

Lee Vining Hydroelectric Project FERC No. 1388

First Technical Working Group Meeting

November



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

0 0

Waiting for others to join...

- Utilize the chat box during the presentation for questions or comments
- Questions will be answered in appropriate Q&A sections as time allows

Type Comment Here

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



- 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



Energy for What's Ahead®













Davis-King & Associates

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 <u>carissa.shoemaker@erm.com</u> or using the online form at <u>https://www.sce.com/leevining</u>

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 Welcome

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?

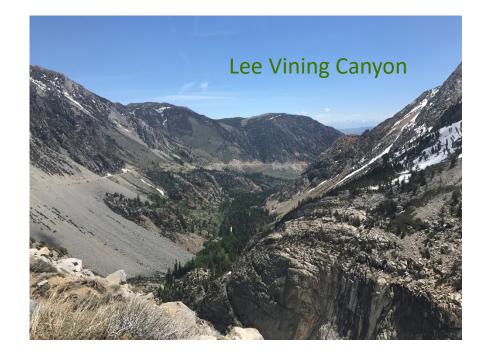


- Complex, multiyear
- Involves multiple participant with public involvement opportunities
- Develops an evidentiary record
- Provides FERC with decision-making information
- Determines license term and requirements

Basic Steps of Relicensing

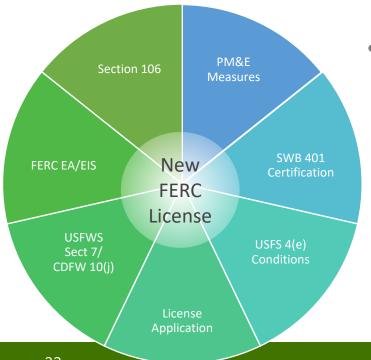
- Step 1: Describe Project and file Notice of Intent (NOI)
- Preliminary Application Document (PAD) summarizes existing Projectrelated information, potential future operations, and identifies potential resource issues
- Identify Key Questions
- Stakeholders ask questions

 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 <u>Protection</u>, <u>Mitigation</u>, <u>and Enhancement (PME)</u> measures for the new license in coordination with stakeholders
 - Submit <u>license application</u> 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 <u>changes</u> in Project facilities/operations against baseline, where baseline is the current condition

FERC has criteria for study identification

- 1. Goals and Objectives
- Relevant Resource
 Management Goals and Public Interest considerations
- 3. Existing Information
- 4. Project Nexus
- 5. Proposed Methodology
- 6. Level of effort and Cost



A GUIDE TO UNDERSTANDING AND APPLYING THE INTEGRATED LICENSING PROCESS STUDY CRITERIA

> Federal Energy Regulatory Commission Office of Energy Projects

> > March 2012

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 REFRESHER



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



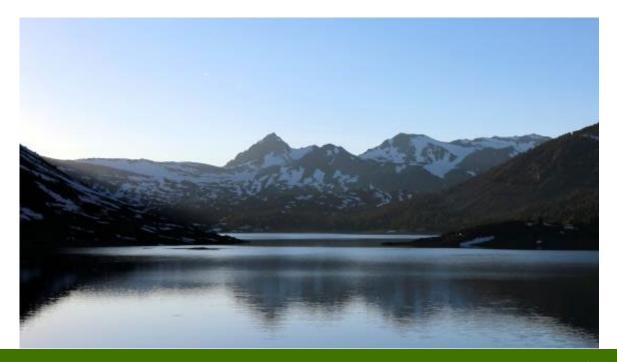
Questions?

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 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



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



Tioga Lake



Rainbow trout

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



Lee Vining Creek below Saddlebag Dam

Fish Population Monitoring

- Conducted in Lee Vining Creek from Saddlebag Dam to Slate Creek
- Six Years of data: 1999, 2000, 2001, 2006, 2011, 2016
 - 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.



