Lee Vining Hydroelectric Project
FERC No. 1388
First Technical Working Group Meeting
November 17, 2020

Please hold, we will begin at 5 minutes past the hour. Thank you for your patience and muting your microphone.
Safety Moment
Meeting Tips and Guidelines

- Please remain on mute unless called on
- Turn off camera
- Meeting materials are available on Project website www.sce.com/leevining
- Consider shutting down other background programs for best meeting audio/viewing quality
- Utilize the chat box during the presentation for questions or comments
- Questions will be answered in appropriate Q&A sections as time allows
How to Ask a Question

• Use the chat box or ask question verbally
• Use the “Raise Hand” feature to indicate you would like to ask your question verbally

![Raised Hand Icon]

• Please wait to be called on and then unmute your line
  – Introduce yourself (name and affiliation) prior to speaking
• Please listen and respect each other
• Please stay on topic
Agenda

• Welcome & Introductions
  – Safety Moment
  – Ground Rules
  – TWG Review

• Relicensing Overview & Project Refresher
  – FERC’s 7 Study Plan Criteria

• Existing Environment
  – Additional data/information to fill gaps
  – Discussion/questions on data/information

• Schedules

• Two planned 10-minute breaks
Introductions
## Lee Vining Relicensing TWG Team

### SCE Team
- **Matthew Woodhall**
  - Project Manager
- **Martin Ostendorf**
  - Senior Manager
- **Audry Williams**
  - Senior Archeologist, Cultural/Tribal TWG Lead
- **Seth Carr**
  - Operations Manager

### Consultant Team
- **Finlay Anderson**
  - Project Manager
- **Shannon Luoma**
  - Deputy PM
- **Kelly Larimer**
  - Project Director
- **Carissa Shoemaker**
  - TWG Coordinator
- **Matt Harper**
  - Recreation/ Land Use TWG Lead
- **Heather Bowen-Neff**
  - Aquatics/Fish, Water Quality TWG Lead
- **Steve Norton & Allison Rudalevige**
  - Terrestrial TWG Leads
- **Cultural and Tribal Support**
  - Lynn Compas
  - Shelly Davis-King
TECHNICAL WORKING GROUP (TWG) OVERVIEW AND GROUND RULES
Ground Rules

• Be respectful
• Different points of view and opinions are welcomed
• Airtime will be shared and balanced
• Speakers generally will be allowed to finish without interruption
• Participants will honor meeting time limits, discussion timeframes, and the focus of the agenda
• Personal attacks or criticism are unacceptable
• Participants will respect requests from the facilitators related to these ground rules, the agenda, and meeting objectives
TWG Purpose and Objectives

- *This initial TWG meeting is to determine the main topics of interest, looking at the big picture to find focus of the next TWG meetings*
- Provide technical expertise and represent key stakeholder constituencies during the relicensing process
- Elicit collaborative participation, while respecting individual authorities and mandates of participating agencies, tribes, and SCE’s independent decision-making
- Identify areas of agreement among SCE/stakeholders
- Clarify and discuss any areas of disagreement
TWG Purpose and Objectives cont.

• Identify gaps that are needed to inform FERC’s NEPA scoping and future analysis
• Inform development of PAD
• Identify a preliminary list of Study Plans
• Inform development of Study Plans:
  – Have an intro and purpose that describes what information gap is being filled by the Study Plan
  – Clearly describe the rationale (i.e., project nexus) for the need for that study
  – Include methods, timing, scope, etc.
  – Adhere to FERC’s Study Plan Criteria
TWG Roles and Participation

• Open to all interested agencies and individual stakeholders with baseline knowledge of their chosen resource area
• TWG member agency/organizations are encouraged to designate a primary representative for each TWG
• Expected to commit and be prepared for and attend meetings, review documents, and provide technical feedback
  – Time commitment expected to increase once formal relicensing begins (after filing of PAD)
• All participants must agree to the guidelines and principles for participation described in the TWG Charter Document
• Join a TWG by emailing carissa.shoemaker@erm.com or using the online form at https://www.sce.com/leevining
TWG Materials Provided via Website

• TWG Charter Document
• Select parts of PAD
• Images, drone footage, mapping (in future)

• PAD References List
• Comprehensive Management Plans List

Please let us know if we are missing references or comprehensive plans
Questions?
SCE RELICENSING PROCESS
SCE's Vision

To achieve excellence in Safety, Operations, and Innovation, delivering reliable, valuable and clean generation solutions for our customers and communities

Why is relicensing important? Why are we here?

