

**SOUTHERN CALIFORNIA EDISON**  
**Lee Vining Hydroelectric Project**  
**(FERC PROJECT NO. 1388)**



**DRAFT LICENSE APPLICATION**  
**VOLUME II**



September 2024

# **SOUTHERN CALIFORNIA EDISON**

**Lee Vining Hydroelectric Project  
(FERC Project No. 1388)**

**Draft License Application  
Volume II**

Southern California Edison  
2244 Walnut Grove Avenue  
Rosemead, CA 91770

September 2024

*Support from:*

***Kleinschmidt***

**LIST OF EXHIBITS**

Appendices of Exhibit E

Appendix E.1: Protection, Mitigation, and Enhancement Measures

Appendix E.2: Flow Duration Curves

Appendix E.3: Habitat-Flow Analysis

Appendix E.4: National Wetlands Inventory Mapbook

Consultation Log

**APPENDIX E.1**  
**PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES**

# **SOUTHERN CALIFORNIA EDISON**

## **LEE VINING HYDROELECTRIC PROJECT**

**(FERC PROJECT No. 1388)**



## **PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES**



September 2024

# SOUTHERN CALIFORNIA EDISON

LEE VINING HYDROELECTRIC PROJECT  
(FERC PROJECT No. 1388)

## PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES

Southern California Edison  
2244 Walnut Grove Avenue  
Rosemead, CA 91770

September 2024

*Support from:*

***Kleinschmidt***

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**TABLE OF CONTENTS**

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	Page
1.0 Environmental Measures and Plans .....	1
PME-1, Minimum Instream Flow Requirements .....	1
PME-2, Reservoir Level Requirements for Recreation .....	2
PME-3, Fish Stocking in Ellery Lake.....	3
PME-4, Resource Management Plan .....	3
PME-5, Historic Properties Management Plan .....	5
2.0 References .....	5

**LIST OF TABLES**

Table 1. Minimum Flow Requirements by Location.....	2
Table 2. Reservoir Level Requirements .....	3

**LIST OF ATTACHMENTS**

Attachment 1      Resource Management Plan

**LIST OF ACRONYMS AND ABBREVIATIONS**

APE	Area of Potential Effects
cfs	cubic feet per second
DLA	Draft License Application
HPMP	Historic Properties Management Plan
PME	protection, mitigation, and enhancement
Project	Lee Vining Hydroelectric Project (FERC Project No. 1388)
SCE	Southern California Edison [Company]
USFS	U.S. Forest Service

## 1.0 ENVIRONMENTAL MEASURES AND PLANS

The protection, mitigation, and enhancement (PME) measures described in this document are proposed as a result of consultation with Stakeholders and agencies, as well as the effects analysis conducted as part of the relicensing process for the Lee Vining Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC) Project No. 1388). Exhibit E of this Draft License Application (DLA) for the Lee Vining Hydroelectric Project (Project; FERC Project No. 1388) presents the PME measures, which used results from the Project-specific technical reports (provided in Volume III of this DLA).

PME measures in this document are described in full detail where appropriate. Management plans are attached to this document in the following order:

- Attachment 1, *Resource Management Plan*

SCE is also developing a *Historic Properties Management Plan* (HPMP), which will be filed as a supplemental report following the DLA filing.

### **PME-1, MINIMUM INSTREAM FLOW REQUIREMENTS**

PME-1, *Minimum Instream Flow Requirements*, represents a proposed measure related to management of water resources in the Project Area to address resource management objectives within operational constraints of the Project. See Table 1.

- Maintain minimum instream flow requirements, as required by U.S. Forest Service (USFS) 4(e) Condition No. 4.
- Maintain required minimum instream flow for visual quality.



**Table 1. Minimum Flow Requirements by Location**

Location	Water Year Type	Minimum Flow (cfs)	Duration
Below Saddlebag Dam <sup>a</sup>	Wet	14	Year-round
	Normal	9	Year-round
	Dry	6	Year-round
Below Tioga Dam	Wet or Normal	<ul style="list-style-type: none"> <li>If inflow is less than 2 cfs, the flow must be equal to the inflow and cannot exceed 2 cfs</li> <li>If the inflow is greater than 2 cfs, the flow must be 2 cfs until the lake water surface elevation is within 2 feet of the main spillway crest; the flow then changes to greater than 60% of the inflow</li> </ul>	May through September
	Dry	<ul style="list-style-type: none"> <li>If the inflow is less than 2 cfs, the flow must be equal to the inflow and cannot exceed 2 cfs</li> <li>If the inflow is greater than 2 cfs, the flow must be 2 cfs until the lake water surface elevation is within 2 feet of the main spillway crest; the flow then changes to the natural inflow</li> </ul>	May through September
	All	2 cfs or the natural inflow	October and November
	All	Equal to the natural flow	December through April
Below Poole Powerhouse <sup>b</sup>	All	27 cfs or the natural flow, whichever is less	August through May
	All	89 cfs or the natural flow, whichever is less	June and July

cfs = cubic feet per second; USFS = U.S. Forest Service

<sup>a</sup> Annual consultation with USFS to occur no later than May 1 of each calendar year. If no agreement is reached, minimum flows are as such.

<sup>b</sup> Flows here are measured by acoustic velocity meter.

**PME-2, RESERVOIR LEVEL REQUIREMENTS FOR RECREATION**

PME-2, *Reservoir Level Requirements for Recreation*, represents a proposed measure related to management of water resources in the Project Area to address resource management objectives within operational constraints of the Project. See Table 2.

- Maintain stable lake levels at Tioga and Ellery Lakes to allow for recreational usage, as required by USFS 4(e) Condition Nos. 4 and 6.
- Maintain reservoir levels to preserve visual quality.

**Table 2. Reservoir Level Requirements**

Location	Water Year Type	Lake Elevation and Duration
Tioga Lake <sup>a</sup>	Wet or Normal	<ul style="list-style-type: none"> <li>As of May 1, when the natural inflow increases to 2 cfs or more, flows from the outlet valve of 2 cfs will continue until the water level of Tioga Lake rises to within 2 feet of the elevation of the top of the spillway.</li> <li>After that date and through September 30, the water level of Tioga Lake will be maintained within 2 feet of the crest of the spillway. This will be maintained as a continuous, minimum flow below the dam that is not less than 60% of the natural inflow.</li> </ul>
	Dry	<ul style="list-style-type: none"> <li>As of May 1, when the natural inflow is 2 cfs or less, outlet flows at Tioga Lake cannot be less than the natural inflow and does not exceed 2 cfs.</li> <li>When the natural inflow into Tioga Lake is greater than 2 cfs, a continuous flow of 2 cfs will be released from the outlet valve. This will continue until the lake level rises to within 2 feet of the crest of the Tioga Lake Dam spillway or, in very dry years, reaches its peak for the year at some point below that level.</li> <li>From May 1 through September 30, a continuous flow will be released from the outlet valve equal to the natural inflow into Tioga Lake.</li> </ul>
Ellery Lake	All	<ul style="list-style-type: none"> <li>Ellery Lake will be managed to be full (within 2 feet of its spillway elevation) during the annual recreation season (defined as the Friday preceding Memorial Day through the end of September).</li> <li>Ellery Lake may be drawn down to a level that is more than within 2 feet of the spillway elevation, but only for short periods of time if needed to meet emergency maintenance needs or with prior written approval from USFS.</li> </ul>

cfs = cubic feet per second; USFS = U.S. Forest Service

<sup>a</sup> Annual consultation with USFS to occur no later than May 1 of each calendar year. If no agreement is reached, target lake levels are as such.

**PME-3, FISH STOCKING IN ELLERY LAKE**

Enhancement of recreational fishing opportunities in the Project reservoirs would be consistent with the management objectives of USFS and the California Department of Fish and Wildlife. The California Department of Fish and Wildlife currently stocks fish in Saddlebag, Tioga, and Ellery Lakes. To offset entrainment, Southern California Edison (SCE) will fund 12 percent of the stocking in Ellery Lake, which equates to about \$2,400, annually adjusted for inflation.

**PME-4, RESOURCE MANAGEMENT PLAN**

The *Resource Management Plan* (included as Attachment 1 to this document) outlines PME measures for botanical, wildlife, rare, threatened, and endangered species, as well as routine operations and maintenance activities.

The *Resource Management Plan* includes the following sections/chapters (see Attachment 1):

- Existing Management Plans
  - Wildfire Mitigation Plan
  - Avian Protection Plan (Appendix A of Attachment 1)
  - Nesting Bird Guidance for Small Projects (Appendix B of Attachment 1)
  - Plan for Storage and/or Disposal of Excess Construction/Tunnel Spoils and Slide Materials (Appendix C of Attachment 1)
  - Plan for Control of Erosion, Stream Sedimentation, Soil Mass Movement, and Dust (Appendix D of Attachment 1)
  - Plan for Oil and Hazardous Waste Storage and Spill Prevention and Cleanup (Appendix E of Attachment 1)
  - Invasive Mussel Prevention Plan (Appendix F of Attachment 1)
  - Vegetation Management Program Guides (Vegetation Management Operations Manual and SCE VM-3 Program Guide WMP: VM-3 Expanded Clearances for Legacy Facilities) (Appendices G and H, respectively, of Attachment 1)
- Project Operations
  - Water Management
  - Inspections and Maintenance
- Botanical and Wildlife Resources
  - Trimming and Mowing Along Roads, Along Trails, and Around Project Facilities
  - Hazard Tree Removal
  - Wildfire Vegetation Management
  - Non-Routine Operations and Maintenance Activities
  - Botanical Resources
  - Wildlife Resources
- Aesthetic Resources
- Consultation and Plan Review
  - Pre-License Consultation
  - Compliance Consultation

## **PME-5, HISTORIC PROPERTIES MANAGEMENT PLAN**

In 1990, SCE developed an HPMP in compliance with National Historic Preservation Act Section 106 (White, 1990). The HPMP required archaeological and historic inventory of the Project Area and development of appropriate management measures. The HPMP developed management strategies to avoid effects on historic properties, monitoring of historic properties, and continual consultation with agencies (White, 1990).