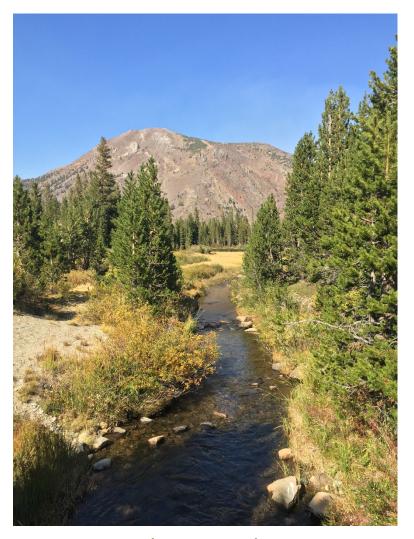
Lee Vining Creek Below Poole Powerhouse

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
 - Surveyed in 1999, 2000, 2001, 2006, 2011, and 2016
 - 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.

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



Glacier Creek

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.



Saddlebag Lake

Geology and Soils

- Soils: generally thin, limited by harsh environment and recent glaciation; generally coarse-textured, welldrained, 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



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



- 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

- ► TWG Leads
 - Steve Norton, Psomas Senior Biologist
 - Allison Rudalevige, Psomas Senior Botanist

Terrestrial and Botanical Topics

- Wildlife
- Botanical
- RTE Species
- Wetlands and Floodplains



Belding's Ground Squirrel at Saddlebag Lake, 2018

Existing Data

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

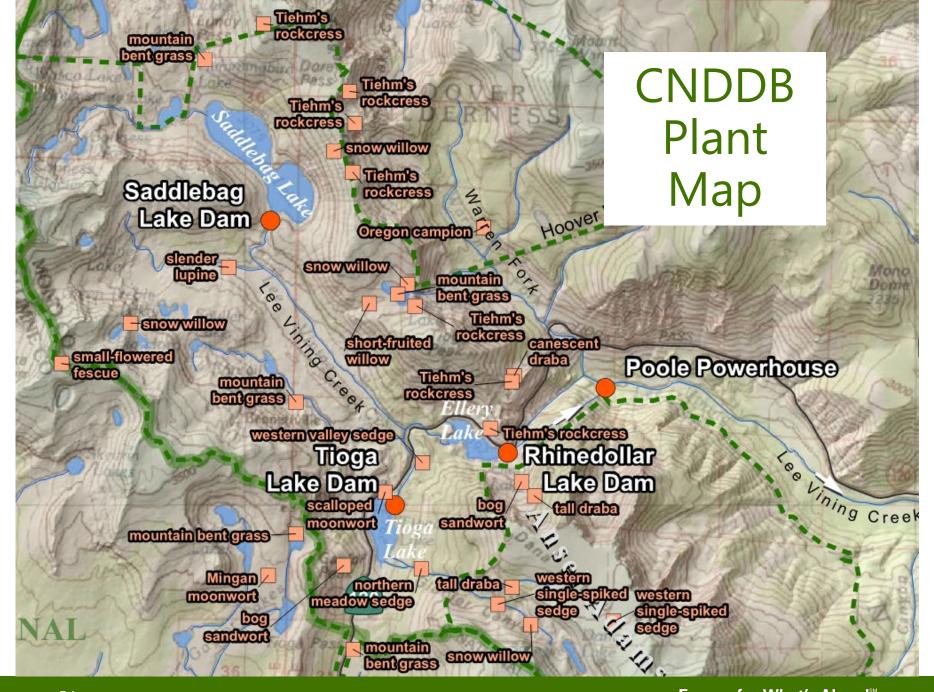
Existing Environment

- 14 Vegetation Types Remotely Mapped within Project Area
 - Ranging from wet meadows to scrub to forested areas with riparian and coniferdominated 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

