The water surface elevation of target flows is imputed between stations 260 and 400 feet.

**Figure 6.7-9. Channel Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 4, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

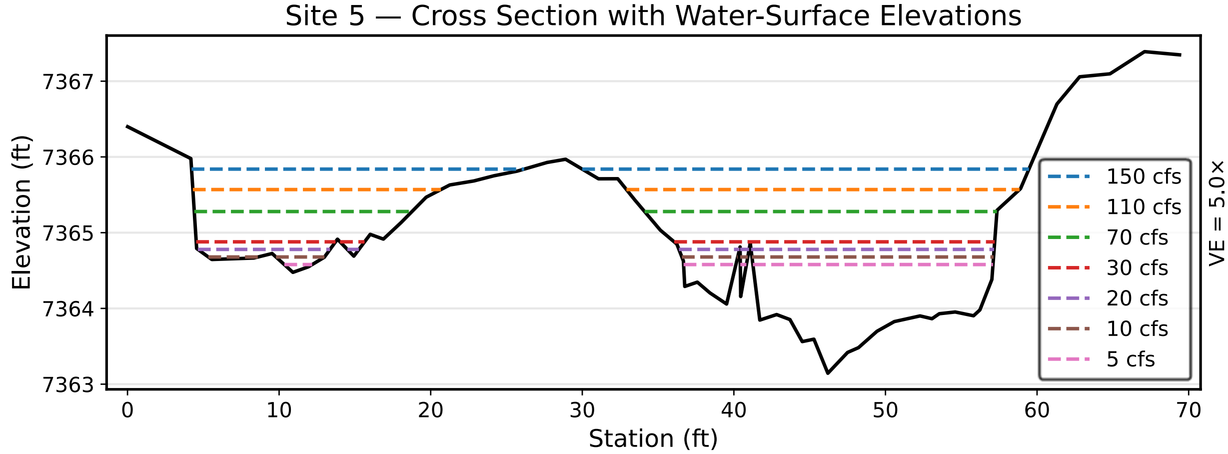
**Figure 6.7-10. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 4, July 2025.**

### 6.7.2.5. Site 5

Site 5 was located within Reach 5, approximately 3,600 feet downstream of the beaver pond complex (Figure 6.7-1). This site was characterized by a steep channel gradient, a narrow valley bottom, and two channels (one on each side of the valley) that were confined by steep valley walls (Table 6.7-1). The main channel occurred along the river right valley wall, and a side channel along the river left valley wall supported continuous surface flow at the higher target flows (greater than or equal to 70 cfs). The channel bed material at Site 5 was dominated by gravel (25 percent) and cobble (23 percent) with interspersed boulders (15 percent), and with patches fine sediment (37 percent). Site 5 had abundant riparian and instream vegetation in addition to large and small wood accumulations that contributed to aquatic habitat complexity (Appendix I).

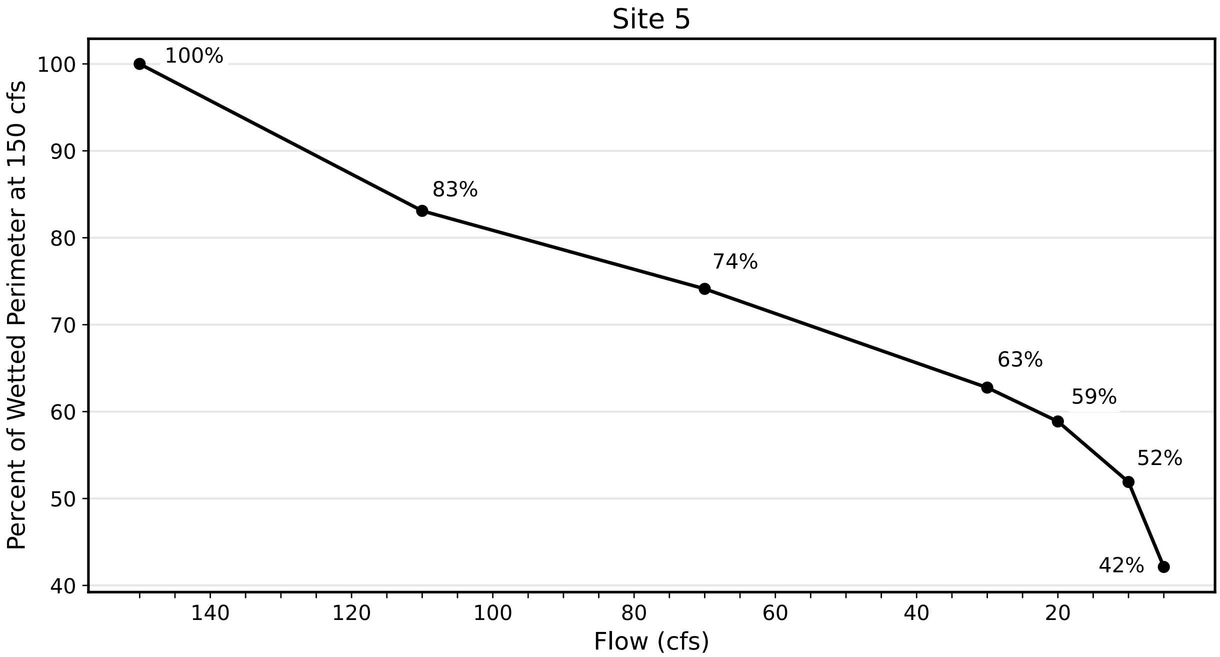
Changes in wetted perimeter between target flows at Site 5 were relatively high from 20 to 5 cfs and to a lesser extent from 150 to 110 cfs and from 30 to 20 cfs (Figure 6.7-11 and Figure 6.7-12). The left bank side channel at Site 5 accounted for the greatest risk of stranding and entrapment. Surface flow in the side channel became intermittent when flows dropped to 70 cfs, and below 70 cfs, most surface flows in the side channel dried, except for an isolated pool that was located along the Site 5 transect (Appendix I). Habitat with moderate to high (from 0 to 6 percent gradient) potential stranding risk occurred between 150 to 110 cfs and 20 to 5 cfs (Figure 6.7-4). Stranding risk at Site 5 was relatively low between 110 to 20 cfs, as dewatered banks had greater than 6 percent gradients (Figure 6.7-4).

There were no fish observed stranded or entrapped in Site 5 during the 7-day study period. Overall, stranding risk in Reach 5 appeared to be low to moderate due to frequent high-flow side channels with relatively steep banks and complex habitat along margins.




Note: The vertical axis is exaggerated by a factor of 5 to facilitate readability.

**Figure 6.7-11. Channel Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 5, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

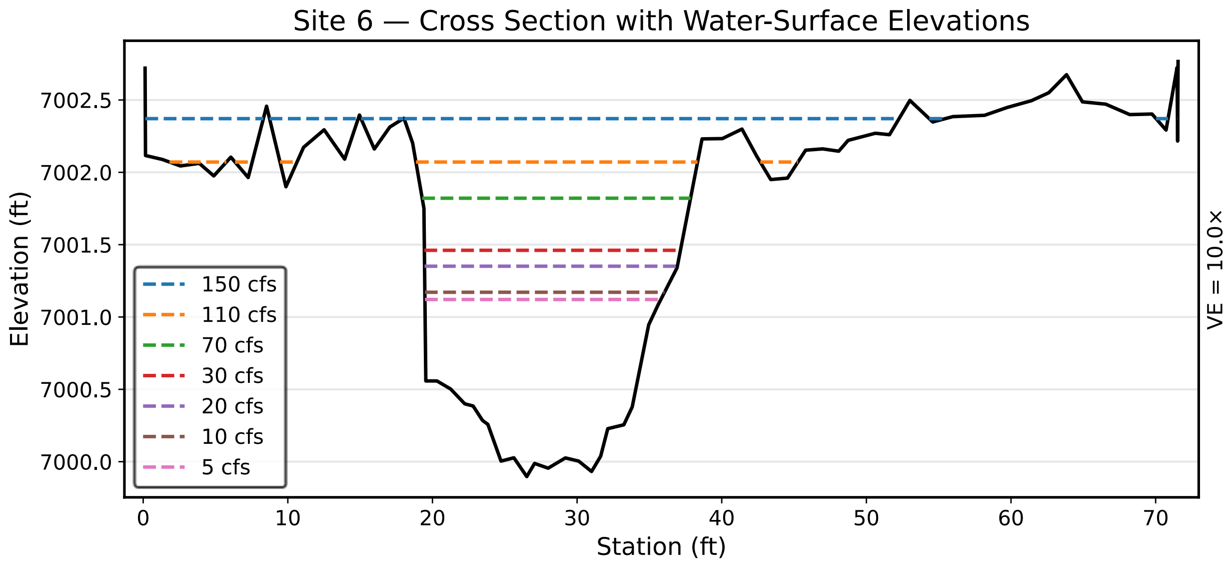
**Figure 6.7-12. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 5, July 2025.**

### 6.7.2.6. Site 6

Site 6 was located in Reach 6 approximately 550 feet upstream of the MCRD. Reach 6 was characterized by a relatively narrow valley bottom, a steep channel gradient, and a single-threaded channel with steeply sloped banks (Figure 6.7-1; Table 6.7-1). Channel bed material was dominated by fine sediment (38 percent) and gravel (38 percent) with interspersed patches of cobble (24 percent). The riparian zone and channel margins were heavily structured by instream and overhanging vegetation and large and small wood (Appendix I). At high target flow releases (150 to 110 cfs), this structure created turbulent hydraulics.

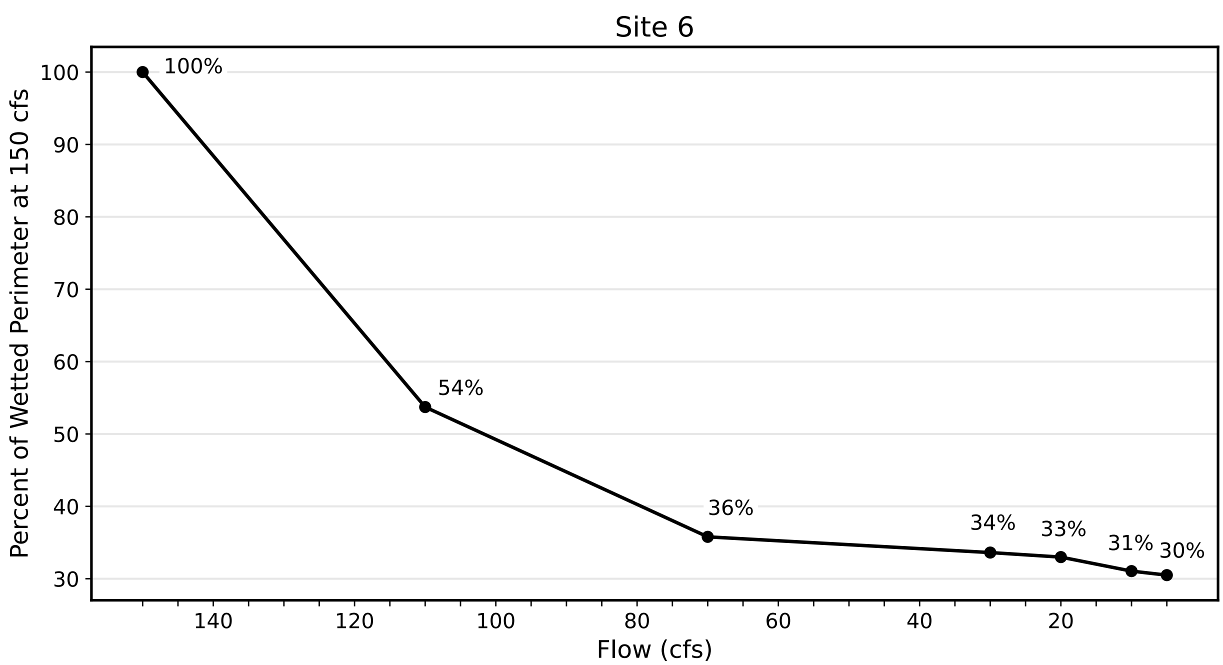
Changes in wetted perimeter at Site 6 were greatest between 150 to 110 cfs, and to a lesser extent between 110 to 70 cfs (Figure 6.7-13 and Figure 6.7-14). Stranding risk along the transect at Site 6 was greatest between 150 to 70 cfs as overbank flows receded and margin habitats with shallow bank slopes and complex structure were dewatered (Figure 6.7-4; Figure 6.7-13 and Figure 6.7-14). Dewatered habitat exposed between 70 to 5 cfs was greater than 6 percent gradient, indicating relatively low stranding risk (Figure 6.7-4).

No fish were observed stranded or entrapped in Site 6 during the 7-day study period. Overall, stranding risk in Reach 6 appeared to be low to moderate with greater risk at higher flows when overbank flows occur.




Note: The vertical axis is exaggerated by a factor of 10 to facilitate readability.

**Figure 6.7-13. Channel Cross-Section Topography (river left to river right bank) and Water Surface Elevation at Different Flow Stages for Site 6, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

**Figure 6.7-14. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 6, July 2025.**

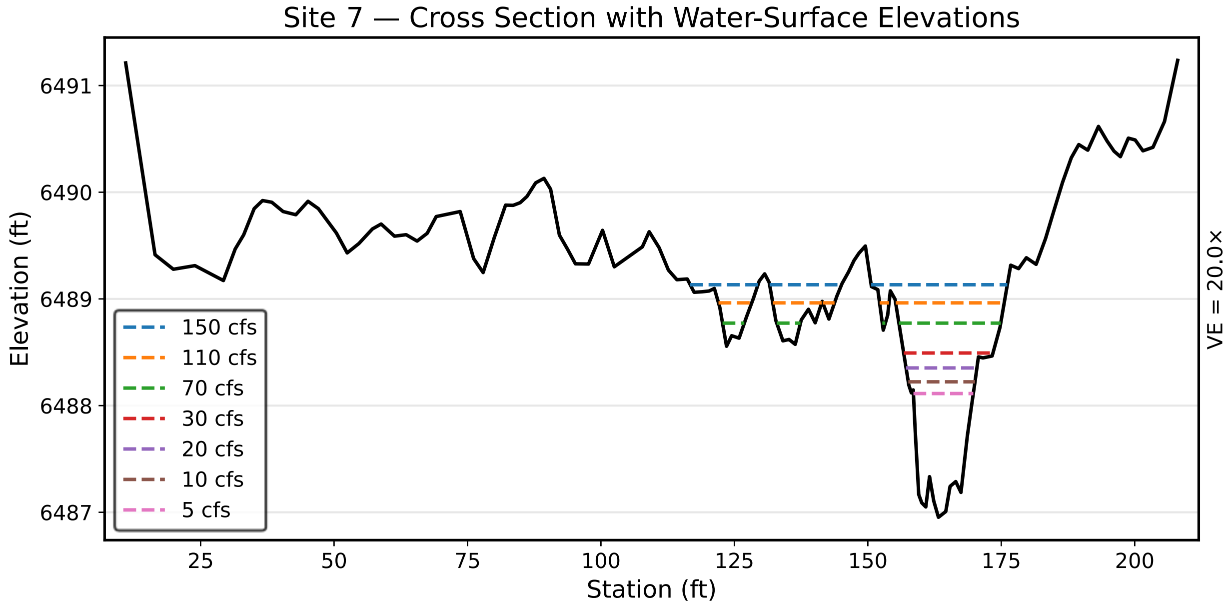
#### 6.7.2.7. Site 7

Site 7 was located about 2.3 miles downstream from Highway 395 and was the only site located outside the study area (Figure 6.7-1). Site 7 was located in Reach 9 and characterized by a moderately wide valley bottom, relatively low channel gradient, and multi-threaded channel planform (Table 6.7-1). The valley bottom was confined by steep walls that transition from a deep gorge to a less-confined reach as Mill Creek approaches Mono Lake. Channel bed material was dominated by fine sediment (39 percent), gravel (32 percent), and cobble (29 percent). The riparian zone and the channel margins were heavily structured by instream and overhanging vegetation and large and small wood (Appendix I). At high target flow releases (150 to 110 cfs), this instream structure created turbulent hydraulics.

Changes in wetted perimeter at Site 7 were greatest between 150 and 20 cfs (Figure 6.7-15 and Figure 6.7-16). At target flow releases between 150 and 70 cfs, overbank flow created shallow, low-velocity habitat along stream margins and inundated side channels and many off-channel topographic depressions. Between 70 and 20 cfs, these inundated marginal habitats were either dewatered or became intermittent with isolated pools (Figure 6.7-15 and Figure 6.7-16). Habitat with relatively high stranding risk (from 0 to 3 percent gradient) occurred between 150 to 110 cfs and between 70 to 20 cfs (Figure 6.7-4). At target flow releases from 20 to 5 cfs, flows were generally contained within the active channel, relatively little habitat was dewatered, and the habitat that was dewatered was generally greater than 6 percent gradient, indicating relatively low stranding risk (Figure 6.7-4).

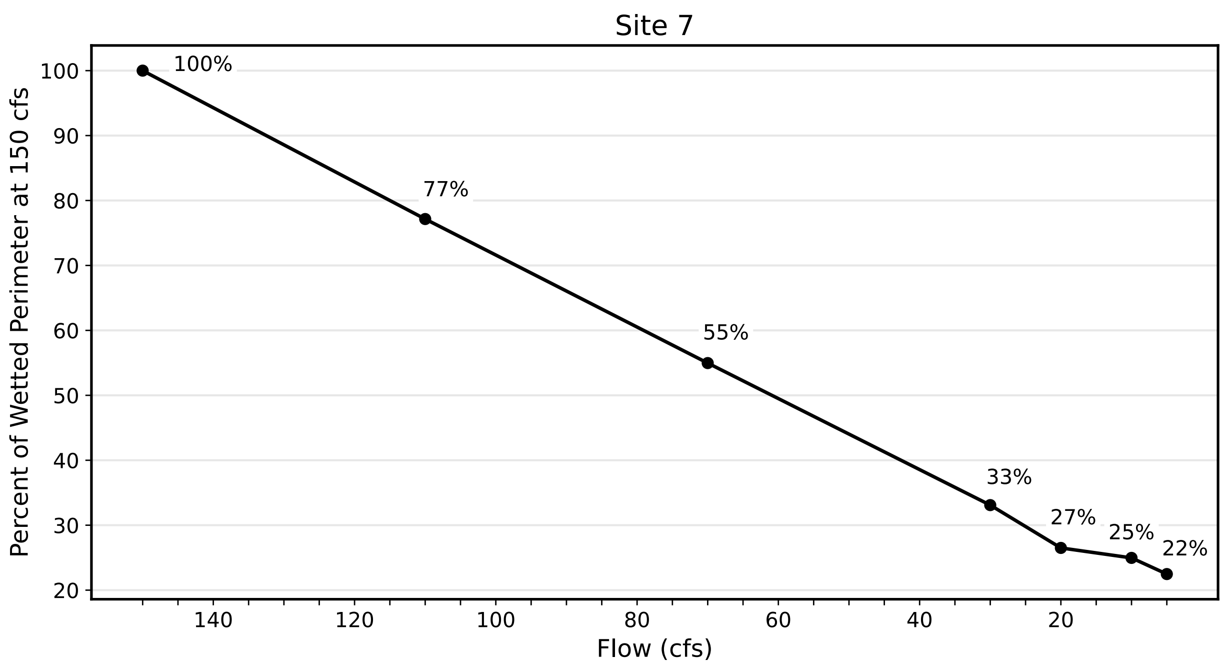
Upstream and downstream of the transect, the channel split from a single thread into a multi-threaded channel network that meandered over the wide floodplain at flows above 110 cfs. At lower flows, some of these high flow channels became disconnected and intermittent, thus creating entrapment risk, or else dried completely, which created stranding risk (Appendix I).

No fish were observed stranded or entrapped in Site 7 during the 7-day study period.




Note: The vertical axis is exaggerated by a factor of 20 to facilitate readability.

**Figure 6.7-15. Channel Cross-Section Topography (river left to river right bank) in Relation to Water Surface Elevation at Different Flow Stages for Site 7, July 2025.**




Note: Wetted perimeter at 150 cfs is assumed to be 100% because this is the maximum flow controlled by Project operations and the highest flow evaluated during the study.

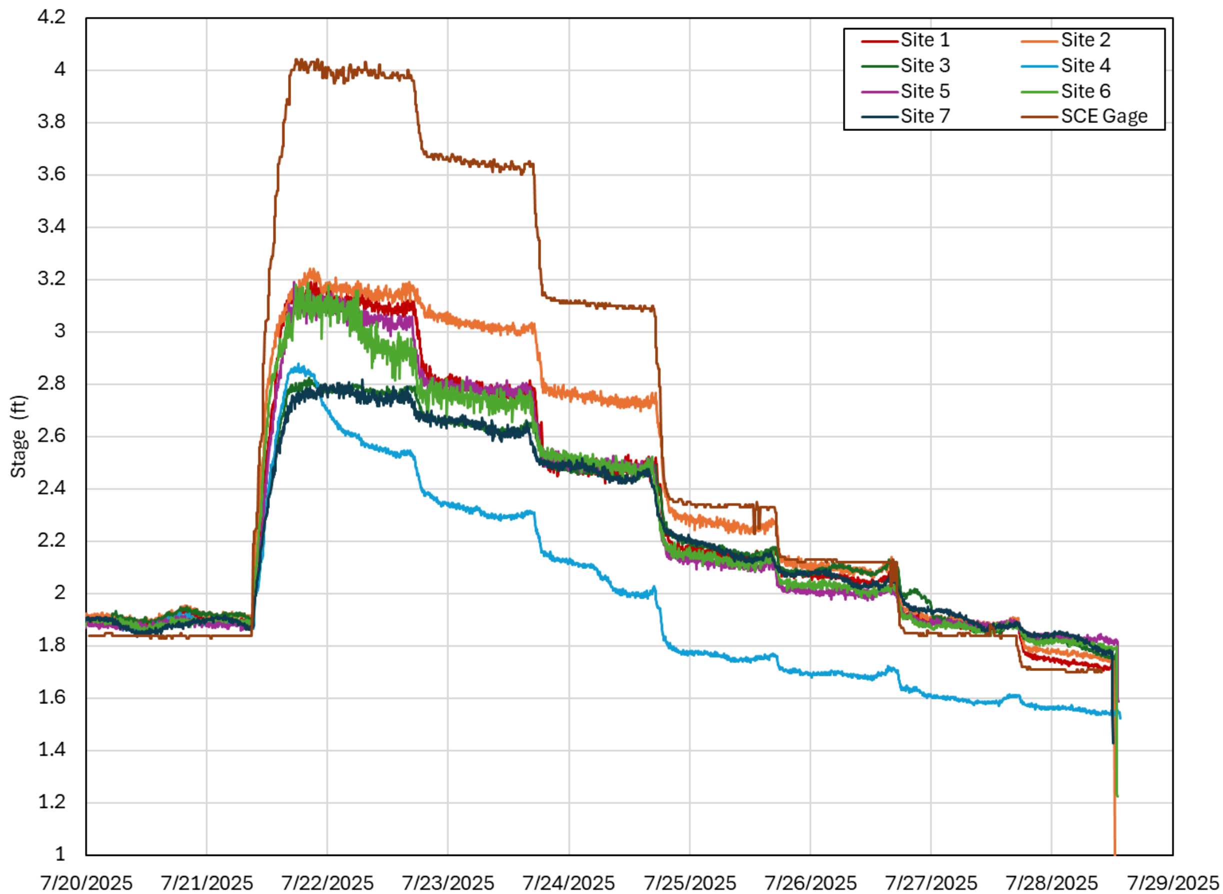
**Figure 6.7-16. Percent of Wetted Perimeter Inundated at Different Flow Stages for Site 7, July 2025.**

### 6.7.3. Hydrology Analysis

The range of instream flows released from Lundy Dam was characterized using discharge data from USGS Gage No. 10287069 and continuous stage records at each site and was supplemented by stream discharge data recorded near the upstream and downstream ends of the study area. A stage-discharge relationship was established to characterize, attenuation and accretion or loss through the reach. Travel time and flow attenuation were assessed by comparing the magnitude and timing of stage hydrographs from stage recorder data collected at each site.

Travel times between stage recorders at Site 1 through Site 7 were estimated using a cross-correlation function on the rising limb of the hydrograph. Time series of paired stage records were offset in fixed 5-minute increments with Pearson correlation coefficients computed for each lag. The lag corresponding to the maximum correlation coefficient (Allen et al., 2018) was identified as the travel time between sites (Figure 6.7-17). To verify results, hydrographs for each site were manually shifted by the computed lag times to ensure alignment of the hydrographs (Figure 6.7-17). Travel times from Site 1 ranged from 10 to 225 minutes and are summarized in Table 6.7-3. Travel times were strongly proportional to distance.

Time-synchronized stage records were used to evaluate flow attenuation through the study reach. The peak stage of the initial pulse flow of 150 cfs was attenuated by up to 0.4 foot within the beaver pond complex (Site 3 and Site 4) and at Site 7. Overall, attenuation increased downstream and was most pronounced at Site 3, Site 4, and Site 7, as indicated by reduced peak stage and more gradual declines in the receding limbs of the hydrographs (Figure 6.7-17). Attenuation at Sites 3 and Site 4 was primarily due to water storage in the beaver pond complex, whereas attenuation at Site 7 was primarily due to the long travel distance. Although Site 5 and Site 6 are downstream of the beaver pond complex, they exhibited less peak flow attenuation, likely reflecting an increase in channel confinement and average slope, which accelerates flow and reduces storage effects.



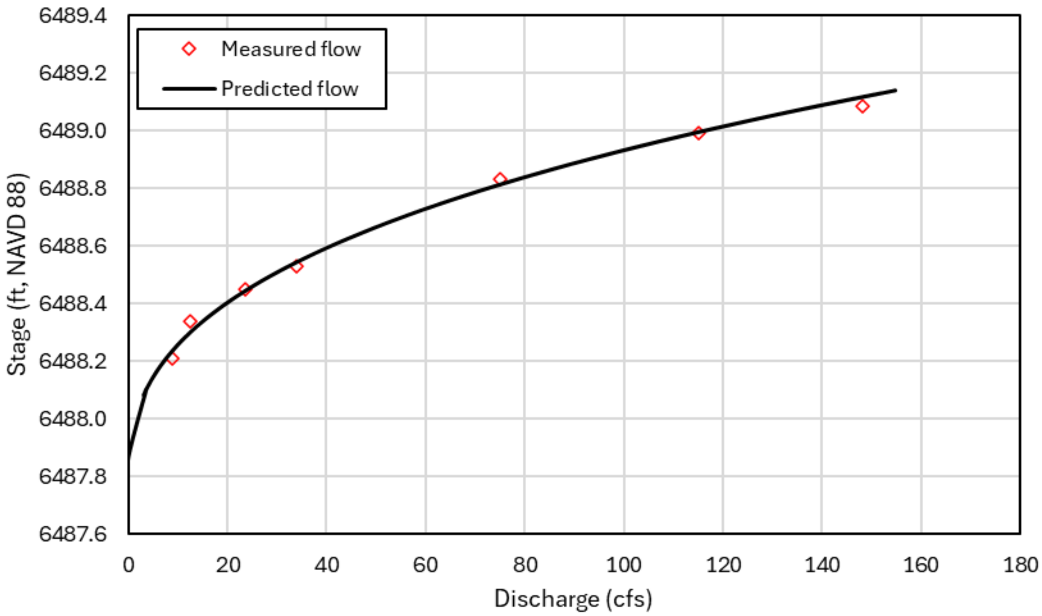

SCE Gage = USGS Gage No. 10287069 at Mill Creek below Lundy Dam
Note: Stage records were shifted by the lag times computed using the cross-correlation function.

**Figure 6.7-17. Synchronized Stage Record for Site 1 through Site 7, July 2025.**

## Table 6.7-3. Estimated Lag Times Between Site 1 and Downstream Sites, July 2025

| Sites | Distance Between Sites (feet) | Estimated Lag Time (minutes) |
|---|---:|---:|
| Site 1 to Site 2 | 563 | 10 |
| Site 1 to Site 3 | 784 | 20 |
| Site 1 to Site 4 | 987 | 30 |
| Site 1 to Site 5 | 2,586 | 85 |
| Site 1 to Site 6 | 5,068 | 130 |
| Site 1 to Site 7 | 10,327 | 225 |

A stage-discharge rating curve was developed for Site 7 to evaluate attenuation and accretion through the study reach and downstream to Site 7 in lower Mill Creek. The curve was constructed from seven discrete discharge measurements paired with concurrent stage readings and fit using the standard USGS power-law relation between stage and discharge (Rantz, 1982; Turnipseed and Saur, 2010) (Figure 6.7-18).




Note: Red triangles show the calibration points (discrete discharge measurements), and the black line shows the computed discharge from the rating equation.

**Figure 6.7-18. Stage-Discharge Rating Curve for Site 7, July 2025.**

Predicted discharge at Site 7 was compared with discharge recorded at the SCE gage to evaluate flow accretion through the study reach. To account for lag time, the Site 7 and SCE discharge records were synchronized before computing flow differences between sites. Manual discharge measurements at Site 7 were also compared to the nearest recorded instantaneous discharge measurements at the SCE gage. Overall, accretion through the reach was minimal and ranged from 0 to 5 cfs, depending on the flow.

### 6.7.4. Incidental Observations

No special-status species or aquatic invasive species were observed during fish stranding survey efforts.

## 6.8. Discussion of Stranding Risk

The results of this study demonstrate how decreasing flow releases over the range of flows that can be managed at Lundy Dam (less than or equal to 150 cfs) translate to changes in water surface elevation through the study area and how these changes relate to the potential risk of fish stranding and entrapment. Overall, the results were highly variable among sites with no consistent pattern in the risk of stranding and entrapment at the target flows evaluated; no specific flow range stands out as having especially high potential risk of fish stranding and entrapment (Figure 6.7-4).

Channel conditions in Reach 4 (Sites 3 and 4) were unique compared with other reaches in the study area and included an extensive complex of beaver ponds and dams in addition to low-gradient habitats with complex structure. A prominent glacial recession moraine at the downstream end of Reach 4 historically caused sediment to deposit upstream, filling the valley and creating the uniquely wide and low gradient conditions in Reach 4. This underlying condition allows for the creation of beaver dams and wetland ponds, and for streamflow to spread across the broad valley bottom to produce habitats like vegetated benches and areas of slower water that attract high densities of fish. The topographic complexity (e.g., depressions, small ponds, vegetated benches, beaver raceways) in Reach 4 has the potential to cause fish stranding and entrapment when flows decrease; however, beaver dams and ponds where present, buffer water surface elevation changes in response to decreasing flows and therefore limit potential risk of fish stranding and entrapment as illustrated at Site 3 (Figure 6.7-4 and Figure 6.7-7).

Additionally, the study found that in the event of a beaver dam failure (Site 4), fish stranding and entrapment can be high due to a rapid decrease in flow and extensive habitat dewatering. Most beaver dams in the Study Area remained intact and functional throughout the study period. The main beaver dam that failed appeared to be older and not maintained compared to other large beaver dams in the beaver pond complex (Reach 4). Because beaver-dam failures are well documented in natural stream systems (Butler and Malanson, 2005; Scamardo et al., 2021) and may be caused by higher magnitude flows or poor maintenance, natural beaver dam failure can be expected to occur in Reach 4 independent of Project operations.

Analysis of data collected as a part of the fish stranding study is ongoing. Final study results will be provided in a USR in 2027.

## 6.9. REFERENCES

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# AQ-2 APPENDICES

# APPENDIX I
# FISH STRANDING STUDY PHOTOGRAPHS

**Figure I-1. Site 1 at the 150-cfs Target Flow, July 2025. Photograph from the Left Bank Looking Across the Channel at Inundated Margin Habitat with Complex Habitat Elements.**

**Figure I-2. Site 1 at the 10-cfs Target Flow, July 2025. Photograph from Left Bank Looking Across the Channel at Dewatered Gravel Bar and Complex Habitat Elements Inundated During Higher Target Flow Releases.**

**Figure I-3. Backwater Side Channel Downstream of Site 2 at the 70-cfs Target Flow, July 2025.**

**Figure I-4. Site 2 at the 150-cfs Target Flow, July 2025. Photograph of the Right-most Side Channel.**

**Figure I-5. Site 2 at the 5-cfs Target Flow, July 2025. Photograph of the Right-most Side Channel.**

**Figure I-6. Site 3 at the 5 cfs Target Flow, July 2025. Photograph from the Left Bank Looking Across the Large Beaver Pond Toward the Right Bank.**

**Figure I-7. Site 3 at the 5 cfs Target Flow, July 2025. Photograph of Isolated Pool Immediately Downstream of Beaver Dam and Transect.**

**Figure I-8. Site 4 at the 30-cfs Target Flow, July 2025. Photograph of Isolated Pool on River Left.**

**Figure I-9. Site 4 at the 110-cfs Target Flow, July 2025. Photograph of Off-Channel Habitat (gravel bar) on Left Bank of Main Channel that Became Disconnected and Dewatered.**

**Figure I-10. Site 5 at the 20-cfs Target Flow, July 2025. Photograph of Dewatered Margin Habitat Along the Main Channel.**

**Figure I-11. Site 5 at the 70-cfs Target Flow, July 2025. Photograph of Left Bank Side Channel With Intermittent Surface Flows.**

**Figure I-12. Site 6 at the 150-cfs Target Flow, July 2025. Photograph of Low-Velocity Margin Habitat along Left and Right Banks Created by Instream Vegetation**

**Figure I-13. Site 7 at the 110-cfs Target Flow, July 2025. Photograph of Woody Vegetation and Small Wood Creating Complex Habitat Along Channel Margin.**

**Figure I-14. Site 7 at the 110-cfs Target Flow, July 2025. Photograph of Off-Channel Habitat at That was Connected at 150 cfs and Dry at 70 cfs.**

**Figure I-15. Two Previously Inundated Side Channels Downstream of the Transect at Site 7 That Became Disconnected or Dewatered by 70 cfs, July 2025**

**Figure I-16. Multiple Size Classes of Brook Trout Observed Entrapped in a Pool in Site 4, July 2025.**

# 7.0 TERR-1 GENERAL BOTANICAL RESOURCES SURVEY

## 7.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a General Botanical Resources Survey (TERR-1) to document vegetation communities in the vicinity of the Project. In its January 2, 2025 SPD, FERC approved the *TERR-1 General Botanical Resources Survey Study Plan* (SCE, 2024). This section includes preliminary data for TERR-1 conducted in 2025. A second year of field documentation will be conducted in 2026. Analysis of the data and completed results will be summarized in a draft Technical Report that will inform the DLA.

## 7.2. REVIEW OF EXISTING INFORMATION

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

Special-status plant occurrences within the study area have been documented by past studies (Psomas, 2009, 2017) and the *Environmental Assessment of Potential Cumulative Impacts Associated with Hydropower Development in the Mono Lake Basin, California* (FERC Nos. 1388, 1389, 1390, 3259, and 3272; FERC, 1990). The USFS has also provided records of rare plants (NRM – TESP/IS, 2018), the *Persistence Analysis for Species of Conservation Concern Inyo National Forest* (INF, 2019), and whitebark pine range geospatial data (USFS, 2020b) from the Project region. Since those studies were undertaken, new occurrences of special-status species have been reported in various databases and new species have been added to the federal and state special-status species lists; and others have been deemed sensitive by various government and non-governmental organizations. The California Natural Diversity Database (CNDDB; CDFW, 2023; U.S. Geological Survey Lundy, Dunderberg Peak, Twin Lakes, Big Alkali, Bodie, Negit Island, Lee Vining, Mount Dana, Tioga Pass quadrangles), the *California Native Plant Society's Inventory of Rare, Threatened, and Endangered Plants* (CNPS, 2023; U.S. Geological Survey Lundy, Dunderberg Peak, Twin Lakes, Big Alkali, Bodie, Negit Island, Lee Vining, Mount Dana, Tioga Pass quadrangles), and the Consortium of California Herbaria (CCH, 2023) were reviewed to obtain information on special-status plant occurrences in the Project region. The latest Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2025b) was used to review the current status of special-status plant species.

 

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

## 7.3. STUDY OBJECTIVES

The goal of this assessment is to obtain additional information regarding terrestrial botanical resources in the Botanical Study Area (BSA) by:

- Ground-truthing the existing USFS vegetation map (USFS, 2020a), including identification of any sensitive natural communities;
- Documenting the presence of species listed, or proposed for listing, by the federal and/or state Endangered Species Acts;
- Documenting the presence of other special-status plant species including species with a California Rare Plant Rank (CRPR) of 1 or 2 and USFS Species of Conservation Concern;
- Documenting non-native invasive plants identified in the INF Invasive Plant Inventory Database (NRM – TESP/IS, 2018) and on the California Invasive Plant Council Inventory (Cal-IPC, 2023).

### 7.3.1. STUDY AREA

The USFS-mapped vegetation communities were ground-truthed in the BSA and documented the presence of special-status plant species and non-native, invasive plant species. The BSA is shown on Figure 7.3-1 and comprises the following sites, including 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
- 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
- Mill Creek Return Ditch

The BSA encompasses areas that may be hydrologically influenced by proposed activities or that may be subject to proposed activities related to Project routine operations and maintenance.

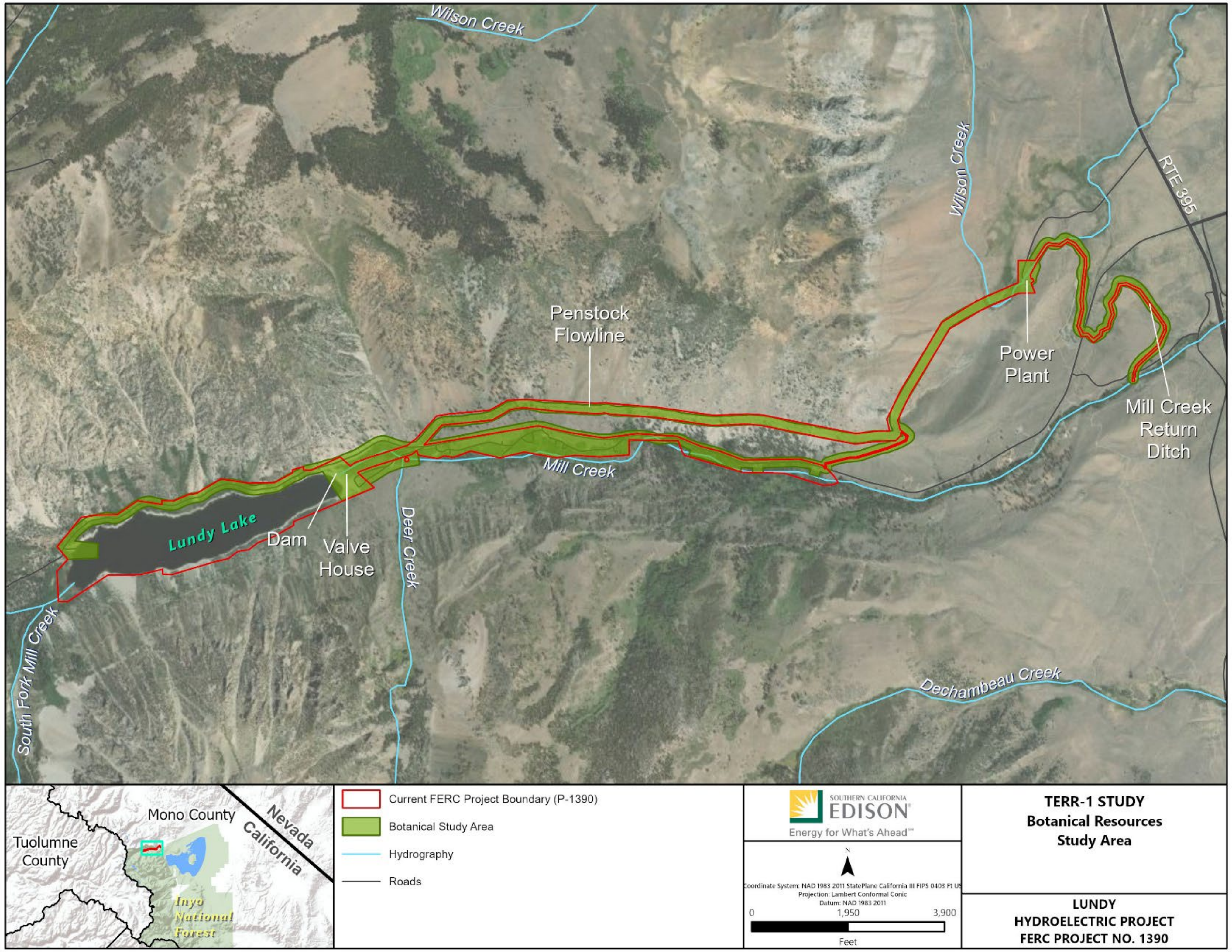


**Figure 7.3-1. Botanical Resources Study Area.**

## 7.4. METHODS

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

### 7.4.1. VEGETATION MAPPING

Vegetation mapping included the following:

- A review of the existing USFS vegetation communities to determine if any suitable habitat for special-status botanical resources occurs within the BSA. Vegetation alliances/associations were cross-referenced to defined habitats for special-status plants.

- Vegetation previously mapped by the USFS was verified and adjusted if conditions on the ground were not consistent with previously mapped vegetation communities. Mapping was performed at a scale appropriate to determining Project-level effects and distinguishing vegetated from unvegetated areas. This resulted in finer-scale mapping than that provided by the USFS. Classification was based on keys and descriptions from the USFS using the CALVEG classification system. In this system, differences between community types (also referred to as alliances) are based on canopy cover as determined from aerial photography and satellite imagery. These were cross-referenced to *A Manual of California Vegetation* (CNPS, 2025), which is used by CDFW for determining whether a vegetation alliance/association is considered to be a sensitive natural community (CDFW, 2025a).

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

### 7.4.2. SPECIAL-STATUS PLANT SURVEYS

Special-status plant surveys included the following:

- Surveys followed the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW, 2018). Surveys were floristic in nature and performed at appropriate times of the year to maximize the opportunity of observing special-status plants, as determined by the literature review and in consultation with the relevant stakeholders. Two survey visits were conducted in 2025 to encompass the blooming/fruiting period for multiple special-status plant species. Surveys were performed on June 17, 18, 19, and 20 and July 15, 16, 17, and 18, 2025.

- Prior to the start of surveys, aerial photographs of the BSA were prepared for field use. The field map was uploaded onto a tablet or cell phone loaded with a mapping program (i.e., ArcGIS Field Maps) to facilitate navigation and data collection. The field maps included known occurrences of special-status botanical resources and areas of potentially suitable habitat for special-status botanical resources.

- Biologists performed pedestrian surveys to identify and map existing conditions and document any observed plants. Plant species were identified in the field or collected for future identification. Plants were identified to the taxonomic level necessary to determine whether or not they are a special-status species. Plants were identified using taxonomic keys, descriptions, and illustrations from a variety of sources, including the Jepson eFlora (Jepson Flora Project, 2025), Wilson et al. (2014), Hurd et al. (1998), Wiese (2013), and Breckling and Breckling (2020). Nomenclature of plant taxa conforms to the Special Vascular Plants, Bryophytes, and Lichens List (CDFW, 2025b) for special-status species and the Jepson eFlora (Jepson Flora Project, 2025) for all other taxa. Field surveys focused on the following:

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

### 7.4.3. Non-native, Invasive Species Surveys

Non-native, invasive species surveys included the following:

- Surveys were conducted concurrently with special-status plant surveys and followed the methods described above.

- The USFS identified select invasive species of concern to be mapped within the BSA. This includes all species on the INF Invasive Plant Inventory Database with a treatment strategy of 1–eradicate or 2–control and select species with a treatment strategy of 3–contain. Select species of local concern are also included. Table 7.4-1 provides a list of these select invasive species of concern.

- Observations of select invasive plant species identified in the BSA were documented either using a hand-held GPS unit, a tablet/cell phone loaded with the field map, or on a hard-copy map. The extent of the population within the BSA boundary was delineated. Discrete individuals/populations were mapped as point or polygon and the number of individuals were counted (estimated for large populations). Widely distributed species dispersed throughout a study site were documented as present/absent and the number of individuals was estimated. Other non-native plant species observed were documented as present but not mapped.

## Table 7.4-1. Invasive Species to be Mapped in the Botanical Study Area

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

Sources: NRM – TESP/IS, 2018; Cal-IPC, 2025.

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

### 7.5. Study Plan Modifications

SCE is not proposing any modifications to TERR-1 as approved by FERC in its SPD (FERC, 2025).

## 7.6. VARIANCES TO APPROVED METHODS

SCE encountered the following variances when implementing the TERR-1 study plan as approved by FERC int is SPD (FERC, 2025):

- The BSA boundary was expanded slightly to ensure all day use areas were incorporated.
- The invasive species mapping methods included a list of select invasive species of concern identified by the USFS. This list included mapping of cheat grass (*Bromus tectorum*). During the survey effort, this species was found to be prolific in disturbed areas throughout the BSA. It was infeasible to map all populations and quantify population sizes. Therefore, a qualitative description was prepared to describe the abundance and extent of this species.

## 7.7. RESULTS

### 7.7.1. VEGETATION TYPES AND OTHER AREAS

Eight vegetation types and four other landcovers were mapped in the BSA: 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. Figure 7.7-1 through Figure 7.7-12 show the extent of these vegetation types and other landcovers within the BSA; each map represents a section of the entire BSA, which is shown in the upper right corner of each figure. Table 7.7-1 provides the acreage of each vegetation type/landcover and whether it is considered a sensitive natural community by the CDFW.