The current licensing efforts included a Cultural Resource (CUL-1) study, which included one study element covering the archaeology and built-environment resources as well as a Tribal Resources (TRI-1) Study. The results of these studies will be used to develop the updated HPMP that addresses the management and treatment of cultural and Tribal resources that have been determined eligible for inclusion in the National Register of Historic Places (NRHP) or remain unevaluated within the Area of Potential Effects (APE) over the term of the new license. Specifically, the HPMP does the following:

- Defines the APE;
- Describes cultural and Tribal resource inventory studies and NRHP-eligibility studies conducted for the Project and their results;
- Describes the statutes, regulations, and executive orders that pertain to cultural resources management;
- Identifies potential Project-related effects on cultural and Tribal resources located within the APE;
- Identifies measures to manage Project-related activities in the vicinity of cultural and Tribal resources located within the APE;
- Describes methodology and reporting associated with periodic cultural resource site condition monitoring;
- Defines protocol for implementation of periodic cultural resource site condition monitoring upon approval of the HPMP; and
- Describes reporting and consultation requirements.

The HPMP will be developed for the FLA.

Further discussion of cultural and Tribal resources is provided in DLA Exhibit E, Section 6.13, *Cultural Resources*, and Section 6.14, *Tribal Resources*.

## **2.0 REFERENCES**

White, D. R. M. 1990. *Management Plan for Historic and Archaeological Resources Associated with the Lee Vining Creek Hydroelectric Project (FERC Project No. 1388), Mono County, California*. April 1990.

**ATTACHMENT 1**  
**RESOURCE MANAGEMENT PLAN**

# **SOUTHERN CALIFORNIA EDISON**

## **LEE VINING HYDROELECTRIC PROJECT**

**(FERC PROJECT No. 1388)**



## **RESOURCE MANAGEMENT PLAN**



September 2024

# SOUTHERN CALIFORNIA EDISON

## LEE VINING HYDROELECTRIC PROJECT (FERC PROJECT No. 1388)

# RESOURCE MANAGEMENT PLAN

Southern California Edison  
2244 Walnut Grove Avenue  
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September 2024

*Support from:*

***Kleinschmidt***

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**TABLE OF CONTENTS**

---

	Page
1. Introduction.....	1
2. Existing Management Plans .....	1
2.1. Wildfire Mitigation Plan .....	1
2.2. Avian Protection Plan (Appendix A).....	2
2.3. Nesting Bird Guidance for Small Projects (Appendix B) .....	2
2.4. Spoils Disposal Plan (Appendix C) .....	2
2.5. Erosion Control Plan (Appendix D) .....	3
2.6. Hazardous Substances Plan (Appendix E).....	3
2.7. Invasive Mussel Prevention Plan (Appendix F).....	3
2.8. Vegetation Management Program Guides (Appendices G and H) .....	3
3. Project Operations.....	4
3.1. Water Management .....	4
3.1.1. Saddlebag Dam .....	5
3.1.2. Tioga Dam .....	5
3.1.3. Poole Powerhouse .....	6
3.2. Inspections and Maintenance .....	6
3.2.1. Facilities Repair.....	9
3.2.2. Maintenance Outage.....	9
3.2.3. Distribution, Power, and Communication Line Maintenance .....	9
3.2.4. Road Grading and Maintenance .....	9
4. Botanical and Wildlife Resources .....	10
4.1. Trimming and Mowing Along Roads, Along Trails, and Around Project Facilities.....	10



---

4.2.	Hazard Tree Removal.....	10
4.3.	Wildfire Vegetation Management.....	11
4.4.	Non-Routine Operations and Maintenance Activities.....	11
4.5.	Botanical Resources.....	12
4.5.1.	Goals and Objectives.....	12
4.5.2.	Special-Status Plants and Sensitive Natural Communities.....	12
4.5.3.	Invasive Plants.....	14
4.6.	Wildlife Resources.....	16
4.6.1.	Goals and Objectives.....	16
4.6.2.	Special-Status Wildlife.....	16
4.6.3.	Avian Species.....	18
5.	Aesthetic Resources.....	20
6.	Consultation and Plan Review.....	21
6.1.	Pre-License Consultation.....	21
6.2.	Compliance Consultation.....	21
7.	References.....	21

**LIST OF TABLES**

Table 3.2-1.	Routine Project Inspection and Maintenance Activities.....	7
--------------	--	---

## **LIST OF APPENDICES**

Appendix A	Avian Protection Plan
Appendix B	Nesting Bird Guidance for Small Projects
Appendix C	Plan for Storage and/or Disposal of Excess Construction/Tunnel Spoils and Slide Materials
Appendix D	Plan for Control of Erosion, Stream Sedimentation, Soil Mass Movement, and Dust
Appendix E	Plan for Oil and Hazardous Waste Storage and Spill Prevention and Cleanup
Appendix F	Invasive Mussel Prevention Plan
Appendix G	Vegetation Management Operations Manual
Appendix H	SCE VM-3 Program Guide WMP: VM-3 Expanded Clearances for Legacy Facilities

## **LIST OF ACRONYMS AND ABBREVIATIONS**

APP	Avian Protection Plan
BMP	best management practice
CDFW	California Department of Fish and Wildlife
cfs	cubic feet per second
CNDDDB	California Natural Diversity Database
DLA	Draft License Application
ESAP	Endangered Species Alert Program
FERC	Federal Energy Regulatory Commission
HFDT	High Fire District Threat
NBMP	Nesting Bird Management Plan
O&M	operations and maintenance
PME	protection, mitigation, and enhancement
Project	Lee Vining Hydroelectric Project (FERC Project No. 1388)
RMP	Resources Management Plan
SCE	Southern California Edison [Company]
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WMP	Wildfire Mitigation Plan

## 1. INTRODUCTION

Southern California Edison [Company] (SCE) has prepared this Resources Management Plan (RMP) to accompany SCE's application for a new Federal Energy Regulatory Commission (FERC) license for the Lee Vining Hydroelectric Project (Project; FERC Project No. 1388).

Combining resource areas under one RMP will enable SCE to more comprehensively train staff and successfully implement protection, mitigation, and enhancement (PME) measures. This plan also describes routine operations and maintenance (O&M) activities that occur within the FERC Project Boundary.

The RMP will guide SCE management and stewardship activities as outlined in this document. Specifically, the following resources are included in this plan:

- Botanical resources, including invasive and special-status plant species
- Wildlife resources, including special-status species
- Aesthetic resources

Additionally, a Historic Properties Management Plan has been prepared as part of the relicensing for the Project. The Historic Properties Management Plan is a standalone document and includes measures to avoid, protect, mitigate, or enhance cultural and Tribal resources; it is not discussed in this RMP, as portions of it contain confidential information.

## 2. EXISTING MANAGEMENT PLANS

The following are existing SCE management plans that will continue to be implemented during the new license, in conjunction with the RMP.

### 2.1. WILDFIRE MITIGATION PLAN

The Project has an existing and recently updated Wildfire Mitigation Plan (WMP) (SCE, 2022). The plan outlines methods to reduce the risk of wildfire that may be caused by utility actions or equipment, and minimize consequences of wildfire by managing vegetation and other potential fuel sources. The WMP includes an actionable, measurable, and adaptive plan to reduce the risk of potential ignitions associated with SCE's electrical infrastructure in high fire risk areas by increasing system hardening, bolstering situational awareness, and enhancing operational practices. While this plan is considered confidential because of the public safety requirements, it is available for review by resource agencies, and the key provisions are described below:

- Risk assessment and mapping
- Situational awareness

- Grid design and system hardening
- Asset management and inspections
- Vegetation management and inspections
- Grid operations and protocols
- Data governance
- Resource allocation methodology
- Emergency planning and preparedness
- Stakeholder cooperation and community engagement

## **2.2. AVIAN PROTECTION PLAN (APPENDIX A)**

SCE developed the *Avian Protection Plan (APP)*, which is implemented for the Project in accordance with primary federal laws protecting birds, the Bald and Golden Eagle Protection Act, the federal Endangered Species Act, and the Migratory Bird Treaty Act. SCE established roles for various SCE personnel to follow state and federal laws as they relate to the protection of bird species within the Project Area. Major procedures discussed in this document include permits, avian mortality, proactive retrofits, bird nest removal, injured birds, and ground-disturbing activities. By following this plan, SCE will effectively protect avian species within the Project Area.

## **2.3. NESTING BIRD GUIDANCE FOR SMALL PROJECTS (APPENDIX B)**

SCE's *Nesting Bird Management Guidance for Small Projects* was approved in April 2016. SCE defines management of nesting birds as "avoiding or minimizing project activities that have the potential to cause active nest failures as well as to minimize or avoid construction delays." The purpose of this guidance document is to prevent take of active nests, eggs, nestlings, or nesting birds as a result of construction activities. SCE's avian biologist defined a buffer around existing nests at the Project sites based on guidelines provided in this document.

Pre-activity nesting bird surveys are conducted during the recognized nesting season and adjusted for altitude across the Project Area.

## **2.4. SPOILS DISPOSAL PLAN (APPENDIX C)**

No large-scale tunneling or excavation activities related to the Project are underway or proposed. There are occasions, however, when material is generated as a result of sediment management activities or from naturally occurring landslides or other earth movements. The Project follows the *Plan for Storage and/or Disposal of Excess Construction/Tunnel Spoils and Slide Materials*, which describes that measures for spoil

disposal are determined on a case-by-case basis and consultation with U.S. Forest Service (USFS) occurs as needed for these events.

## **2.5. EROSION CONTROL PLAN (APPENDIX D)**

In general, the Project would not have an adverse effect on erosion within Lee Vining Creek. However, as a standing FERC license requirement, the Project follows the *Plan for Control of Erosion, Stream Sedimentation, Soil Mass Movement, and Dust*, which describes measures for soil stabilization, erosion protection, sediment reduction, and dust control. The plan was developed to provide the basis for the formulation of specific measures, which are addressed on a case-by-case basis with USFS to cover accidental occurrences such as a pipeline rupture.