What role does the Federal Energy Regulatory Commission play?
SCE’s Relicensing Objectives

• Obtain project authorization for an additional license term of 30-50 years (18 CFR Part 5)
• No anticipated changes in facilities or operations.
• Protect generation assets while providing resource protection/enhancement
• Evaluate effects from ongoing Project operations and maintenance
• Seek collaborative solutions that achieve a sustainable balance for beneficial uses
• Provide safe, reliable, affordable, and clean energy to its customers and community
FERC RELICENSING PROCESS
Federal Energy Regulatory Commission (FERC)

WHAT IS FERC?
A federal, independent agency (formally the Federal Power Commission)

WHAT DOES FERC REGULATE?
Electrical transmission, hydroelectric dam licensing and safety, natural gas and oil pipelines

HOW DOES FERC IMPACT YOU?
FERC manages the participation of the public, agencies, NGOs, and other interested stakeholders.

WHEN DOES RELICENSING START?
The relicensing process officially starts 5 to 5.5 years before license expiration

http://www.ferc.gov/industries/hydropower/gen-info/licensing
What is FERC Relicensing?

• Complex, multiyear
• Involves multiple participant with public involvement opportunities
• Develops an evidentiary record
• Provides FERC with decision-making information
• Determines license term and requirements
Basic Steps of Relicensing

• **Step 1: Describe Project and file Notice of Intent (NOI)**

• Preliminary Application Document (PAD) summarizes existing Project-related information, potential future operations, and identifies potential resource issues

• **Identify Key Questions**
  – Stakeholders ask questions and request studies for information that doesn’t already exist (Criteria for determining appropriate studies).
FERC Relicensing Process Approach

• Step 2: Answer Questions and Develop License Application
  – Conduct studies for 1-2 years to fill in data gaps
  – Identify Protection, Mitigation, and Enhancement (PME) measures for the new license in coordination with stakeholders
  – Submit license application to FERC

• Step 3: FERC Conducts a NEPA review and issues license with term and conditions
  – Solicits comments from stakeholders
  – Receives terms and conditions from agencies
  – Issues License
Study Questions

• Related information necessary to bring Project into compliance with current environmental regulations, standards

• Informed by need to evaluate projects consistent with comprehensive management plans Federal or state comprehensive plans

• Evaluate changes in Project facilities/operations against baseline, where baseline is the current condition
FERC has criteria for study identification

1. Goals and Objectives
2. Relevant Resource Management Goals and Public Interest considerations
3. Existing Information
4. Project Nexus
5. Proposed Methodology
6. Level of effort and Cost
2021 FERC Critical Dates for TWGs

- Jan-July 2021: TWG meetings to develop outline of Study Plans and objectives
- August 2021: SCE Files the PAD
  - After the PAD is filed, TWGs will have approximately 4-5 months to wrap up proposed Study Plans
- Sept/Oct 2021: Study Plan Development
  - If ILP: FERC will issue Scoping Document(s) that outlines NEPA requirements
- Oct/Nov 2021: Stakeholders file comments on Study Plans
  - TWGs review received comments and assess whether input needs to be added into Study Plans
- January 2022: SCE Hosts Study Plan meeting
  - TWG members encouraged to attend/participate
Lee Vining Hydroelectric Project

• Federal Energy Regulatory Commission (FERC) License
  – FERC Project No. 1388
  – Issued February 1997
  – 30 year license term
  – Expires January 31, 2027

• Key Outcomes from Previous Relicensing
  – Established minimum release flows with Project operations (i.e., generation) while protecting aquatic resources
  – Conducted focused studies/evaluation on key resource topics
  – Established resource protection measures
Lee Vining Hydroelectric Project