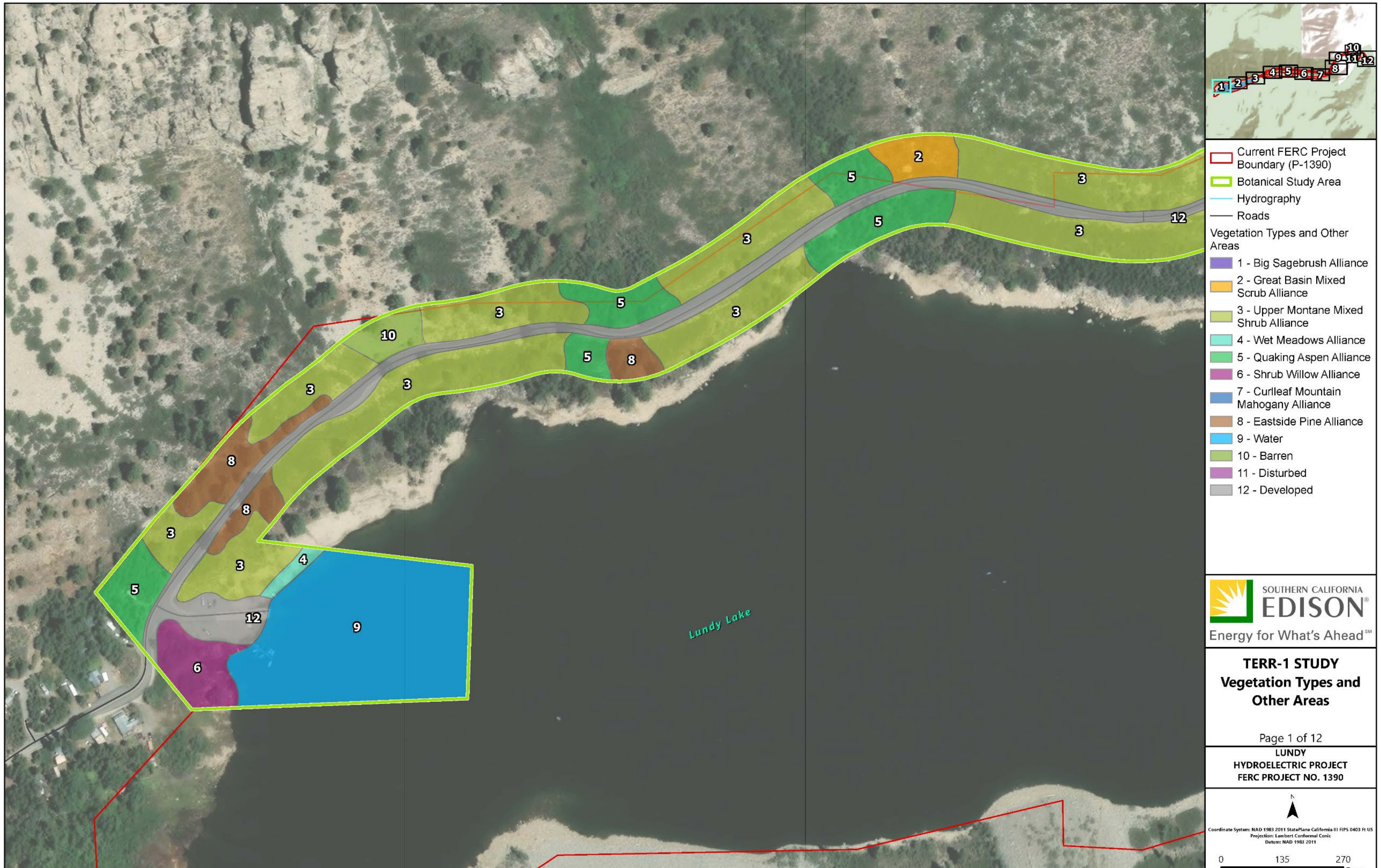


**Figure 7.7-1. Vegetation Types and Other Areas – Section 1.**

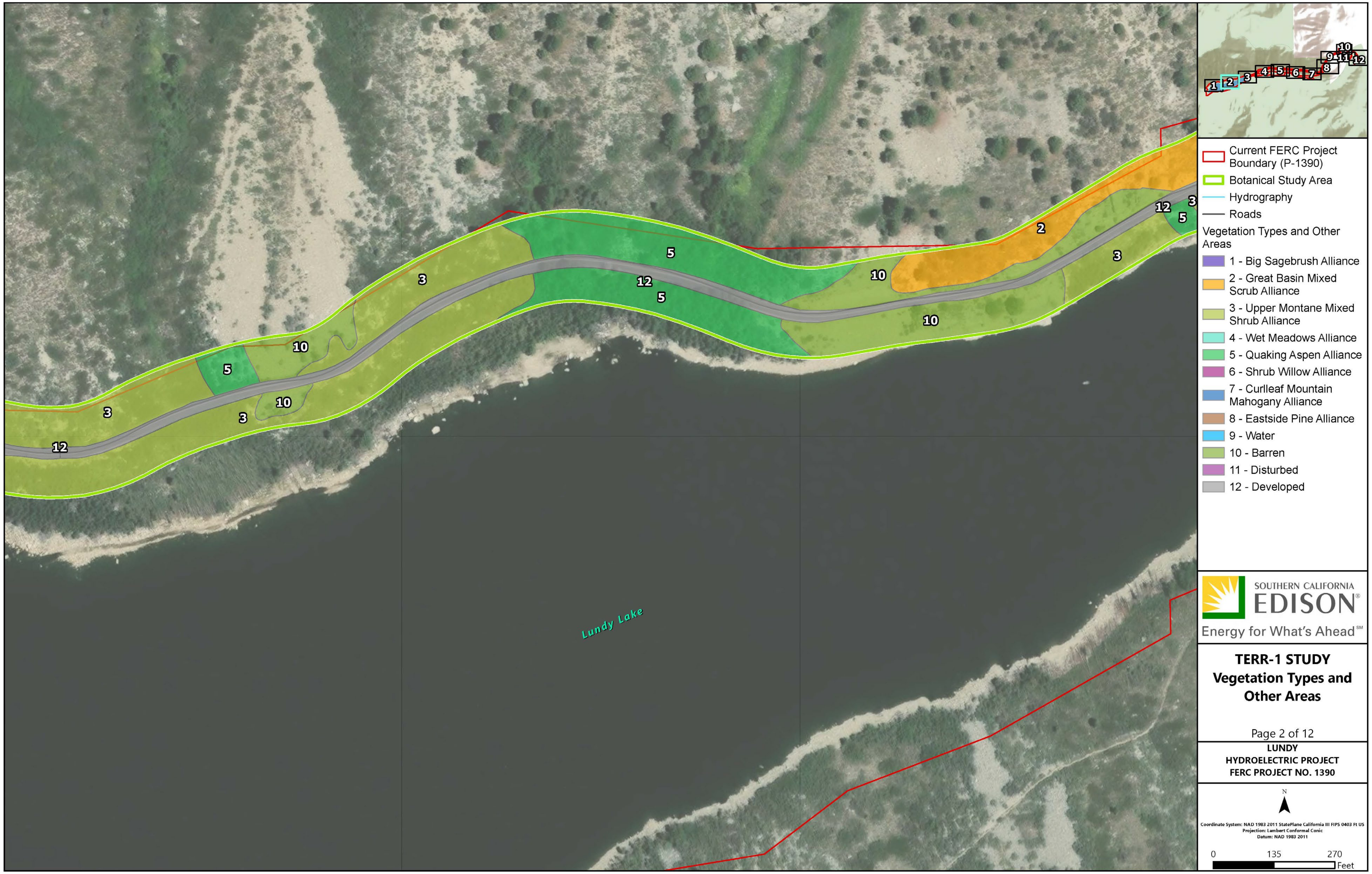


**Figure 7.7-2. Vegetation Types and Other Areas – Section 2.**

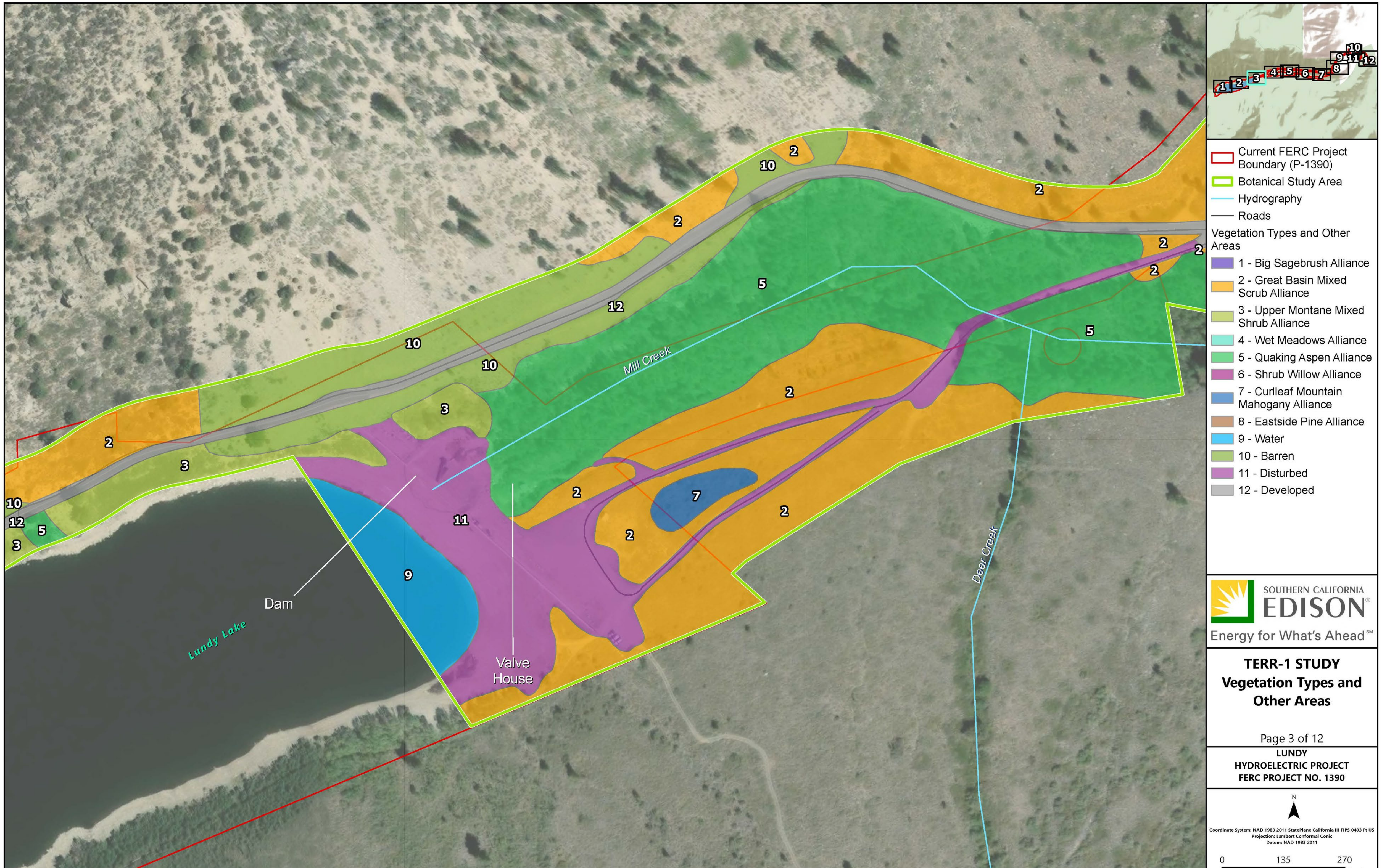


**Figure 7.7-3. Vegetation Types and Other Areas – Section 3.**

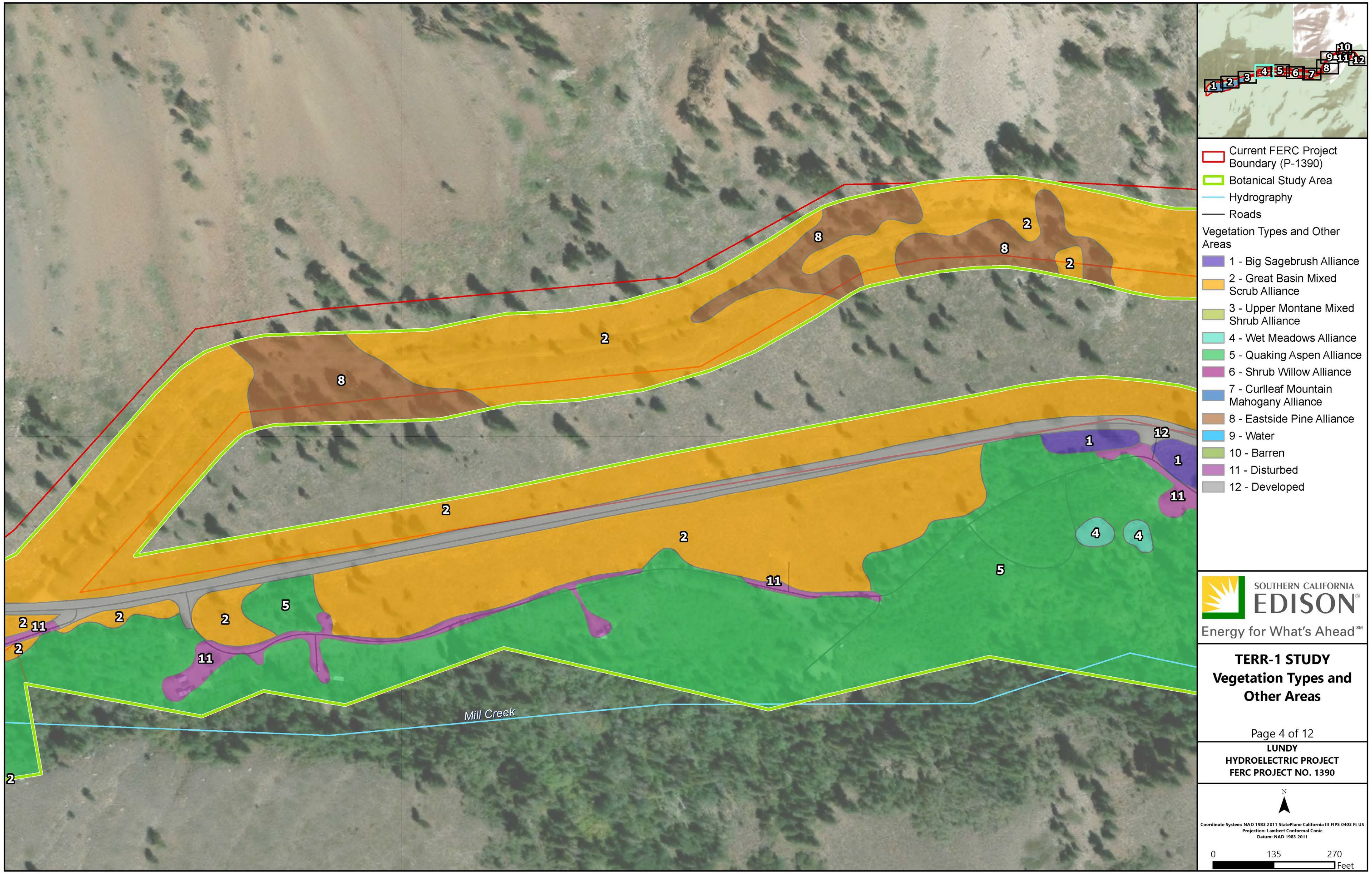


**Figure 7.7-4. Vegetation Types and Other Areas – Section 4.**

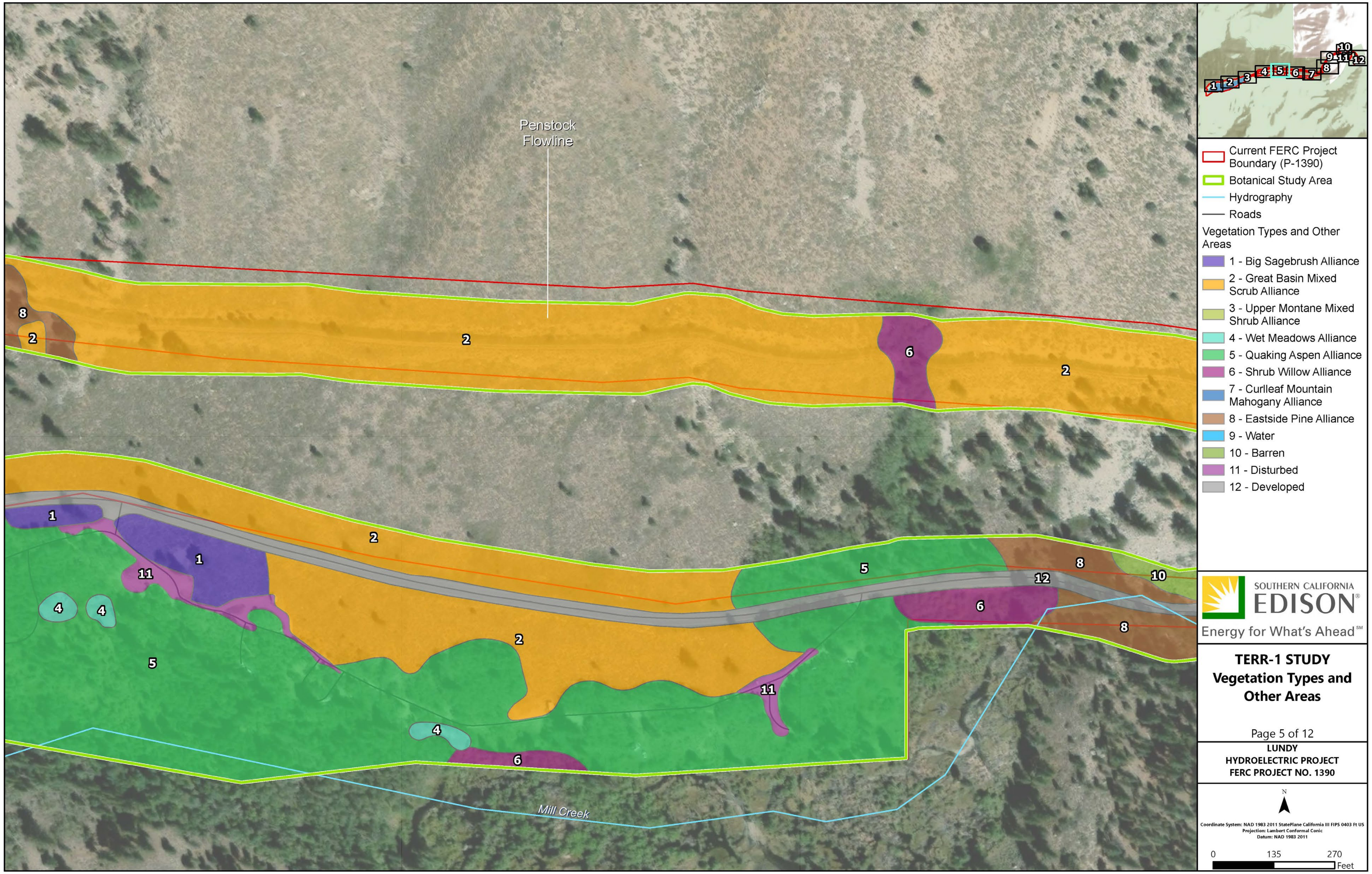


**Figure 7.7-5. Vegetation Types and Other Areas – Section 5.**

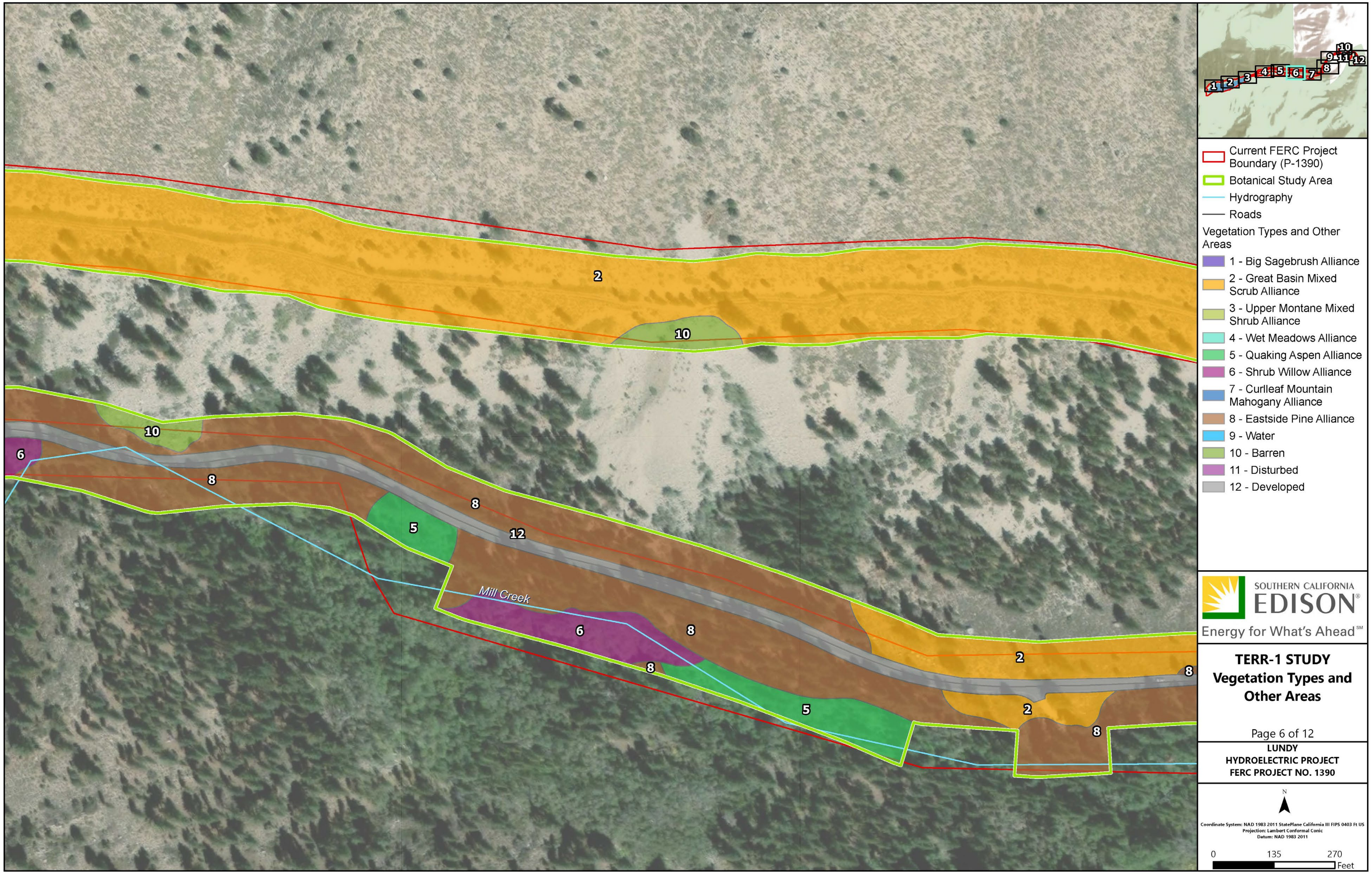


**Figure 7.7-6. Vegetation Types and Other Areas – Section 6.**


**Figure 7.7-7. Vegetation Types and Other Areas – Section 7.**

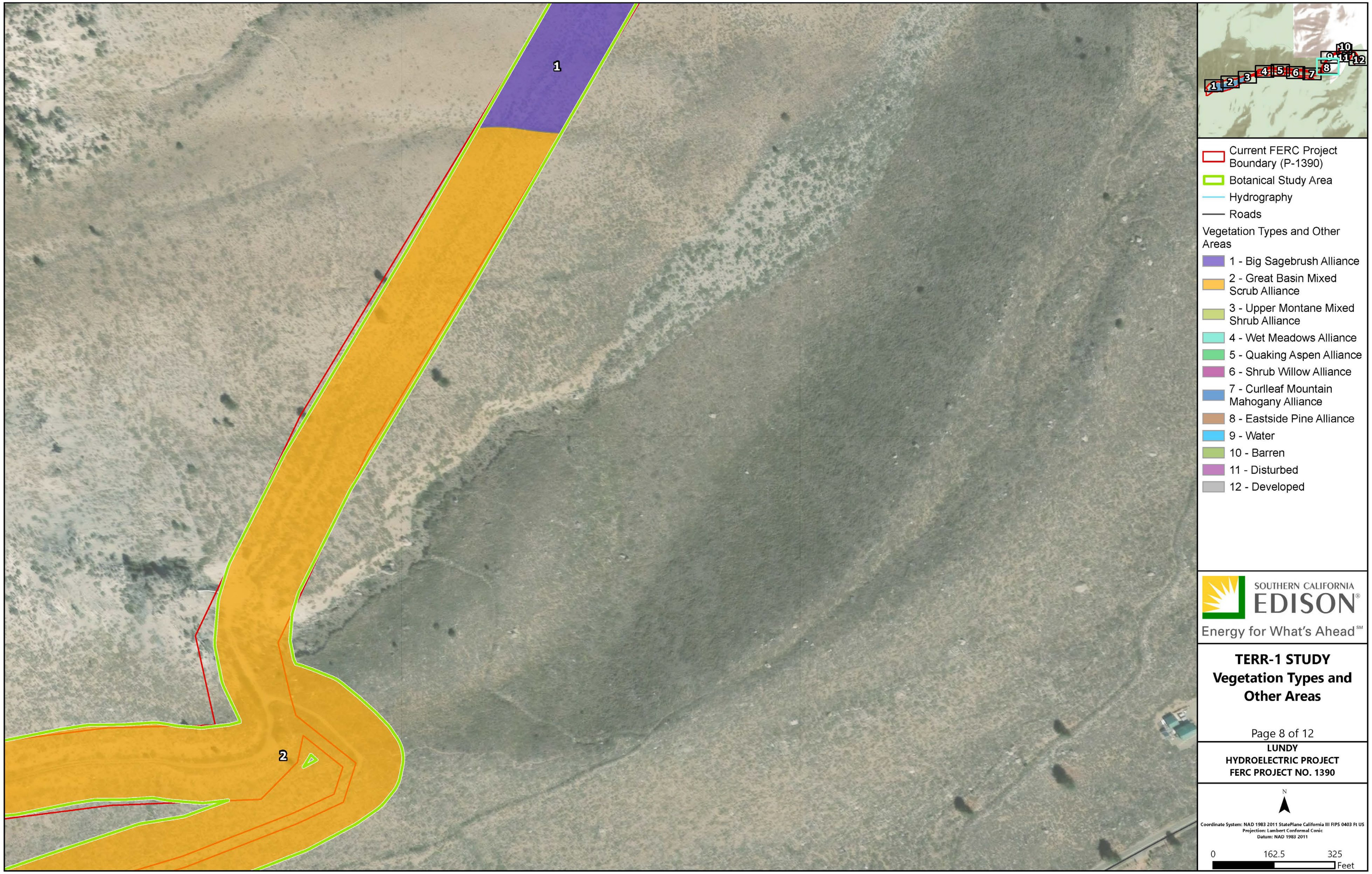


**Figure 7.7-8. Vegetation Types and Other Areas – Section 8.**


**Figure 7.7-9. Vegetation Types and Other Areas – Section 9.**


**Figure 7.7-10. Vegetation Types and Other Areas – Section 10.**

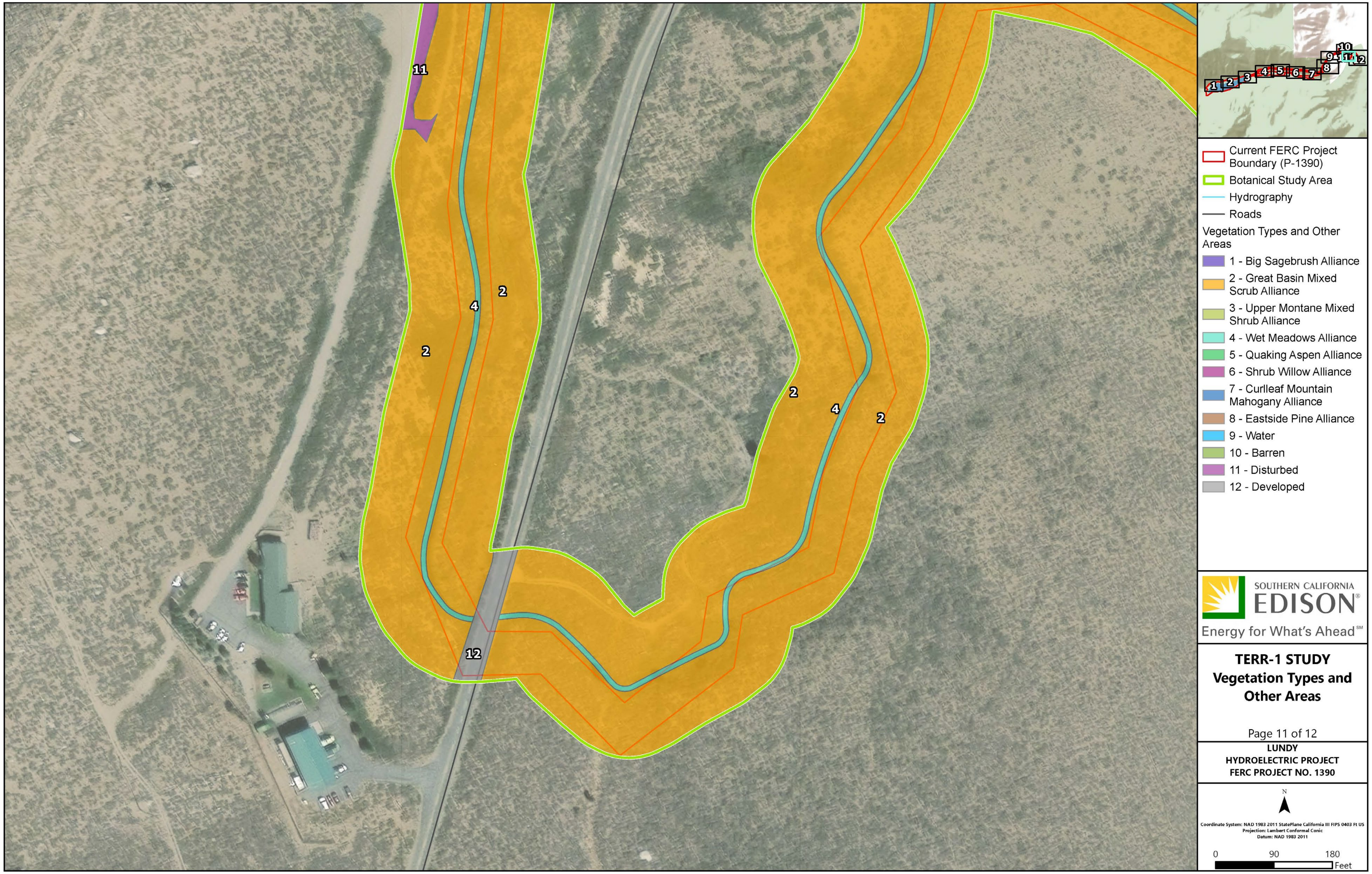


**Figure 7.7-11. Vegetation Types and Other Areas – Section 11.**


**Figure 7.7-12. Vegetation Types and Other Areas – Section 12.**

## Table 7.7-1. Vegetation Types and Other Areas in the Botanical Study Area

| Vegetation Types and Other Areas | Amount in Botanical Study Area (acres) | Sensitive Natural Community[a] |
|---|---|---|
| Big Sagebrush Alliance | 8.18 | No |
| Great Basin Mixed Scrub Alliance | 125.48 | Yes |
| Upper Montane Mixed Shrub Alliance | 12.34 | No |
| Wet Meadows Alliance | 2.89 | Yes (in part) |
| Quaking Aspen Alliance | 42.99 | Yes |
| Shrub Willow Alliance | 4.46 | Yes |
| Curlleaf Mountain Mahogany Alliance | 0.39 | No |
| Eastside Pine Alliance | 17.10 | No |
| Water | 4.84 | No |
| Barren | 8.21 | No |
| Disturbed | 8.74 | No |
| Developed | 13.12 | No |

Notes:
[a] Source: CDFW, 2025a

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 the CDFW (2025a).

Great Basin Mixed Scrub Alliance occurs on slopes throughout the BSA. 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 the CDFW (2025a).

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 (2025a).

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 Mill Creek Return Ditch. Species composition varies among these areas but is characterized by various sedges (*Carex* spp.) and bulrushes (*Scirpus* spp.) and a mesic environment. 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 the CDFW (2025a); however, the *Carex utriculata* Meadow Association is not considered a sensitive natural community by the CDFW (2025a).

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 the CDFW (2025a).

Shrub Willow Alliance occurs in patches associated with the lakeshore, creeks, or mesic areas throughout the BSA. 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 the CDFW (2025a).

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 the CDFW (2025a).

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 the CDFW (2025a).

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 *A Manual of California Vegetation* 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 Mill Creek Return Ditch during the 2025 plant surveys, though this is not shown on Figure 7.7-1 through Figure 7.7-12. Mill Creek was mapped according to the overhanging vegetation and the Mill Creek Return Ditch was too narrow to be mapped separately.

Barren land in the BSA 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 *A Manual of California Vegetation.*

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 *A Manual of California Vegetation.*

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 *A Manual of California Vegetation.*

### 7.7.2. 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, *Special-status Plant Species Reported from the Project Region.*[9] A complete list of plant species observed is included in Appendix K, *2025 Plant Compendium*.

No special-status species were observed in 2025 in the BSA. However, golden violet (*Viola purpurea* ssp. *aurea*) was incidentally observed during the FERC scoping process 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 Mill Creek Return Ditch. Habitat

[9] The Project region includes a greater geographic extent than does the BSA.

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 hawksbeaerd (*Crepis acuminata*), cheat grass, and squirreltail (*Elymus elymoides*). Figure 7.7-13, *Special-status Plant Species Locations 2025*, shows the location of this individual. A survey form will be submitted to the CDFW for this species and is included as Appendix L, *Golden Violet CNDDB Form*.

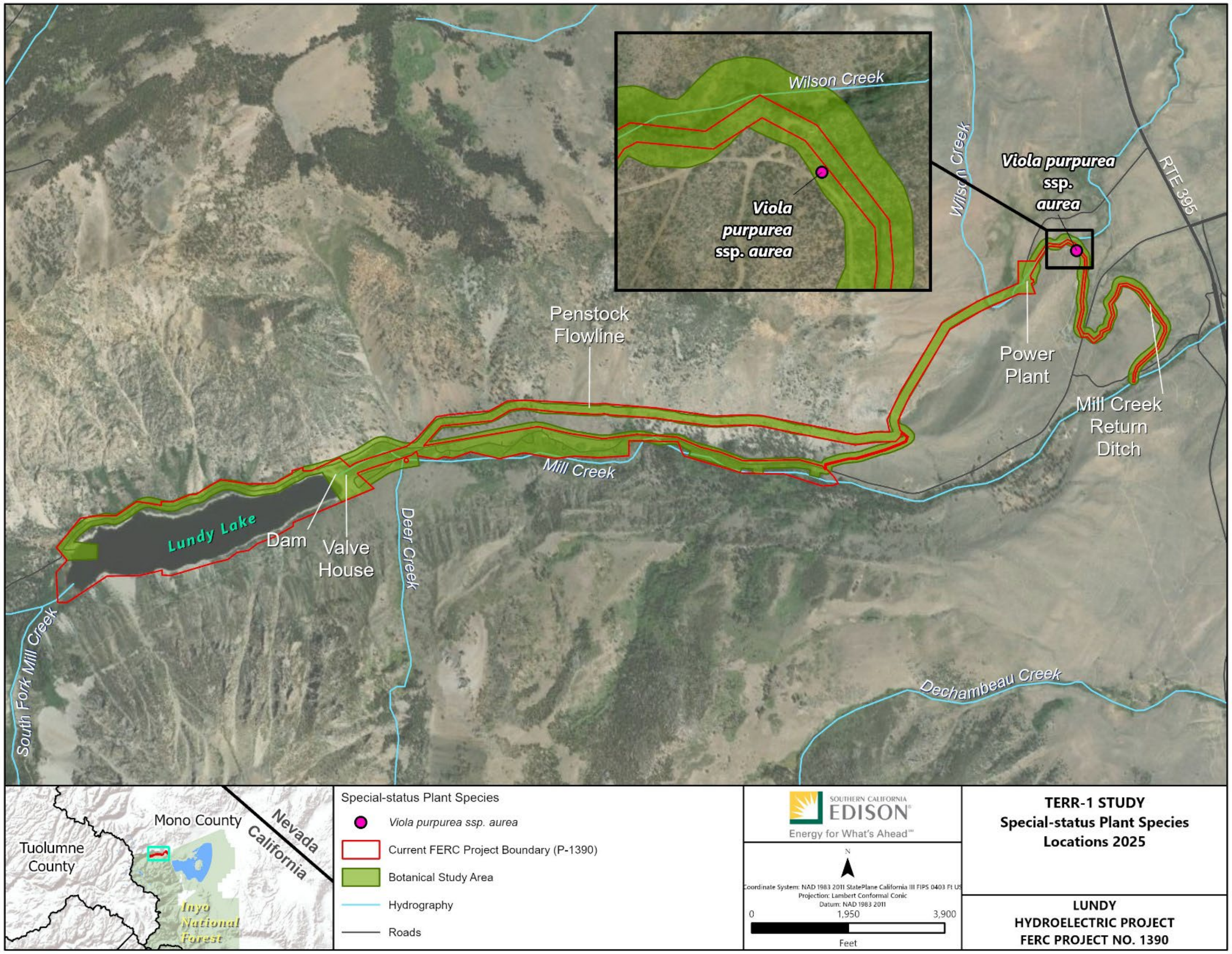


**Figure 7.7-13. Special-status Plant Species Locations.**

### 7.7.3. NON-NATIVE, INVASIVE SPECIES

Three non-native, invasive plant species of concern designated for mapping were observed in 2025 in the BSA: cheat grass, Russian thistle (*Salsola tragus*), and woolly mullein (*Verbascum thapsus*).

Cheat grass is an annual grass that occurs in open, disturbed areas at elevations below approximately 11,155 feet above mean sea level (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 BSA. 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.

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. It is found throughout California. It 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. Figure 7.7-14 through Figure 7.7-25, Non-native Invasive Plant Species Locations 2025, show the location of this species in the BSA, divided into the same 12 sections as above.

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. It is found throughout California except the driest deserts in the southeast of the state. It 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. It has a USFS treatment strategy of 4 (limited or no treatment) and a Cal-IPC rating of "limited". Figure 7.7-14 through Figure 7.7-25, Non-native Invasive Plant Species Locations 2025, shows the location of this species in the BSA. Approximately 6,978 individuals were mapped at 63 locations.

No other invasive plant species of concern were observed in the Botanical Resources Study Area in 2025. Other non-native plant species observed are reported in Appendix K, *2025 Plant Compendium*.