## **2.6. HAZARDOUS SUBSTANCES PLAN (APPENDIX E)**

The Project follows the *Plan for Oil and Hazardous Waste Storage and Spill Prevention and Cleanup*. The plan requires SCE to (1) maintain a cache of spill cleanup equipment suitable in the Project Area for any spill from the Project; (2) periodically inform the USFS of the location of the spill cleanup equipment on USFS lands and of the location, type, and quantity of oil and hazardous substances stored in the Project Area; and (3) inform the USFS immediately of the nature, time, date, location, and action taken for any spill. Additionally, the plan describes approximate quantities of hazardous materials stored within the Project Area, storage procedures, spill prevention measures, and cleanup measures.

## **2.7. INVASIVE MUSSEL PREVENTION PLAN (APPENDIX F)**

SCE implemented the *Invasive Mussel Prevention Plan* in July 2017, which outlines the prevention of introduction and spread of invasive quagga mussel (*Dreissena rostriformis bugensis*) and zebra mussel (*Dreissena polymorpha*) into Project lakes. Quagga and zebra mussels have rapidly spread throughout the United States; once established, these mussels have the potential to result in physical damage to intake pipes and similar hard surfaces that would comprise the Project's infrastructure. Establishment of mussel species is most often the direct result of transportation via boats or vessels. Most Project lakes are open to the public for recreation, so transportation of these species is possible. Lakes operated by SCE are hydrologically connected and susceptible to sequential infestation.

SCE assessed each lake for their vulnerability to be invaded. Results from this study indicate that all Project lakes are low risk for establishment and introduction. Even with this low risk, SCE continues to provide public education and outreach through signs, kiosks, and brochures, explaining the economic damage that invasive mussel species can cause and how to prevent their spread.

## **2.8. VEGETATION MANAGEMENT PROGRAM GUIDES (APPENDICES G AND H)**

SCE has two main documents that guide vegetation management at their Project sites: the *Vegetation Management Operations Manual* (Appendix G) and the *SCE*

*VM-3 Program Guide WMP: VM-3 Expanded Clearances for Legacy Facilities* (Vegetation Management Activity of the WMP; Appendix H). The Vegetation Management Operations Manual is guidance primarily for keeping trees clear of transmission lines. The Vegetation Management Activity of the WMP outlines other procedures for keeping hydropower facilities clear of vegetation and reducing the risk of wildfire.

### **3. PROJECT OPERATIONS**

The Project consists of three dams and reservoirs, an auxiliary dam, a flowline consisting of a pipeline and penstock, and a powerhouse. Project facilities are described in Exhibit A of the Draft License Application (DLA).

The powerhouse is automatically controlled from the Eastern Hydro Operations Center located in Bishop, California; however, the powerhouse can be operated manually should it be necessary. The outlets at Saddlebag and Tioga Reservoirs are manually operated and adjusted for minimum flow requirements and water storage management. A bypass outlet at Ellery Lake can be remotely operated to release flow during powerhouse outages. Flow through the powerhouse is manually adjusted and can be adjusted locally or remotely from the Eastern Hydro Operations Center.

The Project is operated in compliance with existing regulatory requirements, agreements, and water rights to generate power. Sections 3.1, *Water Management*, and 3.2, *Inspections and Maintenance*, describe how the Project manages water in compliance with its FERC license and water delivery agreements to support its operations, and how inspections and maintenance of Project facilities are carried out.

SCE is not proposing any changes to the way the Project is operated or maintained.

#### **3.1. WATER MANAGEMENT**

Releases and spills from both Saddlebag and Tioga Lakes flow into Ellery Lake, which is the intake and regulating reservoir for Poole Powerhouse. The two lakes have historically been drawn down in the winter to provide storage capacity for spring run-off, in accordance with the 1933 Sales Agreement between the Southern Sierras Power Company (predecessor to SCE) and the Los Angeles Department of Water and Power. Ellery Lake is the forebay for the powerhouse, and its storage level is not as varied as the two upper reservoirs. Water is conveyed from Ellery Lake to the powerhouse via the flowline and penstock. Minimum flows are provided into Lee Vining Creek below Poole Powerhouse.

SCE stores water from the drainage area in the Project's reservoirs and releases the water for power generation, which is the primary, non-consumptive use of water within the Lee Vining Creek watershed. Project operations must be consistent with the 1933 Sales Agreement between the Southern Sierras Power Company (predecessor to SCE) and Los Angeles Department of Water and Power. The Project also conforms to the minimum flow release requirements outlined in the FERC license. Once water has left the FERC Project Boundary, SCE has no control over downstream diversions.

While meeting the Los Angeles Department of Water and Power 1933 Sales Agreement targets and the required FERC minimum flows, SCE also optimizes powerhouse generation to meet load requests from the California Independent System Operator. This process of delivering intraday load to satisfy demands is known as Hydro-resource Optimization. The Poole Powerhouse is typically activated during peak hours in response to grid demand. This operation leads to the release of flow into Lee Vining Creek below the Poole Powerhouse, with these instances generally lasting less than 8 hours.

Minimum flow requirements are different below each dam (USFS Condition No. 4 of current license; 78 FERC ¶ 61,110 [1997], *Order Issuing New License*). Under the current license, minimum flow requirements are based on whether the water year is wet, normal, or dry, as well as the water inflow into each reservoir. A water year is considered “wet” when the annual precipitation was in the highest 30 percent of the previous years, back to 1966. A “normal” water year is when it is neither wet nor dry. A water year is “dry” when the precipitation is in the lowest 30 percent of the previous years, back to 1966. Under any new license, the methodology for determining a wet, normal, and/or dry year will be reviewed and modified as necessary.

### 3.1.1. SADDLEBAG DAM

Below Saddlebag Dam, the flow requirements are determined annually in consultation with the USFS no later than May 1 of each calendar year. If SCE and the USFS do not agree on flows, the following minimums apply year-round (78 FERC ¶ 61,110 [1997], *Order Issuing New License*):

- Wet years: 14 cubic feet per second (cfs)
- Normal years: 9 cfs
- Dry years: 6 cfs

### 3.1.2. TIOGA DAM

Below Tioga Dam, the flow requirements are different depending on the month, the water year, and the amount of inflow. The reservoir is kept low in the winter in preparation for spring run-off.

- May through September:
  - In a wet or normal water year, if the inflow is less than 2 cfs, the flow requirement is equal to the inflow and cannot exceed 2 cfs. If the inflow is greater than 2 cfs, the flow requirement is 2 cfs until the lake water surface elevation is within 2 feet of the main spillway crest; once this level has been achieved, the flow changes to greater than 60 percent of the inflow.

- In a dry water year, if the inflow is less than 2 cfs, the flow requirement is equal to the inflow and cannot exceed 2 cfs. If the inflow is greater than 2 cfs, the flow requirement is 2 cfs until the lake water surface elevation is within 2 feet of the main spillway crest; once this level has been achieved, the flow changes to the natural inflow.
- October and November: the minimum flow is 2 cfs or the natural inflow.
- December through April: the minimum flow is equal to the natural flow.

### 3.1.3. POOLE POWERHOUSE

Below Poole Powerhouse, the minimum flow requirement is 27 cfs or the natural flow, whichever is less, between August and May. In June and July, the minimum flow is 89 cfs or the natural flow, whichever is less. Flows are measured by acoustic velocity meter installed in the Poole Powerhouse. During those periods when short-term repair and testing of the Poole Powerhouse facilities may be needed (i.e., Poole Powerhouse is offline), minimum flows in Lee Vining Creek are measured downstream of Ellery Lake, below Rhinedollar Dam. SCE is authorized under the current license to temporarily modify minimum flows if required by operating emergencies beyond its control. SCE may also modify minimum flows for short periods upon written consent of the USFS.

## 3.2. INSPECTIONS AND MAINTENANCE

Routine inspections and maintenance activities are conducted at Project facilities to verify the structural and/or functional integrity of the facilities, identify conditions that might disrupt operations or threaten public safety, and maintain the facilities in safe and operational conditions (Table 3.2-1). These activities are generally described in DLA Exhibit E, Section 4.4, *Project Maintenance*, and further described in the below sections. Inspections occur daily during the spring and summer peak run-off conditions.

Routine inspections are conducted by an operator 4 to 5 days per week. Monthly spill prevention, control, and countermeasure inspections, as well as switchyard inspections, also occur. Routine inspections are conducted at Project facilities to verify the structural and/or functional integrity of the facilities and identify conditions that might disrupt operations or threaten public safety. Weekly and monthly inspections occur outside of peak run-off, while hydrographers perform weekly inspections of Saddlebag Dam in summer months. Monthly inspections occur at all dams year-round; however, there is limited visibility in winter months. Maintenance work is conducted as needed throughout the year. Trash rack grids are raked to ensure they are clean and free of debris. Minor concrete repairs and spalling is fixed as needed. Other normal maintenance includes snow removal and emergency repairs to the generator and associated equipment as needed. Routine O&M activities include minor road and trail maintenance; transmission, power, and communication line maintenance; maintenance outages; powerhouse inspections and maintenance; and flowline inspections and maintenance.