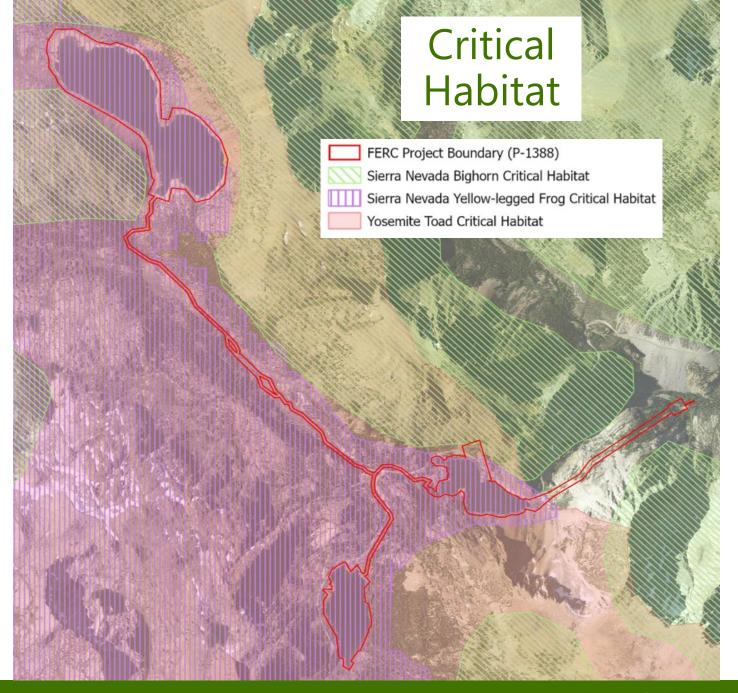


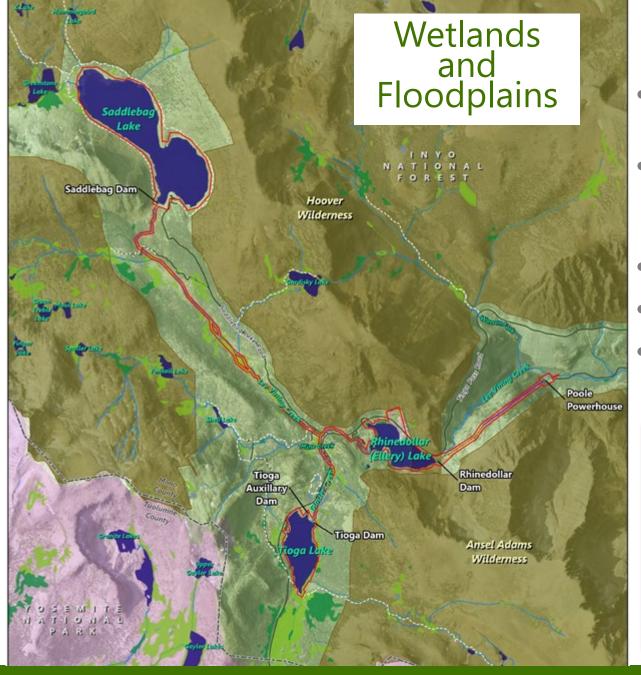
Yosemite Toad at Saddlebag Lake, 2020











Existing Data

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



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

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

- 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

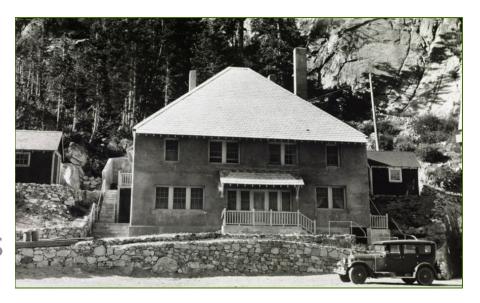
Cultural Resources

- 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 webpages, 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

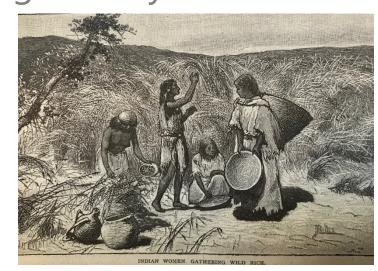
Existing Environment

- 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

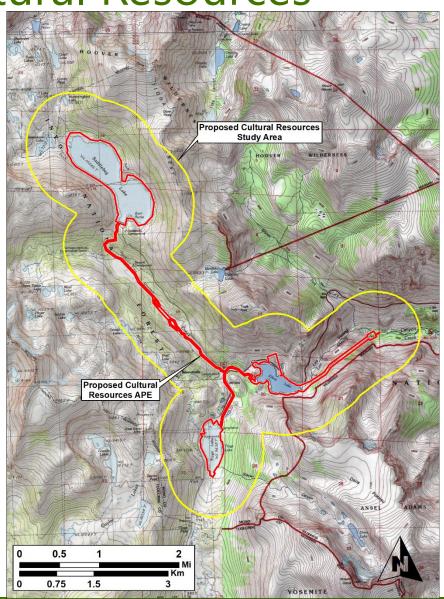
resources, tribal resources, and historic properties in Project area