**Figure 7.7-14. Non-native Invasive Plant Species Locations 2025 – Section 1.**

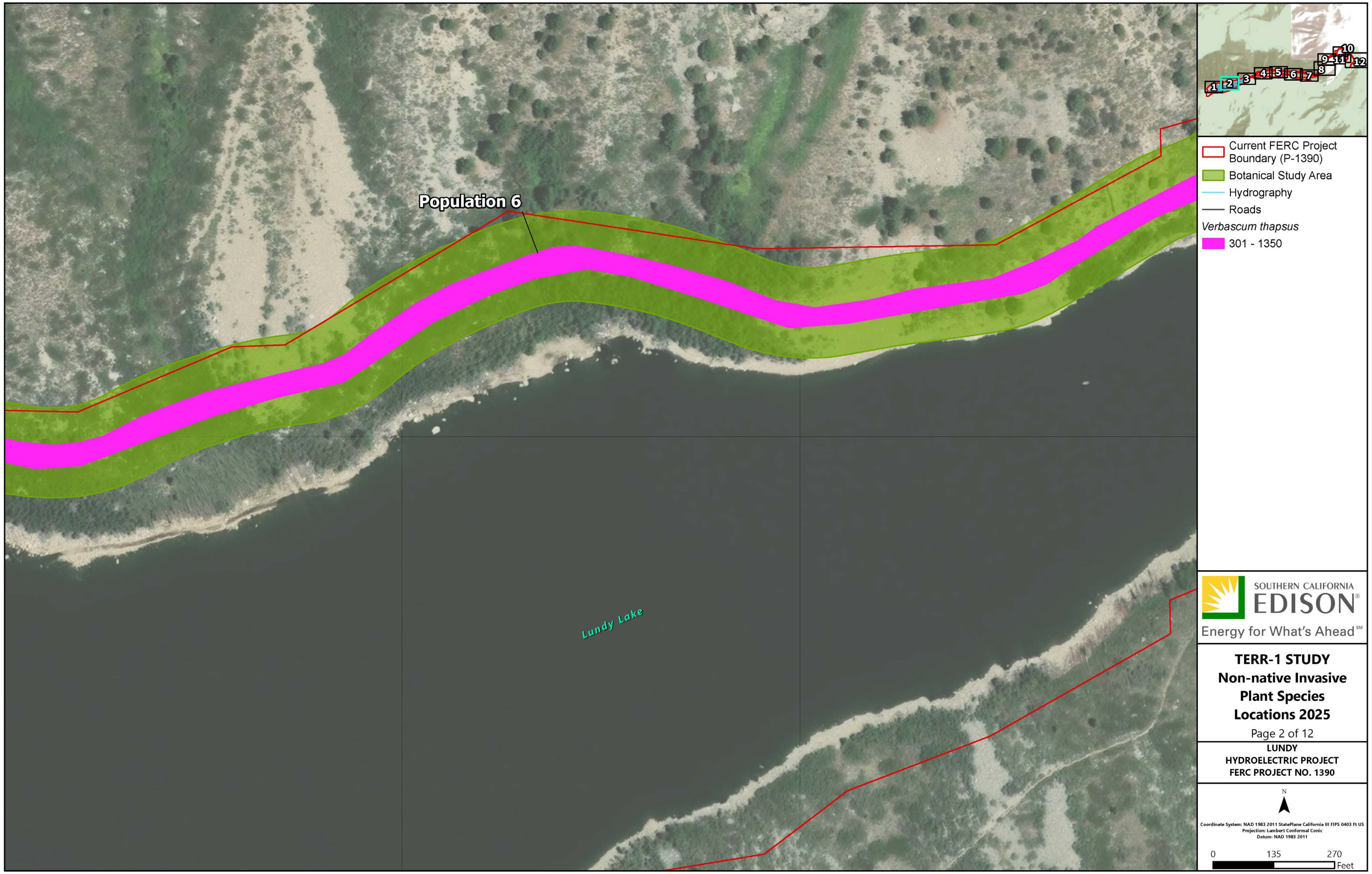


**Figure 7.7-15. Non-native Invasive Plant Species Locations 2025 – Section 2.**

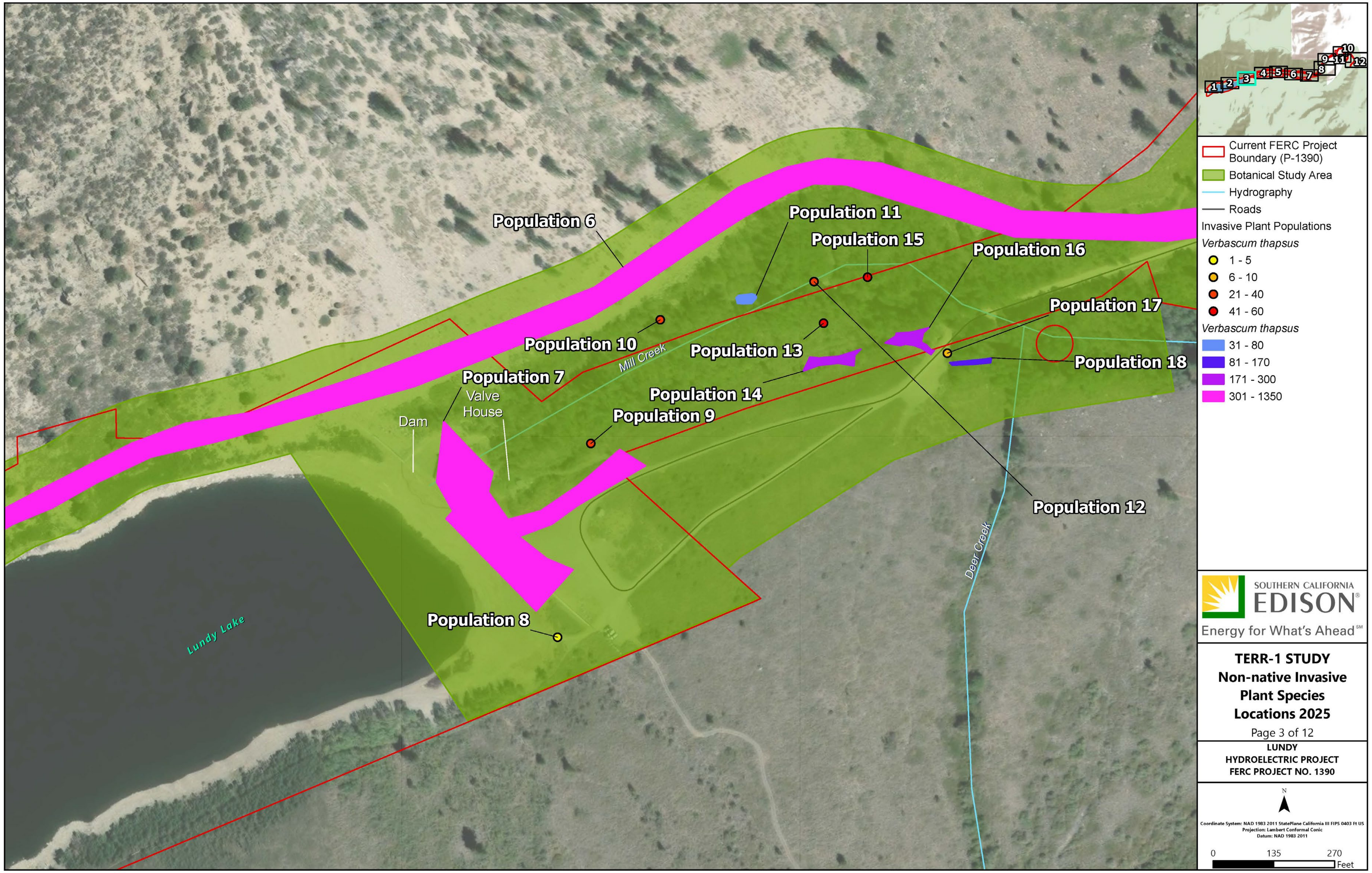


**Figure 7.7-16. Non-native Invasive Plant Species Locations 2025 – Section 3.**

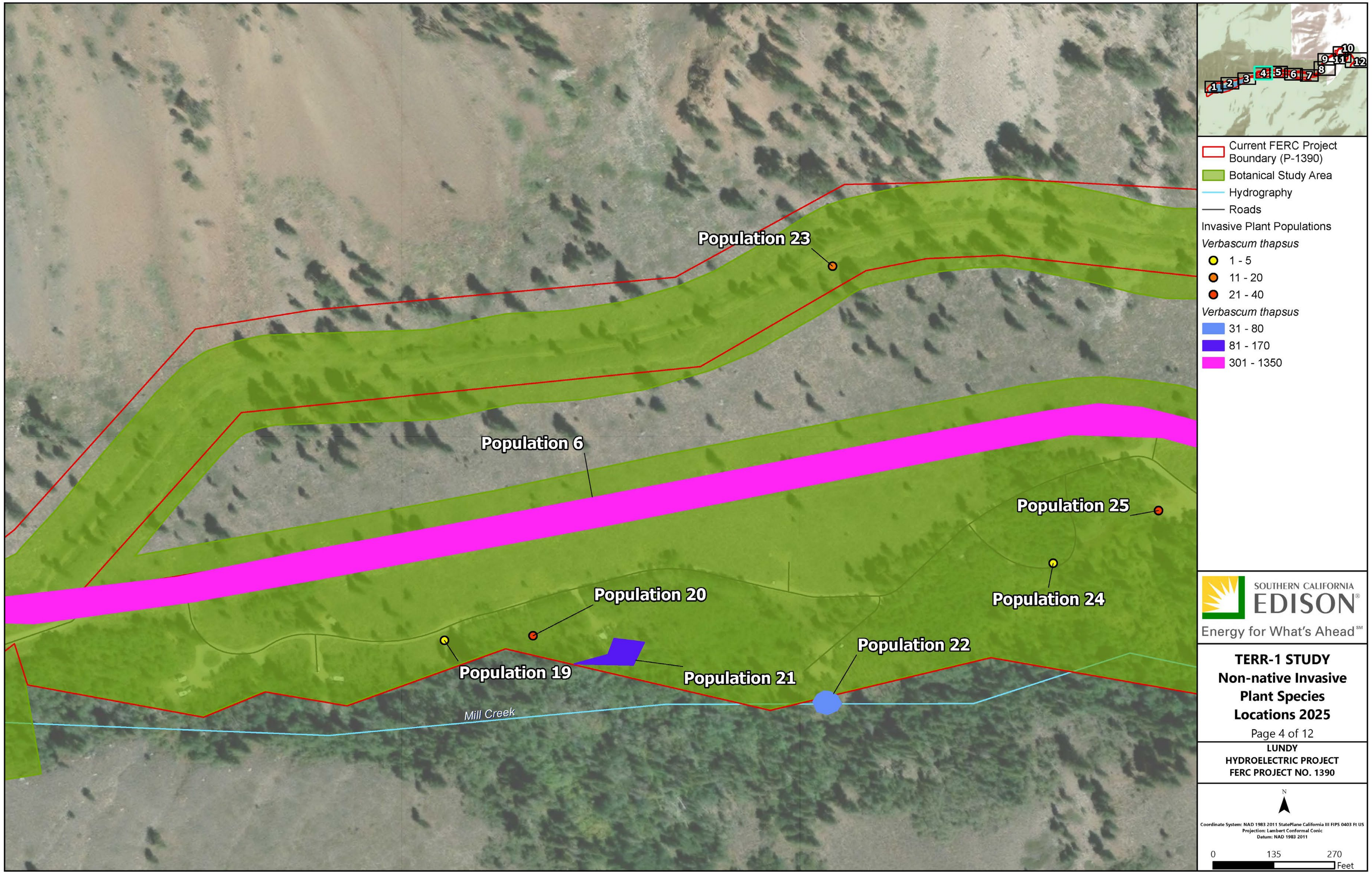


**Figure 7.7-17. Non-native Invasive Plant Species Locations 2025 – Section 4.**

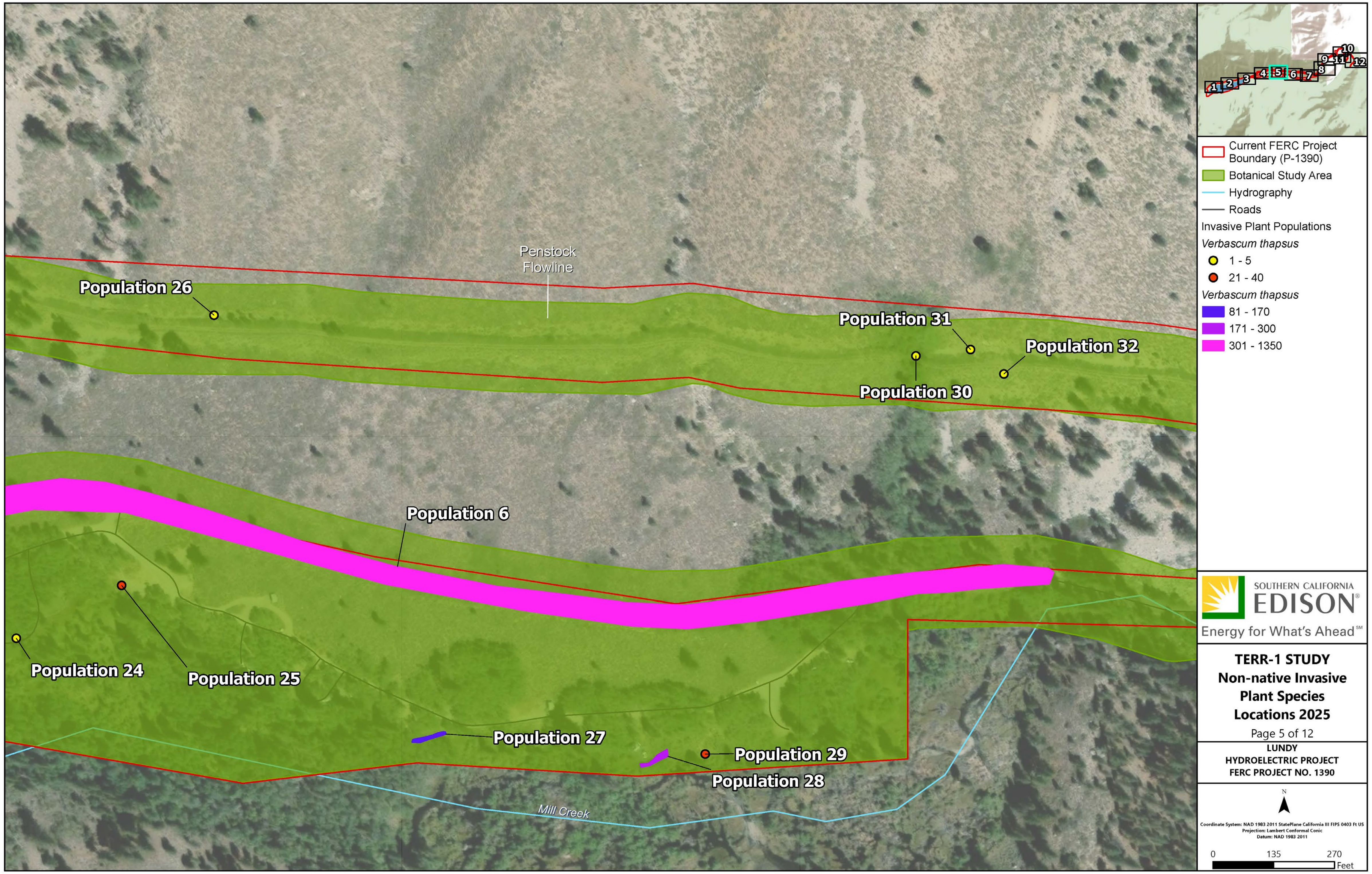


**Figure 7.7-18. Non-native Invasive Plant Species Locations 2025 – Section 5.**

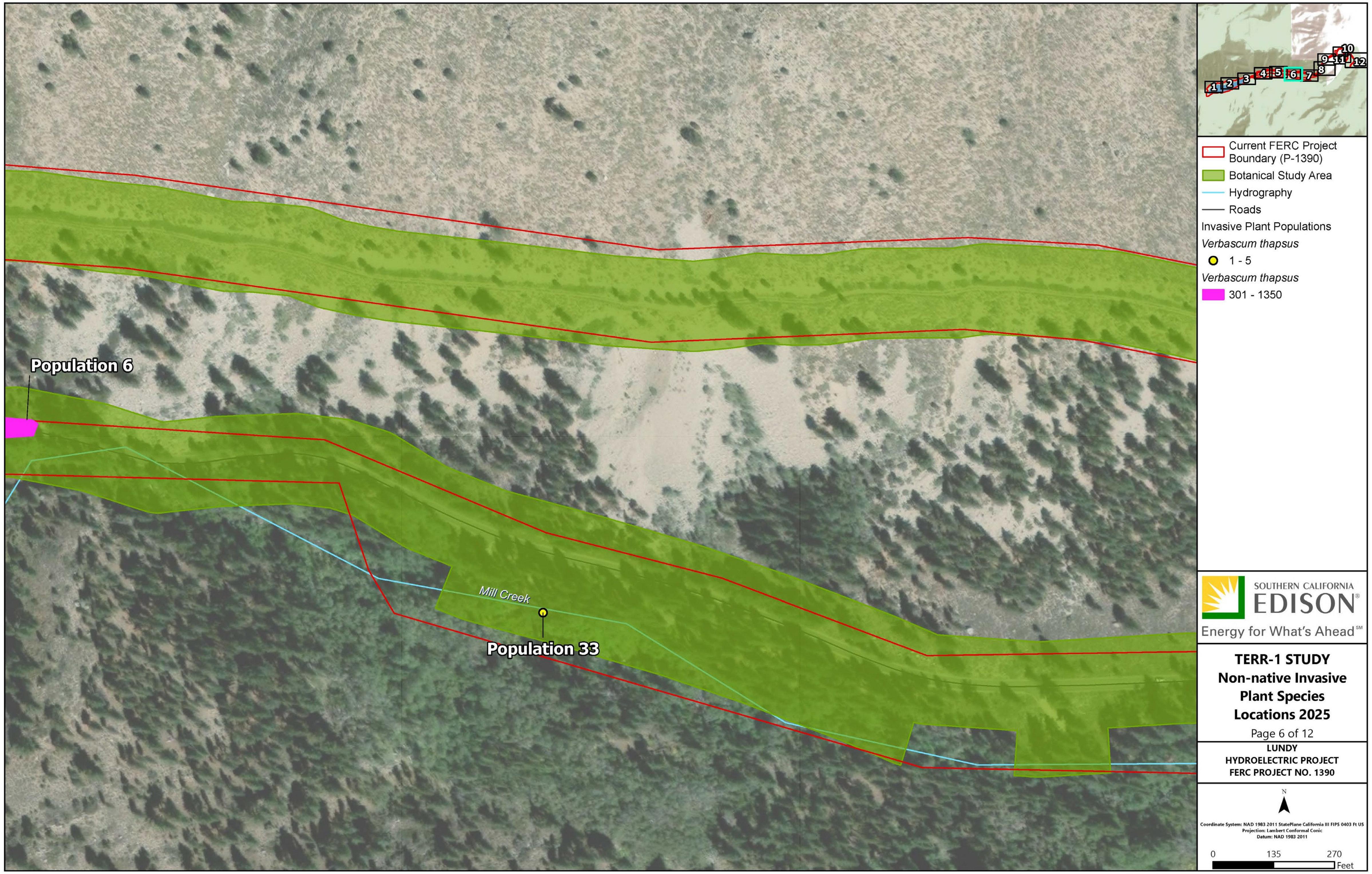


**Figure 7.7-19. Non-native Invasive Plant Species Locations 2025 – Section 6.**


**Figure 7.7-20. Non-native Invasive Plant Species Locations 2025 – Section 7.**


**Figure 7.7-21. Non-native Invasive Plant Species Locations 2025 – Section 8.**

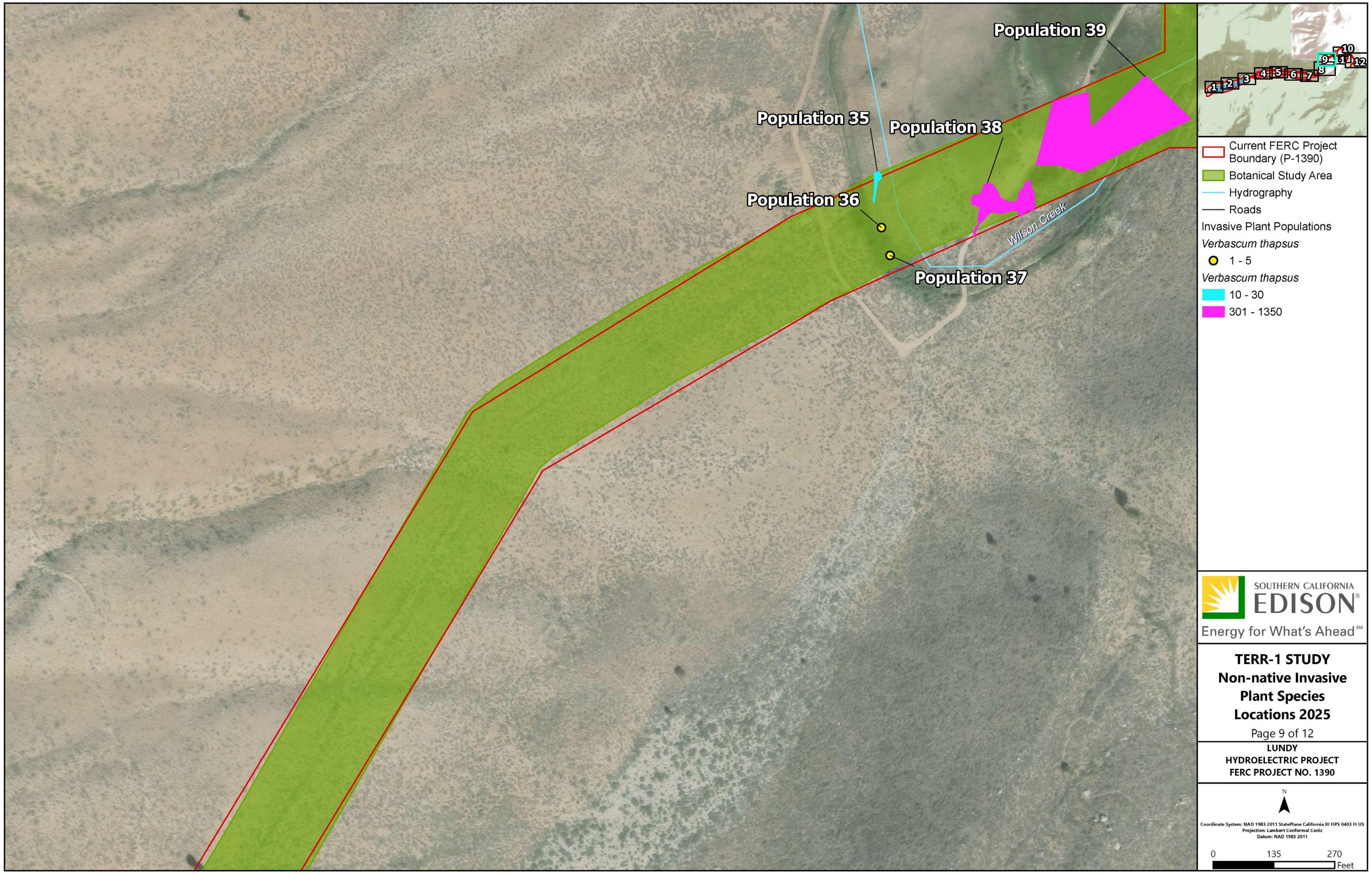


**Figure 7.7-22. Non-native Invasive Plant Species Locations 2025 – Section 9.**

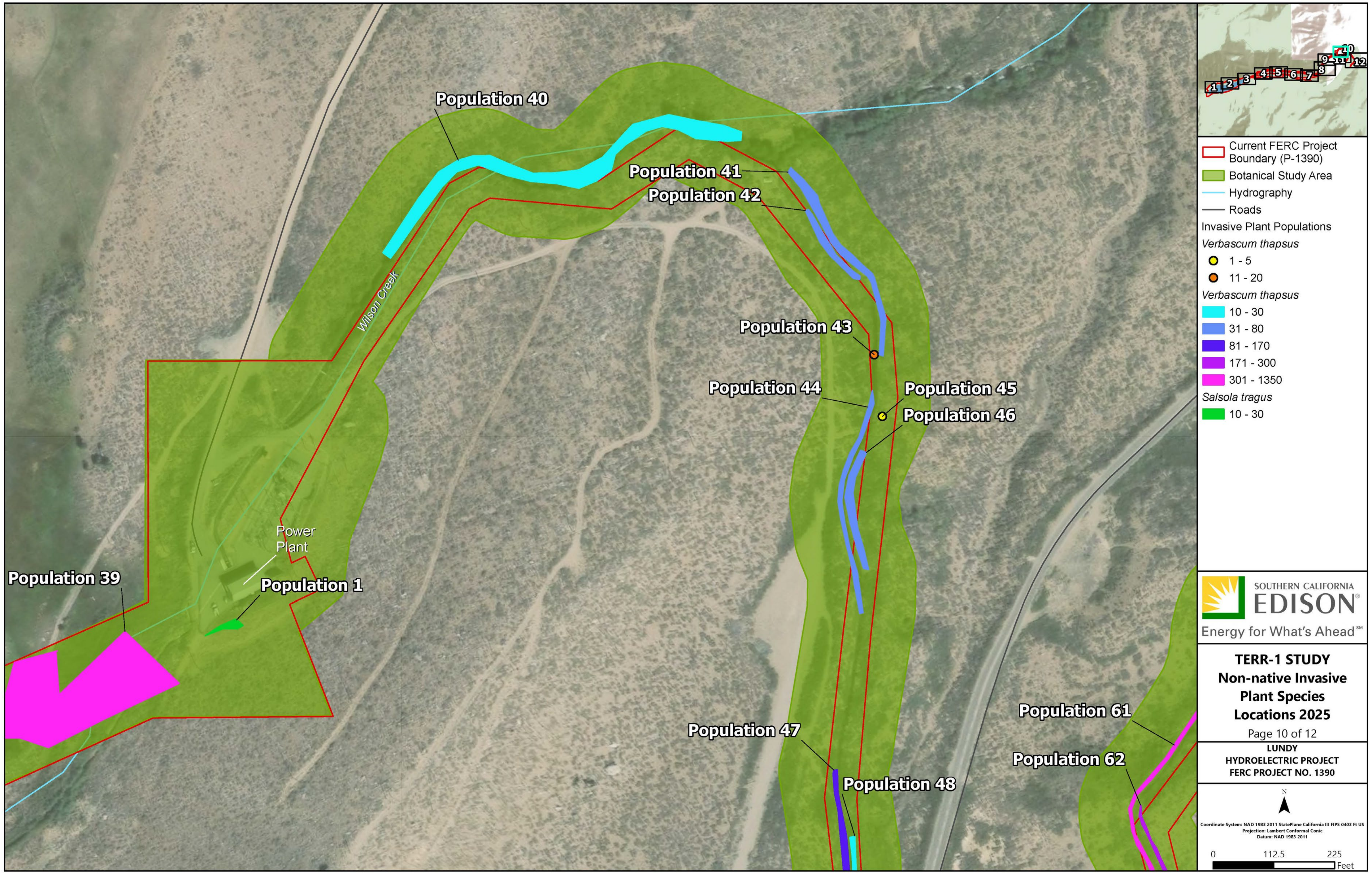


**Figure 7.7-23. Non-native Invasive Plant Species Locations 2025 – Section 10.**

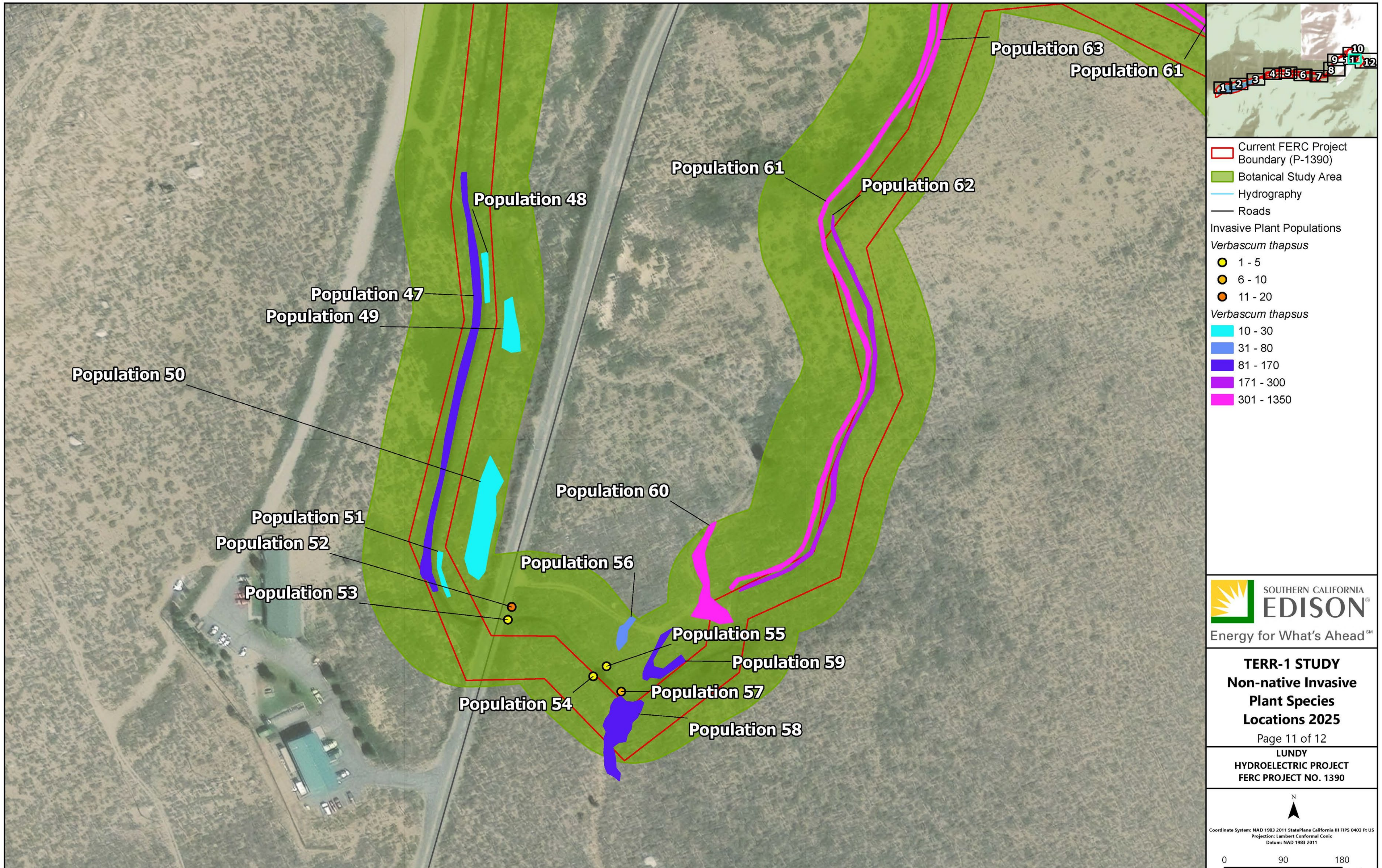


**Figure 7.7-24. Non-native Invasive Plant Species Locations 2025 – Section 11.**


**Figure 7.7-25. Non-native Invasive Plant Species Locations 2025 – Section 12.**

## 7.8. Discussion

As a result of the first year of botanical surveys, one special-status plant species (golden violet) and three non-native, invasive plant species were observed. Vegetation communities and other landcovers were mapped at a more accurate level than the current USFS maps. Final results will be reported following the second year (2026) botanical surveys.

A second year of plant/invasive species surveys will be performed in 2026 to document any additional special-status plant and/or invasive species populations and to add new observations to the plant compendium.

## 7.9. References

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# TERR-1 APPENDICIES

# APPENDIX J
# SPECIAL STATUS PLANT SPECIES REPORTED FROM THE PROJECT REGION

| Scientific Name[a] | Common Name | Federal Status[b] | State Status[c] | General Habitat Description/Distribution[d] | Potential to Occur[e] |
|---|---|---|---|---|---|
| **Listed Plant Species** | | | | | |
| *Astragalus monoensis* | Mono milk-vetch | SCC | SR, CRPR: 1B.2 | Perennial herb found in Great Basin scrub and upper montane coniferous forest, sometimes in gravelly or sandy soil; 6,925–11,010 feet. Blooms: Jun–Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Most populations are located over 20 miles to the south; however, the nearest known occurrence is located approximately 3 miles north of the FERC boundary along Virginia Lakes Road (CNDDB occurrence 33). |
| *Pinus albicaulis* | Whitebark pine | Threatened | N/A | Tree found in subalpine forest; 10,000–12,100 feet | May Occur. Suitable habitat is present but not observed during 2025 surveys. |
| **Other Special-Status Plant Species** | | | | | |
| **Known to Occur** | | | | | |
| *Lupinus duranii* | Mono Lake lupine | SCC | CRPR: 1B.2 | Perennial herb found in volcanic pumice, gravelly soil in Great Basin scrub, subalpine coniferous forest, and upper montane coniferous forest; 6,560–9,845 feet. Blooms: May–Aug. | Known to Occur. Suitable habitat is present but not observed during 2025 surveys. Species historically reported just south of FERC boundary (CNDDB Occurrence 20; 1938 record).<br>Per the Final Rare Plant Protection Plan Southern California Edison Company's Lundy Hydroelectric Project (FERC No. 1390) Compliance with New License Article 405, this record may be a misidentification. |
| *Ranunculus hydrocharoides* | Frog's-bit buttercup | SCC | CRPR: 2B.1 | Perennial herb (aquatic) found in freshwater marshes and swamps; 3,610–8,860 feet. Blooms: Jul–Aug. | Known to occur. Suitable habitat is present but not observed during 2025 surveys. Reported from FERC boundary downstream of Lundy Canyon Campground (CNDDB occurrence 4) |
| *Streptanthus oliganthus* | Masonic Mountain jewelflower | SCC | CRPR: 1B.2 | Perennial herb found in granitic, rocky, volcanic soil of pinyon and juniper woodland; 6,495–10,005 feet. Blooms Jun–Jul. | Known to occur. Suitable habitat is present but not observed during 2025 surveys. Reported less than 1 mile from penstock flowline (CNDDB occurrence 14). |
| *Viola purpurea* ssp. *aurea* | Golden violet | SCC | CRPR: 2B.2 | Perennial herb found in sandy soil in Great Basin scrub and pinyon and juniper woodland; 3,280–8,205 feet. Blooms: Apr–Jun. | Known to occur. Suitable habitat is present and incidentally observed in Botanical Study Area in 2024. Reported less than 1 mile from Powerplant (CNDDB occurrence 24; 1965 record). |
| **May Occur** | | | | | |
| *Allium atrorubens var. atrorubens* | Great Basin onion | SCC | CRPR: 2B.3 | Perennial bulbiferous herb found in Great Basin scrub and pinyon and juniper woodland, sometimes in rocky or sandy soil; 3,935–7,595 feet. Blooms: May–Jun. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5 miles north of the FERC boundary along Highway 395 (CNDDB occurrence 11). |
| *Boechera bodiensis* | Bodie Hills rockcress | SCC | CRPR: 1B.3 | Perennial herb found in alpine boulder and rock fields, Great Basin scrub, pinyon and juniper woodland, and subalpine coniferous forest; 6,840–11,580 feet. Blooms: Jun–Jul (Aug). | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5.5 miles southeast of the FERC boundary (CNDDB occurrence 28). |
| *Boechera cobrensis* | Masonic rockcress | N/A | CRPR: 2B.3 | Perennial herb found in sandy soil in Great Basin scrub and pinyon and juniper woodland; 4,510–10,190 feet. Blooms: Jun–Jul. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 2.3 miles north of the FERC boundary (CNDDB occurrence 19). |
| *Boechera tularensis* | Tulare rockcress | SCC | CRPR: 1B.3 | Perennial herb found in rocky slopes in subalpine coniferous forest and upper montane coniferous forest, sometimes on roadsides; 5,990–10,990 feet. Blooms: (May) Jun–Jul (Aug). | May occur. Suitable habitat is present but not observed during 2025 surveys. Species historically reported just west of FERC boundary (CNDDB occurrence 26; 1942 record). |
| *Botrychium ascendens* | Upswept moonwort | SCC | CRPR: 2B.3 | Perennial rhizomatous herb found in mesic soil in lower montane coniferous forest and meadows and seeps; 3,660–9,990 feet. Blooms: (Jun) Jul–Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 2.5 miles northwest of the FERC boundary (CNDDB occurrence 15). |
| *Botrychium crenulatum* | Scalloped moonwort | SCC | CRPR: 2B.2 | Perennial rhizomatous herb found in bogs and fens, lower montane coniferous forest, freshwater marshes and swamps, meadows and seeps, and upper montane coniferous forest; 4,160–10,760 feet. Blooms: Jun–Sep. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 6.5 miles south of the FERC boundary (CCH record UCR123116). |

| Scientific Name[a] | Common Name | Federal Status[b] | State Status[c] | General Habitat Description/Distribution[d] | Potential to Occur[e] |
|---|---|---|---|---|---|
| *Botrychium lineare* | Slender moonwort | SCC | CRPR: 1B.1 | Perennial herb found in meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest, often in disturbed areas; 8,400–8,530 feet. Blooming period unknown. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 2.5 miles northwest of the FERC boundary (CNDDB occurrence 4); however, identification was not confirmed, and the FERC boundary lies outside this species' current known elevation range. |
| *Botrychium lunaria f* | Common moonwort | N/A | CRPR: 2B.3 | Perennial rhizomatous herb found in mesic areas of meadows and seeps; 6,495–11,205 feet. Blooms: June-Sep. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5.5 miles south of the FERC boundary (CNDDB occurrence 8). |
| *Botrychium minganense* | Mingan moonwort | SCC | CRPR: 2B.2 | Perennial rhizomatous herb found in mesic soil in bogs and fens, lower montane coniferous forest, meadows and seeps (edges), and upper montane coniferous forest; 3,905–10,795 feet. Blooms: Jul–Sep (Oct). | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 6.5 miles northwest of the FERC boundary (CCH record UC1965916). |
| *Botrychium paradoxum* | Paradox moonwort | N/A | CRPR: 2B. 1 | Perennial rhizomatous herb found in alpine boulder and rock fields (limestone and marble) and upper montane coniferous forest (moist); 5,710–13,780 feet. Blooms: Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5.5 miles northwest of the FERC boundary (CNDDB occurrence 2). |
| *Carex praticola* | Northern meadow sedge | SCC | CRPR: 2B.2 | Perennial herb found in mesic meadows and seeps; 0–10,500 feet. Blooms: May–Jul. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 7.5 miles northwest of the FERC boundary (CNDDB occurrence 15). |
| *Carex vallicola* | Western valley sedge | SCC | CRPR: 2B.3 | Perennial rhizomatous herb found in mesic soil in Great Basin scrub and meadows and seeps; 5,005–9,205 feet. Blooms: Jul–Aug. | May occur. A limited amount of suitable habitat is present but not observed during 2025 surveys. Species reported approximately 6.5 miles south of the FERC boundary (CNDDB occurrence 8). |
| *Cusickiella quadricostata* | Bodie Hills cusickiella | N/A | CRPR: 1B.2 | Perennial herb found in Great Basin scrub and pinyon and juniper woodland, sometimes in clay or rocky soil; 6,560–9,185 feet. Blooms: May–Jul. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 3.5 miles northeast of the FERC boundary (CNDDB occurrence 24). |
| *Dermatocarpon meiophyllizum* | Silverskin lichen | N/A | CRPR: 2B.3 | Aquatic foliose lichen found in rocky lake margins and streambanks in the coastal prairie, lower montane coniferous forest, North Coast coniferous forest, subalpine coniferous forest, and upper montane coniferous forest; 970–11,465 feet. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5.5 miles northwest of the FERC boundary (CNDDB occurrence 6). |
| *Eremothera boothii ssp. boothii* | Booth's evening-primrose | N/A | CRPR: 2B.3 | Annual herb found in Joshua tree woodland and pinyon and juniper woodland; 2,675–7,875 feet. Blooms: Apr–Sep. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 3 miles southeast of the FERC boundary (CNDDB occurrence 22). |
| *Kobresia myosuroides* | Seep kobresia | SCC | CRPR: 2B.2 | Perennial rhizomatous herb found in alpine boulder and rock fields (mesic), meadows and seeps (carbonate), and subalpine coniferous forest; 4,890–10,645 feet. Blooms: (Jun) Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 2.5 miles northwest of the FERC boundary (CNDDB occurrence 4). |
| *Lupinus pusillus var. intermontanus* | Intermontane lupine | N/A | CRPR: 2B.3 | Annual herb found in sandy Great Basin scrub; 4,005–6,760 feet. Blooms: May–Jun. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 9 miles northeast of the FERC boundary (CNDDB occurrence 8). |
| *Meesia longiseta* | Long seta hump moss | N/A | CRPR: 2B.3 | Moss found in carbonate soil in bogs and fens, meadows and seeps, and upper montane coniferous forest; 5,740–9,990 feet. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 5.5 miles northwest of the FERC boundary (CNDDB Occurrence 3). |
| *Mentzelia torreyi* | Torrey's blazing star | SCC | CRPR: 2B.2 | Perennial herb found in Great Basin scrub, Mojavean desert scrub, and pinyon and juniper woodland, usually in volcanic soil but also alkaline, rocky, and sandy soil; 3,840–9,300 feet. Bloom: Jul–Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 2.6 miles east of the FERC boundary (CNDDB Occurrence 6). |
| *Phacelia monoensis* | Mono County phacelia | SCC | CRPR: 1B.1 | Annual herb found in Great Basin scrub and pinyon-juniper woodland, in clay soil and often along roadsides; 6,235–9,515 feet. Blooms: May–Jul. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 8 miles north of the FERC boundary (CNDDB occurrence 14). |

| Scientific Name[a] | Common Name | Federal Status[b] | State Status[c] | General Habitat Description/Distribution[d] | Potential to Occur[e] |
|---|---|---|---|---|---|
| *Potamogeton praelongus* | White-stemmed pondweed | N/A | CRPR: 2B.3 | Perennial rhizomatous herb (aquatic) found in marshes and swamps (deep water, lakes); 5,905–9,842 feet. Blooms: Jul–Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species historically reported approximately 1.8 miles northwest of the FERC boundary (CNDDB occurrence 7; 1934 record) |
| *Sabulina stricta* | Bog sandwort | N/A | CRPR: 2B.3 | Perennial herb (aquatic) found in alpine boulder and rock fields, alpine dwarf scrub, and meadows and seeps; 8,005–12,995 feet. Blooms: Jul–Sep. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 3.3 miles northwest of the FERC boundary (CNDDB occurrence 15). |
| *Silene oregana* | Oregon campion | N/A | CRPR: 2B.2 | Perennial herb found in Great Basin scrub and subalpine coniferous forest; 4,920–8,205 feet.<br>Blooms: Jul–Sept. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 4.2 miles south of the FERC boundary (CNDDB occurrence 1). |
| *Tetradymia tetrameres* | Dune horsebrush | SCC | CRPR: 2B.2 | Perennial shrub found in sandy soil in Great Basin scrub; 3,935–7,005 feet. Blooms: (Jul) Aug. | May occur. Suitable habitat but not observed during 2025 surveys. Species historically reported approximately 2.7 miles east of the FERC boundary (CNDDB occurrence 3; 1937 record). |
| *Thelypodium integrifolium ssp. complanatum* | Foxtail thelypodium | SCC | CRPR: 2B.2 | Annual/perennial herb found in mesic areas of Great Basin scrub and meadows and seeps, sometimes in alkaline soils; 3,610–8,205 feet. Blooms: Jun–Oct. | May occur. Suitable habitat but not observed during 2025 surveys. Species historically reported approximately 1.2 miles southeast of the FERC boundary (CNDDB occurrence 8; 1937 record). |
| *Thelypodium milleflorum* | Many-flowered thelypodium | SCC | CRPR: 2B.2 | Perennial herb found in chenopod scrub and Great Basin scrub (sandy); 4,005–8,205 feet. Blooms: Apr–Jun. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 9 miles northeast of FERC boundary (CNDDB occurrence 30). |
| *Triglochin palustris* | Marsh arrow-grass | N/A | CRPR: 2B.3 | Perennial rhizomatous herb found in mesic areas of meadows and seeps, freshwater marshes and swamps, and subalpine coniferous forest; 7,495–12,140 feet. Blooms: Jul–Aug. | May occur. Suitable habitat is present but not observed during 2025 surveys. Species reported approximately 10.3 miles south of the FERC boundary (CCH record UC1949575). |
| | | | | | |
| **Unlikely to Occur** | | | | | |
| *Agrostis humilis* | Mountain bent grass | SCC | CRPR: 2B.3 | Perennial herb found in alpine boulder and rock fields, meadows and seeps, and subalpine coniferous forest, sometimes in carbonate soil; 8,760–10,500 feet. Blooms: Jul–Sep. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Astragalus oophorus* var. *lavinii* | Lavin's milk-vetch | N/A | CRPR: 1B.2 | Perennial herb found in Great Basin scrub and pinyon and juniper woodland; 8,040–10,005 feet. Blooms: Jun. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known geographic range. |
| *Boechera tiehmii* | Tiehm's rockcress | SCC | CRPR: 1B.3 | Perennial herb found in alpine boulder and rock fields (granitic); 9,745–11,780 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Botrychium yaaxudakeit* | Giant moonwort | N/A | CRPR: 2B.1 | Perennial rhizomatous herb found in alpine boulder and rock fields (meadows); 10,500 feet. Blooms: Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range and geographic range; it is only known from a single occurrence over 6.5 miles northwest of the FERC boundary (CCH Record UC1965917). |
| *Calochortus excavatus* | Inyo County star-tulip | SCC | CRPR: 1B1 | Perennial bulbiferous herb found in alkaline, mesic soil in chenopod scrub and meadows and seeps; 3,772–6,560 feet. Blooms: Apr–Jul. | Unlikely to occur. Not observed during 2025 focused surveys. Suitable habitat is present. The species historically reported approximately 15 miles north of FERC boundary (CNDDB occurrence 71; 1949 record). However, the FERC boundary lies outside this species' current known geographic range. |
| *Carex davyi* | Davy's sedge | SCC | CRPR: 1B.3 | Perennial herb found in subalpine coniferous forest and upper montane coniferous forest; 4,920–10,500 feet. Blooms: May–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. Suitable habitat is present. The species historically reported approximately 12 miles southwest of the FERC boundary (CNDDB occurrence 2; 1944 record). However, the FERC boundary lies outside this species' current known geographic range. |

| Scientific Name[a] | Common Name | Federal Status[b] | State Status[c] | General Habitat Description/Distribution[d] | Potential to Occur[e] |
|---|---|---|---|---|---|
| *Carex scirpoidea ssp. pseudoscirpoidea* | Western single-spiked sedge | SCC | CRPR: 2B.2 | Perennial rhizomatous herb found in mesic, often carbonate soil in alpine boulder and rock fields, meadows and seeps, and subalpine coniferous forest (rocky); 9,810–12,140 feet. Blooms: Jul–Sep. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Carex tiogana* | Tioga Pass sedge | SCC | CRPR: 1B.3 | Perennial herb found in meadows and seeps (mesic, lake margins); 10,170–10,825 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Chaetadelpha wheeleri* | Wheeler's dune-broom | SCC | CRPR: 2B.2 | Perennial rhizomatous herb found in sandy soil in desert dunes, Great Basin scrub, and Mojavean desert scrub; 2,610–6,235 feet. Blooms: Apr–Sep. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Claytonia megarhiza* | Fell-fields claytonia | SCC | CRPR: 2B.3 | Perennial herb found in alpine boulder and rock fields and subalpine coniferous forest (rocky or gravelly); 8,530–11,590 feet. Blooms: Jul–Sep. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Crepis runcinata* | Fiddleleaf hawksbeard | SCC (C.r. ssp. *hallii*) | CRPR: 2B.2 | Perennial herb found in alkaline and mesic soil in Mojavean desert scrub and pinyon and juniper woodland; 4,100–6,480 feet. Blooms: May–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Draba asterophora var. asterophora* | Tahoe draba | N/A | CRPR: 1B.2 | Perennial herb found in alpine boulder and rock fields and subalpine coniferous forest; 8,205–11,500 feet. Blooms: Jul–Aug (Sep). | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range and geographic range. |
| *Draba cana* | Canescent draba | N/A | CRPR: 2B.3 | Perennial herb found in carbonate soil in alpine boulder and rock fields, meadows and seeps, and subalpine coniferous forest; 9,845–11,500 feet. Blooms: Jul. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Draba praealta* | Tall draba | N/A | CRPR: 2B.3 | Perennial herb found in mesic soil in meadows and seeps; 8,205–11,205 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Eriogonum alexanderae* | Alexander's buckwheat | SCC | CRPR: 1B.1 | Perennial herb found in Great Basin scrub and pinyon and juniper woodland, sometimes in gravelly or shale soil; 9,500 feet. Blooms May–Jul. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Festuca minutiflora* | Small-flowered fescue | N/A | CRPR: 2B.3 | Perennial herb found in alpine boulder and rock fields; 10,500–13,290 feet. Blooms: Jul. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Glyceria grandis* | American manna grass | N/A | CRPR: 2B.3 | Perennial rhizomatous herb found in bogs and fens, meadows and seeps, and marshes and swamps around lake margins and streambanks; 50–6,495 feet. Blooms Jun–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Lupinus gracilentus* | Slender lupine | N/A | CRPR: 1B.3 | Perennial herb found in subalpine coniferous forest; 8,205–11,485 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Myurella julacea* | Small mousetail moss | N/A | CRPR: 2B.3 | Moss found in damp rock and soil in alpine boulder and rock fields and subalpine coniferous forest; 8,860–9,845 feet. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Pohlia tundrae* | Tundra thread moss | SCC | CRPR: 2B.3 | Moss found in gravelly, damp soil in alpine boulder and rock fields; 8,860–9,845 feet. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Salix brachycarpa var. brachycarpa* | Short-fruited willow | N/A | CRPR 2B.3 | Perennial herb found in carbonate soil in alpine dwarf scrub, meadows and seeps, and subalpine coniferous forest; 9,845–11,485 feet. Blooms: Jun–Jul. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Salix nivalis* | Snow willow | N/A | CRPR: 2B.3 | Perennial deciduous shrub found in alpine dwarf scrub; 10,170–11,485 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |

| Scientific Name[a] | Common Name | Federal Status[b] | State Status[c] | General Habitat Description/Distribution[d] | Potential to Occur[e] |
|---|---|---|---|---|---|
| *Suaeda occidentalis* | Western seablite | N/A | CRPR: 2B.3 | Annual herb found in alkaline and mesic areas of Great Basin scrub; 3,935–4,920 feet. Blooms Jul–Sep. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |
| *Townsendia condensata* | Cushion townsendia | N/A | CRPR: 2B.3 | Perennial herb found in alpine boulder and rock fields and gravelly subalpine coniferous forest; 9,400–12,060 feet. Blooms: Jul–Aug. | Unlikely to occur. Not observed during 2025 focused surveys. The FERC boundary lies outside this species' current known elevation range. |

CRPR = California Rare Plant Rank; FERC = Federal Energy Regulatory Commission; CNDDB = California Natural Diversity Database; CCH = Consortium of California Herbaria; N/A = not applicable

**Federal Status**
SCC = Species of Conservation Concern

**State Status**
SR = State Rare

**CRPR**
1B = Plants rare, threatened, or endangered in California and elsewhere
2B = Plants rare, threatened, or endangered in California but common elsewhere

**CRPR Threat Ranks**
1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
2 = Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat)
[a] The following USGS 7.5-minute topographic quadrangles were queried for special-status plant species: Big Alkali, Bodie, Dunderberg Peak, Lee Vining, Lundy, Mount Dana, Negit Island, Tioga Pass, and Twin Lakes.
[b] The source of the Inyo National Forest status is the Persistence Analysis for Species of Conservation Concern Inyo National Forest (INF, 2019). Species indicated to be present in the Mono Ranger District are included.
[c] The source for the State Status is the Endangered, Threatened, and Rare Plants List (CDFW, 2023c). The source for the CRPR is the Special Vascular Plants, Bryophytes, and Lichens List (CDFW, 2023b).
[d] The source for information on species habitat is the California Native Plant Society Rare Plant Inventory (CNPS, 2023). For the blooming period, months included in parentheses are uncommon.
[e] Location information is provided by the CNDDB (CDFW, 2023a) or the CCH (CCH, 2023).
[f] Taxa referred to as *Botrychium neolunaria* by CNPS (2023).