**Table 3.2-1. Routine Project Inspection and Maintenance Activities**

Maintenance Activity	Relevant Project Area	Frequency	Description
Maintenance of dirt/native roads and parking areas, including ditch and culvert maintenance	<ul style="list-style-type: none"> <li>• All native Project roads and parking areas (e.g., Poole Power Plant Road)</li> <li>• Parking areas at boater put-in/take-outs</li> </ul>	Annually and as needed	<p><b>Minor</b> Project road maintenance:</p> <ul style="list-style-type: none"> <li>• Grading within the road prism</li> <li>• Removing debris and basic repairs, including filling of pothole</li> <li>• Maintaining erosion control features such as drains, ditches, and water bars</li> <li>• Repairing, replacing, or installing access control structures such as posts, cables, and barrier rock</li> <li>• Cleaning and clearing debris and sediment from culverts with a backhoe or hand shovel</li> <li>• Repairing and replacing signage</li> <li>• Conducting vegetation management concurrently with road maintenance on an as-needed basis</li> </ul> <p><b>Major</b> Project road maintenance:</p> <ul style="list-style-type: none"> <li>• Placing or replacing culverts and other drainage features</li> </ul>
Repaving/patching asphalt roads	<ul style="list-style-type: none"> <li>• Paved Project roads and parking areas (e.g., pavement around Poole Powerhouse)</li> <li>• Paved Project roads around powerhouse, machine shop, and warehouse buildings</li> </ul>	As needed (approximately every 2–3 years)	<p><b>Minor</b> Project road maintenance:</p> <ul style="list-style-type: none"> <li>• Cleaning and clearing debris and sediment from culverts and ditches with a backhoe or hand shovel</li> <li>• Filling blacktop and potholes with hand tools</li> </ul> <p><b>Major</b> Project road maintenance:</p> <ul style="list-style-type: none"> <li>• Using pick-up truck, dump truck, loaders, backhoes, and graders for resurfacing larger/longer parking areas or roads</li> </ul>
Vegetation trimming and removal/clearing	All Project roads and facilities: powerhouse, dams, water conveyance system, penstock, and stream gage sites	Every other year	<ul style="list-style-type: none"> <li>• Brush mowing along roadway to maintain road as necessary for safe line of sight and passage</li> <li>• Trimming both manually and with tools/equipment (i.e., weed whacker or chainsaw)</li> </ul>

Maintenance Activity	Relevant Project Area	Frequency	Description
Hazard tree inspection and removal	All Project roads and facilities: powerhouse, dams, water conveyance system, penstock, and stream gage sites	<ul style="list-style-type: none"> <li>Weekly and monthly inspections</li> <li>Removal as needed</li> </ul>	<ul style="list-style-type: none"> <li>Removing hazard brush and trees that are deemed a threat to road or vehicles traveling over them or near Project infrastructure</li> <li>Removing both manually and with tools/equipment</li> </ul>
Slide debris removal	All Project roads	As needed, typically following winter rains	<ul style="list-style-type: none"> <li>Removing slide debris with grader, loader, and dump truck</li> <li>Spreading material on road near debris slide as road base</li> </ul>
Structural inspection and maintenance	<ul style="list-style-type: none"> <li>Powerhouse</li> <li>Saddlebag Dam</li> <li>Tioga Dam</li> <li>Tioga Auxiliary Dam</li> <li>Rhinedollar Dam</li> <li>Penstock</li> <li>Water conveyance system</li> </ul>	<ul style="list-style-type: none"> <li>Weekly and monthly inspections</li> <li>Daily during spring/summer in peak run-off conditions</li> <li>Maintenance work as needed</li> </ul>	<ul style="list-style-type: none"> <li>Raking trash rack grids to ensure they are clean and free of debris</li> <li>Spillway debris removal</li> <li>Fixing minor concrete repairs/spalling</li> <li>Handrail repairs</li> </ul>
Material/slash burning	Varies depending upon source material location	Annually, or as needed	<ul style="list-style-type: none"> <li>Obtaining permit from Inyo National Forest when needed</li> <li>Burning brush, slash, or other vegetation accumulated from various Project operations</li> </ul>
Manage access gates and security fencing	<ul style="list-style-type: none"> <li>Vicinity of powerhouse, including machine shop and warehouse</li> <li>Gates at Tioga, Saddlebag, and Rhinedollar Dams</li> <li>Selected locations around access points at open flumes</li> </ul>	Inspect weekly and monthly during other facility inspections	Repair as needed
Sediment management (physical removal)	Intake areas	As needed	Removing sediment with hand shovels if needed
Facility painting	<ul style="list-style-type: none"> <li>Powerhouse, handrails, maintenance buildings</li> <li>Penstock</li> <li>Parking lots</li> </ul>	Annually maintain as needed (facilities on a rotation of every 10–20 years)	Following general aesthetic guidelines (e.g., painting in earth tones, landscaping with vegetation similar to surrounding areas)

### 3.2.1. FACILITIES REPAIR

SCE routinely makes repairs to structures and facilities and conducts maintenance to retain the functional and structural integrity of the Project facilities. Facilities include gaging stations and flumes, intakes and diversion structures, and flow meters. Within these facilities, maintenance and repairs may occur on gates, barricades, small structures (e.g., gaging stations and storage facilities), streambanks, and diversions. Major categories of facilities include the following:

- Measuring stations and flumes—SCE uses measuring stations and flumes to measure water in the waterways. Maintenance work related to gaging stations and flumes include mowing vegetation to provide access along channel banks and removing stream deposit within an area of measuring stations to allow for unobstructed water flow and the accurate reading of water flow in waterways.
- Intake and diversion structures—SCE uses intake and diversion structures to divert water from a stream or canal. Stream deposits (accumulated sediment and woody debris) are removed above and/or below intake structures as needed.
- Gate inspection and maintenance—This may include the operation of intake drain gates, sand traps, and chamber drain gates. These routine operations do not result in the draining of any ponds, which minimize effects on the stream. SCE is required to inspect penstocks, which does involve lowering the ponds to expose the entry point to the penstock.

### 3.2.2. MAINTENANCE OUTAGE

SCE conducts annual maintenance outages at the Poole Powerhouse to support minor maintenance and repair any wear and tear, typically during low-flow periods (fall). The maintenance outage typically lasts for 1 to 3 weeks. During the outage, SCE conducts mechanical and electrical inspections and maintenance of powerhouse appurtenances. In conjunction with the maintenance outage, SCE also makes minor repairs (e.g., trash rack grid raking, spillway debris removal, concrete spalling/repairs, handrail repairs) to the dams, as appropriate.

SCE conducts physical inspections of the flowline/penstock every quarter.

### 3.2.3. DISTRIBUTION, POWER, AND COMMUNICATION LINE MAINTENANCE

The Project includes a switchyard immediately adjacent to the Poole Powerhouse. This short connection is maintained by Project personnel.

### 3.2.4. ROAD GRADING AND MAINTENANCE

Access roads to Project dams are inspected during normal Project activities. Repairs and maintenance are typically conducted in the spring, following the rainy winter season, and as needed throughout the summer and fall. Maintenance activities include filing potholes, grading the road prism, adding gravel to address instances of washout, mowing grass,

and light brushing. Vegetation management is discussed in Section 4, *Botanical and Wildlife Resources*.

#### **4. BOTANICAL AND WILDLIFE RESOURCES**

Routine Project O&M includes numerous activities to ensure the safe operations of the Project. Botanical and wildlife resource surveys were conducted as part of the relicensing (Volume III of this DLA). Based on the data collected during relicensing surveys, no adverse effects on botanical or wildlife resources, including special-status species, within the FERC Project Boundary were identified as a result of routine O&M activities.

Routine O&M activities typically occur within previously disturbed areas or in areas that are regularly maintained and cleared of vegetation surrounding the Project facilities.

##### **4.1. TRIMMING AND MOWING ALONG ROADS, ALONG TRAILS, AND AROUND PROJECT FACILITIES**

Vegetation trimming and removal/clearing is performed as needed at all Project facilities, including Poole Powerhouse, dams, penstock, and stream gages for safety purposes and to prevent overgrowth of vegetation that interferes with the flow of water and the measurement of flow through the gaging stations. SCE staff brush mow using a flail-type mower along roadways to maintain roads as necessary for safe line of sight and passage, as well as wildfire mitigation. Trimming is performed both manually and with tools/equipment (i.e., string trimmer or chainsaw). Herbicides are not used in the Inyo National Forest, per USFS guidelines.

##### **4.2. HAZARD TREE REMOVAL<sup>1</sup>**

Hazard tree inspection and removal are performed as needed at Project facilities. SCE staff remove hazard brush and trees deemed a threat to road or vehicles traveling them, or near Project infrastructure. Removal occurs as needed and is performed both manually and with tools/equipment.

In 2022, to support wildfire prevention, an effort began to convert the habitat type around Poole Powerhouse from conifer-dominated to deciduous and shrub habitat (e.g., aspen, willow, and maple). Large conifers pose a greater fire hazard and potential risks of falling in winter risk than shrubs and deciduous trees. SCE removed all large conifers (approximately 200 trees) from the area in 2022 with approval from the USFS and California Department of Fish and Wildlife (CDFW). SCE continues to remove conifer

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<sup>1</sup> Hazard trees include dead, decadent or rotten trees, forked trees, trees weakened by decay or disease, trees susceptible to wind-throw, and trees that are leaning toward the conductors or have large branches that may fall on the lines or facilities. Hazard trees will be felled and left as is, just as they would have been if nature had allowed them to fall. The maximum stump height of any tree felled will be 12 inches measured from the uphill side of the stump. No removal of wood is authorized for any SCE or contractor employee for personal use or gain.

saplings as they are identified, on an as-needed basis, in the vicinity of Poole Powerhouse to manage the habitat.

#### **4.3. WILDFIRE VEGETATION MANAGEMENT**

SCE conducts additional vegetation inspections and maintenance in High Fire District Threats (HFDTs) as part of the WMP (SCE, 2022). Sites located in the HFDT are inspected on an annual basis, and many sites have an expanded clearance; expanded clearances in HFDT for high voltage facilities have a 100-foot clearance, and low voltage sites have a 30-foot clearance to reduce wildfire ignition risks. To maintain the expanded clearances, vegetation maintenance is done annually on a regularly scheduled rotation.

#### **4.4. NON-ROUTINE OPERATIONS AND MAINTENANCE ACTIVITIES**

Project facilities may require additional work not currently covered under routine activities. While existing resource surveys may inform consultation with affected Stakeholders, these tasks would be considered new projects, which are not necessarily covered under the new license. Should new non-routine O&M activities be required, SCE personnel will consult with resource agencies and contact the SCE Environmental Manager on appropriate measures, which may include additional environmental or cultural resource surveys.

Examples of non-routine O&M activities include the following:

- Ground-disturbing activities beyond those performed for routine O&M activities
- Reconstruction/repair activities involving major Project facilities
- Construction activities that involve expanding the footprint of existing facilities

When non-routine O&M activities are necessary, SCE Operations staff will contact the SCE Environmental Manager to determine if any special-status plants or wildlife or their habitat could be affected by the activity, if pre-activity surveys are needed, and if any site-specific environmental documents and/or permits are required. This process often includes sensitive species database searches and may include field studies and site-specific effect analysis.