• Located in the eastern slope of the Sierra Nevada primarily on Inyo National Forest lands about 9 miles upstream of Lee Vining, CA

• Situated on Lee Vining Creek, in Mono County

• The Project maintains 3 reservoirs and 4 dams:
  • Saddlebag Dam and Lake
  • Tioga Dam, Auxiliary Dam, and Lake
  • Rhinedollar Dam and Ellery Lake
Project Facilities

• Saddlebag Dam and Lake
  – Headwaters of Lee Vining Creek
  – 297-acre reservoir

• Tioga Dams and Lake
  – Headwaters of Glacier Creek
  – 2 dams: Main and Auxiliary
  – 73-acre reservoir

• Rhinedollar Dam and Ellery Lake
  – Tioga and Saddlebag drain into here
  – 61-acre reservoir

• Poole powerhouse
  – 11.25 megawatts

• Flowline and penstock connect in Ellery Lake and Poole Powerhouse

See the project description sheet for more details
Questions?
5-minute break
EXISTING ENVIRONMENT
TWG Resource Areas

- Water Resources
- Terrestrial and Botanical
- Cultural and Tribal
- Recreation and Land Use
Water Resources

- TWG Leads
  - Heather Bowen-Neff, Stillwater Sciences
  - Seth Carr, SCE Operations
Water Resources Topics

• Operations, Water Management, Hydrology
• Water Quality
• Fish and Aquatics
• Geology and Soils
Water Resources

Water Management

• Different minimum flows below each reservoir, influenced by the type of hydrologic year (wet, dry, normal)

• Historic contract (sales agreement) largely dictates how water is stored and released – SCE has no control over what happens to the water once it leaves the Project

• Water rights below the Project on Lee Vining Creek belong to LADWP and managed through a settlement agreement to allocate water between the Los Angeles Aqueduct System (via the Mono Basin Extension at an impoundment approximately 5 miles downstream of the Poole Powerhouse) and Lee Vining’s historic watershed
Water Resources

Operations, Instream Flows

• SCE provides minimum flow releases consistent with current FERC license

• Below Saddlebag Dam
  – Flows for Lee Vining Creek below Saddlebag Dam are determined bi-annually in consultation with the USFS
  – Typical:
    • 14 cubic feet per second (cfs) for wet years
    • 9 cfs for average years
    • 6 cfs for dry years

• Below Tioga Dam
  – From December to April: equal to the natural inflow
  – October and November: 2 cfs or natural inflow
  – May to September: depends on water year and inflow
  – License provides for spring-time cutting of “Ice dams” to prevent downstream property damage

• Below Poole Powerhouse Dam
  – August – May: 27 cfs or the natural flow, whichever is less
  – June and July: 89 cfs or natural flow, whichever is less
Water Quality

• Regional water board water quality standards for Project reservoirs and Lee Vining Creek, none for Glacier Creek

• Water quality is generally excellent, but information is limited
  — Major nutrients typically at or below detection
  — Ammonium and orthophosphate occasionally elevated below dams in spring and fall, in conjunction with reduced DO in reservoirs
  — Water quality downstream of Poole PH recorded by SWAMP surveys also good: high DO, low turbidity, low mineral concentrations
  — Water temperatures low; DO high in fish surveys
  — Fecal coliform bacteria concentrations measured below Poole PH low, elevated upstream of LADWP diversion

• Dreissenid mussels not expected to invade due to low calcium concentrations and circumneutral pH
Water Resources

Fish Overview

• Project area dominated by non-native populations of brown, brook, and rainbow trout
  – Brown trout introduced in basin in 1919, planted regularly until 1942
  – Brook trout introduced in 1931
  – Unmarked, catchable rainbow trout planted annually beginning in 1942; currently planted annually in all three project reservoirs
• CDFW records available from 2015 - 2016 indicate ~47K lbs of trout stocked in Project waters
Fish Population Monitoring