# APPENDIX K
# 2025 PLANT COMPENDIUM

| Species | Common Name |
|---|---|
| **EQUISETACEAE – HORSETAIL FAMILY** | |
| *Equisetum arvense* | common horsetail |
| *Equisetum laevigatum* | smooth scouring rush |
| **GYMNOSPERMS** | |
| **CUPRESSACEAE – CYPRESS FAMILY** | |
| *Juniperus grandis* | Sierra juniper |
| **PINACEAE – PINE FAMILY** | |
| *Abies concolor* | white fir |
| *Pinus contorta ssp. murrayana* | lodgepole pine |
| *Pinus jeffreyi* | Jeffrey pine |
| *Pinus monophylla* | singleleaf pinyon pine |
| **PODOCARPACEAE – BERRY CONIFER FAMILY** | |
| *Lepidothamnus laxifolius** | pygmy pine |
| **ANGIOSPERMS** | |
| **EUDICOTS** | |
| **AMARANTHACEAE – AMARANTH FAMILY** | |
| *Amaranthus albus** | tumbleweed |
| **APIACEAE – CARROT FAMILY** | |
| *Angelica capitellata* | swamp white heads |
| *Angelica lineariloba* | linearly-lobed angelica |
| *Cymopterus terebinthinus* | turpentine cymopterus |
| *Osmorhiza occidentalis* | western sweet-cicely |
| **APOCYNACEAE – DOGBANE FAMILY** | |
| *Apocynum androsaemifolium* | bitter dogbane |
| **ASTERACEAE – SUNFLOWER FAMILY** | |
| *Achillea millefolium* | thousand-leaved yarrow |
| *Ambrosia acanthicarpa* | annual bur-sage |
| *Arnica mollis* | hairy arnica |
| *Artemisia douglasiana* | mugwort |
| *Artemisia dracunculus* | tarragon |
| *Artemisia ludoviciana* | silver wormwood |
| *Artemisia tridentata* | big sagebrush |
| *Brickellia californica* | California brickellbush |
| *Chaenactis douglasii var. douglasii* | dusty-maidens |
| *Chrysothamnus viscidiflorus* | yellow rabbitbrush |
| *Cirsium cymosum* | peregrine thistle |
| *Cirsium scariosum* | meadow thistle |

| Species | Common Name |
|---|---|
| *Crepis acuminata* | taper-tipped hawksbeard |
| *Dieteria canescens* | hoary-aster |
| *Ericameria nauseosa* | rubber rabbitbrush |
| *Erigeron aphanactis* | rayless shaggy fleabane |
| *Erigeron breweri var. breweri* | Brewer's fleabane |
| *Erigeron canadensis* | horseweed |
| *Eriophyllum lanatum* | common woolly sunflower |
| *Gnaphalium palustre* | marsh cudweed |
| *Packera sp.* | groundsel |
| *Pleiacanthus spinosus* | thorny skeletonweed |
| *Pyrrocoma apargioides* | alpine flames |
| *Senecio hydrophilus* | water ragwort |
| *Senecio integerrimus* | smooth ragwort |
| *Solidago elongata* | west coast Canada goldenrod |
| *Stephanomeria exigua* | little stephanomeria |
| *Stephanomeria tenuifolia* | narrow-leaved wire-lettuce |
| *Taraxacum officinale** | common dandelion |
| *Tetradymia canescens* | hairy cottonthorn |
| *Tragopogon dubius** | yellow salsify |
| *Wyethia mollis* | woolly mule's ears |
| **BORAGINACEAE – BORAGE FAMILY** | |
| *Cryptantha sp.* | cryptantha |
| *Greeneocharis circumscissa* | cushion greeneocharis |
| *Hackelia micrantha* | Jessica's stickseed |
| *Myosotis laxa* | bay forget-me-not |
| *Oreocarya confertiflora* | yellow-flowered oreocarya |
| **BRASSICACEAE – MUSTARD FAMILY** | |
| *Boechera pauciflora* | hairy stem rockcress |
| *Boechera retrofracta* | reflexed rockcress |
| *Boechera spp.* | rockcress |
| *Cardamine breweri* | Brewer's bitter-cress |
| *Descurainia pinnata* | feathery tansy mustard |
| *Descurainia sophia** | wise tansy mustard |
| *Lepidium sp.* | peppergrass |
| *Sisymbrium altissimum** | tumble mustard |
| **CAPRIFOLIACEAE – HONEYSUCKLE FAMILY** | |
| *Symphoricarpos rotundifolius var. rotundifolius* | roundleaf snowberry |

| Species | Common Name |
|---|---|
| **CARYOPHYLLACEAE – PINK FAMILY** | |
| *Sabulina nuttallii var. fragilis* | Nuttall's brittle sandwort |
| **CHENOPODIACEAE – GOOSEFOOT FAMILY** | |
| *Chenopodium album** | lamb's quarters |
| *Grayia spinosa* | thorny hop-sage |
| *Salsola tragus** | Russian thistle |
| **CORNACEAE – DOGWOOD FAMILY** | |
| *Cornus sessilis* | sessile-leaved dogwood |
| **EHRETIACEAE-EHRETIA FAMILY** | |
| *Tiquilia nuttallii* | annual tiquilia |
| **ELAEAGNACEAE – OLEASTER FAMILY** | |
| *Shepherdia argentea* | buffalo-berry |
| **FABACEAE – LEGUME FAMILY** | |
| *Astragalus canadensis var. brevidens* | short-toothed Canadian milkvetch |
| *Astragalus purshii var. tinctus* | colored Pursh's milkvetch |
| *Astragalus whitneyi* | balloon milkvetch |
| *Lupinus argenteus* | silvery lupine |
| *Medicago lupulina** | black medick |
| *Melilotus albus** | white sweetclover |
| *Trifolium repens** | white clover |
| **GENTIANACEAE – GENTIAN FAMILY** | |
| *Frasera speciosa* | monument plant |
| **GERANIACEAE – GERANIUM FAMILY** | |
| *Erodium cicutarium** | redstem filaree |
| *Geranium richardsonii* | Richardson's geranium |
| **GROSSULARIACEAE – GOOSEBERRY FAMILY** | |
| *Ribes cereum* | wax currant |
| *Ribes inerme* | white-stemmed gooseberry |
| **HYDROPHYLLACEAE-WATERLEAF FAMILY** | |
| *Phacelia bicolor* | bicolored phacelia |
| *Phacelia hastata* | spear phacelia |
| *Phacelia heterophylla var. virgata* | wand-like varied-leaf phacelia |
| *Phacelia humilis* | low phacelia |
| *Phacelia ramosissima* | branching phacelia |
| **LAMIACEAE – MINT FAMILY** | |
| *Monardella odoratissima* | coyote-mint |

| Species | Common Name |
|---|---|
| **LINACEAE – FLAX FAMILY** | |
| *Linum lewisii var. lewisii* | Lewis' flax |
| **LOASACEAE – BLAZING STAR FAMILY** | |
| *Mentzelia laevicaulis var. laevicaulis* | smooth-stemmed blazing star |
| *Mentzelia sp.* | blazing star |
| **MALVACEAE – MALLOW FAMILY** | |
| *Malva neglecta** | common mallow |
| **MONTIACEAE – MINER'S–LETTUCE FAMILY** | |
| *Montia chamissoi* | toad lily |
| **ONAGRACEAE – EVENING PRIMROSE FAMILY** | |
| *Chamerion angustifolium ssp. circumvagum* | fireweed |
| *Gayophytum diffusum ssp. parviflorum* | small-flowered, loose-spreading gayophytum |
| *Oenothera elata* | tall evening primrose |
| **OROBANCHACEAE – BROOM–RAPE FAMILY** | |
| *Castilleja applegatei ssp. pinetorum* | pine Applegate's paintbrush |
| *Castilleja linariifolia* | linear-leaved paintbrush |
| *Castilleja miniata ssp. miniata* | red paintbrush |
| *Orthocarpus cuspidatus ssp. copelandii* | Copeland's owl's-clover |
| **PAPAVERACEAE – POPPY FAMILY** | |
| *Argemone munita* | chicalote |
| **PHRYMACEAE – LOPSEED FAMILY** | |
| *Erythranthe floribunda* | many-flowered monkeyflower |
| *Erythranthe guttata* | common monkeyflower |
| **PLANTAGINACEAE – PLANTAIN FAMILY** | |
| *Penstemon rostriflorus* | beaked beardtongue |
| *Penstemon speciosus* | showy beardtongue |
| *Plantago lanceolata** | English plantain |
| *Veronica cf. americana* | American brooklime |
| **POLEMONIACEAE – PHLOX FAMILY** | |
| *Allophyllum gilioides ssp. violaceum* | violet-colored allophyllum |
| *Collomia grandiflora* | large-flowered collomia |
| *Eriastrum wilcoxii* | Wilcox's eriastrum |
| *Leptosiphon nuttallii ssp. pubescens* | Nuttall's hairy leptosiphon |
| *Linanthus sp.* | linanthus |
| *Polemonium occidentale* | western polemonium |
| **POLYGONACEAE – BUCKWHEAT FAMILY** | |
| *Eriogonum elatum var. elatum* | tall wild buckwheat |

| Species | Common Name |
|---|---|
| *Eriogonum microthecum var. laxiflorum* | Great Basin wild buckwheat |
| *Eriogonum spp.* | wild buckwheat |
| *Eriogonum spergulinum var. reddingianum* | Redding's wild buckwheat |
| *Eriogonum umbellatum* | sulphur flower |
| *Polygonum aviculare** | knotweed |
| *Rumex triangulivalvis* | triangular dock |
| **RANUNCULACEAE – BUTTERCUP FAMILY** | |
| *Aconitum columbianum* | Columbian monkshood |
| *Delphinium andersonii* | Anderson's larkspur |
| *Thalictrum fendleri* | Fendler's meadow-rue |
| **RHAMNACEAE – BUCKTHORN FAMILY** | |
| *Ceanothus velutinus* | velvety California-lilac |
| *Frangula rubra* | Sierra coffee berry |
| **ROSACEAE – ROSE FAMILY** | |
| *Amelanchier utahensis* | Utah service-berry |
| *Cercocarpus ledifolius* | curl-leaf mountain-mahogany |
| *Drymocallis lactea* | milky drymocallis |
| *Geum macrophyllum* | large-leaved avens |
| *Potentilla gracilis* | slender cinquefoil |
| *Prunus andersonii* | desert peach |
| *Prunus emarginata* | bitter cherry |
| *Purshia tridentata var. tridentata* | bitterbrush |
| *Rosa woodsii* | Woods' rose |
| **RUBIACEAE – COFFEE FAMILY** | |
| *Galium sp.* | bedstraw |
| **SALICACEAE – WILLOW FAMILY** | |
| *Populus tremuloides* | quaking aspen |
| *Populus trichocarpa* | black cottonwood |
| *Salix exigua* | narrow-leaved willow |
| *Salix lasiandra* | Pacific willow |
| **SCROPHULARIACEAE – FIGWORT FAMILY** | |
| *Scrophularia californica* | California figwort |
| *Verbascum thapsus** | woolly mullein |
| *Nicotiana attenuata* | narrowed-tip tobacco |
| **URTICACEAE – NETTLE FAMILY** | |
| *Urtica gracilis ssp. holosericea* | hoary nettle |

| **Species** | **Common Name** |
|---|---|
| **VALERIANACEAE – VALERIAN FAMILY** | |
| *Viola purpurea ssp. aurea* | golden violet |
| **VIBURNACEAE - MUSKROOT FAMILY** | |
| *Sambucus mexicana* | blue elderberry |
| **MONOCOTS** | |
| **ALLIACEAE – ONION FAMILY** | |
| *Allium bisceptrum* | twin-crested onion |
| **CYPERACEAE – SEDGE FAMILY** | |
| *Carex douglasii* | Douglas' sedge |
| *Carex nebrascensis* | Nebraska sedge |
| *Carex pellita* | woolly sedge |
| *Carex sp.* | sedge |
| *Carex utriculata* | southern beaked sedge |
| *Cyperus squarrosus* | bearded flatsedge |
| *Scirpus microcarpus* | small fruit bulrush |
| **IRIDACEAE – IRIS FAMILY** | |
| *Iris missouriensis* | western blue flag |
| *Sisyrinchium bellum* | western blue-eyed-grass |
| **LILIACEAE – LILY FAMILY** | |
| *Calochortus bruneaunis* | Bruneau mariposa lily |
| *Calochortus leichtlinii* | Leichtlin's mariposa lily |
| *Lilium parvum* | alpine lily |
| **ORCHIDACEAE – ORCHID FAMILY** | |
| *Platanthera dilatata var. leucostachys* | white-flowered bog-orchid |
| **POACEAE – GRASS FAMILY** | |
| *Bromus sitchensis var. carinatus* | California brome |
| *Bromus tectorum** | cheat grass |
| *Elymus cinereus* | Great Basin wild-rye |
| *Elymus elymoides* | squirreltail |
| *Elymus trachycaulus ssp. trachycaulus* | slender wheat grass |
| *Koeleria macrantha* | june grass |
| *Melica bulbosa* | oniongrass |
| *Melica stricta* | rock melic |
| *Muhlenbergia asperifolia* | scratch grass |
| *Poa secunda* | Nevada blue grass |
| *Stipa comata* | needle-and-thread |
| *Stipa hymenoides* | sand rice grass |

| Species | Common Name |
|---|---|
| *Stipa speciosa* | desert needle grass |
| **RUSCACEAE – BUTCHER'S–BROOM FAMILY** | |
| *Maianthemum stellatum* | star-like false lily of the valley |

* Non-native or invasive species
cf. conforms to, species can not be confirmed due to phenological condition

# APPENDIX L
# GOLDEN VIOLET CNDDB FORM

# CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code RUD24F0008
Quad code 3811912
Occ. no.
EO index no.
Map index no.

**Scientific name:** *Viola purpurea ssp. aurea*

**Common name:** golden violet

**Date of field work (mm-dd-yyyy):** 05-15-2024

**Comment about field work date(s):**

***OBSERVER INFORMATION***

**Observer:** Allison D. Rudalevige

**Affiliation:** Psomas

**Address:** 5 Hutton Centre Drive, Suite 300 , Santa Ana, CA 92707

**Email:** allison.rudalevige@psomas.com

**Phone:** (714) 325-0129

**Other observers:**

***DETERMINATION***

**Personal expertise:**

**Keyed in:** Jepson eFlora

**Compared w/ specimen at:**

**Compared w/ image in:**

**By another person:**

**Other:**

**Identification explanation:**

**Identification confidence:** Very confident

**Species found:** Yes **If not found, why not?**

**Level of survey effort:** Incidental observation

**Total number of individuals:** 1

**Collection?** No **Collection number:**

**Museum/Herbarium:**

***PLANT INFORMATION***

**Phenology:**

| vegetative | flowering | fruiting |
|---|---|---|
| 0 % | 100 % | 0 % |

***SITE INFORMATION***

**Habitat description:** Growing in Great Basin mixed scrub (crosswalked to Purshia tridentata - Artemisia tridentata Association) adjacent to Mill Creek Powerhouse Road. Associated species include Purshia tridentata var. tridentata, Prunus andersonii, Artemisia tridentata, and Eriogonum elatum var. elatum.

**Slope:** none

Landowner/manager: USFS - Inyo National Forest

**Aspect:** N/A

**Site condition + population viability:** Good

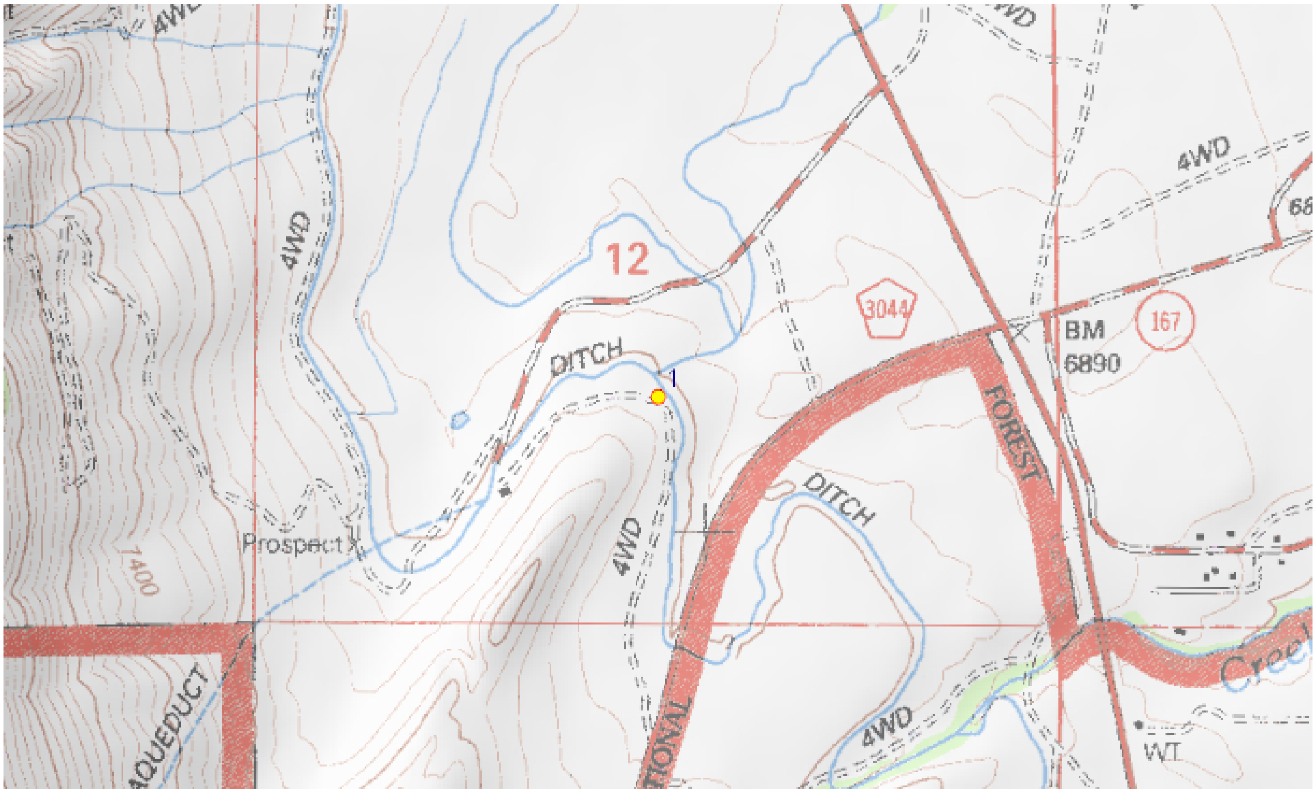
**Immediate & surrounding land use:** Undeveloped open space, Mill Creek Return Ditch, Southern California Edison power plant, US RTE 385

**Visible disturbances:** dirt roads

**Threats:**

**General comments:**

***MAP INFORMATION***




| ID | County | 24K Quadrangle | Elev. (ft) | Latitude NAD83 | Longitude NAD83 | UTM E NAD83 | UTM N NAD83 | UTM Zone |
|---|---|---|---|---|---|---|---|---|
| | Mono | Lundy | 7020 | 38.04403 | -119.16876 | 309691 | 4212921 | 11 |
| 1 | **Public Land Survey** | **Feature Comment** | | | | | | |
| | M T02N R25E 12 | | | | | | | |

**The mapped feature is accurate within:** 5 m

**Source of mapped feature:** Garmin GPS; accuracy 15 ft

**Mapping notes:**

**Location/directions comments:**

**Attachment(s):** TH005542.JPG; TH005546.JPG

# 8.0 TERR-2 GENERAL WILDLIFE SURVEY

## 8.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a General Wildlife Survey (TERR-2) to evaluate the terrestrial wildlife species that are present in the Lundy Project area. In its January 2, 2025 SPD, FERC approved the *TERR-2 General Wildlife Resources Survey Study Plan* (SCE, 2024). This section includes preliminary data for TERR-2 collected in 2025 for the Lundy Project. Analysis of the data is ongoing, and completed results will be summarized in a draft Technical Report that will inform the DLA.

## 8.2. REVIEW OF EXISTING INFORMATION

Wildlife occurrences within the vicinity of the Project have been documented in the California Natural Diversity Database (CNDDB; CDFW, 2025a), USFWS Information for Planning and Consultation System (IPAC) (USFWS, 2023), the Persistence Analysis for Species of Conservation Concern Inyo National Forest (INF, 2019), unpublished At-Risk Aquatic and Terrestrial Species on Inyo National Forest (INF, 2020), the Final Environmental Assessment for Lundy Hydropower License (FERC, 1992, past Project-specific studies in the area (Psomas, 2008a, 2008b, 2008c, 2009a, 2009b, 2010, 2017), and a review of the current licensee's resource management plans including the final Avian Mortality Monitoring Plan (SCE, 2009), and the Threatened, Endangered and Sensitive Species Management Plan (Psomas, 1999). All these documents and databases were reviewed as part of this study. The CNDDB search included a review of the following U.S. Geological Survey topographic quadrangles: Lundy, Dunderberg Peak, Mount Dana, and Tioga Pass. Since the previous license application was completed, new species have been added to the federal and state Endangered Species Act lists, and others have been deemed special-status by various government agencies.

## 8.3. STUDY OBJECTIVES

The goal of the TERR-2 Study is to develop the information necessary to supplement the existing information to address potential effects on terrestrial wildlife species by the Project operation and maintenance activities, including U.S. Forest Service (USFS) At-Risk Species, USFS Species of Conservation Concern (INF, 2019, 2020), bald and golden eagles, game species, species listed as Candidate, Endangered, or Threatened by the federal or state Endangered Species Acts, species with overlapping Critical Habitat, and North American beaver (*Castor canadensis*). . Study objectives include:

- Document the occurrence of any common, USFS At-Risk Species, Species of Conservation Concern, and other special-status wildlife species or associated suitable habitat within and adjacent to Project areas that may be affected by routine operations and maintenance (O&M) activities.
- Document the occurrence of any rare, threatened, and/or endangered wildlife species or associated suitable habitat during general wildlife surveys within and adjacent to Project areas that may be affected by routine O&M activities.

### 8.3.1. STUDY AREA

The Wildlife Study Area (WSA) is shown on Figure 8.3-1. It is comprised of the following Project areas, including a 100-foot buffer:

- Lundy Dam and associated infrastructure to intersection of Lundy Dam Road and Lundy Lake Road
- Connector Road between Lundy Lake Road and Lundy Flowline Road
- Lundy Powerhouse and Switchyard
- Lundy Penstock and Flowline Road
- Lundy Return Ditch
- Lundy Lake Road from intersection with Lundy Return Ditch to Resort
- Lundy Pipeline and Penstock alignment
- Lundy Lake and Mill Creek Delta
- Mill Creek between Lundy Return Ditch and State Route 395

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

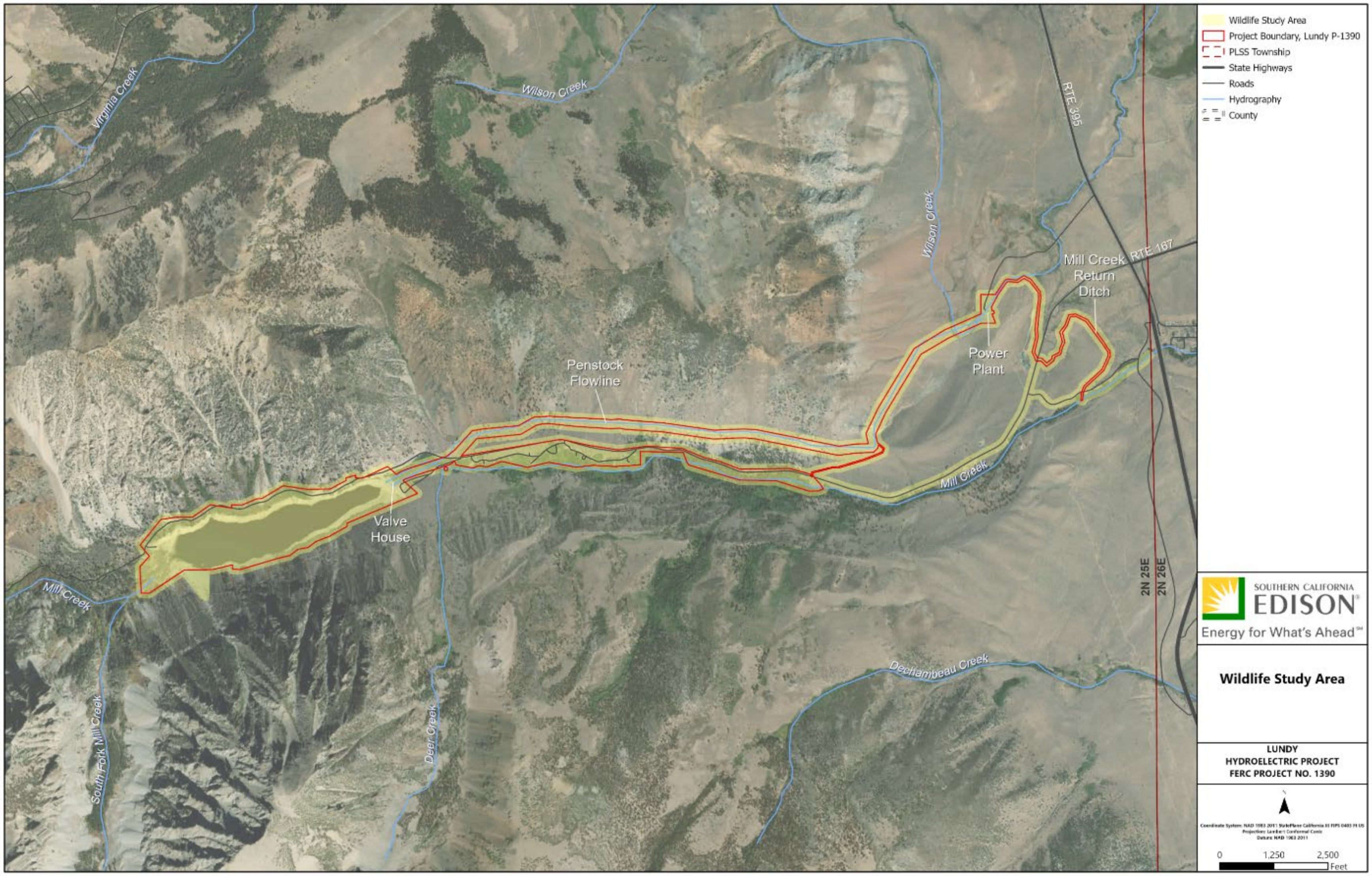



**Figure 8.3-1. Wildlife Study Area.**

## 8.4. METHODS

Three field surveys have been performed within the WSA during the 2025 field season: June 24-26, July 21-24, and September 24-25. A fourth survey to collect the wildlife cameras is scheduled for late-October. Prior to the start of all surveys, aerial images of each facility and WSA at a 1-inch to 200-foot scale were prepared for field use and known wildlife occurrences and areas of potentially suitable habitat for special-status wildlife were reviewed. All field surveys had both daytime and nighttime survey components.

The daytime survey components included pedestrian surveys within the WSA documenting wildlife observations in field notebooks and GPS-enabled tablet devices. Wildlife identification used direct visual observation, aural call identification, evidence of diagnostic sign (such as including scat, footprints, chew patterns, scratch-outs, dust bowls, burrows, and trails) and active searches (such as lifting, overturning, and carefully replacing objects such as rocks, boards, and debris). Project facilities were also inspected for evidence of bat roosting.

The nighttime survey components included nocturnal spotlighting, road surveys, and ultrasonic acoustic recording. The spot-lighting and road surveys consisted of driving Project roads at slow speeds using a spotlight to observe nocturnal wildlife in transit, foraging, or heating themselves on the pavement (i.e. snakes). The ultrasonic acoustic recording was specifically to document bat activity. Both stationary and mobile acoustic surveys for bat species were performed in likely flight corridors within the WSA. Four stationary bat detector locations were deployed over three nights during the July visit. Microphones for the stationary bat detectors were installed on poles greater than 12 feet above the ground and set to record throughout the night, specifically from 15 minutes before sunset to 15 minutes before sunrise. The mobile acoustic surveys were performed shortly after sunset on transects along Lundy Lake Road, by the Lundy Powerhouse, and along the Mill Creek Road during the July and September field visits. These surveys involved installing a microphone on a pole extending above the roof of a field vehicle that drove 20 miles per hour or less, recording ultrasonic acoustic detections throughout the drive.

Four trail cameras were deployed at locations most likely to capture wildlife that may not be observable during the field surveys. The cameras were installed during the July 2025 field visit. CDFW was contacted with the intent of identifying the final camera placement in the field. Memory card status and battery life was checked and maintained during each field visit.

## 8.5. STUDY PLAN MODIFICATIONS

SCE is not proposing any modifications to TERR-2 as approved by FERC in its SPD (FERC, 2025).

## 8.6. VARIANCES TO APPROVED METHODS

SCE encountered the following variances when implementing the TERR-2 study plan as approved by FERC in its SPD (FERC, 2025):

- The study plan proposed installing up to four cameras; during installation of the cameras, the field team determined that data collection for the full five months would be impractical at most locations due to snow. All but one of the cameras will be removed after a three-month deployment to prevent the cameras from being buried in snow and, subsequently, not collecting any data. The remaining camera will be elevated on a tree to the extent feasible and collected in 2026.

## 8.7. RESULTS

The terrestrial wildlife observed or otherwise documented during the 2025 surveys are listed in Table 8.7-1.

## Table 8.7-1. Wildlife Compendium

| 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 |
| **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 |

| 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 |
|---|---|---|---|---|---|---|
| **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 |
| *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 | |

| 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 |
|---|---|---|---|---|---|---|
| **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 |
| **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 |

| 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 |
|---|---|---|---|---|---|---|
| *Pooecetes gramineus* | vesper sparrow | | | X | | X |
| *Melospiza melodia* | song sparrow | | | X | X | |
| *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 | | |
| **DIDELPHIDAE – AMERICAN OPPOSSUM FAMILY** | | | | | | |
| *Marmota flaviventris* + | yellow-bellied marmot | | X | | | |
| *Callospermophilus lateralis* | golden-mantled ground squirrel | | X | X | X | |

| 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 |
|---|---|---|---|---|---|---|
| **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 | | |
| *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 | | | |

| 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 |
|---|---|---|---|---|---|---|
| **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 | | | |
| **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

#### 8.7.1. WILLOW FLYCATCHER HABITAT

The literature search and field survey efforts associated with willow flycatcher were completed in 2025. The literature search results informed the field survey effort and the preliminary data from the field survey are as follows. Detailed results from the literature search and the field survey will be presented in the Final Technical Report. Habitat was assessed using habitat parameters described in U.S. Geological Survey 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 WSA does not provide this type of vegetative density; however, scattered stands with marginally sufficient density occur in Mill Creek within 0.75 miles of State Route 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.

#### 8.7.2. BAT ACTIVITY

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.

Review of the bat acoustic recordings are still in progress, but the following bat species were confirmed to be foraging in the recordings collected within the Project 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*), long-legged bat (*Myotis volans*).

### 8.8. DISCUSSION

The survey effort yielded observations of:

- 78 common wildlife species,
- 1 State- and Federally-listed endangered wildlife species,
- No USFS At-Risk wildlife species;
- No Species of Conservation Concern; and
- 7 other special-status wildlife species (6 California Species of Special Concern and 1 Watchlist species).

Five of the species included in the wildlife compendium were added based on reliable or verified public observations all made at or immediately west of the Lundy Lake Lodge between 2024 and 2025. Both the Sierra Nevada mountain beaver (*Aplodontia rufa*) and Pacific marten (*Martes caurina*) were separately recorded on video using a cell phone and the videos were reviewed by Psomas biologists. The yellow-bellied marmot (*Marmota flaviventris*), mountain lion (*Puma concolor*), and Sierra Nevada bighorn sheep (*Ovis canadensis*) encounters were described in extensive detail during interviews performed by Psomas biologists. Both the mountain lion and Sierra Nevada bighorn sheep observations were isolated occurrences of one individual of each species.

## 8.9. References

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# 9.0 REC-1 RECREATION USE AND NEEDS ASSESSMENT

## 9.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a Recreation Use and Needs Study (REC-1) to evaluate current recreational use and future recreational needs for the Lundy Project. In its January 2, 2025 SPD, FERC approved the *REC-1 Recreation Use and Needs Study Plan* (SCE, 2024) with modification. This section includes a summary of data collected at the time of this ISR filing. Analysis of the data is ongoing, and completed results will be summarized in a draft Technical Report that will inform the DLA

## 9.2. REVIEW OF EXISTING INFORMATION

This study reviews and incorporates existing information related to recreation use and needs identified at the Lundy Project. The following is a list of studies and reports reviewed as part of this REC-1 study:

- 2015 Licensed Hydropower Development Recreation Report, FERC Form 80 (SCE, 2015)
- 2014 SCE Recreation Use Study Report for Eastern Hydro Division (SCE, 2015)
- California's 2021-2025 Statewide Comprehensive Outdoor Recreation Plan (SCORP) (CDPR, 2020)
- Mono County Campground data

## 9.3. STUDY OBJECTIVES

The goals and objectives of REC-1 were as follows:

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

Goal 1 Objectives:

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

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

Goal 2 Objectives:

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

### 9.3.1. Study Area

Recreation sites that were included in REC-1 are listed in Table 9.3-1 and shown in Figure 9.3-1.

**Table 9.3-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary**

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


**Figure 9.3-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary.**

## 9.4. METHODS

A variety of data collection techniques were used to obtain the information necessary to meet the study goals and objectives listed in Section 9.3. Data collection entailed spot counts and recreation use visitor intercept surveys, which were collected at each site as shown in Table 9.4-1. Additionally, for those visitors indicating fishing as their primary recreation activity during the recreation use visitor intercept survey, a set of creel survey questions were included.

**Table 9.4-1. Data Collection Methods at Lundy Recreation Sites**

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

Existing data were used to inform current recreation use as well as projected future recreation needs at the FERC-approved recreation sites. Existing data included U.S. Census Bureau data, the SCORP, Mono County existing data collected at Lundy Lake Campground, and other relevant, available data and literature.

Table 9.4-2 summarizes the study objectives, information needed to meet those objectives, and sources of information. Section 9.4.1 and Section 9.4.2 provide details on the primary data collection methods.

## Table 9.4-2. REC-1 Study Plan Objectives and Efforts

| Objectives | Information Needed | Source |
|---|---|---|
| **Goal 1 – Characterize the existing use of the FERC-approved recreation sites at the Lundy Project.** | | |
| Objective 1.1:<br>Estimate the recreation use at the FERC-approved recreation sites included in the Lundy Project boundary by day type (i.e., weekday, weekend, or peak weekend) and activity. | • Estimated number of vehicles per day<br>• Estimated number of people/vehicles<br>• Estimated length of stay<br>• Proportion of visitors engaged in each available activity | • Spot count data<br>• Recreation Use Visitor Intercept Surveys<br>• Existing data |
| Objective 1.2:<br>Evaluate visitor feedback regarding the perception and experience of visitors at the FERC-approved recreation sites. | • Percent of visitors perceiving crowded facilities<br>• Percent of visitors satisfied with recreational facilities<br>• Average quality rating of facilities and amenities<br>• Average value rating of overall recreation site | • Recreation Use Visitor Intercept Surveys |
| Objective 1.3:<br>Estimate the current recreational fishing effort in Lundy Lake and Mill Creek within the Lundy Project boundary. | • Estimated CPUE<br>• Average quality rating of fishing at site<br>• Average quality rating of fishing in the area<br>• Summary of target species<br>• Summary of harvest/release by species | • Recreation Use Visitor Intercept Surveys<br>• Creel survey questions |
| **Goal 2 – Identify current and future needs related to the FERC-approved recreation sites included at the Lundy Project.** | | |
| Objective 2.1:<br>Evaluate whether the capacity of the existing FERC-approved recreation sites meets current needs. | • User perceptions of crowding and needed improvements compared to existing data<br>• Parking capacity compared to utilization | • Recreation Facilities Condition Assessment (REC-2)<br>• Results of Goal 1 analysis<br>• Existing data |
| Objective 2.2:<br>Estimate future recreation use of the FERC-approved recreation sites. | • Current recreational use assessment<br>• Population projections for the Project area<br>• Recreational use trends | • Results of Goal 1 analysis<br>• U.S. Census Bureau data<br>• SCORP or other readily available literature<br>• Existing data |
| Objective 2.3:<br>Estimate potential future recreation needs and the ability of the existing FERC-approved recreation sites to meet the future needs over the term of a new license. | • Inventory Assessment<br>• Condition Assessment<br>• Parking capacity at recreation sites vs. projected needs density<br>• Future needs identified by additional sources | • Recreation Facilities Condition Assessment (REC-2)<br>• Results of Goal 1 analysis |

CPUE = catch per unit effort

### 9.4.1. Spot Counts

Spot counts provide an estimate of the number of recreationists, parked vehicles, and boats/trailers at discrete times at each parking area within each recreation site (Figure 9.4-1 through Figure 9.4-6). Field technicians conducting the spot counts recorded the activities that individuals were participating in, paying attention to the use of recreation facilities/amenities provided at each site. Results were documented on a Recreation Use Spot Count form (Appendix M).

Spot counts at the parking areas of the FERC-approved recreation sites were conducted on 2 weekdays and 2 weekend days per month from April 15, 2025, to November 15, 2025, and 1 day of each holiday weekend for a total of 36 days throughout the study period. For the purposes of this study, the holidays include the 3 days of the holiday weekend Memorial Day: May 24 to 26, 2025; Juneteenth: June 20 to 22, 2025; Fourth of July: July 4 to 6, 2025; and Labor Day: August 30 to September 1, 2025.

Sampling dates and times were randomly selected for the parking areas at the FERC-approved recreation sites. SCE developed a circuit to allow visits to each parking area associated with all FERC-approved recreation sites, on each sampling day, and the visits started at a different location and at a different time of day, during each circuit, to support random sampling (Table 9.4-3).