During the preparation of the yearly work plan, SCE will contact its biologist to discuss any intended non-routine O&M activities. If it is determined that a proposed activity will affect sensitive botanical or wildlife resources, SCE will request surveys during the appropriate time of year for species detection (e.g., the blooming period or breeding season) and prepare a biological determination that will include recommendations for avoidance or minimization if needed.

Consultation with appropriate agencies will be conducted prior to non-routine O&M activities.

## 4.5. BOTANICAL RESOURCES

### 4.5.1. GOALS AND OBJECTIVES

The goals and objectives of this section include the following:

- Provide a clear operational decision-making process related to botanical resources when planning and/or implementing O&M activities
- Prevent disturbance or effects on federally and state-listed rare, threatened, or endangered species; USFS species of conservation concern; species with a California Rare Plant Rank designation of 1 or 2; or other special-status plant species
- Prevent spread of existing populations and introduction of non-native invasive species through the use of best management practices (BMPs)

### 4.5.2. SPECIAL-STATUS PLANTS AND SENSITIVE NATURAL COMMUNITIES

#### 4.5.2.1. Pre-Activity Consultation

Prior written approval must first be obtained from the USFS before initiating any activity the USFS deems as affecting or potentially affecting sensitive resources on National Forest System lands.

#### 4.5.2.2. Pre-Activity Survey

A new literature review and field survey may be conducted, as necessary, by a qualified botanist prior to routine O&M activities at the direction of SCE's Environmental Manager. Updated literature reviews will provide information on changes in species and sensitive communities status designations that may occur over the license period and identify new species/community occurrences within the Project Area. The literature search will include a review of the most recent California Natural Diversity Database (CNDDB); California Native Plant Society's inventory of rare, threatened, and endangered plants; CDFW's natural communities list; and USFS lists to identify any new special-status plants.

The following parameters will dictate the pre-activity surveys:

- If habitat or known individuals are identified in a work area based on previous surveys or the literature review, species-specific or community-specific surveys will be conducted as necessary. The need for field surveys will be determined by the SCE Environmental Manager as early as possible and, if deemed necessary, will be conducted by a qualified botanist.
- Surveys will be floristic in nature, meaning that every plant taxon that occurs in the individual activity area will be identified to the taxonomic level necessary to determine rarity and listing status. If collection of a sample or voucher specimen is required to confirm species identification, the biologist will possess a collection permit from the appropriate agency.

- Survey(s) will be timed, to the extent practical, so that the phenology of the particular plant species allows for field identification (usually this is during flowering or fruiting). Survey(s) will be spaced throughout the growing season to accurately determine what plants exist in the activity area. The timing and number of visits will be determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which surveys are conducted. Coordination with the USFS botanist may be appropriate to determine survey timing.
- Survey(s) will be comprehensive over the activity area, including areas that will be directly or indirectly affected by the activity. This includes areas that may be affected by equipment staging, soil stockpiling, fueling activities, etc.
- The biologist will report the findings and recommendations to SCE, and the report will be provided to the USFS and CDFW as part of SCE's annual reporting. The biologist will complete a CNDDDB Field Survey Form documenting special-status species observed.

Any field surveys will follow the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018), or the most recent agency-accepted protocol. The pre-activity investigation report should include all information required in the reporting and data collection section of the protocols (CDFW, 2018).

#### 4.5.2.3. General Avoidance Measures

Special-status species and sensitive natural communities will be avoided wherever possible. Measures to facilitate avoidance may include, but are not restricted to, the following:

- Demarcation of the maximum extent of the special-status resource(s) to be avoided: This may include flagging of individual resources or installation of a temporary barrier (e.g., roping off areas to be avoided; installation of silt fencing, straw wattles, or gravel/sandbags if soil disturbance is anticipated) to prevent effects on the species.
- Retention of a biological monitor during ground-disturbing or vegetation removal activities so that special-status resources are avoided: SCE, its biologist, and appropriate agencies will jointly determine the need for monitoring. Any effects on federally or state-listed species will be reported to the USFS, U.S. Fish and Wildlife Service (USFWS), and CDFW within 24 hours.

#### 4.5.2.4. Mitigation for Unavoidable Effects

If effects on special-status plant species or sensitive natural communities cannot be avoided, effects will be minimized to the extent possible. Compensation for effects may be required depending on the status and size of the affected population.

Measures to compensate for unavoidable effects may include, but are not restricted to, the following:

- Collection of plant material (e.g., seeds, corms, bulbs, whole plants) for distribution and revegetation after the activity is completed
- Translocation of special-status plants

Implementation of the appropriate mitigation measures will be managed by SCE's Environmental Manager. A mitigation plan will be developed and submitted to the USFS and/or CDFW (as appropriate) for review and approval prior to implementation.

#### 4.5.3. INVASIVE PLANTS

Implementation of BMPs that reduce invasive plant introduction and spread can help reduce future maintenance needs and costs; reduce fire hazards; reduce herbicide use; enhance access and safety; limit liability for the governing agency or lessee, maintain good public relations; and protect existing wildlife habitat, native plant populations, beneficial insects, as well as threatened and endangered species (Cal-IPC, 2012).

Appropriate BMPs will be dependent on the type of work activity; location of the work (e.g., existing disturbed area, naturally vegetated area); timing of the work; invasive plant species identified and whether it is designated for eradication, control, or containment; and treatment method required. The following general BMPs are recommended to avoid/minimize the spread of invasive plant species when conducting O&M activities:

- Where feasible, do not stage equipment, materials, or crews in invasive plant-infested areas.
- Where feasible, invasive plant infestations will be designated as control areas (i.e., areas where equipment, traffic, and soil-disturbing activities will be excluded). If control areas are designated, they will be identified on Project maps and delineated in the field with flagging.
- All equipment and vehicles used for ground-disturbing projects will be free of invasive plant material before entering the FERC Project Boundary. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris. Cleaning will occur at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter the FERC Project Boundary.
- When working in areas of known invasive plant infestations, equipment will be cleaned before moving to other work sites to prevent the spread of invasive plant species from an infested to potentially non-infested area. Infested areas will be identified on Project maps.



- If erosion control measures are used (e.g., hay bales, straw wattles), they will be certified weed free. If certified weed-free materials are not available, weed-free rice straw or non-vegetated material (e.g., sand or gravel bags) will be substituted.

#### 4.5.3.1. Invasive Plant Management

During the term of the new license, the need to implement an invasive plant management activity will either be based on determination of Project effect or required as a result of non-routine O&M activities that could introduce a new species or cause an existing species to propagate. If there is discovery of new invasive species or a significant change to a known occurrence of a population, SCE will consult with the Inyo National Forest to determine the appropriate measures to be implemented under this plan. Alternately, SCE will consult with Inyo National Forest as appropriate when non-routine O&M activities pose a risk of introducing or spreading a species.

Herbicide usage (chemical control) is not permitted within the Inyo National Forest. Non-chemical control includes mechanical removal (e.g., manual removal, cutting, disking, mowing), controlling plants in place (e.g., girdling, flaming, steaming, or using sheet barriers or solarization), and biological control (i.e., the use of host-specific insects or pathogens to target the invasive plant). Invasive plant species treatment will be performed to avoid effects on special-status plant and wildlife species and aquatic resources.

Precautions for non-chemical control care will be taken to avoid fuel spills if using gasoline-powered equipment, especially near aquatic areas. Invasive plant species will be removed/treated before flowering / setting seed to minimize spread and buildup of a seed bank. If removal by hand occurs when the plant is setting seed, personnel will cut and bag the seed stalks before removing the entire plant to minimize dispersal of seed during the removal process.

The appropriate control method will be selected in consultation with Inyo National Forest. Several factors may influence the type of treatment measures, including the species, effectiveness of the treatment strategy for each individual species, size of the invasive plant population, cost of the potential strategy, and potential for adverse effects on the surrounding environment and natural resources.

BMPs for containment, control, or eradication may be appropriate for some invasive plant species as follows:

- Eradication (1): For species assigned a treatment category of eradication, SCE is not implementing treatment actions for these species, as the Project did not contribute to their establishment or propagation. SCE will implement routine avoidance measures and evaluation of these species.
- Control (2): For species assigned a treatment category of control, SCE is not implementing treatment actions for these species other than routine avoidance measures.

- Containment (3): For species assigned a treatment category of containment, SCE is not implementing treatment actions for these species other than routine avoidance measures.
- Limited or None (4): No treatment strategy is planned for this species.

## 4.6. WILDLIFE RESOURCES

### 4.6.1. GOALS AND OBJECTIVES

The goals and objectives of this section include:

- Provide a clear operational decision-making process related to special-status wildlife resources when planning and/or implementing O&M activities
- Prevent disturbance or adverse effect on special-status wildlife species including federally and state-listed endangered and threatened species, USFS At-Risk Species and Species of Conservation Concern, California Species of Special Concern, and nesting birds and raptors

### 4.6.2. SPECIAL-STATUS WILDLIFE

PME measures for special-status wildlife are described below. These measures are intended to protect resources in the Project Area and are not indicative of an identified Project effect.

#### 4.6.2.1. General Avoidance Measures

Effects on special-status species will be avoided wherever possible. During the annual planning process, the SCE Environmental Manager will review the planned O&M locations and determine if there is the potential for the occurrence of special-status wildlife. If the SCE Environmental Manager determines that any planned O&M location has the potential to support a special-status wildlife species, field surveys will be conducted as early as possible in the planning process to allow modifications to O&M activities, where feasible, to avoid or reduce a potential effect.

#### 4.6.2.2. Pre-Activity Consultation and Surveys

Prior written approval must first be obtained from the USFS before initiating any activity the USFS deems as affecting or potentially affecting special-status species on National Forest System lands.