Projectile Points

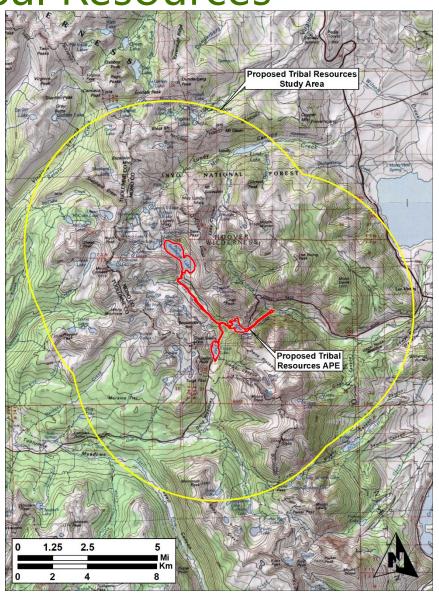
Cultural Resources

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

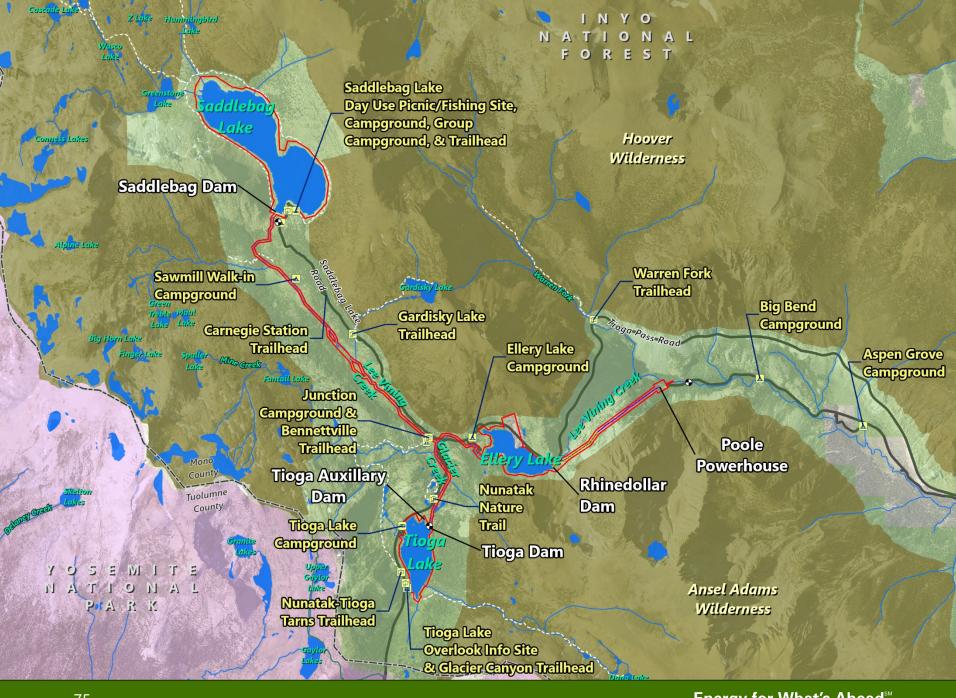
- Recreation
- Land Management
- FERC Project boundary