- Conducted in Lee Vining Creek from Saddlebag Dam to Slate Creek
  - Abundance highest in 2016
  - Biomass highest below Saddlebag Dam and Ellery Lake
  - Fish in good condition
  - No native species known to occur
- Surveys not know to have occurred in Lee Vining Creek between Ellery Lake and Poole PH, Glacier Creek below Tioga Dam, or in Project Reservoirs.
Aquatic Habitat Monitoring

• Instream flow study (1992) on Lee Vining Creek found trout habitat is maximized:
  — Saddlebag Dam to Slate Creek: 15-25 cfs
  — Slate Ck. to Ellery Lake: 20-40 cfs
  — Below Poole PH: 30-40 cfs

• Aquatic habitat monitoring conducted in Lee Vining Creek between Saddlebag Dam and Slate Creek
  — Recorded abundant spawning gravels, loosely compacted sediments, in relatively low gradient areas
  — Occasional LWD

• Monitoring not known in Lee Vining Creek between Slate Creek to Ellery Lake, downstream of Rhinedollar Dam or in Glacier Creek below Tioga Dam.
Water Resources

Benthic Macroinvertebrates

- Data available in Lee Vining Creek
  — Below Saddlebag and Ellery lakes
  — Leakage zone below Saddlebag Dam
  — Below Poole PH

- Data available in Glacier Creek below Tioga Dam

- CSCI Scores: highest condition category
  — Below Poole PH in two locations
  — Downstream of Warren Fork confluence (CSCI = 1.17); Moraine Camp (CSCI = 1.09)

- BMI communities downstream of Project reservoirs similar to nearby natural lakes

- *Didymo* reportedly observed in Lee Vining Creek downstream of Saddlebag Dam
Water Resources

Geology and Soils

• Saddlebag Lake: within a glacially carved U-shaped valley, 1,200-foot ridges bound the lake on the east and west sides, and talus

• Tioga Lake: in a valley on glacial till with a scattering of rounded rock outcrops.

• Ellery Lake: rocky shoreline with several areas of talus slopes entering the lake from the steep terrain along southern margin.
Water Resources

Geology and Soils

• Soils: generally thin, limited by harsh environment and recent glaciation; generally coarse-textured, well-drained, and low in organic matter

• Landslides or other mass movements not mapped in Project vicinity; potential for mass wasting, but information within project not available

• Unknown whether Project creeks carry high post-glacial sediment loads

• Erosion Control Plan in place for ground-disturbing activities
Water Resources

Known Data Gaps

• Limited information on fish populations and aquatic habitat in Lee Vining Creek downstream of Slate Creek confluence or in Glacier Creek; no information in Project Reservoirs.

• Little information regarding water quality in Project stream reaches or within Project reservoirs.

• Landslides or other mass movements not mapped in Project vicinity; potential for mass wasting, but information within project not available

• Limited information on current channel morphology and conditions or sediment supply and transport
Preliminary Relicensing Topics

- Identify protected or managed aquatic species in Project streams and reservoirs
- Habitat conditions and ecosystem health
- Understand water quality in Project reservoirs and streams
- Erosion and sedimentation in the Project vicinity
- Sediment supply and transport
Water Resources

• Questions
• Do you have information you want to share with us?
• Do you want to be in this TWG?
  – Let us know now

• Proposed next TWG dates:
  – TWG 1: January 25
  – TWG 2: February 22
  – TWG 3: March 29
Terrestrial and Botanical Resources

- TWG Leads
  - Steve Norton, Psomas Senior Biologist
  - Allison Rudalevige, Psomas Senior Botanist
Terrestrial and Botanical Topics

- Wildlife
- Botanical
- RTE Species
- Wetlands and Floodplains
Terrestrial and Botanical Resources

Existing Data

- State and Federal Database Reviews
- SCE Biological Survey Reports
- License Compliance Documents
- USFS Data and Publications
- Scientific Literature

Belding's Ground Squirrel at Saddlebag Lake, 2018
Terrestrial and Botanical Resources

Existing Environment

• 14 Vegetation Types Remotely Mapped within Project Area
  – Ranging from wet meadows to scrub to forested areas with riparian and conifer-dominated communities.
  – Provide a wide range of habitats for wildlife.