In areas that may support special-status wildlife species, a qualified biologist will conduct appropriate surveys for the relevant species. The biologist will use accepted survey protocols and methods, if published and appropriate. Draft or final survey protocols exist for certain wildlife species, including willow flycatcher (*Empidonax traillii*), spotted owl (*Strix occidentalis*), northern goshawk (*Accipiter gentilis*), and furbearers (i.e., marten, lynx, and fisher). These will be adopted as the standard for surveys of these species

where appropriate. The most recently accepted protocol surveys will be used (USFWS, 2024; CDFW, 2024).

Prior to any field survey, a literature review will be conducted to determine if any newly designated special-status wildlife have the potential to be present in the activity area. Updated literature reviews will provide information on changes in species status designations that may occur over the license period and identify new species occurrences within the activity area. The literature search will include a review of the most recent version of the CNDDDB and Inyo National Forest Land Management Plan to identify any new wildlife species of conservation concern. Upon identifying potential species habitat on site through the literature review, targeted surveys will be conducted as determined necessary by the SCE Environmental Manager. Where appropriate, the surveying biologist will have any requisite scientific collecting permits from the CDFW or 10(A) permits from the USFWS.

Surveys will be undertaken as early as possible within the activity planning process. This will allow for modifications to O&M activities, where feasible, to avoid or reduce any potential effect. If needed, a biological monitor will be present during activities that may affect special-status resources.

A report will be prepared describing the survey methods, results, and any recommendations. The report will be provided to the USFS as part of SCE's annual report. If any special-status species are found immediately adjacent to the work area, SCE will visibly mark the area to be avoided under the direction of the biologist, and, where necessary, a biological monitor will be present during Project activities to document avoidance of the area and associated resources. SCE and its biologist will jointly determine the need for monitoring. Following each survey or monitoring effort, the biologist will report all relevant special-status species observations to the CNDDDB. In the unlikely occurrence of a federally or state-listed species being affected by a Project activity, the activity will be halted as soon as it is safe, and the incident will be immediately reported to the USFS, USFWS, and CDFW.

#### 4.6.2.3. Endangered Species Alert Program

The Endangered Species Alert Program (ESAP) (SCE, 2005) was developed to provide SCE personnel with a means to identify when they may be working within an area with the potential occurrence of legally protected plant and animal species in the SCE service territory. For each of these species within the SCE service territory, the ESAP Manual includes a photograph, description, natural history information, and map showing the species' distribution in relation to SCE facilities. Should a proposed activity have potential to conflict with a known special-status species population, SCE's Environmental Department staff will be notified to evaluate the situation and, if needed, participate in consultation with the relevant regulatory agencies. SCE will include the avoidance and conservation measures discussed above in the ESAP to protect the special-status species mentioned above.

#### 4.6.2.4. Compliance Consultation

SCE will meet with the USFS and CDFW annually in the spring to discuss proposed activities for the remainder of the calendar year. During this meeting, SCE will present the list and schedule (if available) for planned activities that may affect special-status species covered in this plan. Based on discussions at the annual meeting, SCE may modify implementation of non-routine ground-disturbing activities or other projects with a plan for pre-activity surveys appropriate for the species of concern.

SCE will meet with the USFS and CDFW on an as-needed basis throughout the year to discuss the Project and O&M activities. SCE will continue to consult with agency staff on an as-needed basis.

#### 4.6.2.5. Yosemite Toad

Yosemite toad (*Anaxyrus canorus*) is known to occur at three locations adjacent or in close proximity to the FERC Project Boundary: the southern end of Saddlebag Lake, in a few locations west of Lee Vining Creek below Slate Creek, and at the inlet to Tioga Lake. These locations have not been subject to routine maintenance in the past and are not anticipated to undergo routine maintenance in the future. SCE will avoid performing routine maintenance or other ground-disturbing activities in these locations during the term of the new license. Should future maintenance activities be needed in any of these areas, SCE will have qualified biologists survey the area for toad activity and flag an avoidance area with an appropriately sized buffer to avoid take of Yosemite toad. Prior to conducting activities in known Yosemite toad locations, SCE will consult with the USFS, USFWS, and CDFW to seek their review and approval in advance of the activity.

#### 4.6.2.6. Bighorn Sheep

Bighorn sheep (*Ovis canadensis*) freely roam throughout the Project Area without interference from the Project. No special measures are needed to protect bighorn sheep.

#### 4.6.3. AVIAN SPECIES

SCE maintains and implements a corporate-wide APP (Appendix A) and a Nesting Bird Management Plan (NBMP) for small projects (Appendix B). These plans will be consulted prior to any O&M ground-disturbing or native vegetation-disturbing activity or any activity with the potential to disturb nests or nesting birds. These are corporate plans and subject to change as new policies are implemented.

The NBMP provides guidance on pre-activity nesting bird survey methods, monitoring, and reporting for projects falling outside the scope of routine O&M activities. Additionally, it provides useful definitions, guidelines on buffers and buffer implementation, and management guidance for inactive nests.

The APP is based on relevant guidelines published by the Avian Power Line Interaction Committee and the USFWS. The APP is applicable to the Project because there are powerlines and associated infrastructure in the FERC Project Boundary even though they

are not part of the new license. The APP provides procedures for reporting incidences bird mortality for common and threatened and endangered species, avian safe construction standards, and employee training.

#### 4.6.3.1. Nesting Season Protection Measures

For any O&M activities requiring vegetation removal during the bird nesting season (as described herein), the SCE Operations Manager will contact the SCE Environmental Manager and discuss work activities. Subsequently, the SCE Environmental Manager will determine if a nesting bird survey will be necessary. Because of the range in elevations for the Project, and because the onset and duration of winter and spring vary greatly between years in the Project Area, a strict beginning and ending date for the bird nesting and requisite surveys is not practical. Generally, the peak bird nesting season is described as February 1 to September 15; however, requisite nesting surveys should coincide with the spring thaw and the onset of consistently warm (above freezing) temperatures.

Surveys for nesting birds and raptors will be scheduled as deemed appropriate by the SCE Environmental Manager. A typical survey buffer will be 300 feet depending on the activity. The size of the survey buffer will be determined by the surveying biologist taking into account the anticipated Project activity and the amount of vegetation disturbance. The NBMP provides guidance on buffer sizes and will be the decision document for these surveys. If the biologist determines that no special-status wildlife will be affected by Project activities, and that either no active bird nests are present or that potential nesting habitat or nesting activities will not be adversely affected by the anticipated activities, Project activities can proceed.

A report will be prepared to document the survey, findings, and any monitoring results. Reports will be provided to SCE's Environmental Manager, and the findings will be reported at SCE's annual meeting with the USFS and CDFW.

If nesting activity is observed, or nesting birds/raptors are observed displaying nesting/territorial behavior (such as flying with nesting material or food), the biologist will note the location of the nest, and a second survey may be scheduled if the anticipated activities could adversely affect the nest or nest occupants. Active nests and nest vegetation will be mapped, and an appropriate avoidance buffer surrounding the nest will be established based on Table 1 in the NBMP (Appendix B). The location of the nest and the size of the buffer will be communicated with SCE Operations prior to the start of activities. During O&M activities, SCE will provide a monitor, on a daily or periodic basis, to monitor the nest for disturbance and nest completion. The regularity of the monitoring, either daily or periodic, will be determined by the biologist based on the nature of the activity, proximity of the nest, and species. If the biologist observes definite disturbance to the nest, the biologist will immediately contact SCE and have the work halted. The work will not begin again until the biologist determined that continuing the activities will not disturb the active nest occupants.

Trees that contain raptor nests will not be removed or trimmed, unless a qualified biologist determines that the nests are inactive or abandoned.

Prior to the removal of an inactive raptor nest, the biologist will follow the guidelines provided in SCE's NBMP:

"In accordance with the definition of inactive nest for raptors provided in this Guidance, inactive raptor nests that will impact construction activities will be removed [according to the following protocol]:

- A biological monitor/avian biologist will observe the nest for four consecutive hours or for consecutive two-hour periods over two successive days to determine if there is any activity at the nest site.
- If an avian biologist determines that the nest is unlikely to be active based on these observations, the construction team will provide personnel to inspect the nest if it is not accessible by a biological monitor/avian biologist due to safety concerns.
- For inaccessible nests, the construction team will take a photo of the nest contents and provide the photograph to a biological monitor/avian biologist.
- Once a biological monitor/avian biologist has confirmed from the photo that the nest is inactive, the construction contractor will remove the nest.
- Nests will not be collected or taken off site by biologists because this would be in violation of the [Migratory Bird Treaty Act] MBTA and Native Bird sections of the California Fish and Game Code."

No raptor nests will be removed unless necessary for the activity and there is no alternative. The USFS and CDFW will be notified of the removal of abandoned or inactive raptor nests via email from the SCE Environmental Manager within 14 days of nest removal.

## **5. AESTHETIC RESOURCES**

Prior written approval must first be obtained from the USFS before initiating any activity the USFS deems as affecting or potentially affecting resources on National Forest System lands.

Buildings, other structures, and pipelines are designed, placed, landscaped, and painted in earth tones to blend into the surrounding area. The facility areas are landscaped with trees and scrubs to screen and break up the lines of the buildings.

However, no new Project infrastructure is currently proposed. Project-related activities will consider building materials, color, conservation of vegetation, and landscaping to preserve the aesthetics of the Project Area.

## 6. CONSULTATION AND PLAN REVIEW

### 6.1. PRE-LICENSE CONSULTATION

This RMP was developed during the relicensing process, prior to submittal of the DLA in September 2024, as indicated below.

- June 11, 2024: RMP outline provided to Technical Work Group
- July 16, 2024: Draft RMP distributed to Technical Working Group
- August 27, 2024: RMP filed as part of the Project DLA
- September 2, 2024 through December 2, 2024: Formal DLA comment period

### 6.2. COMPLIANCE CONSULTATION

This RMP will be reviewed internally by SCE Operations staff on an annual basis and included in any environmental training for the Project. Following major updates or revisions, the revised RMP will be distributed to the USFS and the CDFW and filed with FERC.