**Table 9.4-3. Spot Count Schedule**

| Date | Day Type | Start Site | Direction |
|---|---:|---:|---:|
| 04/19/2025 | Non-Peak Weekend | 4 | CCW |
| 04/24/2025 | Weekday | 3 | CCW |
| 04/27/2025 | Non-Peak Weekend | 4 | CW |
| 05/08/2025 | Weekday | 7 | CCW |
| 05/10/2025 | Non-Peak Weekend | 5 | CW |
| 05/21/2025 | Weekday | 5 | CCW |
| 05/25/2025 | Holiday Weekend | 2 | CW |
| 05/31/2025 | Non-Peak Weekend | 5 | CW |
| 06/05/2025 | Weekday | 2 | CW |
| 06/08/2025 | Non-Peak Weekend | 2 | CW |
| 06/18/2025 | Weekday | 7 | CCW |
| 06/21/2025 | Holiday Weekend | 2 | CW |
| 06/28/2025 | Non-Peak Weekend | 5 | CCW |
| 07/02/2025 | Weekday | 5 | CW |
| 07/05/2025 | Holiday Weekend | 5 | CCW |
| 07/19/2025 | Non-Peak Weekend | 5 | CW |

| Date | Day Type | Start Site | Direction |
|---|---|---|---|
| 07/27/2025 | Non-Peak Weekend | 5 | CW |
| 07/30/2025 | Weekday | 7 | CW |
| 08/02/2025 | Non-Peak Weekend | 5 | CW |
| 08/09/2025 | Non-Peak Weekend | 6 | CCW |
| 08/12/2025 | Weekday | 7 | CCW |
| 08/17/2025 | Non-Peak Weekend | 3 | CW |
| 08/26/2025 | Weekday | 4 | CCW |
| 08/31/2025 | Holiday Weekend | 7 | CCW |
| 09/07/2025 | Non-Peak Weekend | 3 | CCW |
| 09/09/2025 | Weekday | 2 | CCW |
| 09/20/2025 | Non-Peak Weekend | 7 | CCW |
| 09/23/2025 | Weekday | 3 | CCW |
| 09/28/2025 | Non-Peak Weekend | 7 | CCW |
| 10/06/2025 | Weekday | 6 | CCW |
| 10/12/2025 | Non-Peak Weekend | 3 | CW |
| 10/17/2025 | Weekday | 4 | CCW |
| 10/25/2025 | Non-Peak Weekend | 4 | CW |
| 10/31/2025 | Weekday | 7 | CCW |
| 11/02/2025 | Non-Peak Weekend | 1 | CW |
| 11/13/2025 | Weekday | 4 | CCW |

CCW = counterclockwise; CW = clockwise


**Figure 9.4-1. Parking Area Associated with Lundy Lake Boat Launch.**

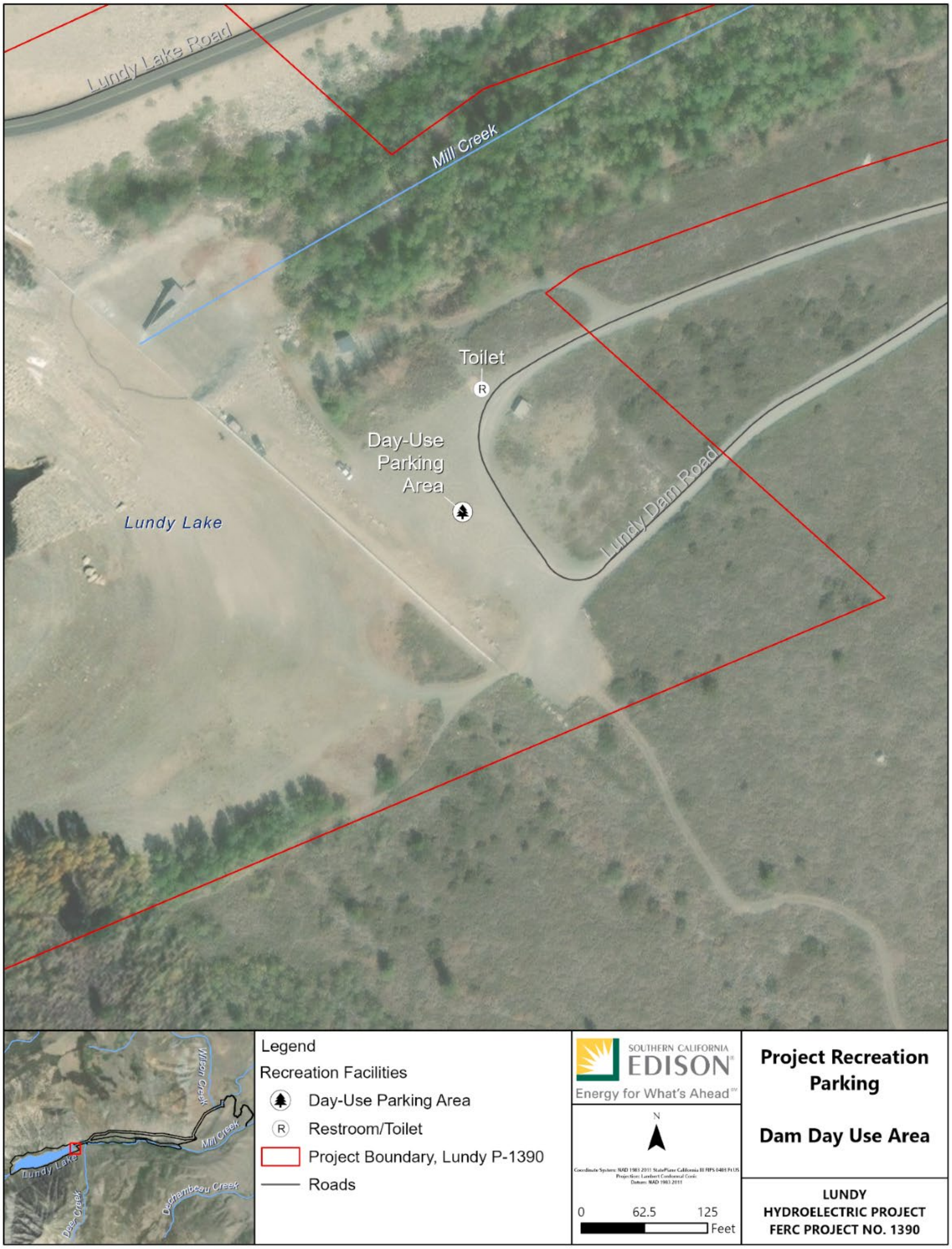


**Figure 9.4-2. Parking Area Associated with Lundy Dam Day Use Area.**

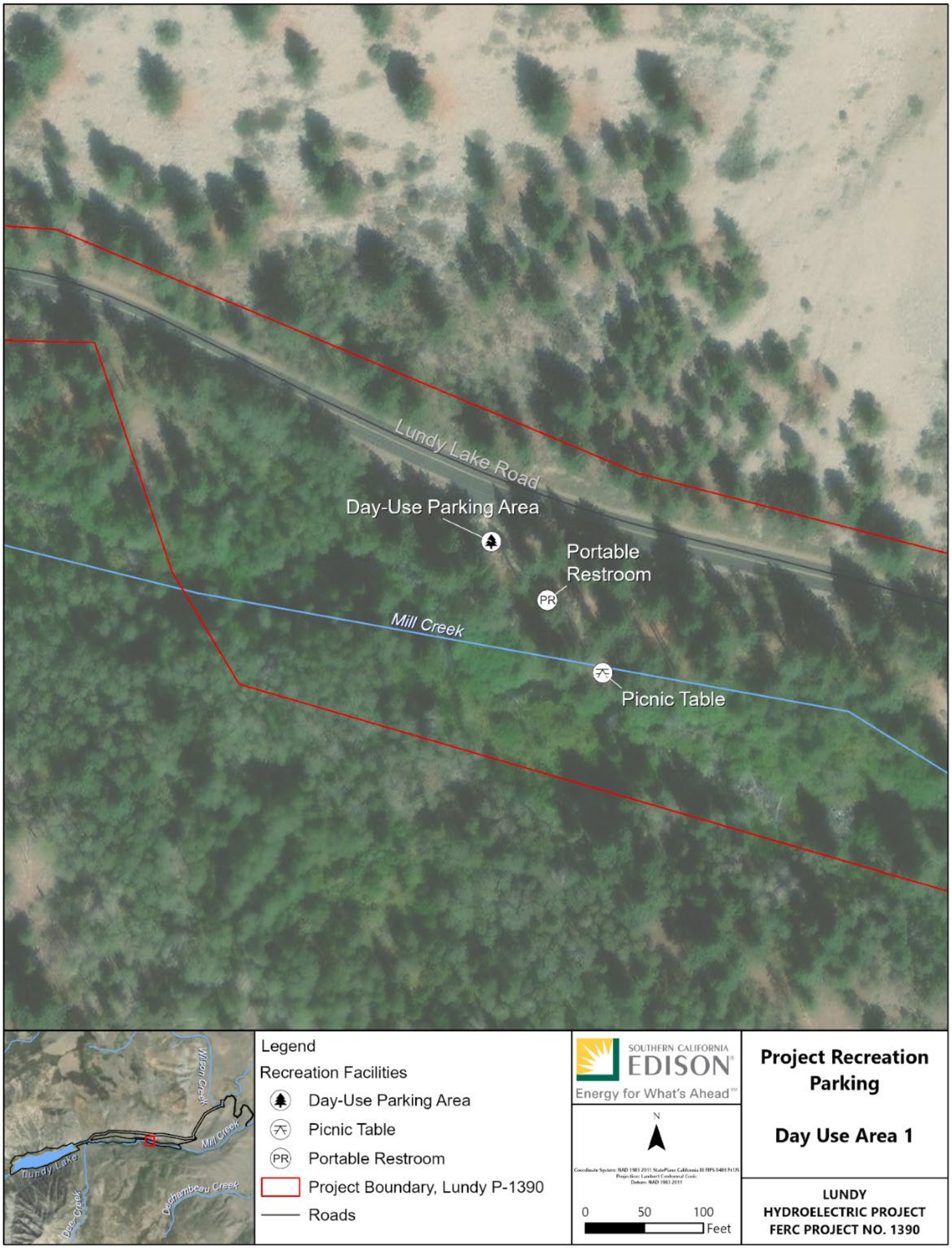


**Figure 9.4-3. Parking Area Associated with Lundy Day Use Area 1.**

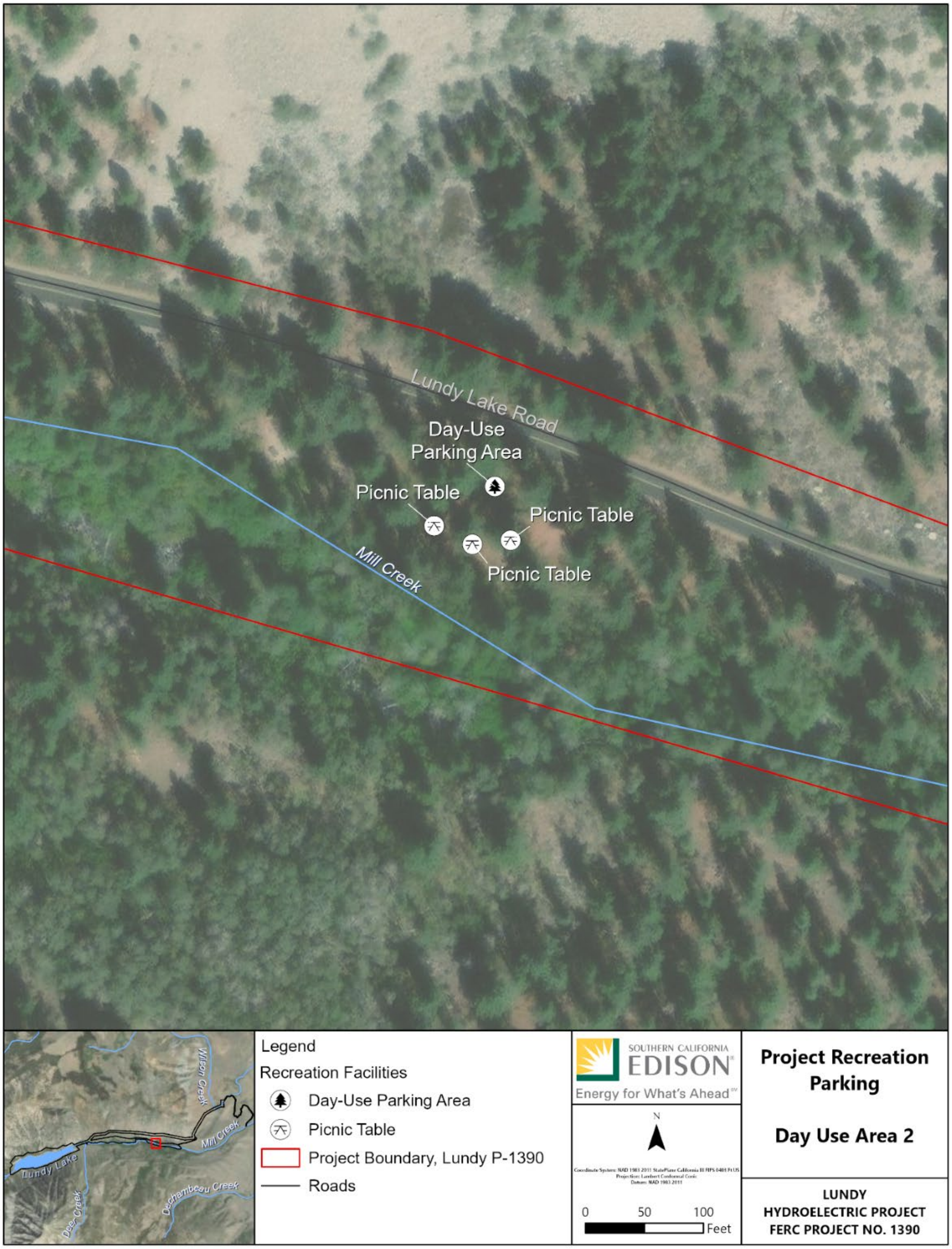


**Figure 9.4-4. Parking Area Associated with Lundy Day Use Area 2.**

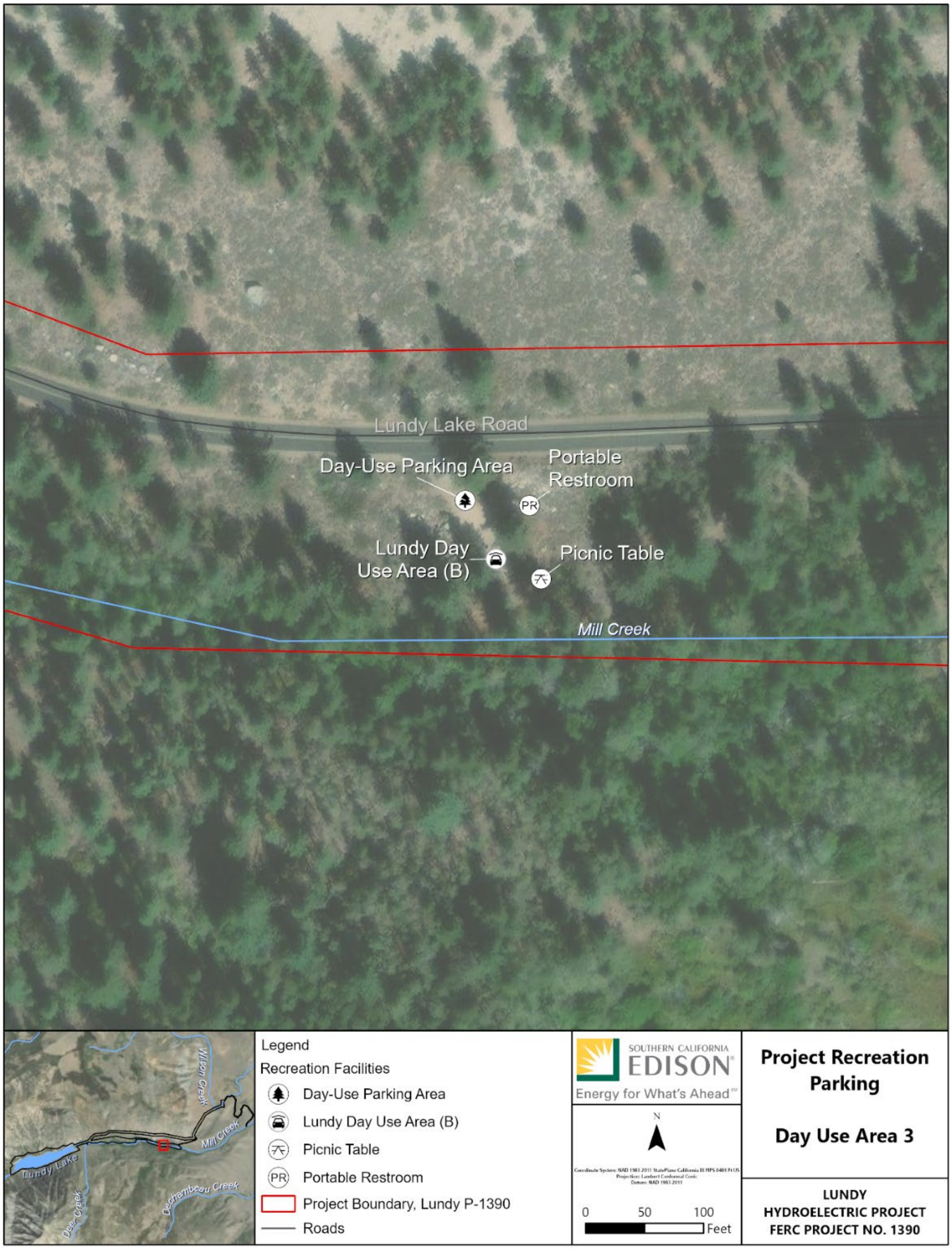


**Figure 9.4-5. Parking Area Associated with Lundy Day Use Area 3.**

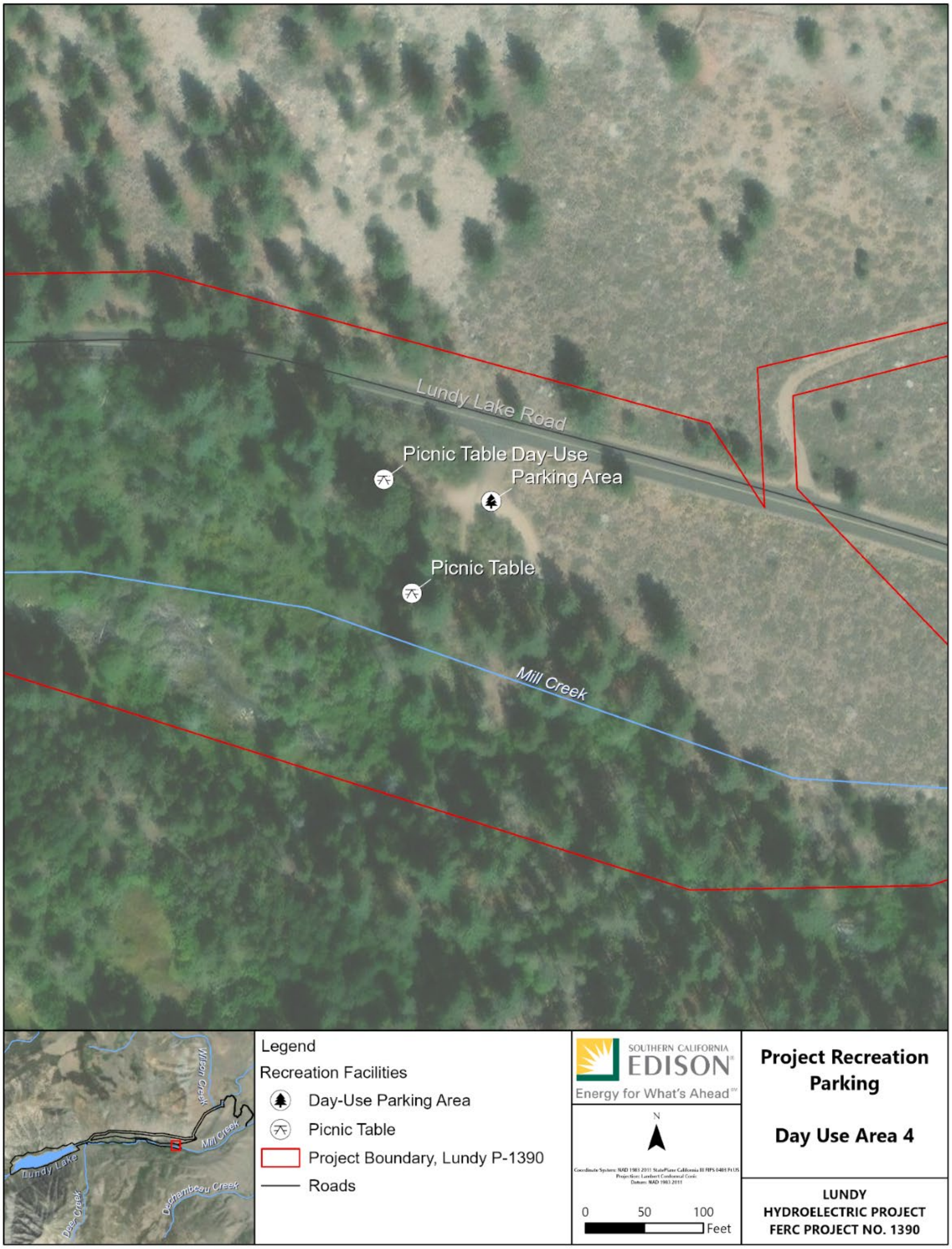


**Figure 9.4-6. Parking Area Associated with Lundy Day Use Area 4.**

### 9.4.2. Recreation Use Visitor Intercept Surveys

SCE conducted recreation use visitor intercept surveys at the FERC-approved recreation sites (Figure 9.4-1 through Figure 9.4-6). A Recreation Use Visitor Intercept Survey form is provided in Appendix N. The full set of questions were designed to collect information on group sizes, recreation activities, length of visit, crowdedness, user satisfaction, and site conditions. Per FERC's SPD, for those who responded that they were fishing, SCE included fishing-specific questions (e.g., timing, effort, harvest, composition, and success, and estimates of catch-per-unit effort).

Field technicians visited each recreation site on 2 weekdays and 2 weekends per month from April 15, 2025, to November 15, 2025, and 1 day of each holiday weekend for a total of 36 days throughout the study period. For the purposes of this study, the holidays include the 3 days of the holiday weekend Memorial Day: May 24 to 26, 2025; Juneteenth: June 20 to 22, 2025; Fourth of July: July 4 to 6, 2025; and Labor Day: August 30 to September 1, 2025. Recreation use visitor intercept survey days were conducted on the same days as spot counts, previously described in Section 9.4.1 (Table 9.4-3). Field technicians were at each recreation site for approximately 1 hour conducting the recreation use visitor intercept surveys. Two field technicians were to be administering surveys on each survey day.

## 9.5. Study Plan Modifications

SCE is not proposing any modifications to REC-1 as approved by FERC in its SPD (FERC, 2025).

## 9.6. Variances to Approved Methods

SCE encountered the following variances when implementing the REC-1 study plan as approved by FERC in its SPD (FERC, 2025):

- From May 22 - May 25, 2025, the Inn Fire in Mono City closed U.S. 395 and caused mandatory evacuation of the Project area, preventing surveyors from having safe access to conduct the scheduled survey day on May 25, 2025. Given this survey day fell on a holiday weekend, the survey was not made up on another date during the study period.

- Due to extenuating circumstances, there were 3 field dates that had one field technician administering surveys. Those dates included August 2, August 9, and August 31, 2025. However, 207 surveys were collected to still provide ample survey data to characterize recreation use preferences at the Lundy Project.

## 9.7. RESULTS

### 9.7.1. DATA SUMMARY

#### 9.7.1.1. Spot Counts

Table 9.7-1 presents the total number of vehicles counted at each FERC-approved recreation site during the 35 spot counts (Note: vehicles were not counted at Site 3). Between April 15, 2025, and November 15, 2025, a total of 239 vehicles were observed during the spot counts. At the Lundy Lake Boat Launch, 105 vehicles were counted, and at the Dam Day Use Area 120 vehicles were counted. A total of 14 vehicles were observed at the four day use areas.

## Table 9.7-1. Summary of Vehicle Spot Counts at FERC-approved Recreation Sites at the Lundy Project

| Date | Day Type | Site Number | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 4 | 5 | 6 | 7 | |
| 04/19/2025 | Non-Peak Weekend | 3 | 7 | 0 | 0 | 0 | 0 | 10 |
| 04/24/2025 | Weekday | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04/27/2025 | Non-Peak Weekend | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 05/08/2025 | Weekday | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 05/10/2025 | Non-Peak Weekend | 1 | 4 | 1 | 0 | 0 | 0 | 6 |
| 05/21/2025 | Weekday | 1 | 3 | 0 | 0 | 1 | 0 | 5 |
| 05/25/2025 | Holiday Weekend | n/a[A] | n/a[A] | n/a[A] | n/a[A] | n/a[A] | n/a[A] | n/a[A] |
| 05/31/2025 | Non-Peak Weekend | 4 | 8 | 0 | 0 | 0 | 0 | 12 |
| 06/05/2025 | Weekday | 2 | 1 | 0 | 0 | 0 | 1 | 4 |
| 06/08/2025 | Non-Peak Weekend | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 06/18/2025 | Weekday | 6 | 4 | 0 | 0 | 1 | 0 | 11 |
| 06/21/2025 | Holiday Weekend | 6 | 2 | 0 | 0 | 0 | 0 | 8 |
| 06/28/2025 | Non-Peak Weekend | 6 | 2 | 0 | 0 | 0 | 0 | 8 |
| 07/02/2025 | Weekday | 6 | 4 | 0 | 0 | 0 | 0 | 10 |
| 07/05/2025 | Holiday Weekend | 14 | 12 | 0 | 0 | 0 | 1 | 27 |
| 07/17/2025 | Weekday | 5 | 3 | 0 | 0 | 0 | 0 | 8 |
| 07/27/2025 | Non-Peak Weekend | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| 07/30/2025 | Weekday | 4 | 1 | 0 | 0 | 0 | 1 | 6 |
| 08/02/2025 | Non-Peak Weekend | 2 | 8 | 1 | 0 | n/a[B] | 0 | 11 |

| Date | Day Type | Site Number | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 4 | 5 | 6 | 7 | |
| 08/09/2025 | Non-Peak Weekend | 4 | 7 | 0 | 0 | 1 | 0 | 12 |
| 08/12/2025 | Weekday | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 08/17/2025 | Non-Peak Weekend | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 08/26/2025 | Weekday | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| 08/31/2025 | Holiday Weekend | 5 | 7 | 1 | 0 | 1 | 0 | 14 |
| 09/07/2025 | Non-Peak Weekend | 3 | 2 | 1 | 0 | 0 | 0 | 6 |
| 09/09/2025 | Weekday | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09/20/2025 | Non-Peak Weekend | 4 | 3 | 0 | 0 | 0 | 0 | 7 |
| 09/23/2025 | Weekday | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 09/28/2025 | Non-Peak Weekend | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 10/06/2025 | Weekday | 6 | 7 | 0 | 0 | 0 | 1 | 14 |
| 10/12/2025 | Non-Peak Weekend | 9 | 4 | 0 | 1 | 0 | 0 | 14 |
| 10/17/2025 | Weekday | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| 10/25/2025 | Non-Peak Weekend | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 10/31/2025 | Weekday | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11/02/2025 | Non-Peak Weekend | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 11/13/2025 | Weekday | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Total Vehicles** | **105** | **120** | **5** | **1** | **4** | **4** | **239** |

[A] No spot count was conducted on 5/25/2025 due to the Inn Fire
[B] No spot count was conducted at Site 6 on 8/2/25

SCE also collected data on the number of people and types of recreation activities observed during spot counts throughout the study season. Table 9.7-2 summarizes the number of people observed during the 35 spot count days at the FERC-approved recreation sites. A total of 590 people were observed at the FERC-approved recreation sites. Of those, the most popular activities observed were camping and fishing. Activities listed as “Other” included skiing and children playing on the beach.

**Table 9.7-2. Summary of People and Recreation Activities at FERC-approved Recreation Sites at the Lundy Project**

| Site Number | Bicycling | Camping | Picnicking | Personal Watercraft Use | Photography | Viewing Scenery or Wildlife | Day Hiking | Overnight Backpacking | Fishing | Swimming | Non-Recreation Activity | Other Activity | Total People |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 1 | 3 | 19 | 1 | 18 | 15 | 0 | 78 | 4 | 5 | 13 | 160 |
| 2 | 0 | 0 | 0 | 2 | 0 | 16 | 9 | 0 | 58 | 0 | 1 | 4 | 90 |
| 3 | 0 | 295 | 7 | 2 | 0 | 14 | 4 | 0 | 1 | 0 | 0 | 0 | 323 |
| 4 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 8 |
| 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 6 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **Total People** | **3** | **297** | **20** | **23** | **1** | **51** | **28** | **0** | **137** | **6** | **7** | **17** | **590** |

#### 9.7.1.2. Recreation Use Visitor Intercept Surveys

The recreation use visitor intercept surveys were collected between April 15, 2025, and November 15, 2025 (Table 9.7-3). A total of 288 user surveys were attempted. Of those, 66 visitors declined to participate in the survey, and 15 visitors had already completed the survey, leading to a user survey participation rate of approximately 72 percent and a total of 207 completed surveys to be used for data analysis.

**Table 9.7-3. Visitor Surveys Attempted and Completed by Study Site**

| Site Number | Accepted | Declined | Previously Surveyed | Total |
|---|---:|---:|---:|---:|
| 1 | 59 | 24 | 2 | 85 |
| 2 | 50 | 14 | 2 | 66 |
| 3 | 92 | 24 | 11 | 127 |
| 4 | 0 | 3 | 0 | 3 |
| 5 | 0 | 0 | 0 | 0 |
| 6 | 3 | 0 | 0 | 3 |
| 7 | 3 | 1 | 0 | 4 |
| Total Count | 207 | 66 | 15 | 288 |
| Total Percentage | 71.9 | 22.9 | 5.2 | 100 |

### 9.7.2. Data Analysis

At the time this interim report was prepared, data collection was complete. The analysis of data for REC-1 was still ongoing. The final results of REC-1 will be provided in the final technical report.

## 9.8. Discussion

Analysis of recreation use data is ongoing. Additional study results will be provided in the DLA.

## 9.9. References

CDPR (California Department of Parks and Recreation). 2020. *California's 2021-2025 Statewide Comprehensive Outdoor Recreation Plan.* California Department of Parks and Recreation, Sacramento, CA.

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

SCE (Southern California Edison). 2015. *Licensed Hydropower Development Recreation Report, FERC Form 80 and Recreation Use Study Report for Eastern Hydro Division Filing*. March 26, 2015.

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

# REC-1 APPENDICIES

# APPENDIX M
# RECREATION USE SPOT COUNT FORM

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

## *Recreation Use Survey*

**Clerk: _______________ Site:__________________ Date:_________ Time:_am/pm _____**

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

### *Section 1: Demographics*

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

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

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

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

### *Section 2: Current Trip Information*

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

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

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

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

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

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

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

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

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

❑ *Visit the area on days to avoid holidays*

❑ *Other, please specify* ________________________________

### *Section 3: User Perception and Feedback*

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

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

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

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

***Section 4: Lake Level***

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

    If yes, was the level:

    Too low

    Too high

    Other:_________

13. *Please rate the level of acceptability of the lake level presented in the following photos on a scale from 1-5 (1 very unacceptable, 3 neutral, and 5 very acceptable)*

| | ***1 very unacceptable*** | ***2 unacceptable*** | ***3 Neutral*** | ***4 acceptable*** | ***5 very acceptable*** |
|---|---|---|---|---|---|
| ***Photo 1 (drought year)*** | ❑ | ❑ | ❑ | ❑ | ❑ |
| ***Photo 2 (normal year)*** | ❑ | ❑ | ❑ | ❑ | ❑ |
| ***Photo 3 (high water year)*** | ❑ | ❑ | ❑ | ❑ | ❑ |

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

*FOR ANGLERS ONLY*

| | |
|---|---|
| Number of anglers in party | |
| What time did you start fishing? | |
| How much longer will you fish? | |
| Target Species (primary) | |
| 2nd Target Species (If applicable) | |
| How often (frequency) do you fish in the area? | *Examples: Just passing through # times per year* |
| What other nearby locations do you fish? | |
| How do you define quality of fishing? | Fish Species Size<br>Catch Rate<br>Natural Setting<br>Solitude<br>Park Amenities<br>Water Access Proximity<br>*Any other potential variables* |
| How does fishing quality compare here to other nearby locations you've fished this trip? (If applicable) | |
| How does overall fishing quality here compare to past experiences here? (If applicable) | |

*BIOLOGICAL DATA (Enter total number of harvested (H) and released (R) fish in each size class)*

| Species | <8 in. | 8 in. | 9 in. | 10 in. | 11 in. | 12 in. | 13 in. | 14 in. | 15 in. | 16 in. | 17 in. | 18 in. | 19+ in. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rainbow trout | | | | | | | | | | | | | |
| Brook trout | | | | | | | | | | | | | |
| Brown trout | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | |
| Notes | | | | | | | | | | | | | |

# 10.0 REC-2 RECREATION FACILITIES CONDITION ASSESSMENT

## 10.1. Introduction

During the study planning process, SCE identified the need to conduct a Recreation Facilities Condition Assessment Study (REC-2) to gather baseline data on the inventory and condition of recreation facilities and amenities associated with the Lundy Project. In its January 2, 2025 SPD, FERC approved the REC-2 Recreation Facilities Condition Assessment Study Plan (SCE, 2024) with modification. This section includes a summary of data collected at the time of this ISR filing. Analysis of the data is ongoing, and completed results will be summarized in a draft Technical Report that will inform the DLA.

## 10.2. Review of Existing Information

This study reviews and incorporates existing information related to the recreation sites at the Lundy Project. The following is a list of studies and reports reviewed as part of this REC-2 study:

- Existing Lundy Hydroelectric Project Exhibit R Drawings (SCE, 2017).
- County of Mono, License Agreement (CM, 2024).

## 10.3. Study Objectives

The goal of REC-2 was to conduct an inventory of existing FERC-approved Lundy Project recreation sites, including locations, facilities/amenities, general condition, ownership, and management responsibilities. Additionally, SCE collected data to evaluate the accessibility and useability of the Lundy Lake Boat Launch. To accomplish these goals, the following objectives were implemented.

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

### 10.3.1. Study Area

Recreation sites that were included in REC-2 are listed in Table 10.3-1 and shown in Figure 10.3-1.

## Table 10.3-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

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

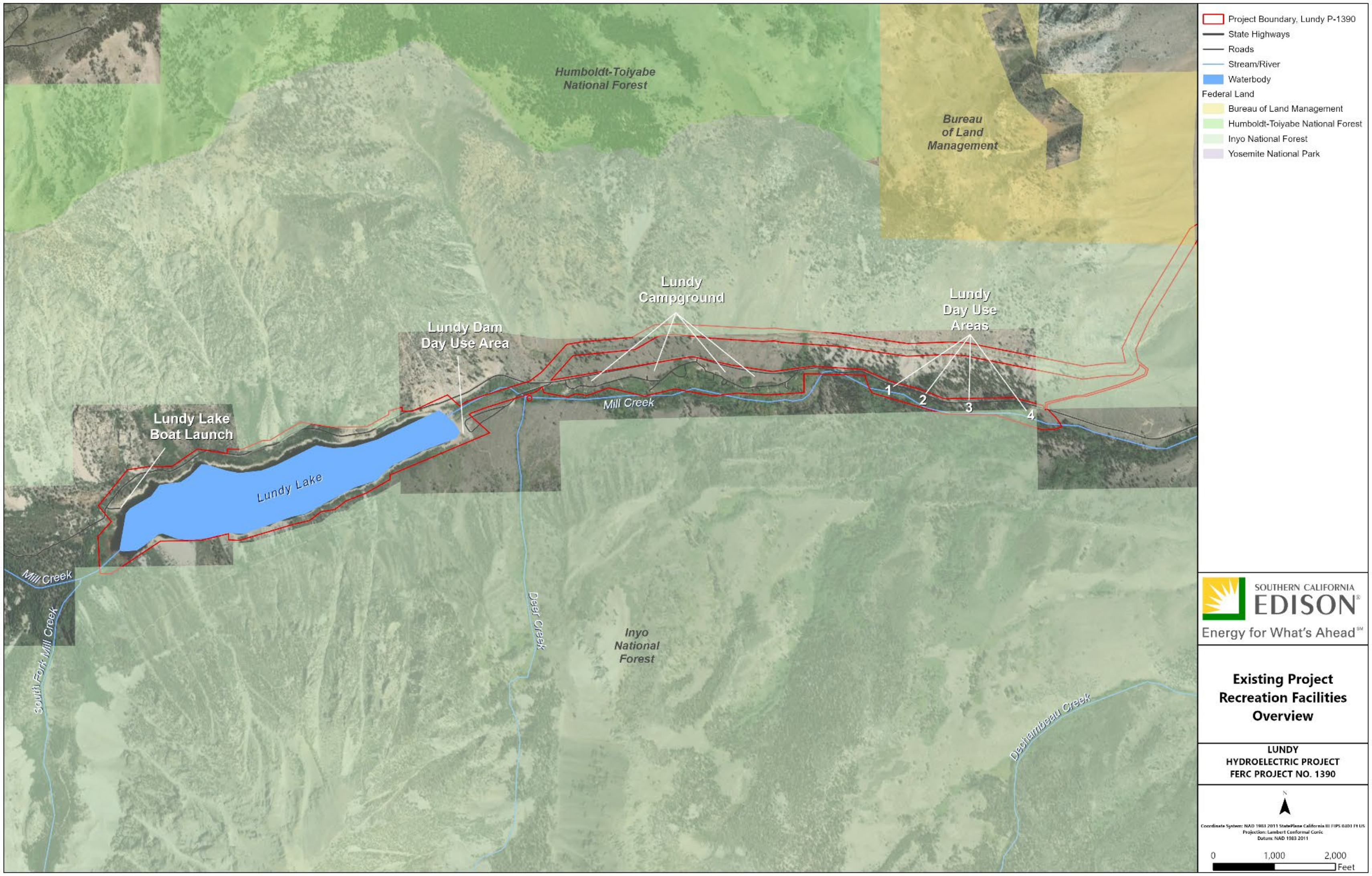


**Figure 10.3-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary.**

## 10.4. METHODS

### 10.4.1. RECREATION SITE INVENTORY AND CONDITION ASSESSMENT METHODOLOGY

SCE performed a field inventory to document the existing recreation facilities and amenities at the Lundy Project FERC-approved recreation sites (Table 10.3-1). Field technicians visited each recreation site and collected data on the recreation facilities and amenities using a handheld device. Data collected during the inventory included the following:

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

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

- N = Needs replacement (Facility/amenity is non-functional or has broken or missing components)
- R = Needs repair (Facility/amenity has structural damage or is in an obvious state of disrepair)
- M = Needs maintenance (Facility/amenity needs maintenance, such as cleaning or painting)
- G = Good condition (Facility/amenity is functional and well maintained)

### 10.4.2. RECREATION SITE ACCESSIBILITY ASSESSMENT METHODOLOGY

SCE will evaluate the useability of the Lundy Lake Boat Launch, under existing Project operations, by assessing impoundment levels as measured by an existing USGS gage located on the east end of Lundy Lake at the Lundy Dam for the high-use recreation season (Memorial Day–Labor Day).

The boat launch will be evaluated regarding the location and usability of the facilities with respect to impoundment water levels. Minimum functional limits will be determined for the boat launch facility based on parameters such as water depth, slope, and substrate. Using this information, SCE will determine the range of impoundment water levels over which the facility is functional for its primary purpose. To the extent possible, SCE will also utilize recreation use and user survey data collected during the Recreation Use and Needs Study (REC-1) to evaluate the potential relationship between impoundment water levels and recreation site use.

## 10.5. Study Plan Modifications

SCE is not proposing any modifications to REC-2 as approved by FERC in its SPD (FERC, 2025).

## 10.6. Variances to Approved Methods

SCE encountered the following variance when implementing REC-2 study plan as approved by FERC in its SPD (FERC, 2025):

- In its SPD, FERC recommended that SCE "install a temporary staff gage located near the project boat launch on the west side of Lundy Lake…to determine the difference in lake levels across the lake" (FERC, 2025). In consultation with CDFW, SCE determined that the data currently collected at the USGS-approved gage located near the dam would adequately represent the lake levels for both the east and west sides of Lundy Lake (Appendix P, REC-2 Consultation Record).

## 10.7. Results

### 10.7.1. Recreation Site Inventory and Condition Assessment

#### 10.7.1.1. Lundy Lake Boat Launch

Lundy Lake Boat Launch is the west-most recreation site at the Lundy Project and sits on the northwestern end of Lundy Lake. The site includes a boat launch concrete slab that extends into the lake, portable toilets found across the street from the boat launch, a small parking area of approximately 1,650 square feet to the left of the launch, and beach access throughout the area. Signage is also found, which captures the extents of invasive species known throughout the area and ways to mitigate the spread. A floatable dock was located on the left side of the boat launch where boats and rafts were docked. A fishing line disposal receptacle was located on entry into the site where anglers were encouraged to throw unused and tangled line into the container. The site is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Lundy Lake Boat Launch access road and parking consist of a concrete slab that extends into the lake for the boat launch and dirt road access for vehicle parking. The access and parking areas were noted to be in good condition.

Site elements, quantities, and their conditions at the Lundy Lake Boat Launch site are included in Table 10.7-1 and on Figure 10.7-1, below.

## Table 10.7-1. Lundy Lake Boat Launch

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Portable Toilet | G | 2 |
| Informational Signage | G | 1 |
| Fishing Line Disposal | G | 1 |
| Boat Launch | G | 1 |
| Boat Dock | G | 1 |


**Figure 10.7-1. Lundy Lake Boat Launch Site Elements, Quantities, and Conditions.**

##### 10.7.1.1.1. Signage and Wayfinding

Signage at the Lundy Lake Boat Launch included a total of one informational signage, which was noted in good condition.

##### 10.7.1.1.2. Universal Accessibility

The Americans with Disabilities Act (ADA) universal accessibility was assessed at each amenity at Lundy Lake Boat Launch (Table 10.7-1). Amenities were assessed as follows:

- The portable restrooms were not ADA accessible.
- The informational signage was not ADA accessible.
- The fishing line disposal was not ADA accessible.
- The boat launch was not ADA accessible.
- The boat dock was not ADA accessible.

#### 10.7.1.2. Lundy Dam Day Use Area

Lundy Dam Day Use Area is located east of Lake Lundy at/around the Lundy Dam itself. The site includes a parking area that is approximately 13,787 square feet, informational and safety signage, ADA accessible toilets, and a trash can. The site includes access to the lake and lakeshore via a walkway from the parking area to the lake. In addition, the site provides access to hiking and biking trails located outside of the Project boundary. The site is owned, operated, and maintained by SCE.

Lundy Dam Day Use Area access consists of a dirt road named Lundy Dam Road, which is an offshoot of Lundy Lake Road. Parking can be found all around the gravel area at the base of the dam. Parking was noted to be in good condition.

Site elements, quantities, and their conditions at the Lundy Dam Day Use Area are included in Table 10.7-2 and Figure 10.7-2, below.

**Table 10.7-2. Lundy Dam Day Use Area**

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Informational Signage | **G** | **1** |
| Safety Signage | **G** | **1** |
| Toilet ADA | **G** | **1** |
| Trash Can | **G** | **1** |

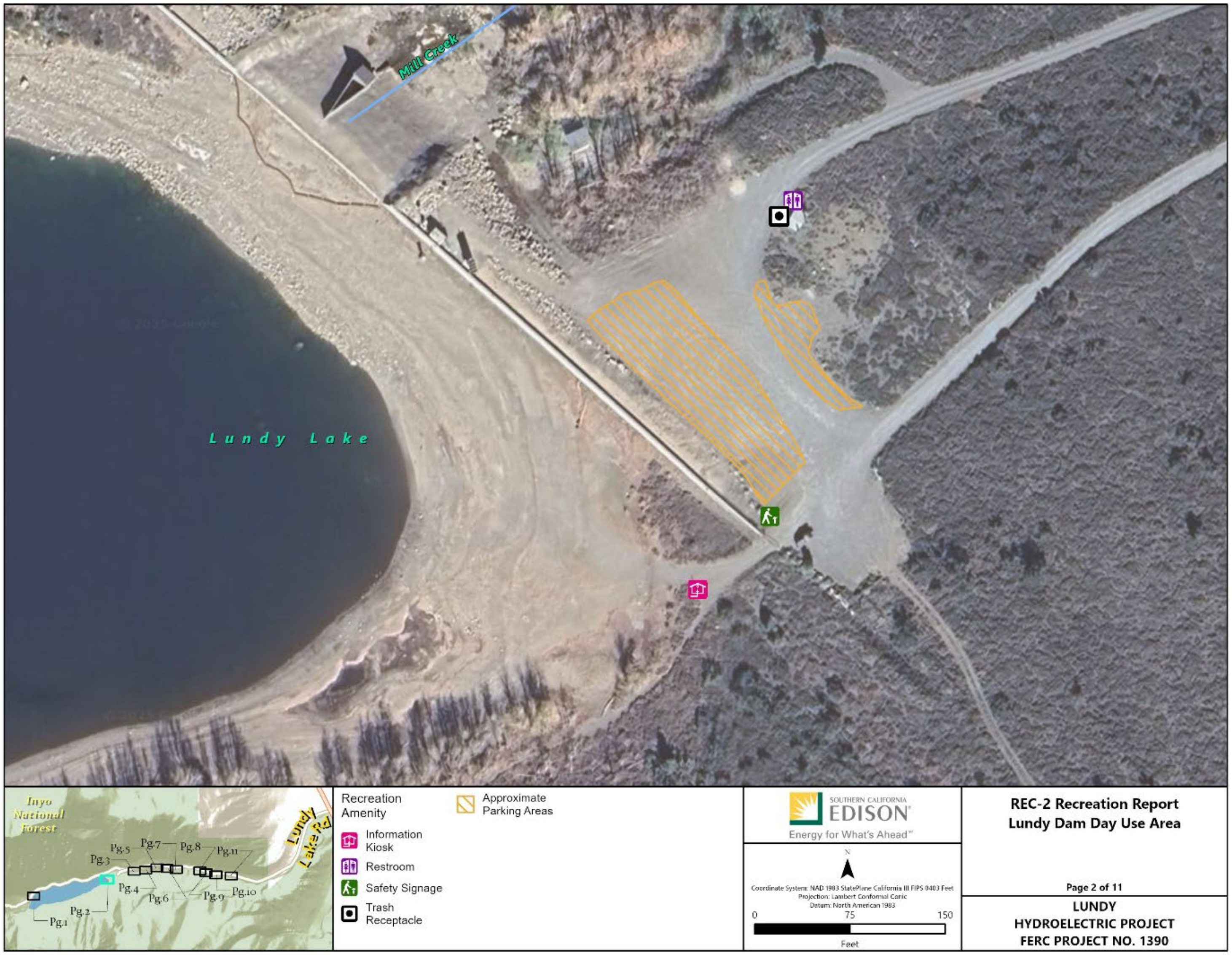


**Figure 10.7-2. Lundy Dam Day Use Area Site Elements, Quantities, and Conditions.**

10.7.1.2.1. Signage and Wayfinding

Signage at the Lundy Dam Day Use Area included a total of one informational signage and one safety signage, which were noted to be in good condition.

10.7.1.2.2. Universal Accessibility

The ADA universal accessibility was assessed at each amenity at Lundy Dam Day Use Area (Table 10.7-2). Amenities were assessed as follows:

- The informational signage was not ADA accessible.
- The safety signage was not ADA accessible.
- The toilets were ADA accessible.
- The trash can was not ADA accessible.

10.7.1.3. Lundy Campground

Lundy Campground is located east of Lundy Lake and consists of 38 individual campsites with three separate entrances into the campground. The campground consists of dirt/gravel roads to travel in between campsites and hosts numerous amenities such as bear boxes, campfire rings, toilets, picnic tables, signage, etc. The campground costs $15 per night per site. Additional information about the campground, wildlife, and other concerns is located on a signage board found in the middle of the campground near the central entrance. The Lundy Campground is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Lundy Campground consists of grave/dirt roads connecting campsites throughout the campground. A single parking space is available at each campsite.

Site elements, quantities, and their conditions at the Lundy Campground site are included in Table 10.7-3 and on Figure 10.7-3 to Figure 10.7-7, below.