• Special Status Species Present
  – Yosemite toad
  – Whitebark pine

• Critical Habitat
  – Yosemite toad
  – Sierra Nevada yellow-legged frog
  – Sierra Nevada bighorn sheep

Yosemite Toad at Saddlebag Lake, 2020
Existing Data

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Wetlands and Floodplains
Terrestrial and Botanical Resources

Known Data Gaps
- Ground-truth vegetation mapping within the FERC right-of-way

Unknown Data Gaps
- Unrecorded species occurrences known by public and local organizations
Terrestrial and Botanical Resources

Preliminary Relicensing Topics

• Identify protected or managed species present within the Project boundary

• Assess habitat suitability for special status wildlife and plants

• Protect habitat for special status species

Pika at Saddlebag Lake, 2018
Terrestrial and Botanical Resources

• Questions
• Do you have information you want to share with us?
• Do you want to be in this TWG?
  – Let us know now

• Proposed next TWG dates:
  – TWG 1: January 26
  – TWG 2: February 23
  – TWG 3: March 30
10-minute break
Cultural and Tribal Resources

- TWG Lead
  - Audry Williams, SCE Senior Archeologist
Cultural Resources

• Cultural Resource
  – A cultural resource can be a building, structure, object, site, or district, usually more than 50 years of age

• Tribal Resource
  – A Tribal resource may include tribal cultural or economic interests, can be a cultural resource, and may also include plants, animals, geological/geographic features, and more
Cultural Resources

Existing Environment

• Data Sources - SCE's Subscription to California Historical Resources Information Center, USFS Data, Previous Studies, SCE Historical Documents

• 19 previous studies

• 25 previously recorded built environment resources
  • Triple Cottage National Register eligible

• 5 previously recorded archaeological resources
Tribal Resources

Existing Environment

• Data Sources - accessible libraries, online web-pages, and Native American Heritage Commission

• Multiple Tribal Groups have an interest in the Project (Northern Paiute, Owens Valley Paiute, Western Shoshone, Southern Miwok, Central Me-Wuk, HungAlelti Washo, Western Mono)

• Kutzadikaa Paiute/Mono Lake are the principal tribal group

• No federal trust tribal lands in Project

• No baseline ethnographic investigation of Project; ethnography from 1960s
Tribal Resources

Existing Environment

• Numerous trails in area, camps, medicine and food gathering locales
• Broad territory of tribal people to include Walker Lake and Yosemite Valley
• No interviews or meetings have yet been scheduled with Tribes
Cultural and Tribal Resources

Known Data Gaps

• No recent archaeological survey of most of the project area
• No recent ethnographic study of the project area
Cultural and Tribal Resources

Preliminary Relicensing Topics

• Compliance with the National Historic Preservation Act
• Contact Tribes and interested parties
• Identification of location and types of cultural resources, tribal resources, and historic properties in Project area

Projectile Points
Cultural Resources

Proposed Study Area and APE
Tribal Resources

Proposed Study Area and APE
Cultural and Tribal Resources

• Questions
• Do you have information you want to share with us?
• Do you want to be in this TWG?
  – Let us know now

• Proposed next TWG dates:
  – TWG 1: January 27
  – TWG 2: February 24
  – TWG 3: March 31
Recreation and Land Management Resources

- TWG Lead
  - Matthew Harper, Kleinschmidt
Recreation and Land Use Topics

• Recreation
• Land Management
• FERC Project boundary
Recreational Resources

Existing Environment

- No recreation sites required of current license, though many Inyo NF recreation sites in the vicinity.
  - Inyo National Forest operates and maintains 10 conventional camping, 1 group camping, and 2 recreational vehicle camping areas; 1 day use

- Inside FERC boundary:
  - Hiking trails and rec sites crossing or adjacent to Project boundary
  - Minimum flows, stable lake levels
  - CDFW fish stocking program at all three reservoirs and Lee Vining Creek (Funding requirement at Ellery as part of current license)
Existing Environment