## 7. REFERENCES

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**APPENDIX A  
AVIAN PROTECTION PLAN**



SCE	EHS	ENVIRO	PL	Doc. No	1	 SOUTHERN CALIFORNIA <b>EDISON</b> <sup>®</sup> An EDISON INTERNATIONAL <sup>®</sup> Company
Responsible Department: Environmental Services Department				Version	1	
Eff. Date	Latest Signature Date					
Supersedes	SCE-CEHS-EP-PL-1			NA		
<b>Avian Protection Plan</b>						

## Environmental Services Department Corporate Plan

### SCE-EHS-ENVIRO-PL-1

Approved by: See [Attachment 8.2](#) Signature Page for all signatures Date: \_\_\_\_\_

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Director, Corporate Environmental, Health and  
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Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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# Contents

<b>1. Introduction</b>	<b>5</b>
1.1 Purpose	5
1.2 Scope	5
<b>2. Definitions</b>	<b>6</b>
2.1 Authorized SCE Employee	6
2.2 Contractor	6
2.3 Imminent Danger (Alteration of Active Nest)	6
2.4 Incidental Take	6
2.5 Major Projects	6
2.6 Migratory Bird	6
2.7 Nest	6
2.8 Possession	7
2.9 Protected Species	7
2.10 Special Purpose Permit	7
2.11 Take	7
2.12 Threatened and/or Endangered (T&E)	8
<b>3. Regulatory Background</b>	<b>9</b>
3.1 Federal Requirements	9
3.2 State Requirements	10
<b>4. Responsibilities</b>	<b>11</b>
4.1 ESD Director	11
4.2 SCE Avian Protection Specialist	11
4.3 SCE Biologist (ESD employee handling emergency calls for biological resources)	11
4.4 Environmental Project/Program Manager (EPM)	11
4.5 SCE Employees	12
<b>5. Procedures</b>	<b>13</b>
5.1 SCE Vehicles and USFWS Permit	13
5.2 Reporting	13
5.3 Avian Mortality	13
5.4 Proactive Retrofits	17
5.5 Bird Nest Removal	19
5.6 Injured Birds	23
5.7 Information Management	23
5.8 Construction Standards	24
5.9 Avian-Specific Safety Requirements	25
5.10 Training	26
5.11 Quality Control	27

**6. Major Projects ..... 28**

6.1 Applicant-Proposed Measures .....28

6.2 Nesting Bird Management Plan.....28

6.3 Projects without an NBMP .....29

6.4 Avian-Safe Design .....29

6.5 Reporting .....30

**7. References ..... 31**

7.1 Federal .....31

7.2 State .....31

7.3 SCE .....31

Other31

7.4 Hyperlinks .....32

**8. Attachments ..... 35**

8.1 Listing Status of Avian Species in SCE’s Service Territory.....35

8.2 Signature Page .....37

## 1. Introduction

### 1.1 Purpose

The Southern California Edison (SCE) Avian Protection Plan (APP) details SCE processes for managing avian issues. The requirements explained in the APP are applicable to all SCE facilities and shall be implemented by all SCE employees and Contractors.

### 1.2 Scope

The APP incorporates relevant guidelines published by the Avian Power Line Interaction Committee (APLIC) and the U.S. Fish and Wildlife Service (USFWS) in 2005. SCE's APP incorporates the following eight key elements:

- Corporate Policy
- Training
- Permit Compliance
- Construction Standards
- Nest Management
- Reporting System
- Mortality Reduction Measures
- Quality Control

SCE's environmental corporate policy can be found on the SCE Portal [here](#). Construction Standards are addressed in other company documents, but referenced in this document.

SCE's Environmental Services Department (ESD) will oversee the implementation of the APP in affected SCE organizations. ESD will solicit input from the affected SCE organizations and perform an annual review of the APP.

## 2. Definitions

### 2.1 Authorized SCE Employee

ESD Director, SCE Avian Protection Specialist, SCE Biologist, SCE Environmental Project/Program Manager, Patrolmen, Troublemakers, Foremen, Transmission System Operators, or other employees as authorized by the T&D Director.

### 2.2 Contractor

An individual, who is not a SCE employee, who performs work for SCE, such as an employee of a construction or environmental supplier.

### 2.3 Imminent Danger (Alteration of Active Nest)

Impending circumstances likely to result in the electrocution of a bird, a fire, or an immediate threat to the stability of the bulk electric system, human health, or public and/or employee safety.

### 2.4 Incidental Take

See the definition of Take in [Section 2.10](#) below. An Incidental Take is incidental to, and not the purpose of, carrying out an otherwise lawful activity per the Endangered Species Act (ESA) and the Bald and Golden Eagle Protection Act (BGEPA). 50 C.F.R. § 22.3.

### 2.5 Major Projects

Projects that have specific avian protection measures defined during California Public Utilities Commission (CPUC) proceedings and/or associated project-specific resource agency permitting actions.

### 2.6 Migratory Bird

Most bird species in the U.S. are considered to be migratory birds and are protected under the Migratory Bird Treaty Act (MBTA), except for introduced species, such as the house sparrow, European starling, rock pigeon, monk parakeet, and some game species, such as the ring-necked pheasant. 50 C.F.R. § 10.12 provides a complete list of the species protected by the MBTA. The MBTA is discussed further in [Section 3.1.2](#).

### 2.7 Nest

The definitions of Nest, Active Nest, and Inactive Nest vary across species and between Federal and California laws and agency interpretation.

#### 2.7.1 USFWS Definition (USFWS Federal Fish & Wildlife Permit; 50 C.F.R. § 22.3):

**Active Nest:** Nest with eggs, young, or incubating adults present.

**Inactive Nest (non-eagle):** Nest without eggs, young, or incubating adults present.

**Inactive Nest (eagle):** Bald eagle or golden eagle nest that is not currently being used by eagles as determined by the continuing absence of any adult, egg, or dependent young at the nest for at least 10 consecutive days.

## 2.7.2 California Department of Fish and Wildlife (CDFW) Definition

**Active Nest:** CDFW has not provided a written definition of an active nest.

**Inactive Nest:** Nest no longer in use; without viable eggs, nestlings, or juveniles. Determined by an avian biologist.

## 2.8 Possession

Possession means detention and control of a Protected Species. 50 C.F.R. § 10.12. This includes picking up or handling of any Migratory Bird. This may also include moving or transporting Migratory Birds or Nests.

## 2.9 Protected Species

Any bird listed under federal or state laws and regulations, such as the federal and state Endangered Species Acts, BGEPA, MBTA, and California Fish & Game Code.

## 2.10 Special Purpose Permit

A permit issued by the USFWS that must be acquired before any person may lawfully Take, salvage, acquire, transport, or possess Migratory Birds, their parts, Nests, or eggs for any purpose not covered by the standard form permits of 50 C.F.R. Section 21.

## 2.11 Take

### 2.11.1 Federal Definitions of Take

The definition of “take” is different under the three relevant federal laws: BGEPA, ESA, and MBTA.

#### 2.11.1.1. BGEPA

Take: To pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb, or to attempt to engage in such conduct. 16 U.S.C. § 668c; 50 C.F.R. § 22.3. The BGEPA is discussed further in [Section 3.1.3](#). “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. 50 C.F.R. § 22.3.

#### 2.11.1.2. ESA

Take: To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct in regards to a listed species. 16 U.S.C. § 1532 (19). “Harm” may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. 50 C.F.R. § 22.3. “Harass” is defined as “an intentional or negligent act or omission which

creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3.

#### **2.11.1.3. MBTA**

Take: To pursue, hunt, shoot, wound, kill, trap, capture, or collect (alive or dead), or to attempt to engage in such conduct. 50 C.F.R. § 10.12. See additional discussion of the MBTA in [Section 3.1.2](#).

#### **2.11.2 California Definition of Take (California Fish & Game Code)**

Take: To hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. Cal. Fish & Game Code § 86.

### **2.12 Threatened and/or Endangered (T&E)**

Any species subject to the protection of the federal and California Endangered Species Acts. 16 U.S.C. §§ 1531 to 1544; Fish & Game Code §§ 2050-2115.5.



### 3. Regulatory Background

#### 3.1 Federal Requirements

The three primary federal laws protecting birds are:

- ESA
- MBTA
- BGEPA

All three laws make it unlawful to Take birds without the proper permits. It is important to note the definition of Take differs among the three laws. For example, Take under the ESA includes habitat degradation and harassment. The definition of Take under each law can be found in the Definitions section. Each of these federal laws is discussed in detail below.

##### 3.1.1 ESA

Special protection is afforded to T&E bird species under the ESA. 16 U.S.C. §§ 1531 to 1544. The ESA and its companion regulations make it unlawful to import, export, Take, transport, possess, sell, purchase, or receive in interstate or foreign commerce any species of fish or wildlife (including birds) listed as endangered or threatened. 16 U.S.C. § 1538.

The ESA has provisions for permitted Incidental Take. Incidental Take authorization can be obtained through ESA Section 7 for projects with a federal nexus (e.g., involving federal money, lands, or interconnection) or through Section 10 for projects with no federal nexus. Such authorization allows for otherwise prohibited Take of a species, so long as the Take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

##### 3.1.2 MBTA

The MBTA applies to the vast majority of birds in the United States with the exception of a few species, such as the house sparrow, European starling, and rock pigeon. 16 U.S.C. §§ 703-712. 50 C.F.R. § 10.13.

The purpose of the MBTA is to afford protection to migratory birds, their parts, Nests, and eggs. The MBTA states that, unless permitted by regulation, it is unlawful to “pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, or import ... any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof...” 16 U.S.C. § 703.

Currently, there are no provisions to allow for Incidental Take under the MBTA. Special Purpose Permits are available for transporting bird carcasses and nest management.

### 3.1.3 BGEPA

Bald and golden eagles, their eggs, and their Nests receive additional protection under the BGEPA. 16 U.S.C. §§ 668 to 668d. It is a crime for a person or entity who lacks the required permit to “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export, or import ... any bald eagle... or any golden eagle, alive or dead, or any part, nest or egg thereof ....” 16 U.S.C. § 668(a).