**Table 10.7-3. Lundy Campground**

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Bear Box | G | 34 |
| | M | 2 |
| Campsite | G | 35 |
| | M | 2 |
| | R | 1 |
| Dumpster | G | 3 |
| | M | 1 |
| Firepit / Ring | G | 36 |
| | M | 1 |

| Amenity Type | Amenity Condition | Count |
| --- | --- | --- |
| Information Kiosk | M | 1 |
| Iron Ranger | M | 1 |
| Picnic Table | G | 10 |
| | M | 14 |
| | R | 16 |
| | N | 2 |
| Portable Toilet | G | 7 |
| Potable Water | G | 1 |
| Toilet Vault | G | 3 |

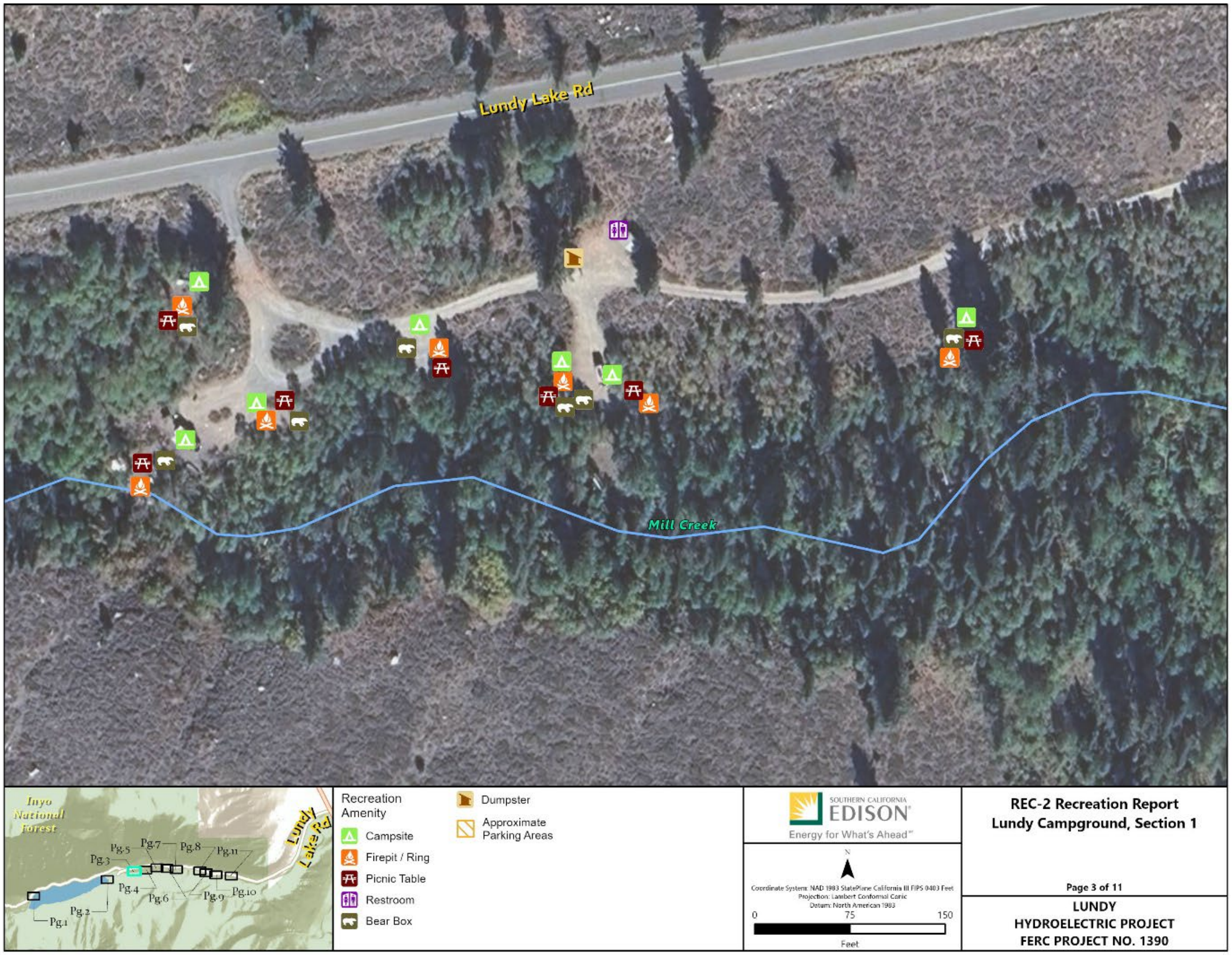


**Figure 10.7-3. Lundy Campground Site Elements, Quantities, and Conditions, Section 1.**

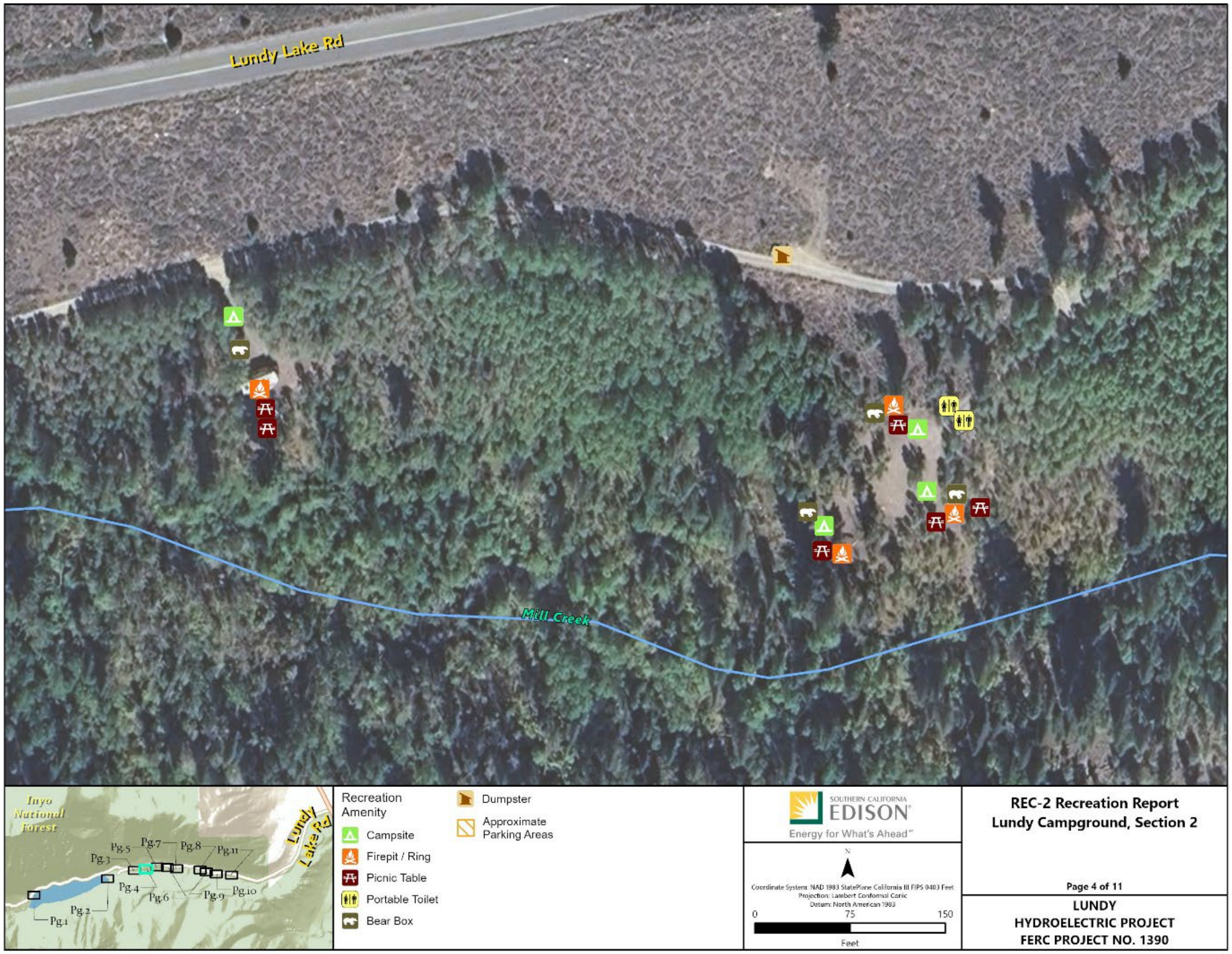


**Figure 10.7-4. Lundy Campground Site Elements, Quantities, and Conditions, Section 2.**

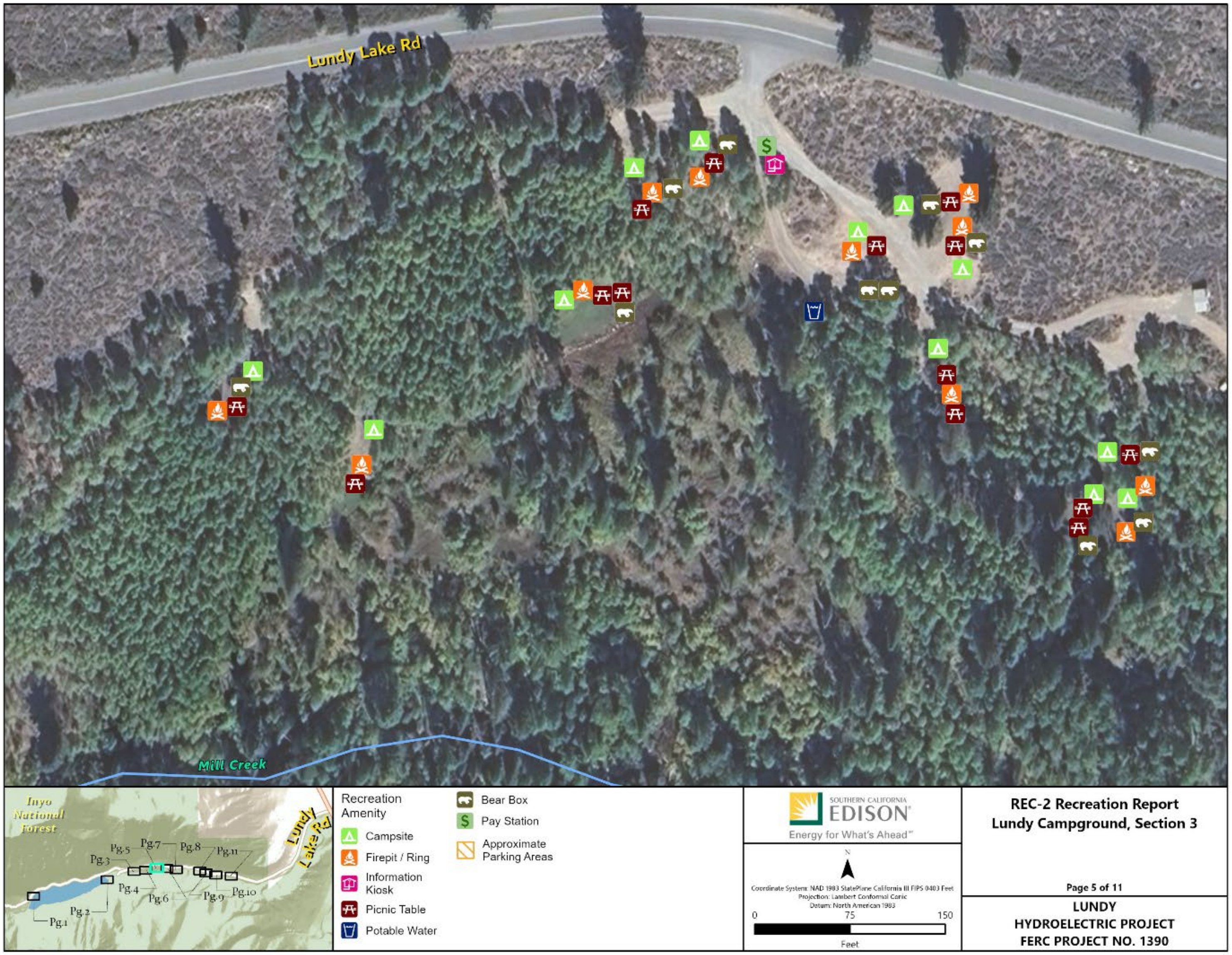


**Figure 10.7-5. Lundy Campground Site Elements, Quantities, and Conditions, Section 3.**

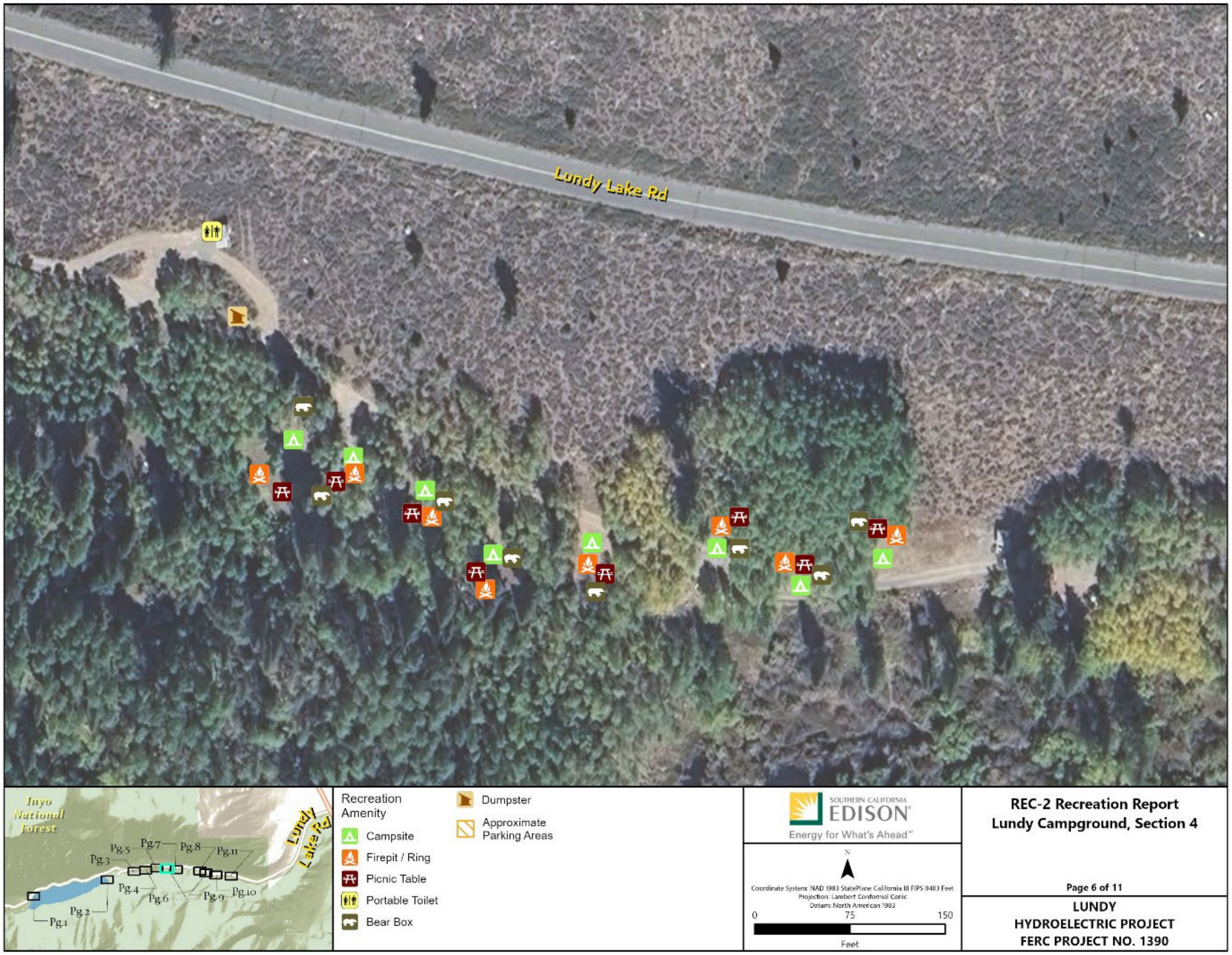


**Figure 10.7-6. Lundy Campground Site Elements, Quantities, and Conditions, Section 4.**


**Figure 10.7-7. Lundy Campground Site Elements, Quantities, and Conditions, Section 5.**

10.7.1.3.1. Signage and Wayfinding

Signage at Lundy Campground consists of one informational board found by the central entrance to the campground. The condition of the informational sign was noted to need maintenance.

10.7.1.3.2. Universal Accessibility

ADA universal accessibility was assessed at each amenity at Lundy Campground (Table 10.7-3). Amenities were assessed as follows:

- None of the campsites were ADA accessible.
- None of the bear boxes were ADA accessible.
- None of the firepits/rings were ADA accessible.
- None of the dumpsters were ADA accessible.
- The information kiosk was not ADA accessible.
- The iron ranger was not ADA accessible.
- None of the picnic tables were ADA accessible.
- None of the portable toilets were ADA accessible.
- The potable water was not ADA accessible.
- None of the toilet vaults were ADA accessible.

10.7.1.3.3. Erosion

Erosion was noted at Campsite 4, with signs of tires from vehicles and people using non-identified trails to reach the creek, and Campsite 30, with noticeable tire marks from vehicles.

10.7.1.4. Day Use Area 1

Day Use Area 1 is found east of Lundy Campground. Day Use Area 1 consists of a picnic table and a portable toilet. A parking space is located behind the toilet. This site is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Day Use Area 1 access road and parking consist of a dirt/gravel road within Day Use Area 1 and a dirt parking space that is approximately 300 square feet.

Site elements, quantities, and their conditions at the Day Use Area 1 site are included in Table 10.7-4 and on Figure 10.7-8, below.

## Table 10.7-4. Day Use Area 1

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Picnic Table | M | 1 |
| Portable Toilet | M | 1 |

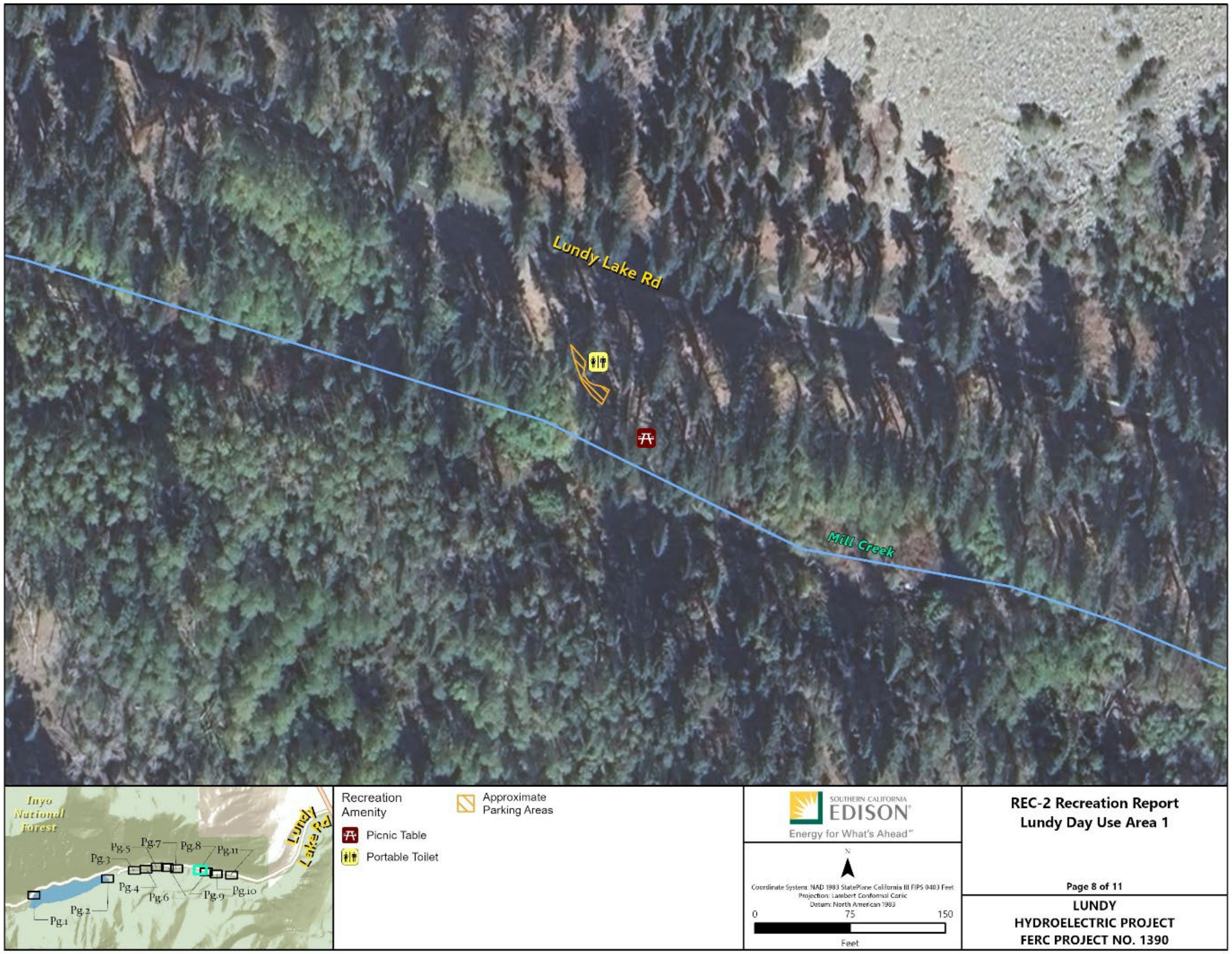


**Figure 10.7-8. Day Use Area 1 Site Elements, Quantities, and Conditions.**

10.7.1.4.1. Signage and Wayfinding

There was no signage accounted for at the site.

10.7.1.4.2. Universal Accessibility

The ADA universal accessibility was assessed at each amenity at Day Use Area 1 (Table 10.7-4). Amenities were assessed as follows:

- The picnic table was not ADA accessible.
- The portable toilet was not ADA accessible.

10.7.1.5. Day Use Area 2

Day Use Area 2 is found east of Lundy Campground. Day Use Area 2 consists of two picnic tables and a social firepit found on an old service road. The site is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Day Use Area 2 access road and parking consist of a dirt/gravel road within Day Use Area 2. Parking was not noted within the area due to no clear signs of use or speculations of being able to park within the site. A picnic table was noted off the main site at the end of an old service road.

Site elements, quantities, and their conditions at the Day Use Area 2 site are included in

Table 10.7-5 and on Figure 10.7-9, below.

**Table 10.7-5. Day Use Area 2**

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Social Firepit | R | 1 |
| Picnic Table | G | 1 |
| | R | 1 |

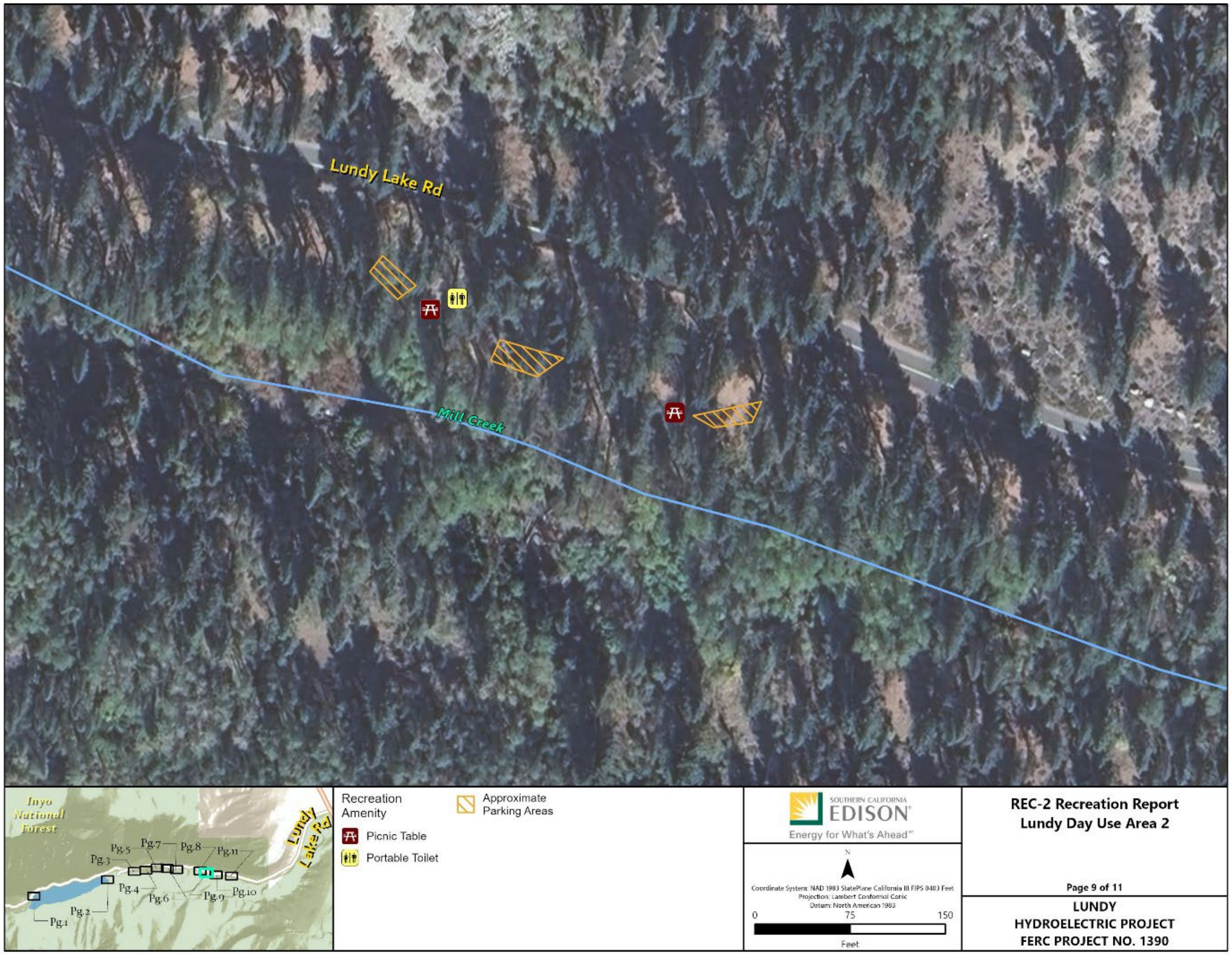


**Figure 10.7-9. Day Use Area 2 Site Elements, Quantities, and Conditions.**

##### 10.7.1.5.1. Signage and Wayfinding

There was no signage accounted for at the site.

##### 10.7.1.5.2. Universal Accessibility

The ADA universal accessibility was assessed at each amenity at Day Use Area 2 (Table 10.7-5). Amenities were assessed as follows:

- None of the picnic tables were ADA accessible.
- The social firepit was not ADA accessible.

##### 10.7.1.5.3. Erosion

Compact vegetation was noted at the site near the entrance, but no erosion was observed during the site visit.

#### 10.7.1.6. Day Use Area 3

Day Use Area 3 is found east of Lundy Campground. Day Use Area 3 consists of a picnic table and a portable toilet. Parking is located in two general areas of Day Use Area 3, with no true defined area for parking. The area consists of gravel/dirt. The site is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Day Use Area 3 access road and parking consist of a dirt/gravel road within Day Use Area 3 and a dirt parking space that is approximately 1,650 square feet.

Site elements, quantities, and their conditions at the Day Use Area 3 site are included in

Table 10.7-6 and on Figure 10.7-10, below.

**Table 10.7-6. Day Use Area 3**

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Picnic Table | M | 1 |
| Portable Toilet | G | 1 |

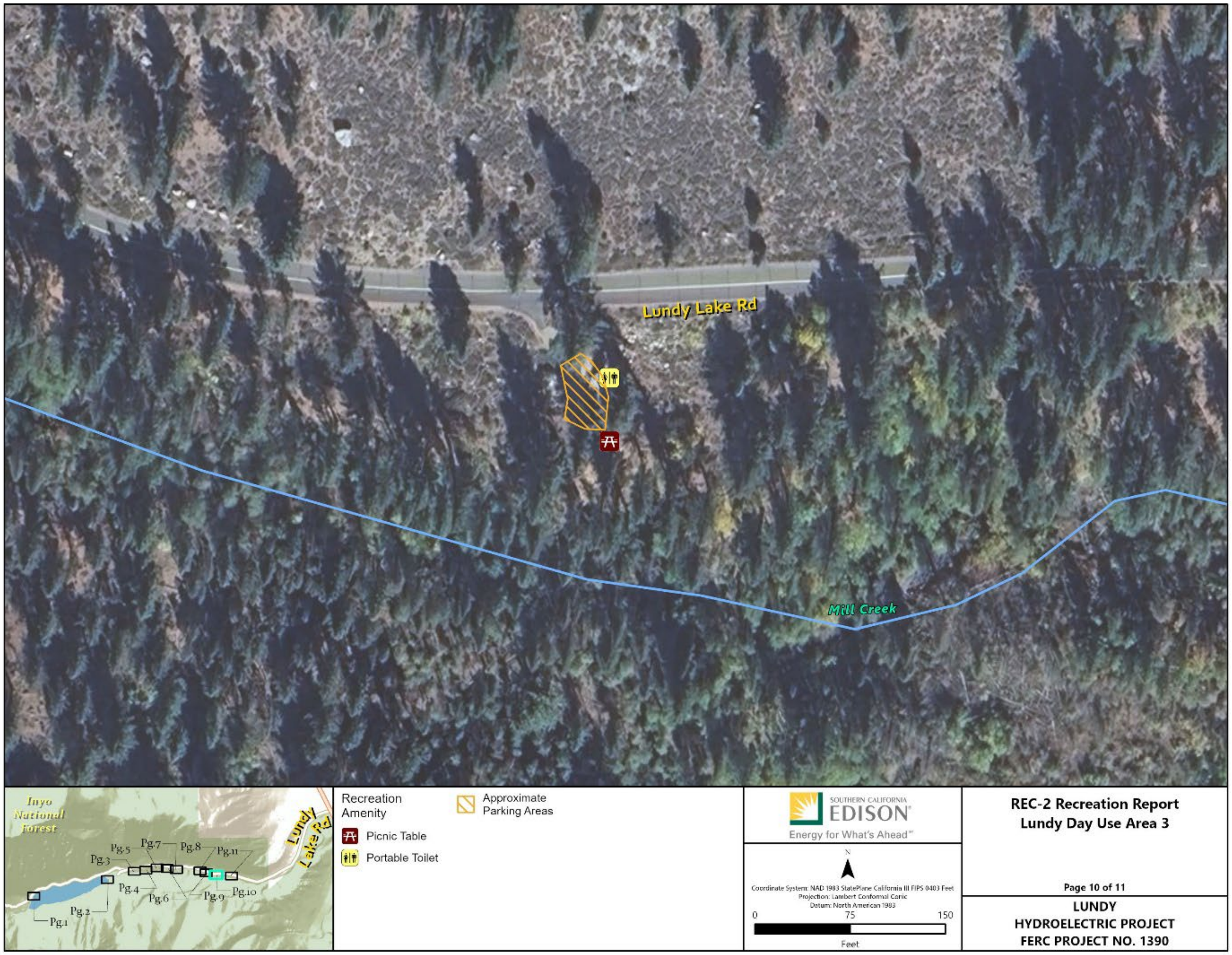


**Figure 10.7-10. Day Use Area 3 Site Elements, Quantities, and Conditions.**

10.7.1.6.1. Signage and Wayfinding

There was no signage accounted for at the site.

10.7.1.6.2. Universal Accessibility

The ADA universal accessibility was assessed at each amenity at Day Use Area 3 (Table 10.7-6). Amenities were assessed as follows:

- The picnic table was not ADA accessible.
- The portable toilet was not ADA accessible.

10.7.1.6.3. Erosion

Compacted soil and vegetation were noted, but no erosion was observed at the site visit.

10.7.1.7. Day Use Area 4

Day Use Area 4 is found the furthest east of Lundy Campground. Day Use Area 4 consists of a picnic table and a portable toilet. Parking is located in two distinct areas, and the site has a roundabout feature within the site itself. The site is owned by SCE, while the operation and maintenance is provided by Mono County through a lease agreement.

Day Use Area 4 access road and parking consist of a dirt/gravel road within Day Use Area 4 and two dirt parking spaces, which equal approximately 583 square feet.

Site elements, quantities, and their conditions at the Day Use Area 4 site are included in Table 10.7-7 and on Figure 10.7-11, below.

**Table 10.7-7. Day Use Area 4**

| Amenity Type | Amenity Condition | Count |
|---|---:|---:|
| Picnic Table | M | 1 |
| Portable Toilet | G | 1 |

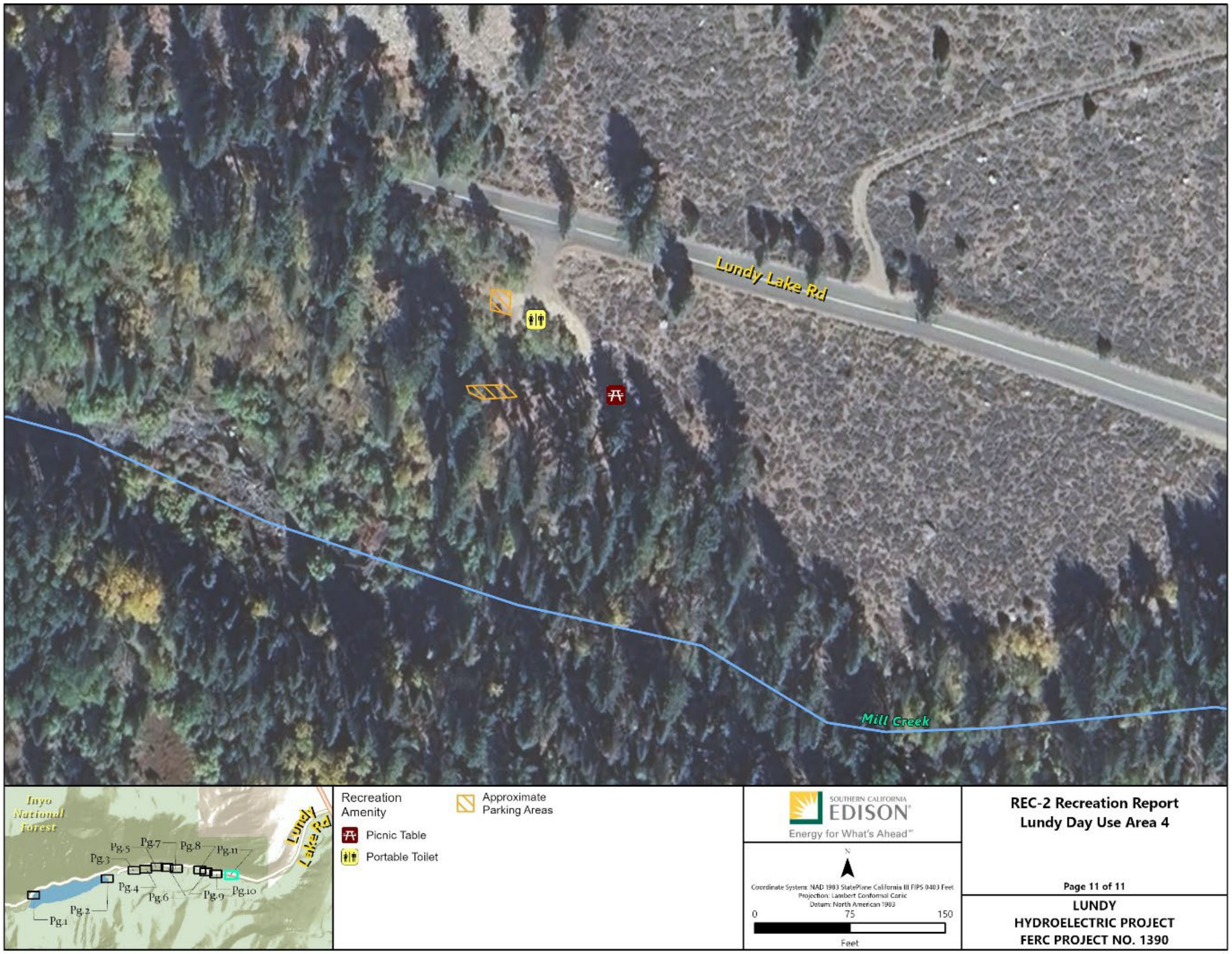


**Figure 10.7-11. Day Use Area 4 Site Elements, Quantities, and Conditions.**

10.7.1.7.1. Signage and Wayfinding

There was no signage accounted for at the site.

10.7.1.7.2. Universal Accessibility

The ADA universal accessibility was assessed at each amenity at Day Use Area 4 (Table 10.7-7). Amenities were assessed as follows:

- The picnic table was not ADA accessible.
- The portable toilet was not ADA accessible.

10.7.2. RECREATION SITE ACCESSIBILITY ASSESSMENT

At the time this interim report was prepared, data collection was complete. The analysis of data for REC-2 was still ongoing. The final results of REC-2 will be provided in the final technical report.

## 10.8. DISCUSSION

Analysis of recreation data is ongoing. Additional study results will be provided in the USR in 2027.

## 10.9. REFERENCES

CM (County of Mono). 2024. County of Mono License Agreement. June 2024.

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

SCE (Southern California Edison) 2017. Exhibit R drawings. Filed with FERC on June 28, 2017. Accession number: 20170608-5077

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

# REC-2 APPENDICIES

# APPENDIX O
# RECREATION FACILITIES CONDITION ASSESSMENT FORM

# LUNDY PROJECT
# RECREATION SITE INVENTORY FORM

Observed by:______________________________ Date/Time: ________________

Site Name:________________________________ GPS Coordinates:_____________

**Facility Type:**

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

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

☐ Paved access # lanes ______
☐ Unpaved access # lanes ______

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

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

**Operations:**

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

Operating Hours_____________ Owner/Manager________________
Project Facility: _____________ Within FERC Project boundary?_____________

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

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

Other (specify)____________________________________________________________________________

_____________________________________________________________________________________

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

_______________________________________

☐ Hard surface ☐ Unimproved (informal) ☐ Gravel ☐ Carry In

☐ Universal Access ☐ Boat Prep Area _____ # of Lanes

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

______________________________________________

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

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

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

Type:__________ Length (ft):_______ Condition: _____________ ☐ Universal Access

Type:__________ Length (ft):_______ Condition: _____________ ☐ Universal Access

Type:__________ Length (ft):_______ Condition: _____________ ☐ Universal Access

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

_____ No. of Displays

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

☐ Regional Events ☐ Other (specify)_________________________________

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

______________________________________________________________

☐ Part 8 ☐ Directional ☐ Informational ☐ Other

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

_____________________________________________

| | # Flush | (# UA*) | # Portable | (# ADA) | Showers | (#UA) |
|---|---|---|---|---|---|---|
| Unisex | ______ | (______) | ______ | (______) | ______ | (______) |
| Women | ______ | (______) | ______ | (______) | ______ | (______) |
| Men | ______ | (______) | ______ | (______) | ______ | (______) |

**UA = Universal Access*

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

______________________________________________

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

**Observed Vegetation and Erosion Impacts:**

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

**Description of Observations/Evidence of Vegetation Impacts:**

___________________________________________________________________________

___________________________________________________________________________

**Description of Observations/Evidence of Erosion:**
_______________________________________________________________________________
______________________________________________________________

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

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

**Notes (including general condition, any restrictions/alerts, such as boating use, invasive species, etc.)**:
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
Photo number from _____ to _____

**Sketch of Site and Facilities:**

# APPENDIX P
# REC-2 CONSULTATION RECORD

**From:** Finlay Anderson
**To:** graham.meese@wildlife.ca.gov
**Cc:** Matthew Woodhall; Angela Whelpley
**Subject:** Lundy Lakes Recreation Assessment - Study Plan Implementation
**Date:** Wednesday, March 19, 2025 5:00:18 PM
**Attachments:** REC-2 Memo to CDFW-Proposed Study Plan Modification.pdf
20250102-3061_P-1390-069 Study Plan Determination.pdf jan 2 (1).pdf
Outlook-Logo__Desc

---

Hi Graham --

SCE is gearing up for the recreation season, and is trying to make plans to meet study objectives identified in FERC's Study Plan Determination. One of the methods that FERC recommended for addressing a question that CDFW raised included installing a staff gage on the west end of Lundy Lake.

SCE does not feel this is necessary to achieve the goals of the study, but wanted to double check with CDFW to see if there is a concern with utilizing existing infrastructure. The attached memo outlines the question and the reasons why SCE believes installation of a gage is not warranted. I've also included the study plan determination for your convenience.

Can you confer with your colleagues and let us know what you think? Happy to arrange a call if necessary. We are hoping to resolve this question by the end of the month.

Thanks
FMA

**Finlay Anderson**
**Principal Consultant**
Kleinschmidt
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# MEMORANDUM

| | |
|---|---|
| **To:** | Graham Meese, California Department of Fish and Wildlife (CDFW) |
| **From:** | Kleinschmidt Associates, on behalf of Southern California Edison (SCE) |
| **Cc:** | Matthew Woodhall, SCE |
| **Date:** | March 19, 2025 |
| **Re:** | Consultation on Staff Gage Data Collection as part of the REC-2 Study |

**Introduction**

On January 2, 2025 the Federal Energy Regulatory Commission (FERC) issued a Study Plan Determination (SPD) for the Lundy Hydroelectric Project, P-1390. The SPD recommended modification to SCE's proposed Recreation Inventory and Condition Assessment Study (REC-2). The Recommendations were in response to requests by the California Department of Fish and Wildlife (CDFW) to consider the Lundy Lake as a recreational component and that SCE assess how project operations affect Lundy Lake levels, specifically during the peak summer recreation season between Memorial Day and Labor Day. SCE intends to modify its REC-2 study to meet the objectives of CDFW; however, this memorandum seeks concurrence from CDFW to not adopt all of FERC's recommended methods, as described below.

**FERC Recommendations**

CDFW requested that the analysis should identify potential recreational impacts at various lake levels as well as identify how normal project operations cause changes in lake levels and associated potential impacts on recreational facilities at a daily timestep. FERC responded to this request by recommending that SCE install a temporary staff gage on the west side of Lundy Lake. FERC recommended that data should be collected at intervals comparable to the USGS-approved gage located near the dam to determine the difference in lake levels across the lake.

**No Need for Staff Gage**

FERC's intent for the installation of a temporary staff gage at the west side of the lake is to "understand how lake levels differ between the east side of Lundy Lake where the dam and the water-level gage operates, and the west side of Lundy Lake where the only project boat launch on Lundy Lake exists". SCE believes that this question is not germane to the question that CDFW has asked and intends instead to utilize the existing gage at the dam to report on daily reservoir elevation throughout the recreation season.

SCE does not believe there is any reason to conclude that the water surface elevation (WSE) at one side of the lake varies substantially from the WSE at the other end: there are no hydraulic controls that would create a grade-line, and the water body is too small to anticipate deviations that could be measurable with standard equipment or which would be meaningful in terms of the FERC's goal to obtain user-preference data. Compounding the fundamental question of whether gage would yield useful information, SCE has the following concerns with the installation of a new gage system:

- The new gage system requires a reliable power source, which may necessitate additional infrastructure development in remote areas of the lake. This may involve environmental impact and potential disruptions to the existing ecosystem.
- Telemetry and accessing data present several challenges that can impact the efficiency and reliability of the data.
- Identifying and securing an optimal location for the new gage that provides comprehensive coverage of the lake levels on the shallowing, west side of the lake could be challenging.

The existing staff gage infrastructure located at the Lundy Lake Dam can achieve the same data collection objectives as the new gage system suggested by FERC. This proposal is based on the following points:

- **Accuracy and Reliability:** The current staff gage has been consistently calibrated and maintained to ensure accurate readings. Historical data from this gage has shown reliable correlation with actual lake levels. This gage data has been used to communicate with water-rights holders for decades.
- **Comprehensive Coverage:** The strategic location of the existing staff gage allows it to effectively monitor water levels at critical points, including the dam and the boat launch.
- **Cost-Effectiveness:** Utilizing the existing infrastructure eliminates the need for additional resource allocation and minimizes environmental impact.

SCE believes that leveraging the existing staff gage infrastructure will provide a cost-effective and environmentally friendly solution to achieve the desired lake level monitoring objectives.

**Request for Concurrence**

SCE believe that there is a compelling case that the objectives added by FERC can be met without the addition of the temporary gage. However, before making this modification, SCE wishes to verity with you that our proposed method of data gathering will meet your intended objectives for the study (i.e., assessing how project operations affect Lundy Lake levels, specifically during the peak summer recreation season between Memorial Day and Labor Day). SCE, therefore, requests your comments and concurrence on the proposal to only utilize the existing staff gage infrastructure for lake level monitoring at Lundy Lake.

SCE is committed to working collaboratively to ensure the successful implementation of this study.

Should you require any further information or have any questions, please do not hesitate to contact Matthew Woodhall or Finlay Anderson.

\\EgnyteDrive\Kleinschmidt\Jobs\3202\008\Docs\Study Planning\Final Study Plans\REC-2 Memo to CDFW.docx

| | |
|---|---|
| **From:** | Meese, Graham@Wildlife |
| **To:** | Finlay Anderson |
| **Cc:** | Matthew Woodhall; Angela Whelpley |
| **Subject:** | RE: Lundy Lakes Recreation Assessment - Study Plan Implementation |
| **Date:** | Thursday, March 20, 2025 8:19:12 PM |

HI Finlay,
Thank you for reaching out to discuss the objectives of the study CDFW proposed to assess how project operations affect the recreational values of Lundy Lake. I've reviewed the attached memo dated March 19, 2025 requesting CDFWs concurrence on the use of the existing gage at dam to measure lake levels instead of installing an additional staff gage at the western side of the lake. So long as SCE continues to collect data at the dam at a timestep of 24 hours or less and can corelate these measurements to the lake elevation, I agree with the points made by SCE in the memo that an additional temporary staff gage is not needed to accomplish the goals of the study. Please let me know if you have any additional questions or concerns.

Best,

Graham Meese
California Department of Fish and Wildlife
Habitat Conservation Program Supervisor
Eastern Sierra - Region 6
(760) 996-7387

**From:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>
**Sent:** Wednesday, March 19, 2025 2:00 PM
**To:** Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>
**Cc:** Matthew Woodhall <matthew.woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>
**Subject:** Lundy Lakes Recreation Assessment - Study Plan Implementation



Hi Graham --

SCE is gearing up for the recreation season, and is trying to make plans to meet study objectives identified in FERC's Study Plan Determination. One of the methods that FERC recommended for addressing a question that CDFW raised included installing a staff gage on the west end of Lundy Lake.

SCE does not feel this is necessary to achieve the goals of the study, but wanted to double check with CDFW to see if there is a concern with utilizing existing infrastructure. The attached memo outlines the question and the reasons why SCE believes installation of a gage is not warranted. I've also included the study plan determination for your convenience.

Can you confer with your colleagues and let us know what you think? Happy to arrange a call if necessary. We are hoping to resolve this question by the end of the month.

Thanks
FMA


**Finlay Anderson**

**Principal Consultant**

Kleinschmidt

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# 11.0 CUL-1 CULTURAL RESOURCES – ARCHAEOLOGY

## 11.1. INTRODUCTION

During the study planning process, SCE and stakeholders identified the need to conduct Cultural and Tribal Resources Studies to identify historic properties that may be affected by the O&M of the Project. Three studies were identified the Cultural Resources – Archaeology (CUL-1), Cultural Resources – Built Environment (CUL-2) and the Tribal Resources (TRI-1). In its January 2, 2025 SPD, FERC approved the CUL-1, CUL 2, and TRI-1 Study Plans (SCE, 2024). The following provides a summary of the CUL-1 Study objectives, study area, methods, and results. The results of all three studies will result in the development of a Historic Properties Management Plan (HPMP).

Several terms used throughout this ISR warrant definition at the outset.