• Project boundary is currently 615.5 acres, tightly encompassing Project features (dams, reservoirs, flowlines, creeks):
  - USFS Lands: 96%
  - SCE Lands: 4%

• Land use in the Project boundary is overwhelmingly Open Water followed by Shrub/Scrub and Evergreen Forest:
  - Open Water (62.2%)
  - Shrub/Scrub (21.2%)
  - Evergreen Forest (7.3%)

• Similar breakdown for 0.5 mile buffer on Project boundary:
  - Shrub/Scrub (54.9%)
  - Evergreen Forest (24.0%)
  - Barren Land [Rock/Sand/Clay] (8.9%)
  - Open Water (6.7%)
Recreation and Land Management Resources

Known Data Gaps

• Inyo National Forest Wilderness Permit Use and Day Use Estimates
Recreation and Land Management

Resources

Preliminary Relicensing Topics

- Assess the Project area’s recreation opportunities, use, and needs
- Inventory condition of recreation facilities with a nexus to the Project and assess future needs
- Learn from the community what recreation attributes of the Project are most valued
- Identification of lands needed for inclusion in a future project boundary, including project roads, trails, spoil sites, recreation sites, or any other lands needed for Project operations
Recreation and Land Use Resources

• Questions

• Do you have information you want to share with us?

• Do you want to be in this TWG?
  – Let us know now

• Proposed next TWG dates:
  – TWG 1: January 28
  – TWG 2: February 25
  – TWG 3: April 1
RE LICENSING SCHEDULE OVERVIEW
## Relicensing Process Schedule
(subject to change depending on relicensing process)

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>August 2, 2021</td>
<td>SCE Files Notice of Intent/Pre-Application Document (NOI/PAD)</td>
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<tr>
<td>September 2021</td>
<td>FERC initiates Tribal consultation</td>
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| September – October 2021 | *If ILP:* FERC issues Notice of Commencement and Scoping Document 1 (SD1) and hosts scoping meeting/site visit  
                  | *If TLP:* FERC approves use of TLP                                       |
| October 2021     | Public Meeting to discuss PAD and NOI                                     |
| October/November 2021 | Stakeholders file comments on NOI/PAD and request studies               |
| November 13, 2021| SCE files proposed Study Plans                                           |
| January 2022     | SCE hosts Study Plan Meeting                                              |
| April 2022       | Revise Study Plans as appropriate                                        |
| Spring/Summer 2022-2023 | Conduct field studies                                                  |
| September 3, 2024| SCE Files Draft License Application                                      |
| January 31, 2025 | SCE Files Final License Application                                      |
# Tentative TWG Meeting Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Week of January 25, 2021</td>
<td></td>
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<tr>
<td>Monday, Jan 25</td>
<td>Water Resources TWG 1</td>
</tr>
<tr>
<td>Tuesday, Jan 26</td>
<td>Terrestrial and Botanical TWG 1</td>
</tr>
<tr>
<td>Wednesday, Jan 27</td>
<td>Cultural and Tribal TWG 1</td>
</tr>
<tr>
<td>Thursday, Jan 28</td>
<td>Recreation and Land Use TWG 1</td>
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<tr>
<td>Week of February 22, 2021</td>
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<td>Monday, Feb 22</td>
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<td>Week of March 29, 2021</td>
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<tr>
<td>Monday, Mar 29</td>
<td>Water Resources TWG 3</td>
</tr>
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</tr>
<tr>
<td>Wednesday, Mar 31</td>
<td>Cultural and Tribal TWG 3</td>
</tr>
<tr>
<td>Thursday, Apr 1</td>
<td>Recreation and Land Use TWG 3</td>
</tr>
</tbody>
</table>
How to Stay Involved

• Check the Project website for updates/news at www.sce.com/leevining

• Sign-up to receive Project-related emails through the Contact Registration Form/Project Questionnaire on the Project website

• Participate in an ongoing TWG

• Sign up for FERC’s for e-subscription (docket number “P-1388”) at www.ferc.gov

• Email Carissa Shoemaker with questions carissa.shoemaker@erm.com
Thank you!