Recreational Resources

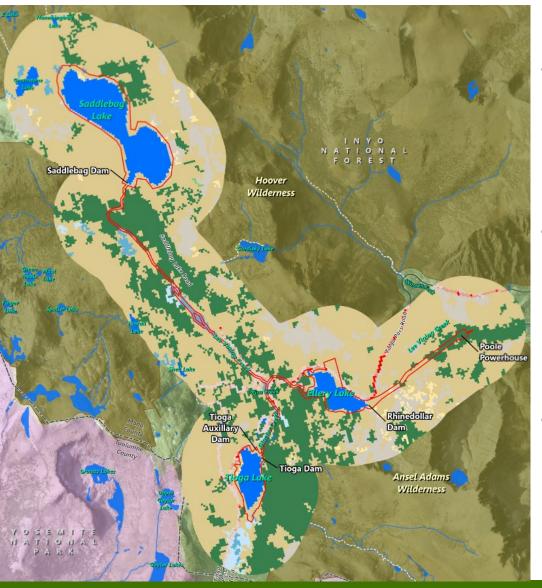
Existing Environment

- 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)



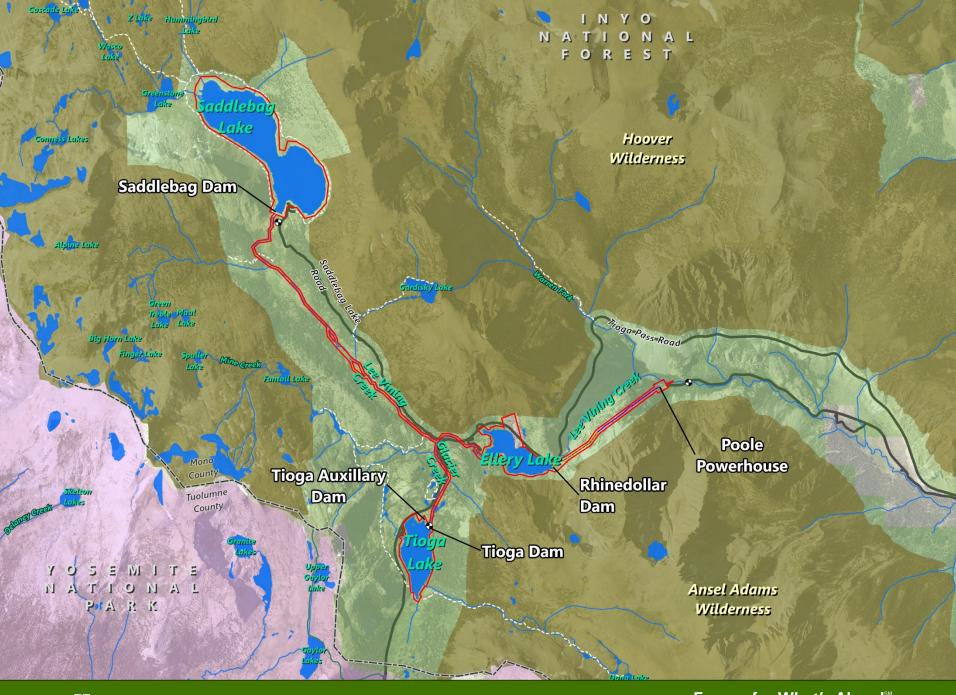


Land Management and Use



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

RELICENSING SCHEDULE OVERVIEW

Relicensing Process Schedule (subject to change depending on relicensing process)

Date	Activity	
August 2, 2021	SCE Files Notice of Intent/Pre-Application Document (NOI/PAD)	
September 2021	FERC initiates Tribal consultation	
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

Date		Activity
Week of January 25, 2021	Monday, Jan 25	Water Resources TWG 1
	Tuesday, Jan 26	Terrestrial and Botanical TWG 1
	Wednesday, Jan 27	Cultural and Tribal TWG 1
	Thursday, Jan 28	Recreation and Land Use TWG 1
Week of February 22, 2021	Monday, Feb 22	Water Resources TWG 2
	Tuesday, Feb 23	Terrestrial and Botanical TWG 2
	Wednesday, Feb 24	Cultural and Tribal TWG 2
	Thursday, Feb 25	Recreation and Land Use TWG 2
Week of March 29, 2021	Monday, Mar 29	Water Resources TWG 3
	Tuesday, Mar 30	Terrestrial and Botanical TWG 3
	Wednesday, Mar 31	Cultural and Tribal TWG 3
	Thursday, Apr 1	Recreation and Land Use TWG 3

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!