- ***Historic property(ies)***, as defined under 36 CFR §800.16(l) (1), are precontact or historic districts, sites, buildings, structures, or objects, included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Historic properties are identified through a process of evaluation against specific NRHP criteria in 36 CFR § 60.4.
- ***A district*** is a geographic area containing significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan and physical development. Examples of districts include (but are not limited to) prehistoric archaeological site complexes, hydroelectric projects, residential areas, commercial zones, mining complexes, transportation networks, rural villages, canal systems, irrigation systems, or large ranches (NPS, 1997).
- ***Cultural resource(s)***, for the purpose of this document, is used to discuss any precontact or historic-period district, archaeological site, building, structure, object, landscape, or traditional cultural places (TCP), regardless of its NRHP eligibility.
- ***Archaeological resource(s)***, for the purpose of this study, is used to refer to a place with physical evidence of past human activity, encompassing both precontact and historic periods, regardless of its NRHP eligibility.

FERC has determined that Project operation and maintenance, Project-related recreational development, and any other associated enhancements or improvements covered by the license may affect properties included in or eligible for inclusion in the NRHP (historic properties) and that issuing such a license makes the Project an undertaking subject to review by FERC under Section 106 (54 U.S.C. § 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and its implementing regulations, “Protection of Historic Properties” (36 C.F.R. § 800). For historic properties, appropriate study areas are defined by regulations under 36 CFR § 800 as the area of potential effects (APE). The APE for the Project is further defined in Section 11.3.1 of this ISR.

## 11.2. REVIEW OF EXISTING INFORMATION

### 11.2.1. SUMMARY OF RECORD SEARCHES AND ARCHIVAL RESEARCH

SCE and its consultant contractors conducted searches of SCE archived records and maps, as well as at the Inyo National Forest (INF and California Historical Resources Information Center. The purpose of this search was to gather existing information regarding previously recorded cultural resources within the APE, and to assess which areas of the APE had been surveyed previously. The record searches included all lands within the APE plus a study area extending 0.5-mile around all Project features.

Research showed that while some areas within the Project had been previously surveyed, most of the APE had not been surveyed or needed resurvey to meet current professional standards.

### 11.2.2. PREVIOUS CULTURAL RESOURCES STUDIES

Thirty-four previous cultural resource investigations were identified within the study area. Eighteen of these are within or overlap the APE. Approximately 70 percent of the studies within the APE occurred more than 10 years ago. While the previous studies were numerous, they generally provided insufficient information in the reports to determine the adequacy of the survey coverage, and/or failed to provide substantial survey coverage of the current Project area.

### 11.2.3. PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES

Research conducted prior to the current survey indicated that there are seven precontact, three multi-component (precontact and historic-period), and 21 historic-period previously recorded archaeological sites within the study area. Precontact site components primarily include bedrock milling stations and lithic scatters. Historic-period site components include historic-period refuse scatters, roads, and the remains of buildings or structures such as ditches. Twelve archaeological sites are within the APE, and 10 of these were previously evaluated for their eligibility for listing in the NRHP during the last relicensing (White, 1983, 1985, 1990; York, 1990). One site, the remains of the Jordan Powerhouse, was determined eligible for NRHP listing, while nine were found not eligible (Ref No. FERC831003B).

## 11.3. STUDY OBJECTIVES

CUL-1 had the following goals and objectives:

- Meet FERC compliance requirements under Section 106 of the NHPA, as amended, by determining if Project-related activities and public access will have an adverse effect on historic properties.

- Identify all archaeological resources within the APE, determine which are historic properties, and develop the HPMP based on those results.

 

- Ensure that future Project facilities and operations are not inconsistent with the Desired Conditions described in the *Land Management Plan for the Inyo National Forest* (USFS, 2018) for Social and Economic Sustainability and Multiple Uses.

### 11.3.1. APE and Study Area

Under 36 CFR § 800.16(d), the APE is defined 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.” For archaeological, built environment, and non-Native TCPs, the APE includes the Project boundary and a 50-foot radius around ancillary facilities such as gages located outside of the FERC boundary (Figure 11.3-1). The study area includes a 0.5-mile radius around the APE, to provide a more complete picture of the cultural background of the area, the likely types of cultural resources to be found within the smaller APE, and appropriate fieldwork strategies.

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.

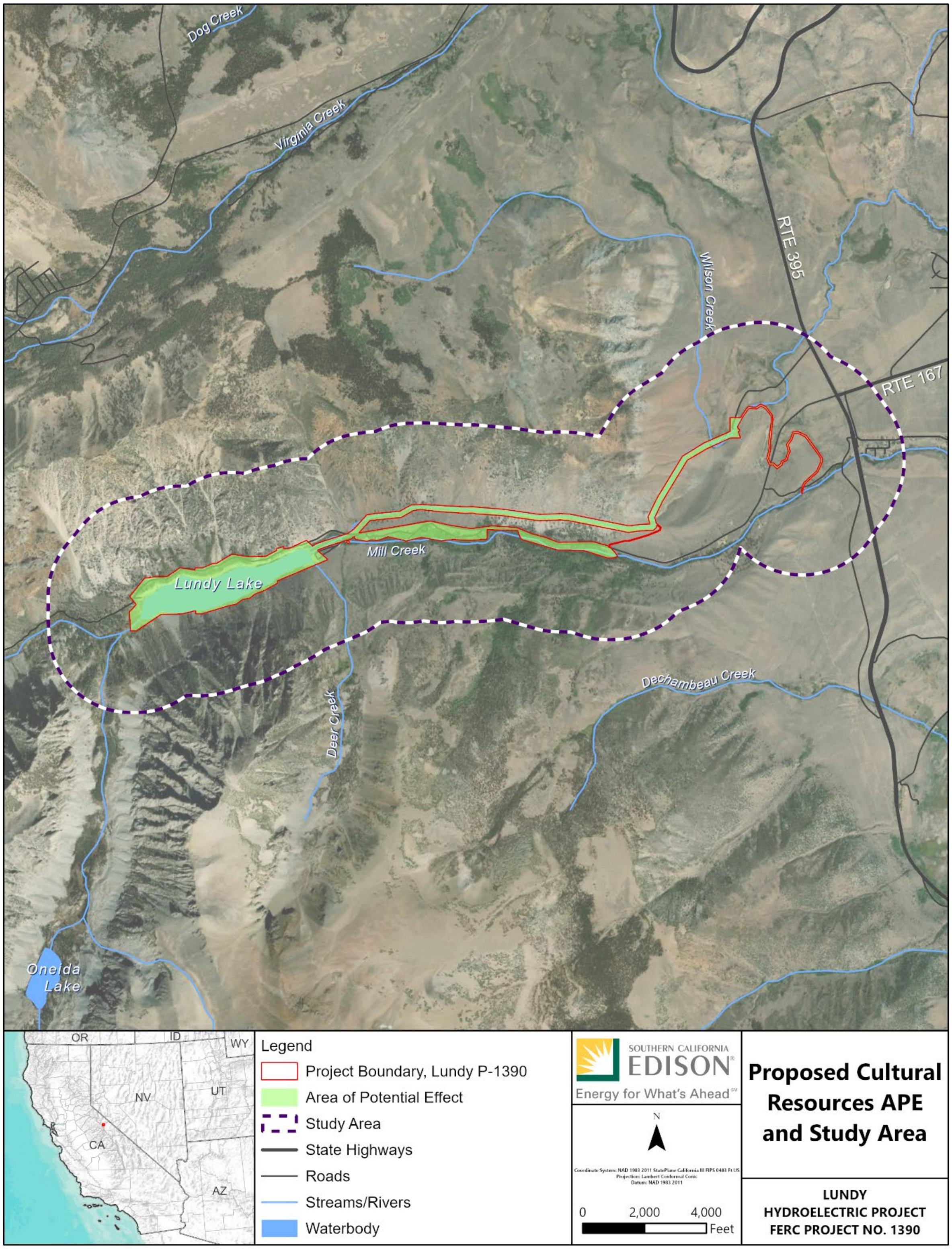


**Figure 11.3-1. Project APE and Cultural Resources Study Area.**

## 11.4. METHODS

### 11.4.1. ARCHIVAL RESEARCH

For information on previously recorded archaeological sites, the inventory relied upon the recently conducted records search, augmented with information from regional histories, historical newspapers and photographs, and a set of aerial imagery from 1929.

### 11.4.2. PERMITS

To conduct fieldwork, the cultural resource team was required to obtain Organic and Antiquities Act Permits from INF and a Fieldwork Authorization from BLM under Cultural Resources Use Permit CA-24-17. These were obtained prior to conducting fieldwork.

### 11.4.3. ARCHAEOLOGICAL INVENTORY

An archaeological inventory was performed in May 2025. Because very little of the APE had been previously surveyed to current standards, the entire APE was surveyed. The field survey was directed by an archaeologist meeting the Secretary of the Interior's Professional Qualifications for Archaeology, who was present for all fieldwork. Parts of the survey were also accompanied by a Native American representative.

During the survey, archaeologists walked parallel transects spaced at no more than 20 meters, as vegetation and terrain allowed. Variations in ground visibility and survey coverage were mapped in detail.

All previously recorded archaeological sites were re-visited and the site constituents and condition verified. All were updated using standard Department of Parks and Recreation 523 forms (DPR 523 forms). Newly discovered archaeological resources, including isolated finds, were fully documented following the recordation procedures outlined in *Instructions for Recording Historical Resources* (OHP, 1995). All sites were documented with a resource-grade GPS receiver and photographed. All mapping and data collection adhered to INF and BLM specifications. All artifacts encountered during the field survey were left in place; no artifacts were collected during the field survey.

### 11.4.4. NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

Because the purpose of the study is to identify historic properties that may be adversely affected by the undertaking, evaluation of these resources' eligibility to the NRHP is required.

Many of the previously recorded archeological resources have been evaluated as part of the most recent relicensing of the Project. One site, the remains of the Jordan Powerhouse, was determined eligible for NRHP listing, while nine were found not eligible (Ref No. FERC831003B). However, in view of the time elapsed since these determinations were made, re-evaluation of these resources is recommended. Newly recorded archaeological sites will also require evaluation. NRHP evaluations will be offered, where possible, in the Final Technical Report. For some types of sites, inventory-level evaluation is not possible, and these sites will remain unevaluated.

To address sites remaining unevaluated, SCE will prepare, in collaboration with INF, BLM, and Tribes, a plan to evaluate the eligibility of potential historic properties for the NRHP. The plan will include an assessment of past, present, and reasonably foreseeable Project effects on potential historic properties and detail the methods of evaluation to be implemented. The evaluation plan will be provided to the INF, BLM, and Tribes for review.

#### 11.4.5. Reporting and Historic Properties Management Plan

The results of the study will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. All confidential and other sensitive information will be submitted to FERC via a confidential appendix withheld from public disclosure, in accordance with Section 304 (54 USC 307103) of the NHPA.

SCE anticipates FERC will enter into a Programmatic Agreement with the California State Historic Preservation Office (SHPO) and the federal land managing agencies. FERC may invite the Advisory Council on Historic Preservation (ACHP) to participate. A stipulation of the Programmatic Agreement will be the completion and implementation of an HPMP.

The HPMP will consider direct and indirect effects of continued Project O&M on NRHP-listed or eligible cultural and Tribal resources and will require avoidance and protection of specified resources, when feasible. Processes and procedures will be developed for general and site-specific treatment measures, including measures to be taken should license implementation create unavoidable adverse effects to historic properties. The HPMP will include an Evaluation Plan and schedule for evaluating unevaluated resources.

#### 11.4.6. Consistency of Methods with Generally Accepted Scientific Practice

The study methods discussed in this document are consistent with those followed in several recent relicensing projects, and with other similar studies reviewed by participating agencies. The methods presented in the Study Plan and their implementation are consistent with the ACHP guidelines for compliance with the requirements of Section 106 of the NHPA found in 36 CFR Part 800.

### 11.5. Study Plan Modifications

SCE is not proposing any modifications to CUL-1 as approved by FERC in its SPD (FERC, 2025).

### 11.6. Variances to Approved Methods

SCE encountered no variances when implementing the CUL-1 study plan as approved by FERC in its SPD (FERC, 2025).

## 11.7. Results

All 12 previously recorded archaeological sites within the APE were visited and re-recorded, and 20 new sites were also recorded (Table 11.7-1). Eighteen of these are historic in age, including five water conveyance systems, one road segment, four arborglyph locales, seven refuse scatters, and a long section of riveted pipe. Other newly identified resources include one precontact-era limited habitation site, and one multi-component lithic and historic refuse scatter.

**Table 11.7-1. Survey Results**

| Primary No. (P-) | Trinomial (CA-) | USFS No. | Temporary Designation | Age | Summary description | Ownership |
|---|---|---|---|---|---|---|
| 26-002400 | MNO-2400H | 05045100680 | - | H | Refuse scatter, Cairn | INF |
| 26-002401 | MNO-2401H | 05045100681 | | H | Road | INF, Private |
| 26-002402 | MNO-2402H | 05045100682 | - | H | Structural remains | INF |
| 26-002403 | MNO-2403H | 05045100683 | - | H | Structural remains | Private |
| 26-002404 | MNO-2404H | 05045100684 | - | H | Structural remains | Private |
| 26-002405 | MNO-2405H | 05045100685 | - | H | Structural remains | Private |
| 26-002406 | MNO-2406H | 05045100686 | - | H | Road | Private |
| 26-002407 | MNO-2407H | 05045100688 | - | H | Cemetery | Private |
| 26-002411 | MNO-2411H | 05045100694 | - | H | Remains of the Jordan Powerhouse | BLM, Private |
| 26-003814 | - | 05045100687 | - | P | Lithic scatter | Private |
| - | - | - | Lundy Return Ditch Historic | H | Refuse scatter | Private |
| - | - | - | Lundy Return Ditch Multi-Component | MC | Lithic scatter; Refuse scatter | INF |
| - | - | - | LS-01 | H | Water conveyance (ditch) | INF |
| - | - | - | LS-02 | MC | Lithic scatter; Refuse scatter | INF |
| - | - | - | LS-03 | MC | Refuse scatter | INF |
| - | - | - | LS-04 | MC | Limited habitation; Refuse scatter | INF |
| - | - | - | LS-05 | H | Water conveyance (ditch) | BLM, INF, Private |
| - | - | - | LS-06 | H | Refuse scatter, Rock alignment | Private |
| - | - | - | LS-07 | H | Water conveyance (ditch) | BLM, Private |

| Primary No. (P-) | Trinomial (CA-) | USFS No. | Temporary Designation | Age | Summary description | Ownership |
|---|---|---|---|---|---|---|
| - | - | - | LS-08 | H | Water conveyance (ditch) | Private |
| - | - | - | LS-09 | H | Water conveyance (pipe) | Private |
| - | - | - | LS-10 | H | Arborglyph | INF |
| - | - | - | LS-11 | H | Arborglyph | INF |
| - | - | - | LS-12 | H | Refuse scatter | Private |
| - | - | - | LS-13 | H | Refuse scatter | Private |
| - | - | - | LS-15 | H | Arborglyph | Private |
| - | - | - | LS-16 | H | Road | INF |
| - | - | - | LS-17 | H | Refuse scatter | INF |
| - | - | - | LS-18 | H | Water conveyance (ditch) | INF, Private |
| - | - | - | LS-19 | H | Arborglyph (Basque) | Private |
| - | - | - | LS-22 | H | Refuse scatter | Private |
| - | - | - | LS-23 | H | Foundation, refuse pits, refuse scatter | Private |

P = precontact; H = historic; MC = multi-component

Twenty-six isolated finds were also documented during May 2025 fieldwork, all but one historic in age. The precontact-era isolate consists of two obsidian flakes. Historic-period isolates include two survey benchmarks, several small or isolated refuse scatters, a standing utility pole, and a buried pipe section. Isolated finds are considered categorically ineligible to the NRHP.

## 11.8. Discussion

The findings of the study will be reported in a Final Technical Report.

## 11.9. References

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

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White, D. 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, California: Lundy (FERC Project 1390), Lee Vining Creek (FERC Project 1388), Rush Creek (FERC Project 1389), and Bishop Creek (FERC Project 1394).” Prepared for Southern California Edison Company, Rosemead, CA.

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

# 12.0 CUL-2 CULTURAL RESOURCES – BUILT ENVIRONMENT

## 12.1. INTRODUCTION

During the study planning process, SCE and stakeholders identified the need to conduct Cultural and Tribal Resources Studies to identify historic properties that may be affected by the O&M of the Project. Three studies were identified the Cultural Resources – Archaeology (CUL-1), Cultural Resources – Built Environment (CUL-2) and the Tribal Resources (TRI-1). In its January 2, 2025 SPD FERC approved the CUL-1, CUL 2, and TRI-1 Study Plans. The following provides a summary of the CUL-2 Study objectives, study area, methods, and results. The results of all three studies will result in the development of a Historic Properties Management Plan (HPMP).

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

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

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

- ***Cultural Resource(s)***, for the purpose of this document, is used to discuss any prehistoric or historic-period district, archaeological site, building, structure, object, landscape, or traditional cultural places (TCP), regardless of its NRHP eligibility

- ***Built Environment Resource***, for the purpose of this study, this term, or simply "built resource," is used to discuss any historic-period district, building, structure, or object, regardless of its NRHP eligibility.

FERC has determined that Project operation and maintenance, Project-related recreational development, and any other associated enhancements or improvements covered by the license may affect properties included in or eligible for inclusion in the NRHP (historic properties) and that issuing such a license makes the Project an undertaking subject to review by FERC under Section 106 (54 U.S.C. § 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and its implementing regulations, "Protection of Historic Properties" (36 C.F.R. § 800). For historic properties, appropriate study areas are defined by regulations under 36 CFR § 800 as the area of potential effects (APE). The APE for the Project is defined in Section 12.3.1 of this ISR.

 

## 12.2. Review of Existing Information

### 12.2.1. Summary of Record Searches and Archival Research

SCE and its consultant contractors conducted searches of SCE archived records and maps, as well as the Inyo National Forest (INF), Bureau of Land Management (BLM), and California Historical Resources Information Center. This research gathered existing information from previously recorded cultural resources studies within and near the APE that identified known cultural resources and those areas of the APE subject to previous surveys. The record searches included all lands within the APE plus a study area extending 0.5 mile around all Project features.

Research showed that while some areas within the Project had been previously surveyed, most of the APE had not been surveyed, or needed resurvey to meet current professional standards.

### 12.2.2. Previous Cultural Resources Studies

Thirty-four previous cultural resource investigations were identified within the study area. Eighteen of these are within or overlap the APE. Approximately 70 percent of the studies within the APE occurred more than 10 years ago. While the previous studies were numerous, they generally provided insufficient information in the reports to determine the adequacy of the survey coverage, and/or failed to provide substantial survey coverage of the current Project area. Most of the previous studies focused on documenting archaeological resources and were not relevant to this ISR for built resources.

### 12.2.3. Previously Recorded Built Environment Resources

One study, White (1985), evaluated Lundy Powerhouse and concluded that it was not eligible for listing on the NRHP. The California State Historic Preservation Officer (SHPO) concurred with this finding on December 9, 1988 (FERC Ref No. FERC861112A, FERC831003B, FERC880816A). It should be noted that the evaluation solely focused on the powerhouse and did not examine or discuss the entire hydroelectric system, and no evaluation forms were prepared. Two built environment resources associated with the Lundy Project (Lundy Return Ditch and Mill Creek-Control Transmission Line) were also previously documented, both on California Department of Parks and Recreation 523 Forms. No other built environment resources have been documented within the APE.

## 12.3. Study Objectives

This Cultural Resources Study (CUL-2) had the following goals and objectives:

- Meet FERC compliance requirements under its Regulations (18 CFR Part 5) and Section 106 of the NHPA, as amended, by determining if Project-related activities and public access will have an adverse effect on historic properties.

- Identify all built environment resources within the APE, evaluate which are historic properties, and report conclusions.

- Conduct additional background archival research of the built environment resources in the APE.
- Conduct field survey of built environment resources within or intersecting the APE.
- Prepare a technical and evaluation report presenting conclusions of inventory and evaluation of built environment resources.

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

### 12.3.1. APE and Study Area

Under 36 CFR § 800.16(d), the APE is defined 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." For archaeological, built environment, and non-native TCPs, the APE includes the Project boundary and a 50-foot radius around ancillary facilities such as gages located outside of the FERC boundary (Figure 12.3-1). The Study Area includes a 0.5-mile radius around the APE, to provide a more complete picture of the cultural background of the area, the likely types of cultural resources to be found within the smaller APE, and appropriate fieldwork strategies.

On November 25, 2025, 2024, 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 m) below current grade, where excavations due to O&M could take place.

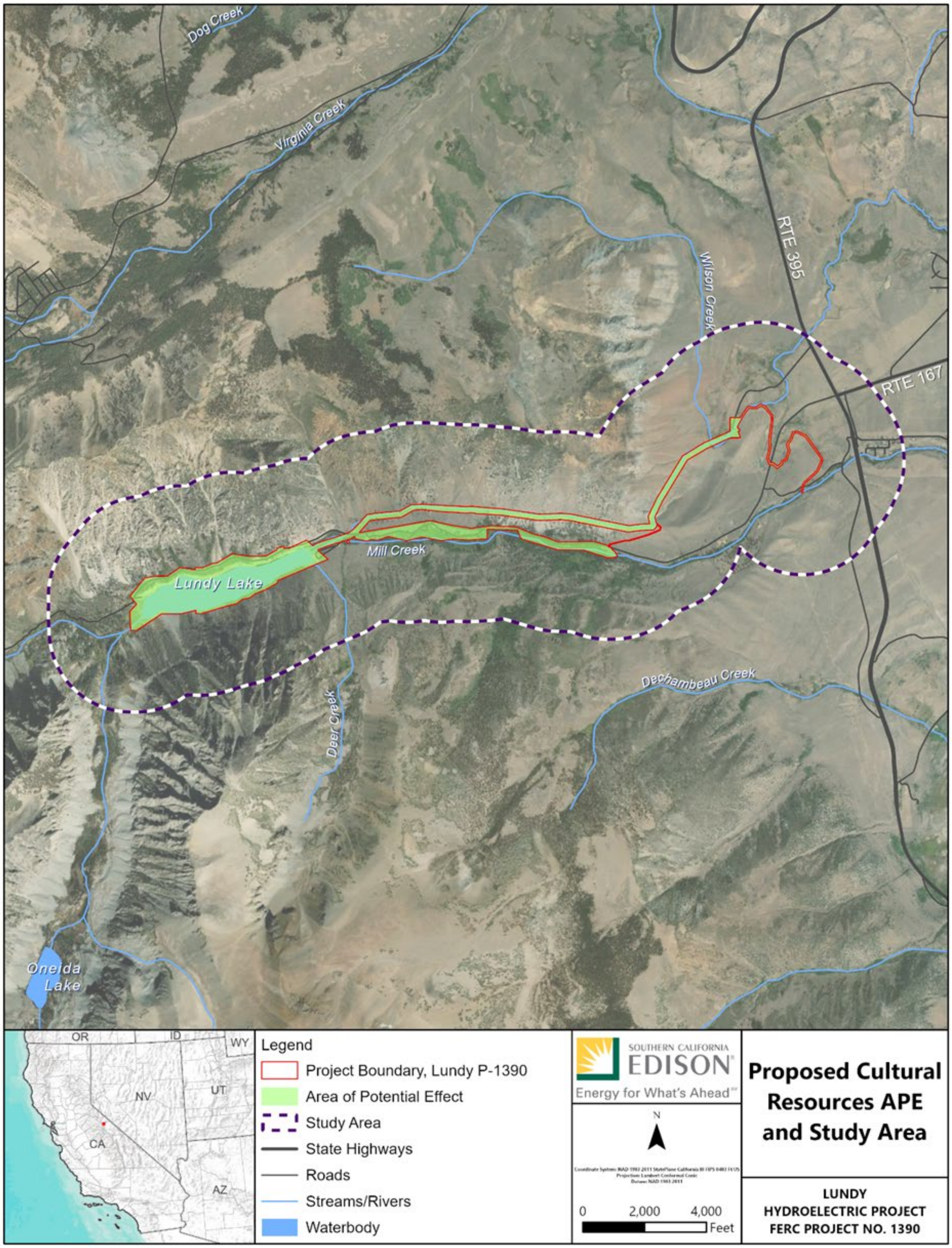


**Figure 12.3-1. Project APE and Cultural Resources Study Area.**

## 12.4. METHODS

### 12.4.1. ARCHIVAL RESEARCH

Archival research in support of the cultural resources studies is underway and/or has been completed at the repositories listed below, where those collections were determined to be relevant. Research focuses on information specific to the history of the built environment in the Project area, and specifically the development and use of the Lundy Project and its components. This research effort has included contacting SCE employees, as appropriate, to gather resource-specific information and guidance regarding SCE records related to the Project. The results of the archival research are being incorporated into the historic context and system development history necessary for evaluation of the built environment resources.

Historic photographs, maps, and other images located during archival research are being used and cited in the technical studies and the inventory and evaluation forms (if not limited by copyright or use restrictions). Previous built resources studies have been reviewed for relevant information to incorporate in the current study, as well as historic newspapers, U.S. Census data, and property records, where relevant.

Repositories contacted and/or visited for research regarding built resources include:

- Bancroft Library, University of California Berkeley
- California Historical Research Information System (Eastern Information Center, University of California, Riverside)
- SCE
- Huntington Library, SCE Collection
- Mono Basin Historical Society & Museum (Lee Vining)
- Mono County Museum (Bridgeport)
- Mono County Assessor
- California State Archives, Sacramento
- California State Library, California History Room, Sacramento
- U.S. Forest Service (USFS), Inyo National Forest
- U.S. Bureau of Land Management (BLM)
- Other libraries, archives, and online repositories as applicable

### 12.4.2. Permits

To conduct fieldwork, the cultural resource team was required to obtain Organic and Antiquities Act Permits from INF and a Fieldwork Authorization from BLM under Cultural Resources Use Permit CA-24-17. These were obtained prior to conducting fieldwork.

### 12.4.3. Built Environment Inventory

A field survey inventory of built environment was conducted as part of the FERC's reasonable and good-faith effort to identify historic properties that may be affected by the Project. Per 36 CFR § 800.4(b)(1), this was accomplished for built environment resources through field surveys that were implemented in accordance with the Secretary of the Interior's Standards and Guidelines for Identification (NPS, 1983).

A built environment resources inventory was performed in August 2025. The field survey included field review and documentation that is being used in the NRHP evaluation of built environment resources. The field survey was undertaken by individuals meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) for History and/or Architectural History (NPS, 2021).

All built environment resources were recorded, or re-recorded, following procedures outlined in Instructions for Recording Historical Resources (OHP, 1995) using California Department of Parks and Recreation 532 forms (DPR 523 forms). The built environment resources survey recorded all buildings, structures, or objects associated with hydroelectric and other historic-period activities in the APE, such as mining, transportation, agriculture/ranching, or recreation.

Fieldwork included digital photography of all resources, notetaking, and the production of sketch maps of built environment resources showing the location of individual resources and the relationship of buildings and structures to each other (e.g., an operational hydroelectric facility or a campground within the APE). Global positioning system (GPS) points were taken for built environment resources and these data are being process for use in production of mapping as part of the comprehensive inventory of built environment resources within the APE. GPS data collection adhered to INF and BLM specifications for accuracy and site-specific procedures where applicable.

### 12.4.4. National Register of Historic Places Evaluation

Because the purpose of the study is to identify historic properties that may be adversely affected by the undertaking, evaluation of these resources' eligibility to the NRHP is required.

Many of the previously recorded built environment resources have been evaluated as part of the most recent relicensing of the Project. However, in view of the time elapsed since these determinations were made, re-evaluation of these resources is recommended. Newly recorded built environment sites will also require evaluation. NRHP evaluations will be offered in the Final Technical Report.

#### 12.4.5. Reporting and Historic Properties Management Plan

The results of the study will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. All confidential and other sensitive information will be submitted to FERC via a confidential appendix withheld from public disclosure, in accordance with Section 304 (54 USC 307103) of the NHPA.

SCE anticipates FERC will enter into a Programmatic Agreement with the California State Historic Preservation Office (SHPO) and the federal land managing agencies. FERC may invite the Advisory Council on Historic Preservation (ACHP) to participate. A Stipulation of the Programmatic Agreement will be the completion and implementation of an HPMP.

The HPMP will consider direct and indirect effects of continued Project O&M on NRHP-listed or eligible cultural and Tribal resources and will require avoidance and protection of specified resources, when feasible. Processes and procedures will be developed for general and site-specific treatment measures, including measures to be taken should license implementation create unavoidable adverse effects to historic properties. The HPMP will include an Evaluation Plan and schedule for evaluating unevaluated resources.

#### 12.4.6. Consistency of Methods with Generally Accepted Scientific Practice

The study methods discussed in this document are consistent with those followed in several recent relicensing projects, and with other similar studies reviewed by participating agencies. The methods presented in the Study Plan and their implementation are consistent with the ACHP (n.d.) guidelines for compliance with the requirements of Section 106 of the NHPA found in 36 CFR Part 800.

### 12.5. Study Plan Modifications

SCE is not proposing any modifications to CUL-2 as approved by FERC in its SPD (FERC, 2025).

### 12.6. Variances to Approved Methods

SCE encountered no variances when implementing the CUL-2 study plan as approved by FERC in its SPD (FERC, 2025).

### 12.7. Results

All previously recorded built environment resources within the APE were visited and re-recorded, and all newly identified built environment resources were also recorded. The built environment resources identified as associated with the Lundy Project include Lundy Dam, Lundy Lake, a flowline consisting of pipeline and penstock, Lundy Powerhouse, and the Mill Creek Return Ditch. Lundy Lake is the intake and regulating reservoir for the Lundy Powerhouse. Lundy Lake has historically been drawn down in the winter to provide storage capacity for spring runoff. Water is conveyed from Lundy Lake to the powerhouse via the flowline and penstock. Minimum flows are provided into Mill Creek below Lundy Powerhouse via the Mill Creek Return Ditch (SCE, 2024).

The results of the inventory and evaluation of built environment resources will be reported in the Final Technical Report.

## 12.8. Discussion

The findings of the study will be reported in a Final Technical Report.

## 12.9. References

ACHP (Advisory Council on Historic Preservation). n.d. Indian Tribes, Native Hawaiians, and Indigenous Peoples: Tribal and Indigenous Peoples in Historic Preservation. Available online at https://www.achp.gov/indian-tribes-and-native-hawaiians/initiatives/achp-nativeamerican-policies.

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Projects, in Mono and Inyo Counties, California: Lundy (FERC Project 1390), Lee Vining Creek (FERC Project 1388, Rush Creek (FERC Project 1389), and Bishop Creek (FERC Project 1394).” Prepared for Southern California Edison Company, Rosemead, CA.

# 13.0 TRI-1 TRIBAL RESOURCES

## 13.1. INTRODUCTION

During the study planning process, SCE and stakeholders identified the need to conduct Cultural and Tribal Resources Studies to identify historic properties that may be affected by the O&M of the Project. Three studies were identified the Cultural Resources – Archaeology (CUL-1), Cultural Resources – Built Environment (CUL-2) and the Tribal Resources (TRI-1). In its January 2, 2025 SPD FERC approved the CUL-1, CUL 2, and TRI-1 Study Plans (SCE, 2024). The following provides a summary of the TRI-1 Study objectives, study area, methods, and results. The results of all three studies will result in the development of a Historic Properties Management Plan (HPMP).

Several terms used throughout this ISR warrant definition at the outset.

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

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

- ***Traditional cultural property/place (TCP)***, a place or property that is eligible for inclusion in the NRHP based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. TCPs are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community. Examples provided in National Register Bulletin No. 38, Guidelines for Evaluating and Documenting Identification of Traditional Cultural Properties/Places (NPS, 1998, 2024) include:

  - A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;

  - A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; or

  - A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents.

- ***Cultural resource(s)***, for the purpose of this document, is used to discuss any prehistoric or historic-period district, archaeological site, building, structure, object, landscape, or TCP, regardless of its NRHP eligibility.

FERC has determined that Project operation and maintenance, Project-related recreational development, and any other associated enhancements or improvements covered by the license may affect properties included in or eligible for inclusion in the NRHP (historic properties) and that issuing such a license makes the Project an undertaking subject to review by FERC under Section 106 (54 U.S.C. § 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and its implementing regulations, “Protection of Historic Properties” (36 C.F.R. § 800). For historic properties, appropriate study areas are defined by regulations under 36 CFR § 800 as the area of potential effects (APE). The APE for the Project is further defined in Section 13.3.1 of this ISR.

## 13.2. Review of Existing Information

### 13.2.1. Summary of Record Searches and Archival Research

SCE and its consultant contractors conducted searches of SCE archived records and maps, as well as at the Inyo National Forest (INF), Bureau of Land Management (BLM), and California Historical Resources Information Center. On April 30, 2023, SCE through its consultant requested a search of the Sacred Land Files at the California Native American Heritage Commission (NAHC) and a list of Native American contacts who may have an interest in any portion of the study area. The purpose of this search was to gather existing information regarding previously recorded Tribal resources within the APE, and to assess the level of ethnographic studies that have occurred within the APE. The record searches included all lands within the APE plus a study area extending 5 miles around all Project features.

### 13.2.2. Results of the Records Search and Archival Research

A review of ethnographic literature indicated the study area was inhabited by the Mono Lake Kootzaduka’a for millennia. Other nearby Tribes may also have resources of value in the Project area. The area was utilized for habitation, sustenance, travel, and spiritual undertakings. The most relevant ethnographic information for the Mono Lake area in general is contained in Emma Lou Davis’s (1965) “An Ethnography of the Kuzedika Paiute of Mono Lake, Mono County, California,” which documents numerous places that were utilized within the study area.

Tribal gathering, fishing, and hunting areas have been identified in the study area. Members of the Kootzaduka’a Tribe continue to access medicine plants, food plants, materials for tools, and many other items as part of their ongoing traditional cultural lifeways. The Kootzaduka’a are culturally and traditionally connected to plants and animals currently present in the study area. Bighorn sheep, for example, have traditional value in Kootzaduka’a culture, and the relationship between humans and bighorn and all other aspects of the environment are part of Kootzaduka’a traditional ecological knowledge.

### 13.2.3. Data Gaps

Although ethnographic studies were recently prepared for the relicensing of the Lee Vining Creek (FERC No. 1388) and Rush Creek (FERC No. 1389) hydroelectric projects that are nearby, no previous ethnographic background studies appear to have been prepared for the Lundy Project area, including the previous licensing efforts. The following are considered data gaps to be rectified in the study:

- Location and nature of Tribal resources that could be affected by Project O&M activities.
- Identification of individual and familial ties to the Project area and procurement of historic era and ethnographic data regarding resources in the APE and study area to provide context for the Tribal Resources Study.

## 13.3. Study Objectives

The principal goal of the study implementation is to assist FERC in meeting compliance requirements identified in 18 CFR Part 5 along with those requirements subject to NHPA Section 106 (as amended), among other federal laws and regulations, by determining if licensing of the Project would have an adverse effect upon Tribal resources, which may also include historic properties. FERC desires to know to what extent the existing Project construction and operation may have affected Tribal, cultural, or economic interests; Tribal cultural sites; and connected interests with other technical group studies. In addition to historic properties, which may be a type of Tribal resource, there are other Tribal resources that may be identified through archival research, oral interviews, field inspections, and government-to-government consultation. The intention of the study is to ensure such places are described from a Tribal perspective and identify options for potential O&M effects.

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

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

- Conduct outreach and contact with Tribal governments and their representatives.

#### 13.3.1. APE and Study Area

Under 36 CFR §800.16(d), the APE is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historical properties, if any such properties exist.” For Tribal resources, the Project boundary will serve as a draft APE; it is acknowledged that the APE may be amended based on consultation and resource issues. In addition to the APE, an arbitrary Tribal resources study area of an approximately 5-mile radius around the APE will be used to capture information about the Project area. Both the APE/Project area and the study area are depicted in Figure 13.3-1.

On November 25, 2025, 2024, 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 m) below current grade, where excavations due to O&M could take place.

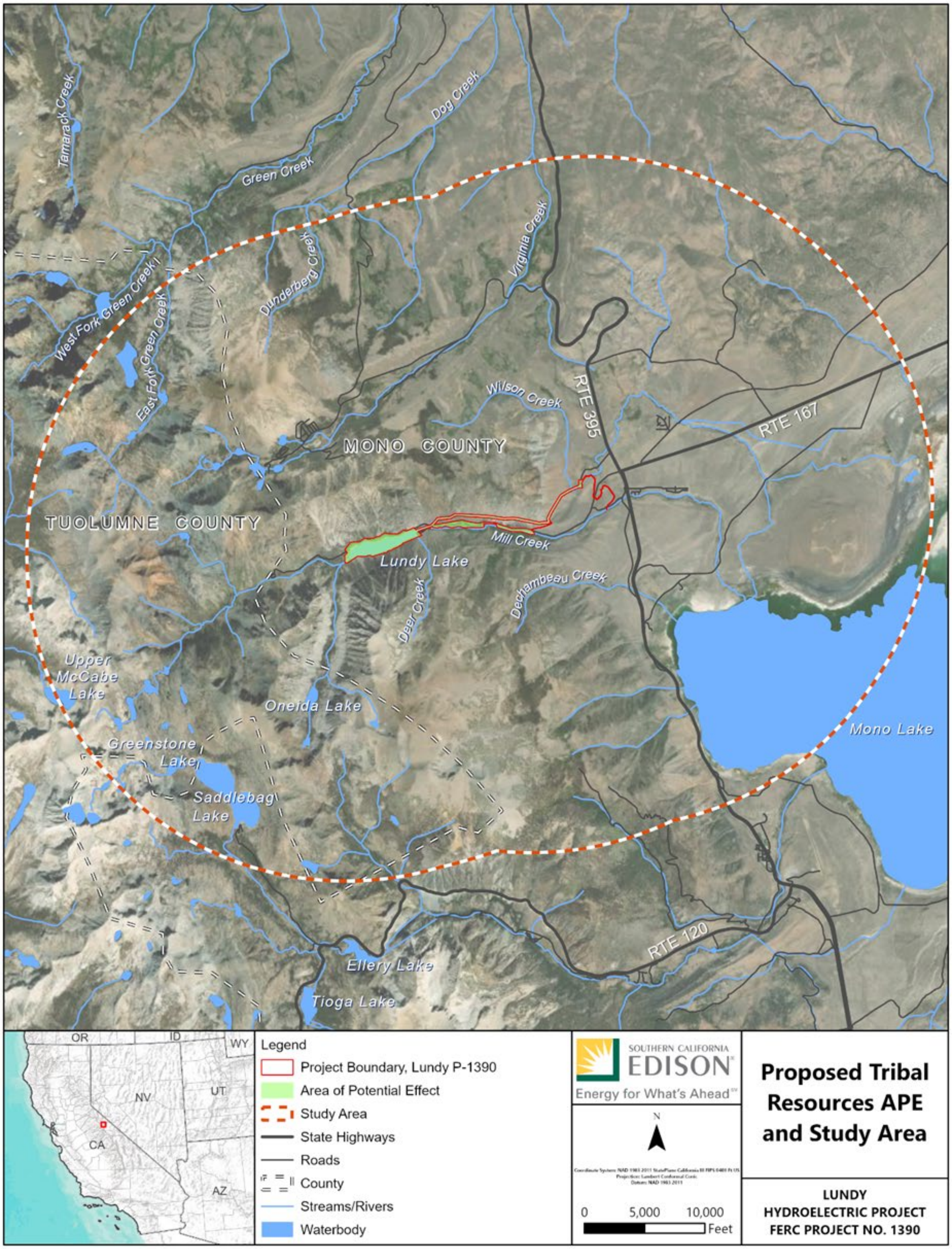


**Figure 13.3-1. Project APE and Tribal Resources Study Area.**

## 13.4. METHODS

The study investigation will make a good-faith effort for proper communication with Tribal leaders as laid out in FERC's *Policy Statement on Consultation with Indian Tribes in Commission Proceedings*, issued July 23, 2003 (Docket No. PL03-4-000; Order No. 635). The investigation will follow FERC Regulations at 18 CFR § 2.1c, which added a policy statement on consultation with Tribes in FERC proceedings. All phases of the study investigation will be conducted in accordance with the American Indian community consultation standards outlined by the implementing Regulations of Sections 101 and 106 of the NHPA and discussed in the 2021 Advisory Council on Historic Preservation (ACHP) publication *Consultation with Indian Tribes in the Section 106 Review Process: A Handbook.*

Potential TCP documentation, consultation, and any necessary fieldwork will be implemented in accordance with Section 106 of the NHPA, as amended, and shall take into consideration National Register Bulletin (NRB) No. 38, *Guidelines for Evaluating and Documenting Identification of Traditional Cultural Properties* (NPS, 2024).

Study documentation will be implemented in accordance with FERC Regulations and with Section 106 of the NHPA, as amended, if such resources are potential historic properties, and shall take into consideration NRB No. 38 (NPS, 2024) among other NRBs.

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

### 13.4.1. PERMITS

To conduct fieldwork, the cultural resource team was required to obtain Organic and Antiquities Act Permits from INF and a Fieldwork Authorization from BLM under Cultural Resources Use Permit CA-23-01. These were obtained prior to conducting fieldwork.

### 13.4.2. ARCHIVAL RESEARCH

Archival research in support of the cultural resources studies is underway and/or has been completed at the repositories listed below, where those collections were determined to be relevant. Research focuses on information specific to the precontact, ethnographic, and history of the Project area. This research effort has included gathering of primary data to create a background on American Indian ethnohistory of the study area; and inform the Tribal resources historic context against which Tribal resources may be evaluated for the NRHP.

Repositories contacted and/or visited for research regarding Tribal resources include:

- Autry Museum of the American West, Los Angeles
- California State Archive, Sacramento
- California State Library, California History Room, Sacramento

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

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

#### 13.4.3. Assist Other Resource Specialists

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

#### 13.4.4. Meetings with Tribal Governments

Meetings with Tribal governments or administrators and/or attendance at Tribal Council meetings is proposed to provide Project data to Tribal groups, elicit areas of interest, identify appropriate Tribal informants, and establish protocols for conveying information. To date,12 American Indian Tribes have been identified as having potential interests in the Project and include the following:

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

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

#### 13.4.5. Interviews

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

#### 13.4.6. Tribal Resources Identification

Identification of Tribal resources is ongoing. All resources will be documented and described in the Tribal Resources Technical Study Report according to Tribal values and submitted for review to Tribal representatives.

#### 13.4.7. National Register of Historic Places Evaluation

Because the purpose of the study is to identify Tribal resources and those which may be historic properties that may be adversely affected by the undertaking, evaluation of these resources' eligibility to the NRHP is required.

SCE will prepare, in collaboration with INF, BLM, Tribes, a plan to evaluate any resources that remain unevaluated for the NRHP. The plan will include an assessment of past, present, and reasonably foreseeable Project effects on potential historic properties and detail the methods of evaluation to be implemented. The evaluation plan will be provided to the INF, BLM, and Tribes for review.

#### 13.4.8. Reporting and Historic Properties Management Plan

The results of the study will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. All confidential and other sensitive information will be submitted to FERC via a confidential appendix withheld from public disclosure, in accordance with Section 304 (54 USC § 307103) of the NHPA.

SCE anticipates FERC will enter into a Programmatic Agreement with the California State Historic Preservation Office (SHPO), the land managing agencies, and interested parties. FERC will invite ACHP to participate. A Stipulation of the Programmatic Agreement will be the completion and implementation of an HPMP.

The HPMP will consider direct and indirect effects of continued Project O&M on NRHP-listed or eligible cultural and Tribal resources and will require avoidance and protection of specified resources, as appropriate. Processes and procedures will be developed for general and site-specific treatment measures, including measures to be taken should license implementation create unavoidable adverse effects to historic properties. The HPMP will include an Evaluation Plan and schedule for evaluating unevaluated resources.

#### 13.4.9. Consistency of Methods with Generally Accepted Scientific Practice

The study methods discussed in this document are consistent with those followed in several recent relicensing projects, and with other similar studies reviewed by participating agencies. The methods presented in the Study Plan and their implementation are consistent with the ACHP (n.d.) guidelines for compliance with the requirements of Section 106 of the NHPA found in 36 CFR Part 800.

### 13.5. Study Plan Modifications

SCE is proposing one modification to TRI-1 as approved by FERC in its SPD (FERC, 2025):

- California Department of Parks and Recreation 523 forms will not be prepared as part of the TRI-1 Technical Study Report

## 13.6. Variances to Approved Methods

SCE encountered no variances when implementing the TRI-1 study plan as approved by FERC in its SPD (FERC, 2025).

## 13.7. Results

Results of the TRI-1 Study are pending. Interviews and site visits are ongoing with Tribal members. Interviews and site visits will assist in the identification of Tribal resources and potential effects from Project O&M.

## 13.8. Discussion

The findings of the study will be reported in a Final Technical Report.

## 13.9. References

ACHP (Advisory Council on Historic Preservation). n.d. Indian Tribes, Native Hawaiians, and Indigenous Peoples: Tribal and Indigenous Peoples in Historic Preservation. Available online at https://www.achp.gov/indian-tribes-and-native-hawaiians/initiatives/achp-nativeamerican-policies.

ACHP. 2021. Consultation with Indian Tribes in the Section 106 Review Process: The Handbook. Washington, D.C.: Advisory Council on Historic Preservation. Available online at https://www.achp.gov/sites/default/files/2021-06/ConsultationwithIndianTribesHandbook6-11-21Final.pdf.

Davis, E.L. 1965. An Ethnography of the Kuzedika Paiute of Mono Lake, Mono County, California. Miscellaneous Paper Number 8. University of Utah Anthropological Papers 75:1–56.

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

NPS (National Park Service). 1997a. National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Washington, D.C.: U.S. Department of the Interior, National Park Service.

NPS. 1997b. National Register Bulletin 16A: How to Complete the National Register Registration Form. Washington, D.C.: U.S. Department of the Interior, National Park Service.

NPS. 1998. National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties. Washington, D.C.: U.S. Department of the Interior, National Park Service, 1992, rev. 1998.

NPS. 2024. National Register Bulletin: Identifying, Evaluating, and Documenting Traditional Cultural Places. Washington, D.C.: U.S. Department of the Interior, National Park Service.

SCE (Southern California Edison). 2024. TRI-1 – Tribal Resources Technical Study Plan, Lundy Hydroelectric Project FERC Project No. 1390. Submitted December 2024.

# 14.0 LAND-1 PROJECT LANDS AND ROADS STUDY

## 14.1. INTRODUCTION

During the study planning process, SCE identified the need to conduct a Project Lands and Roads Study (LAND-1) to evaluate the current lands and roads needed for Lundy Project operations and maintenance. In its January 2, 2025 SPD, FERC approved the LAND-1 Project Lands and Roads Study Plan. This section provides a summary of work completed to date for LAND-1 within the Lundy Project. Final data collection and analysis of the data will be completed, and the results will be summarized in a draft Technical Report that will inform the DLA.

## 14.2. REVIEW OF EXISTING INFORMATION

The following existing information and data sources have been reviewed to guide the analysis:

- Approved FERC Project boundary geographic information system (GIS) data
- Approved Project exhibit drawings
- Mono County tax parcel GIS data
- Federal land ownership GIS data
- Aerial imagery
- Lundy Lake Resort (LLR), Thomas Wragg, Patricia Wragg, and Haley Wragg License Agreement (LLR, 2023)
- County of Mono (CM), License Agreement (CM, 2024)
- Land Management Plan for the Inyo National Forest (USFS, 2019)

## 14.3. STUDY OBJECTIVES

The goal of LAND-1 is to assess potential modifications to the FERC Project boundary to account for future O&M of Project facilities. To meet this goal, the study objectives are as follows:

- Identify whether additional Lundy Project lands may be needed for operation of the Project, including laydown and spoil areas, or whether current Project lands or facilities are no longer needed for Project operation.
- Confirm existing land ownership and federal lands within the existing FERC Project boundary are accurately represented.

- Identify which roads or access trails are used for access to and maintenance of the Project, and identify existing agreements related to maintenance of those roads and access trails.
- Inventory and assess the condition of those identified Project-related roads and access trails, including the potential need for improvements.
- Identify for purposes of describing in the License Application all Project facilities and structures used for hydroelectric generation (e.g., buildings, roads, and spillway).

#### 14.3.1. Study Area

The study area includes lands within the existing FERC Project boundary, as well as additional lands identified by SCE staff, that may be needed to support Project O&M activities under the proposed action.

### 14.4. Methods

To ensure that the FERC Project boundary conforms to 18 CFR §4.41 requirements, the following methods were implemented to assess the current Project:

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

Methods will include consultation with USFS and/or other landowners as needed to determine if other Project-related resource areas should be removed or included in the FERC Project boundary. Results of other studies conducted as part of this relicensing will be reviewed for potential modifications to the FERC Project boundary.

## 14.5. STUDY PLAN MODIFICATIONS

SCE is not proposing any modifications to LAND-1 as approved by FERC in its SPD (FERC, 2025).

## 14.6. VARIANCES TO APPROVED METHODS

SCE encountered no variances when implementing the LAND-1 study plan as approved by FERC in its SPD (FERC, 2025).

## 14.7. RESULTS

Based on a review of available data and conversations with SCE O&M staff to date, a list of proposed changes to the existing FERC Project boundary has been developed (Table 14.7-1 and Table 14.7-2). Proposed changes are primarily related to ensuring that all current Project operations and facilities are adequately encompassed, including current and proposed Project roads. Minor changes to the FERC Project boundary due to mapping corrections based on improved accuracy of available data can be expected but are not discussed in this ISR. Examples of mapping corrections include improved centerlines and buffers for roads, flowlines, or creeks that are included in the FERC Project boundary but not accurately represented in the GIS data.

This LAND-1 report focuses on those proposed changes to Project lands for features that are either not currently included in the FERC Project boundary under the existing license (i.e., proposed lands to be added into the existing Project boundary) or no longer needed for Project purposes (i.e., lands proposed to be removed from the existing Project boundary). Table 14.7-1 and Table 14.7-2 list each FERC Project boundary change currently proposed by SCE. For each proposed change, a unique ID and figure reference (corresponding to Figures q-1 through Q-6 in Appendix Q), short description, suggested action, and reason for the proposed change to the FERC Project boundary, if applicable, is provided.

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## Table 14.7-1. 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 Q-1 | 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. |

[a] Lands around the Lundy Lake Boat Launch to be re-evaluated following completion of the REC-1 Recreation Use and Needs Study.

## Table 14.7-2. Proposed FERC Project Boundary Changes Related to Project Roads Inventory

| ID | Figure Reference | Current Description | Proposed Action | Reason for Proposed FERC Project Boundary Change |
|---|---|---|---|---|
| Roads – 1 | Figure Q-2 | 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 Q-2 | Weather station | Extend Project boundary to include weather station and access road. | Used exclusively for Project O&M purposes |
| Roads – 3 | Figure Q-3, Figure Q-4 | 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 Q-4 | Recreation areas | Remove land not needed for Lundy Day Use Area 4 | Not needed exclusively for recreation access |
| Roads – 5 | Figure Q-5 | Sand trap access road | Extend Project boundary to include access road to the sand trap. | Used exclusively for Project O&M purposes |
| Roads – 6<br>Roads – 7 | Figure Q-6 | Return ditch access | Extend Project boundary to include 2 Mill Creek Return Ditch access roads. | Used exclusively for Project O&M purposes |

### 14.7.1. LAND OWNERSHIP

A review of the existing FERC Project boundary in relation to the current boundary of the Inyo National Forest and most recent Mono County tax parcels revealed that there are approximately 1.1 acres of private land within the Project boundary (Figure 14.7-1) along with approximately 53.8 acres of USFS land (Figure 14.7-2), a small portion (approximately 1.1 acres) of Mono County land (Figure 14.7-3), and a small portion (approximately 0.5 acre) of Bureau of Land Management (BLM) land (Figure 14.7-4).

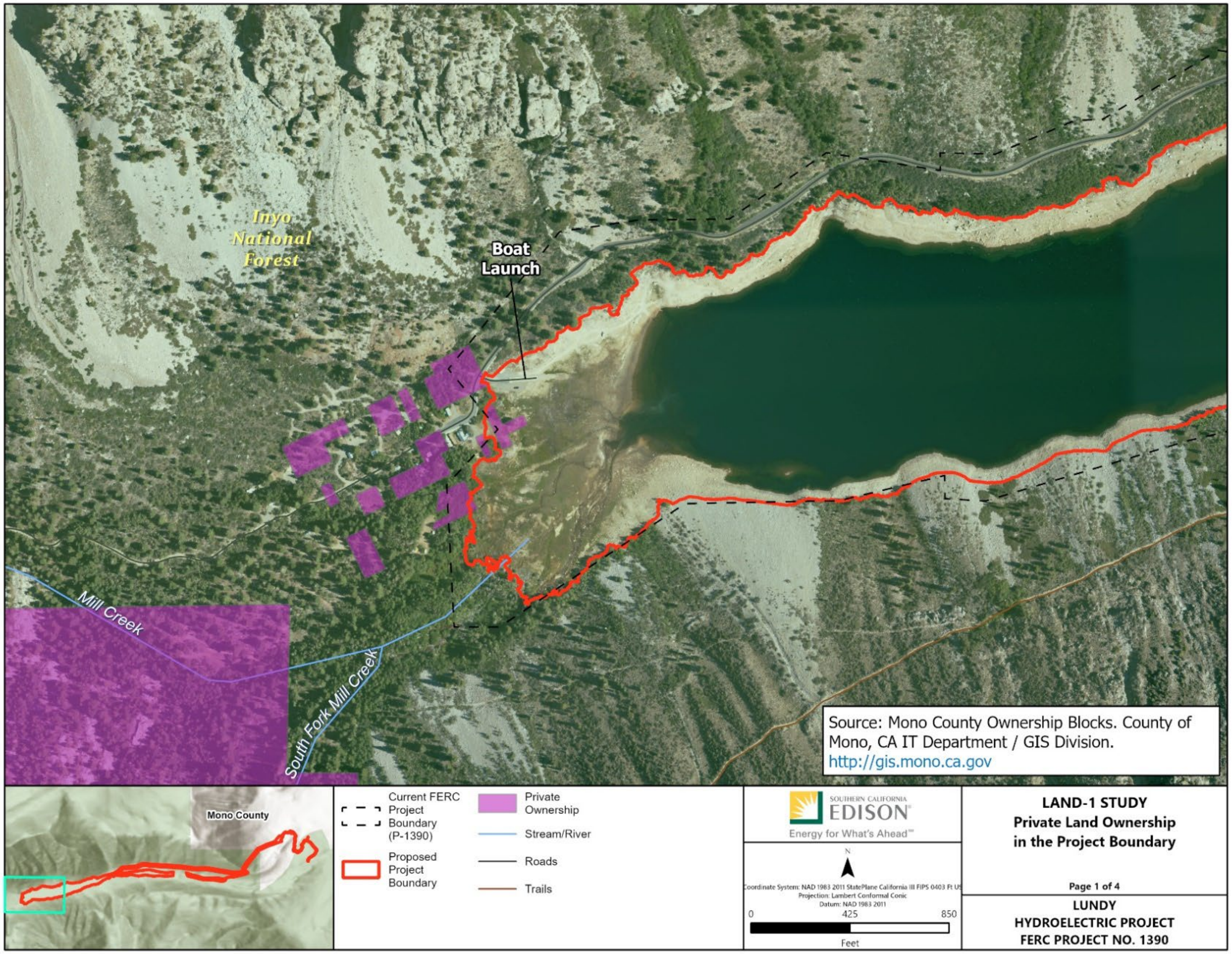


**Figure 14.7-1. Private Land Ownership within the Existing FERC Project Boundary.**

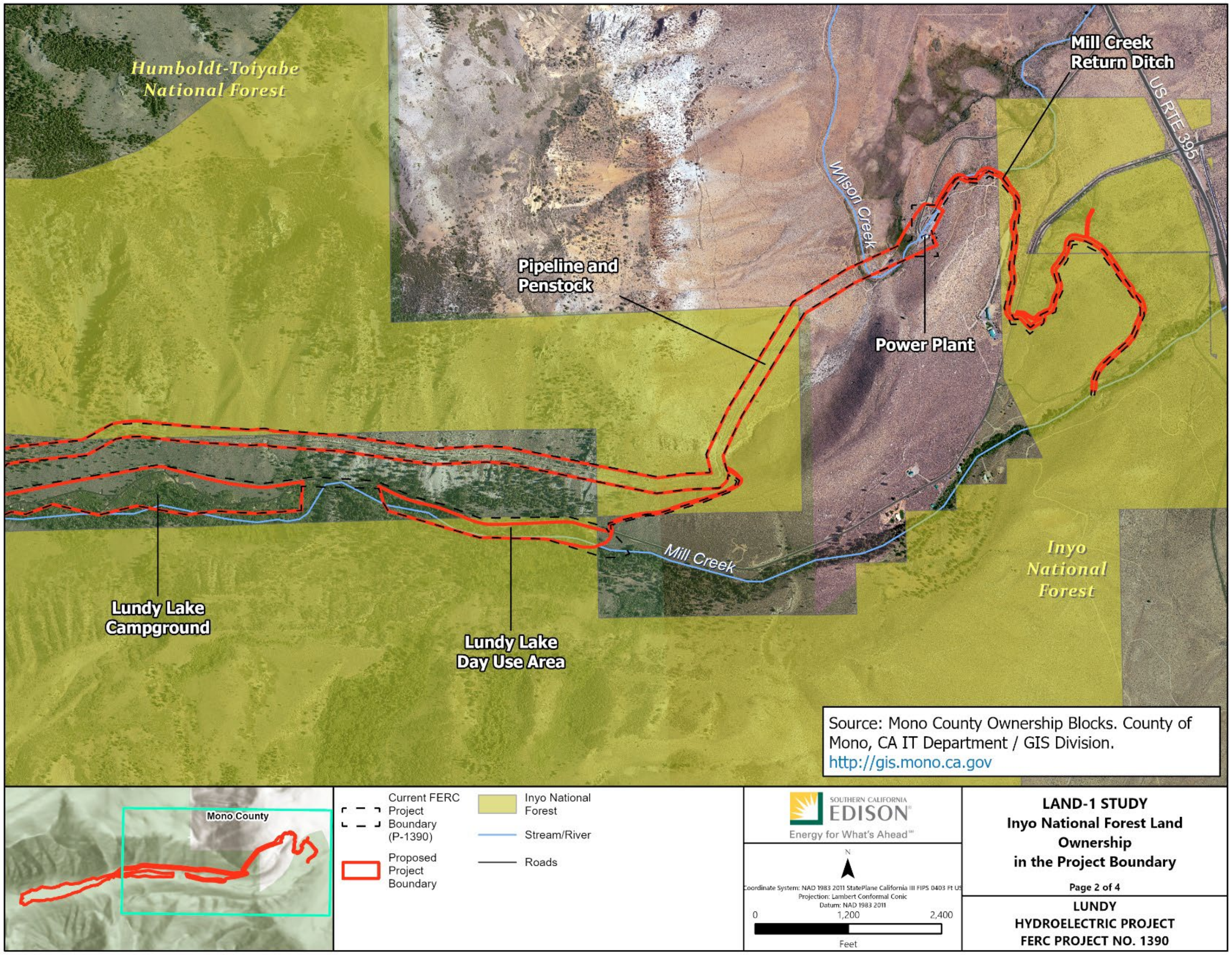


**Figure 14.7-2. Inyo National Forest Land Ownership within the Existing FERC Project Boundary.**

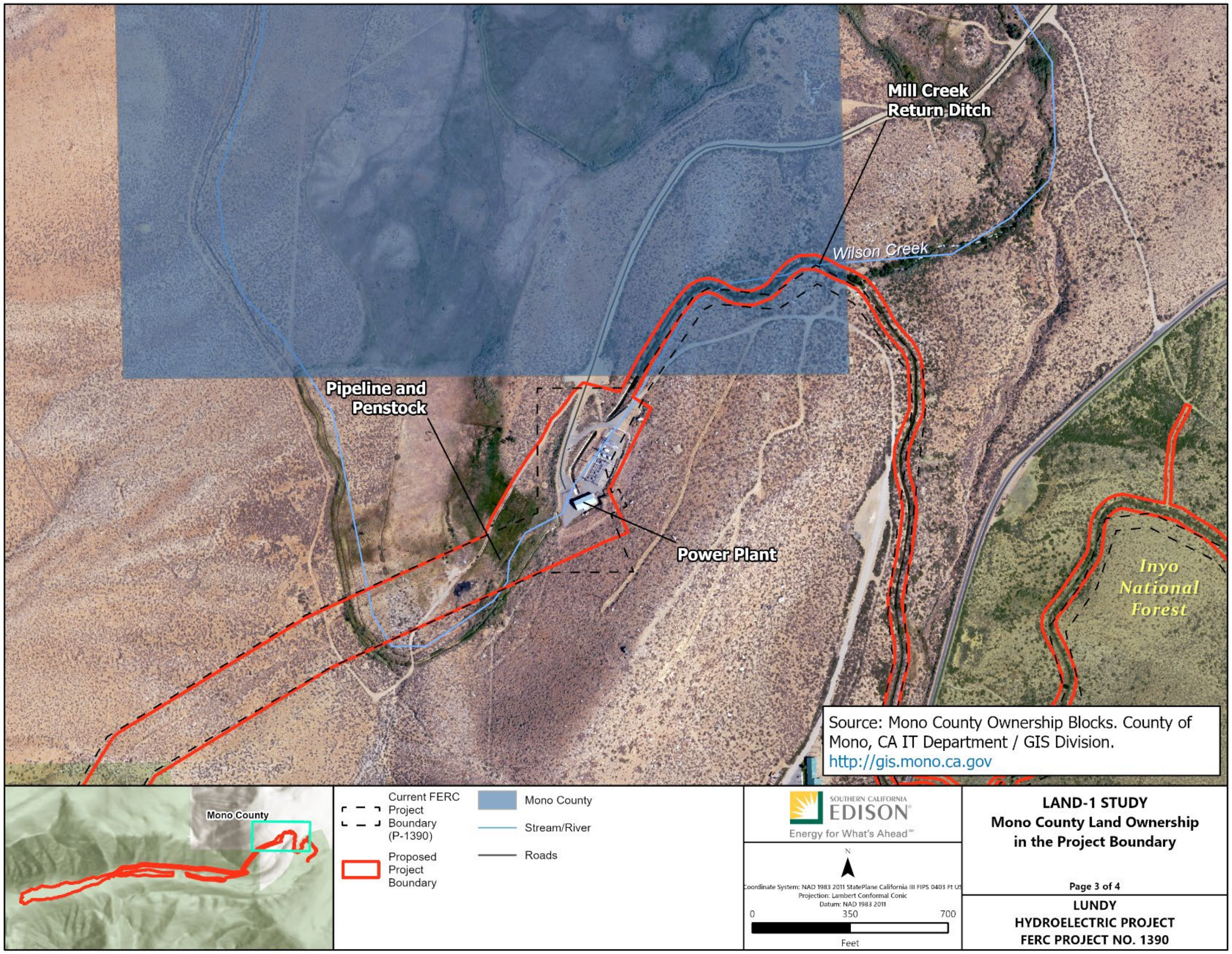


**Figure 14.7-3. Mono County Land Ownership within the Existing FERC Project Boundary.**

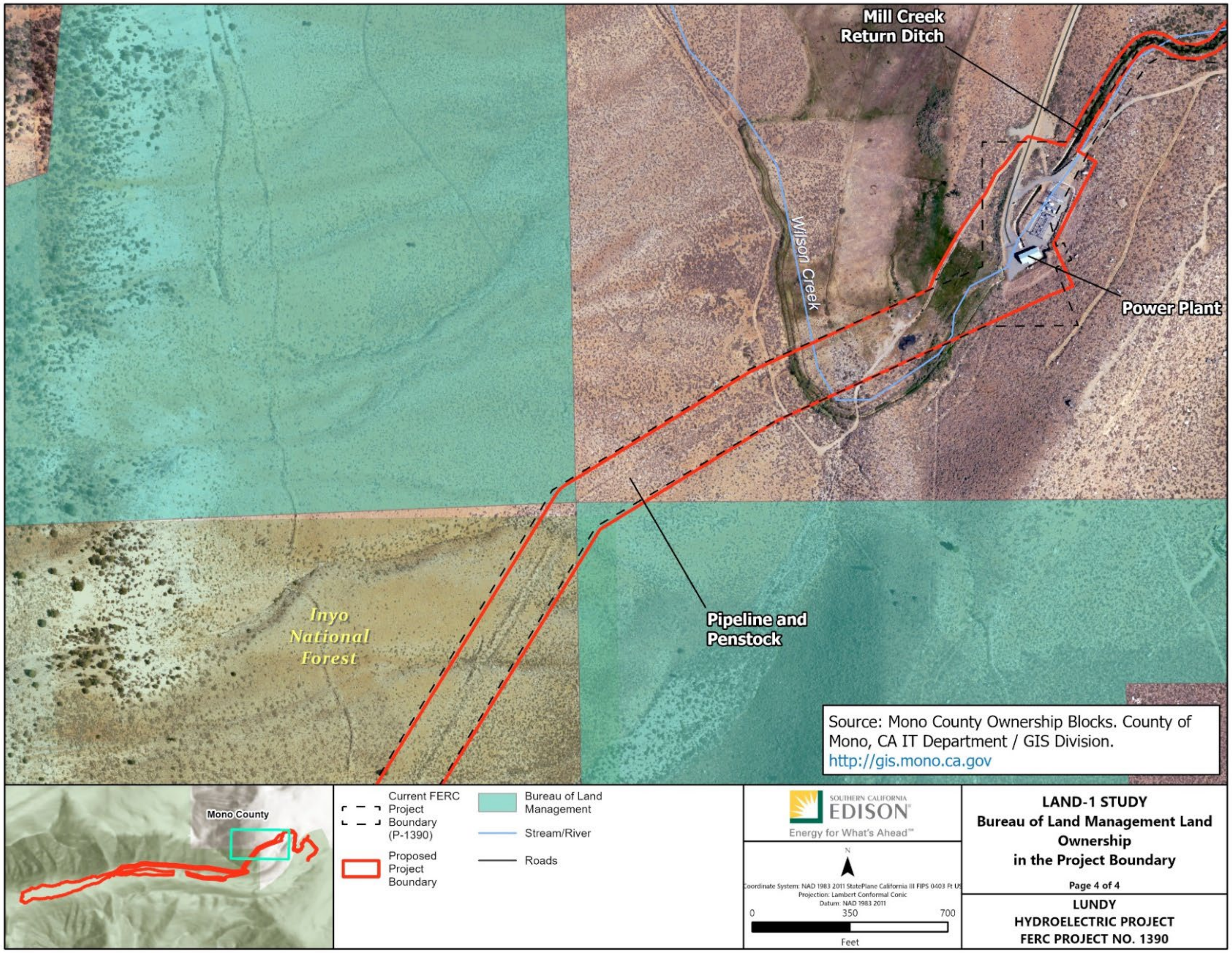


**Figure 14.7-4. Bureau of Land Management Land Ownership within the Existing FERC Project Boundary.**

### 14.8. DISCUSSION

The proposed changes discussed in this LAND-1 report are a result of initial review of Project lands, features, operations, maintenance activity, and underlying land ownership. As intended, this study is an ongoing process that will continue until a proposed FERC Project boundary and inventory of Project features is established and submitted as part of SCE's DLA in October 2026. SCE will meet with USFS and BLM to discuss land ownership and the proposed addition or removal of lands within the Project boundary as noted above, prior to a final technical report being filed. SCE intends to file Proposed Exhibit G with the DLA to provide an additional opportunity for review.

### 14.9. REFERENCES

CM (County of Mono). 2024. County of Mono License Agreement. June 2024

FERC (Federal Energy Regulatory Commission). 2025. Study Plan Determination for the Lundy Hydroelectric Project, P-1390. January 2, 2025.

LLR (Lundy Lake Resort). 2023. Lundy Lake Resort, Thomas Wragg, Patricia Wragg, and Haley Wragg License Agreement. September 1, 2023.

USFS (U.S. 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: August 24, 2020. Available online: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd664404.pdf.

# LAND-1 APPENDICIES

# APPENDIX Q
# PROJECT LANDS FIGURES

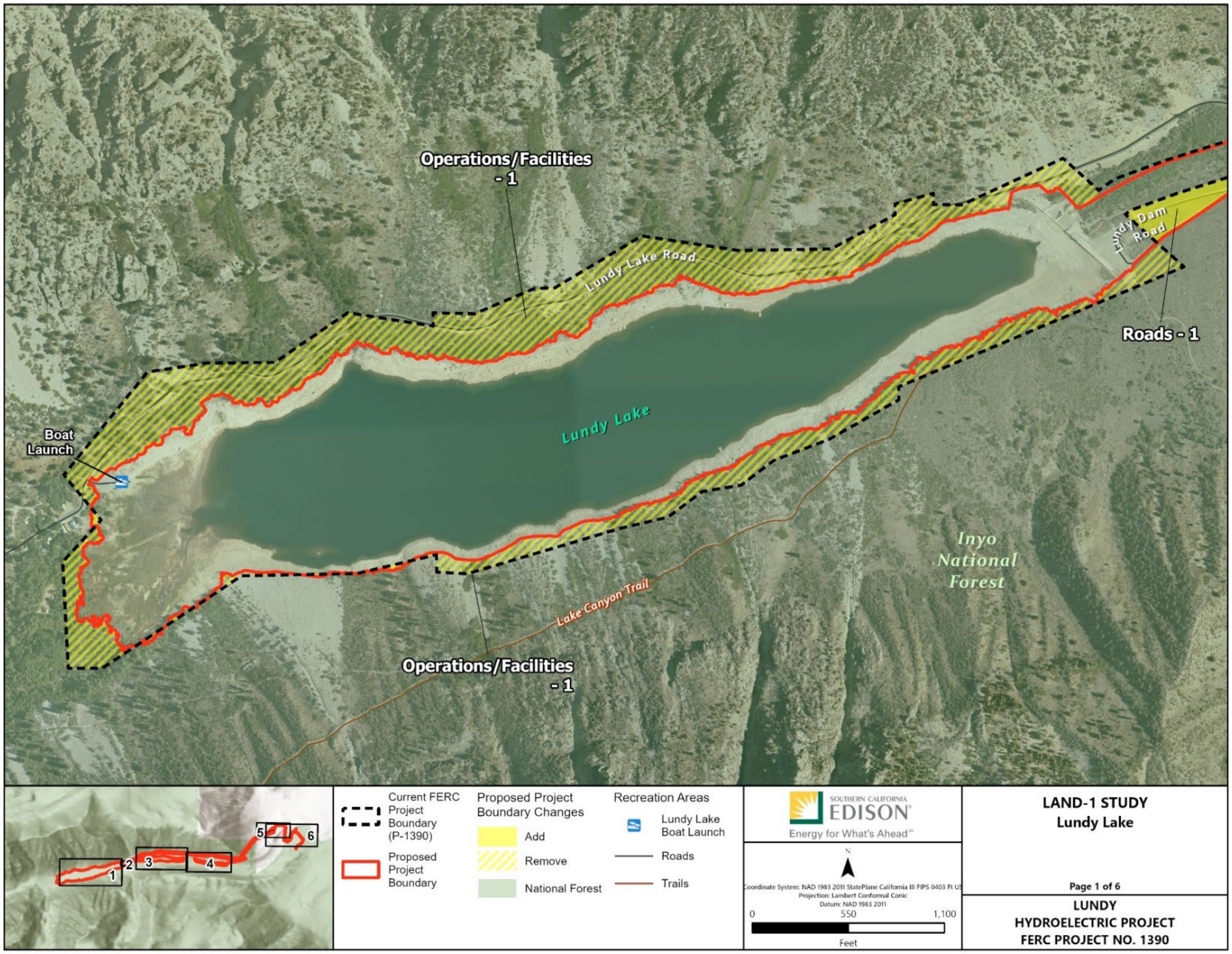


**Figure Q-1. Lundy Lake.**

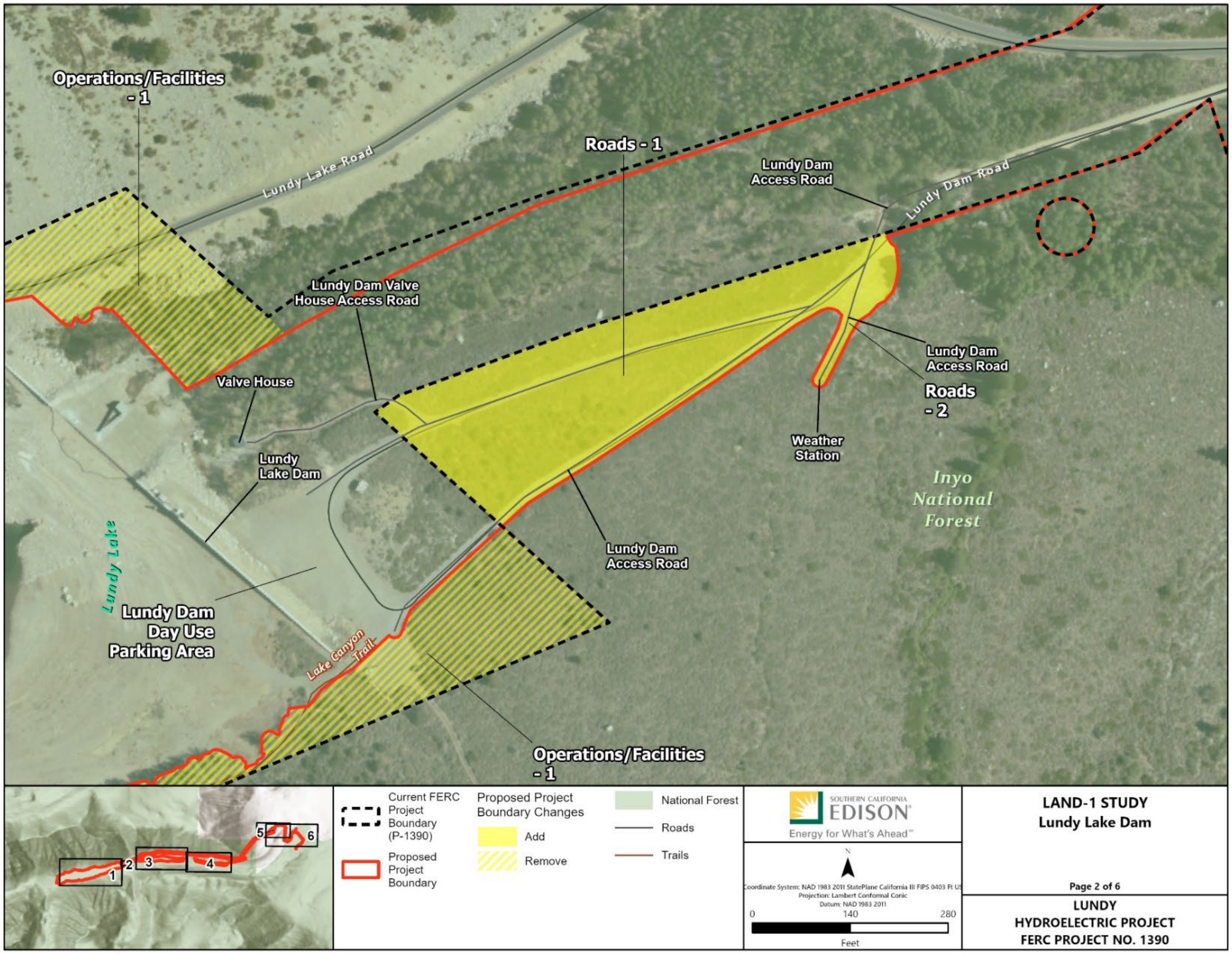


**Figure Q-2. Lundy Lake Dam.**

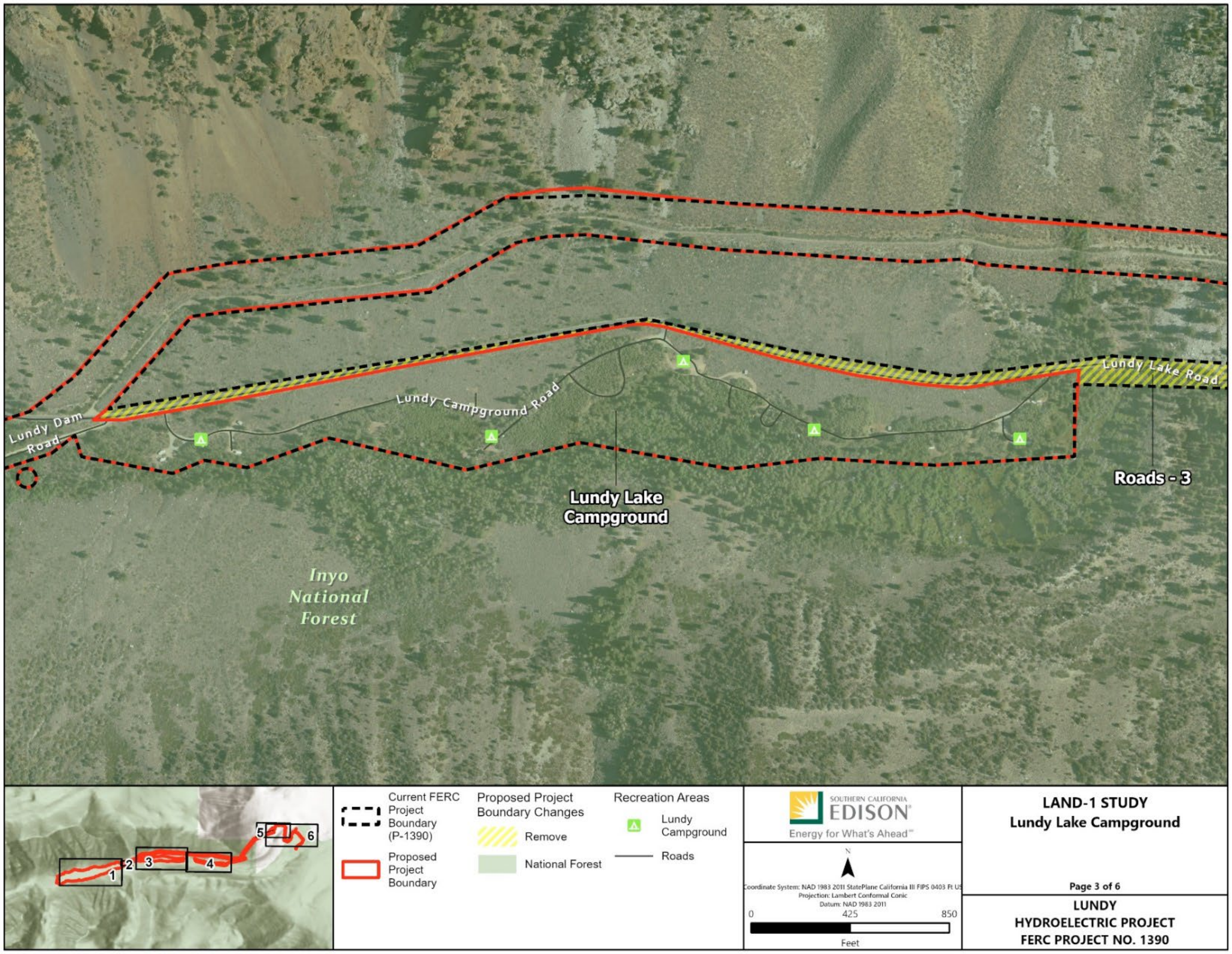


**Figure Q-3. Lundy Lake Campground.**

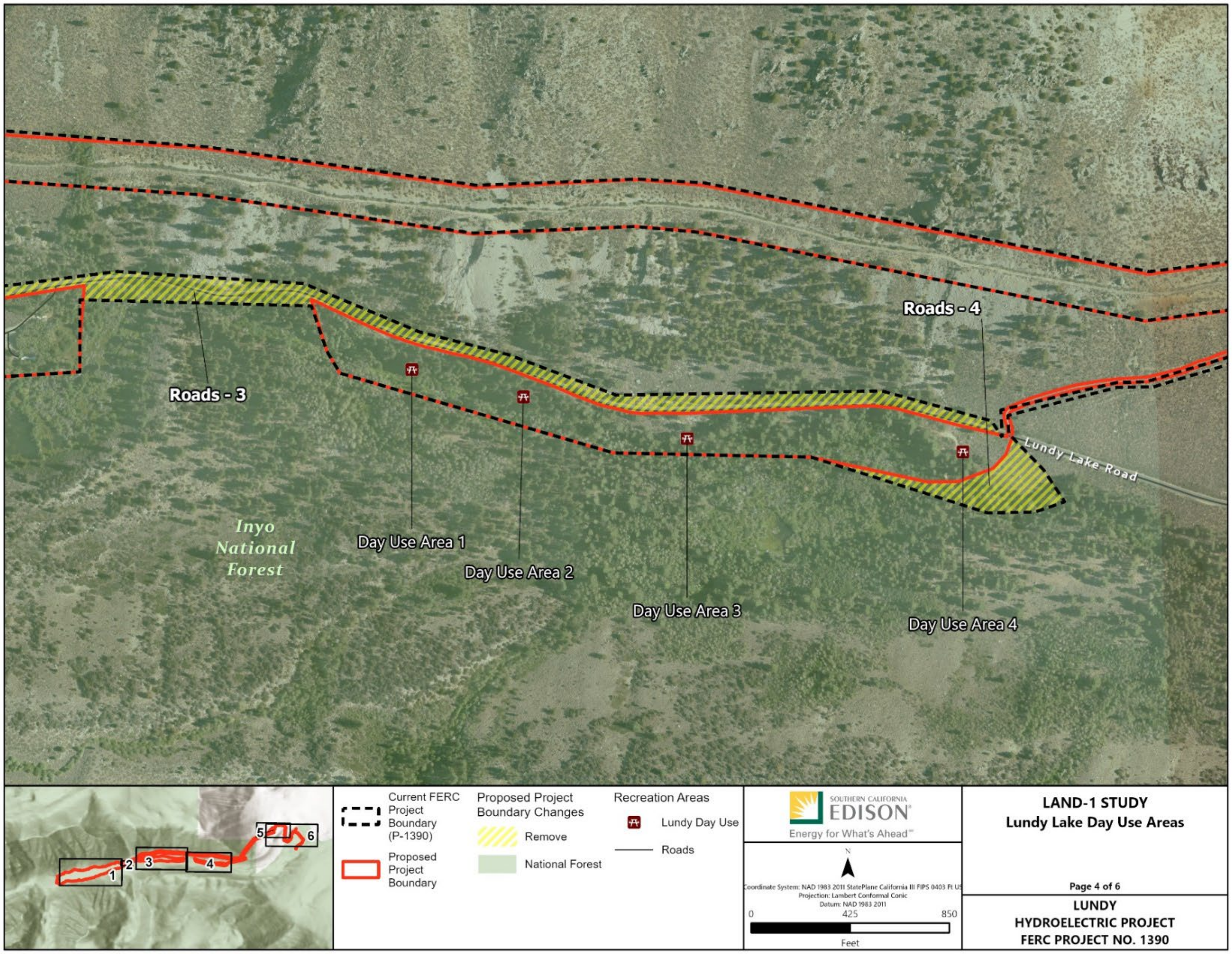


**Figure Q-4. Lundy Lake Day Use Areas.**

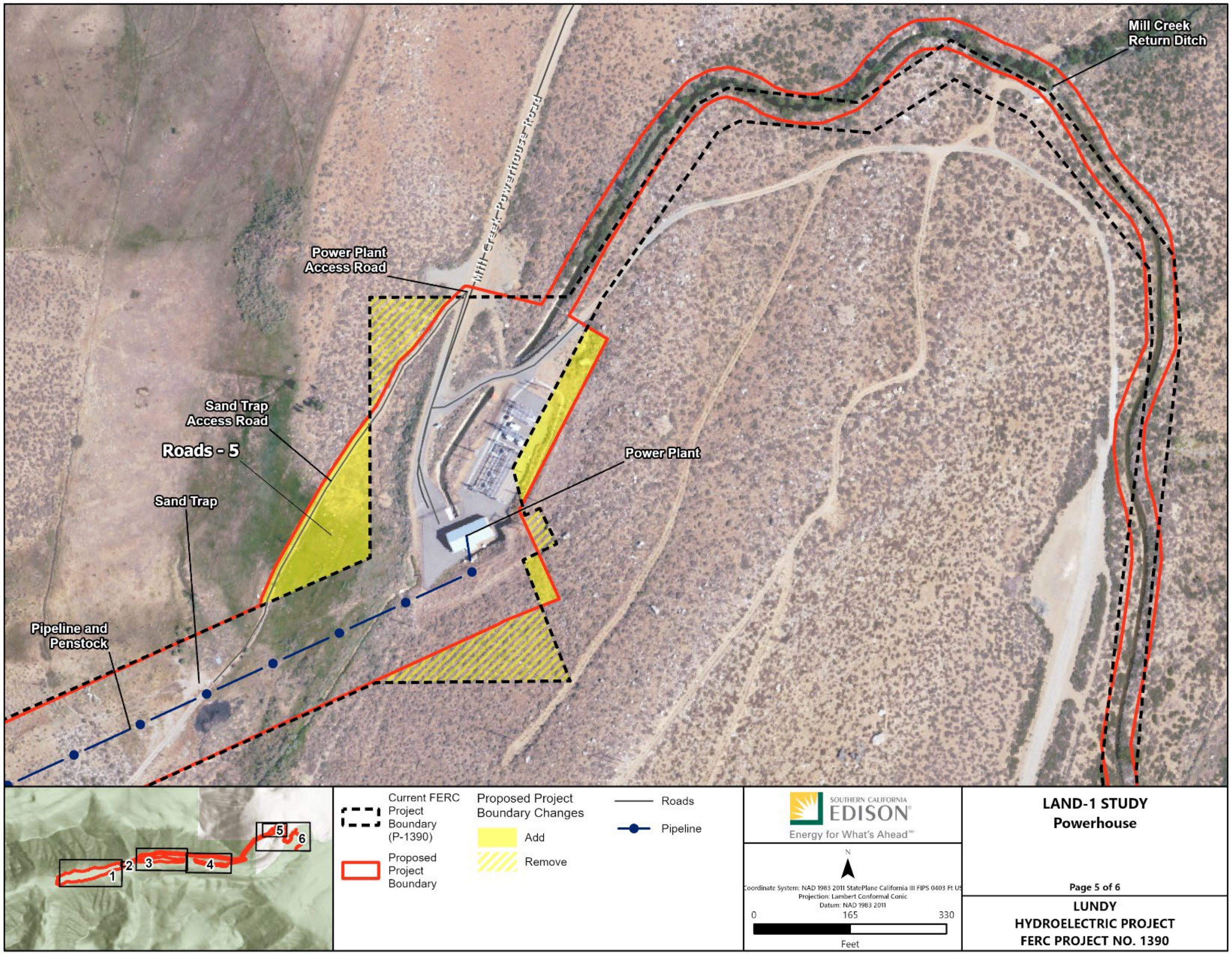


**Figure Q-5. Powerhouse.**

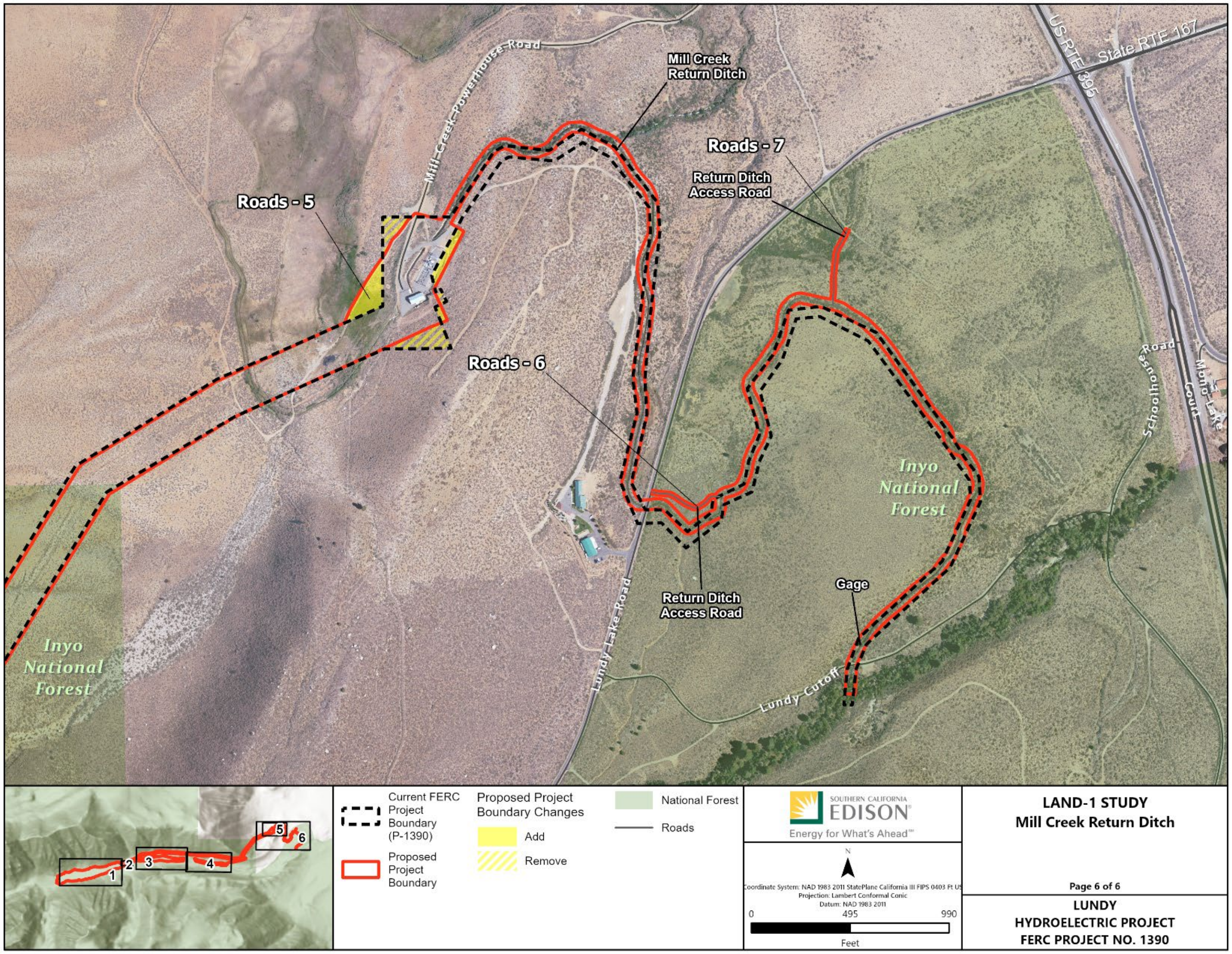


**Figure Q-6. Mill Creek Return Ditch.**