The BGEPA has provisions for permitted Incidental Take under 50 C.F.R. Section 22. SCE holds a permit for exhibition purposes and has a mounted golden eagle on display at Camp Edison. Permits can also be approved for the Take of eagles during otherwise lawful activities or to remove a nest that poses a safety hazard.<sup>1</sup>

**Note:** In addition to the federal and state laws protecting birds discussed below, the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) require projects subject to these regulations to evaluate potential impacts of these projects on Protected Species.

If project impacts are potentially significant, further investigation will be required to determine whether and which Applicant Proposed Measures (APMs) are necessary to demonstrate that impacts can be reduced to below-significant levels. For further discussion of this issue, see [6.1: Applicant Proposed Measures](#).

### 3.2 State Requirements

The following Fish and Game Code sections protect birds:

- California Endangered Species Act (CESA) (§§ 2050-2115.5)
- All birds (§ 3503)
- Birds in the orders Falconiformes or Strigiformes (i.e., birds-of-prey) (§3503.5)
- Aigrette or egret, osprey (*Pandion haliaetus*), bird of paradise, goura, numidi, or any part of such a bird (§3505)
- Fully protected birds (§3511)
- Migratory nongame bird as designated in the MBTA, or any part of such migratory nongame bird, except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA (§3513)

The CDFW may issue permits to allow Incidental Take of state-listed species pursuant to CESA.

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<sup>1</sup> Under California law, however, bald and golden eagles have additional protection. See Fish & Game Code Sections 2081 and 3511.

## 4. Responsibilities

### 4.1 ESD Director

- Approves and signs permits.
- Maintains strategic oversight and establishes policies and standards to ensure SCE complies with applicable requirements related to avian protection.

### 4.2 SCE Avian Protection Specialist

- Oversees the implementation of the APP, solicits input from SCE Operating Units on the APP, and performs an annual review of the APP.
- Applies for company-wide Incidental Take Permits under BGEPA and MBTA and reviews project permits under BGEPA and MBTA.
- Receives and processes SCE's Avian Incident Reports.
- Contacts the appropriate agency when a dead eagle or T&E species is discovered.
- Maintains a record of bird fatalities and submits the record as required to the appropriate agencies.
- Contacts the USFWS and/or CDFW (depending on the species) to request a permit when an eagle or T&E nest needs to be removed.
- Maintains an APP document library and provides access as necessary.
- Chairs the Eagle Zone Review Team.
- Provides advice on biological considerations for implementation of avian-safe construction standards and avian deterrents.
- Provides avian expertise to the SCE Biologist and Environmental Project/Program Managers (EPM).

### 4.3 SCE Biologist (ESD employee handling emergency calls for biological resources)

- Evaluates activities for potential impacts to birds.
- Provides support and recommendations to T&D employees and other SCE employees and Contractors whose work involves potential impacts to birds.
- Provides guidance in Nest removal situations.
- Arranges for transportation of injured birds to licensed wildlife rehabilitators.
- Determines species of bird carcass.

### 4.4 Environmental Project/Program Manager (EPM)

- Serves as main point of contact for activities and/or projects. Note: EC EPM is responsible for oversight of EC programs and is supported by an EC TSP to manage implementation below;

**4.5 SCE Employees**

- Work with the SCE Avian Protection Specialist and/or SCE Biologist to review activities for the potential to impact birds.
- Work with the SCE Avian Protection Specialist and/or SCE Biologist to ensure efficient and effective implementation of avian impact avoidance, minimization and/or mitigation requirements during activities.
- Implement retrofits and construction to avian-safe construction standards.
- Participate in the Eagle Zone Review Team.
- Report avian incidents in the EHSync Avian Incident form.
- Provide project information to the SCE Biologist necessary for evaluating potential impacts to birds.
- Work with the SCE Biologist to ensure implementation of avian mitigation requirements.

## 5. Procedures

### 5.1 SCE Vehicles and USFWS Permit

All SCE vehicles that may be used to transport birds shall be equipped with SCE's [USFWS Special Purpose Permit](#). The SCE Avian Protection Specialist provides the current permit to Transportation Services for placement in vehicles each time it is renewed.

### 5.2 Reporting

5.2.1 SCE employees are expected to report dead birds and Active Nests that pose problems near (e.g., on an overhanging tree branch) or on SCE equipment and facilities (e.g., poles, towers, substations) to the SCE Biologist within 24 hours of discovery. (As explained in Section 5.5, employees and/or Contractors who discover injured birds must contact the on-call SCE Biologist through 833-723-2362 immediately.) For reporting procedures regarding eagle Nests, see [Section 5.4](#). This report may be made via telephone or email. An EHSync Avian Incident report must be submitted within five (5) business days of the discovery. This deadline may be extended upon approval from the SCE Avian Protection Specialist or designee.

5.2.2 Contractors are expected to report dead birds and Active Nests that pose problems near or on SCE equipment and facilities within 24 hours of discovery. (As explained in Section 5.5, Employees and/or Contractors who discover injured birds must contact the on-call SCE Biologist through 833-723-2362 immediately.) For reporting procedures regarding eagle Nests, see [Section 5.4](#). Reports must be made to the SCE Representative (SCE employee responsible for managing the contract). The SCE Representative shall submit the EHSync Avian Incident report within five (5) business days of the discovery. This deadline may be extended upon approval from the SCE Avian Protection Specialist or designee.

**Note:** The reporting requirement does not apply to major projects that have reporting requirements specified in a Nesting Bird Management Plan and/or project specific- reporting requirements (see [Section 6](#) for Major Projects). However, the EPM shall report electrocutions and line collisions in an EHSync Avian Incident report for tracking.

**Note:** The SCE [Endangered Species Alert Program \(ESAP\) Manual](#) contains information that may facilitate the identification of sensitive bird species found in SCE's service territory. It can aid in completing the EHSync Avian Incident report.

### 5.3 Avian Mortality

Any questions should be directed to the SCE Biologist on call, who can be reached through 833-723-2362 24 hours a day, 7 days a week for reporting and/or support.

**WARNING**

**Diseases can be transmitted by contact with wildlife; therefore, employees shall wear safety glasses and nitrile gloves and/or use an inverted plastic bag to pick up carcasses (refer to Section 5.10). Contractors are expected to provide the same level of protection to their employees and subcontractors.**

Figure 1, Avian Mortality Procedure Flowchart, shows an overview of the process described in this section.

- 5.3.1 Photographs. The SCE Employee will take digital photographs of the bird, the structure, and surrounding areas to provide a context for the find and to document the species, and upload the photographs to the EHSync Avian Incident Report. If no camera is available, the SCE Employee will provide a written description of the bird (basic dimensions and colors) and of the avian-safe status of the structure within the Report.
- 5.3.2 Tag or Band. Unless the bird is a T&E species, the SCE Employee will remove any tag or band from the bird and mail the tag or band to the SCE Avian Protection Specialist. Contact the SCE Avian Protection Specialist at [BiologicalResources@sce.com](mailto:BiologicalResources@sce.com) for the current pony location. If the tag or band cannot be removed, the tag or band information should be recorded in the EHSync Avian Incident Report.
- 5.3.3 Species Determination. The SCE Employee should attempt to determine whether the bird is an eagle, T&E, or California fully protected species. See [Attachment 8.1](#) for a list of special status bird species in SCE territory and the [ESAP Manual](#) if needed. If the species of bird cannot be determined, the SCE Employee will contact a SCE Biologist.
- Note:** Both bald and golden eagles occur within SCE's service territory. It is important to initially determine if the bird is an eagle or another bird of prey (i.e., raptor). Adult bald and golden eagles range anywhere from 30 to 40 inches long and have a 79- to 80-inch wingspan, while other raptors, such as red-tailed hawks, are considerably smaller, measuring about 19 inches long and with a 49-inch wingspan. When in doubt, contact the SCE Biologist for guidance.
- 5.3.4 Non-Eagle/Non-T&E. The SCE Employee shall bag and transport the carcass to the closest SCE facility and dispose of it in a dumpster at the SCE facility.
- 5.3.5 Eagles. If the bird is an eagle:
- 5.3.5.1. The SCE Employee will notify the on-call SCE Biologist at the earliest reasonable opportunity.
  - 5.3.5.2. The SCE Employee shall place the bird in a plastic bag using either nitrile gloves or an inverted plastic bag.
  - 5.3.5.3. The SCE Employee shall arrange to keep the carcass frozen until collected by a SCE Biologist. This can be accomplished

by placing the bagged bird in a cooler full of ice or by filling a plastic bag with ice and placing the bagged bird inside.

**5.3.5.4.** The SCE Biologist will verify the species identity at the earliest reasonable opportunity and, if confirmed that the carcass is an eagle, promptly notify the SCE Avian Protection Specialist. If the bird is an eagle, the SCE Biologist will contact a USFWS law enforcement agent for coordination. If the bird is a state-listed species, the SCE Biologist will notify the CDFW before the end of the next business day.

**5.3.5.5.** If the carcass is an eagle, the SCE Avian Protection Specialist shall report to the appropriate agencies and send the carcass to the National Eagle Repository. The carcass must be shipped on Monday, Tuesday, or Wednesday only, for delivery no later than Friday (unless Friday is a holiday). The eagle should be sent to:

U.S. Fish & Wildlife Service  
National Eagle Repository  
Rocky Mountain Arsenal, Building 128  
Commerce City, CO 80022

**5.3.5.6.** If the SCE Biologist determines that the bird is **not** an eagle, the SCE Biologist shall instruct the SCE Employee to dispose of the bird. The SCE Employee shall bag and transport the carcass to the closest SCE facility and dispose of it in a dumpster at the SCE facility.

5.3.6 T&E Species. If the bird is a T&E species (for example, California condor):

**5.3.6.1.** The SCE Employee will take a digital photograph if possible (Section 5.3.1) and send to the on-call SCE Biologist at the earliest reasonable opportunity.

**5.3.6.2.** The SCE Employee shall leave the bird in place. The SCE Employee should attempt to cover the carcass with a box or bucket to reduce the chance of scavenging.

**5.3.6.3.** The SCE Biologist will verify the species identity based on the photograph or description at the earliest reasonable opportunity and, if confirmed that the carcass is a T&E species, promptly notify the SCE Avian Protection Specialist. If the bird is a federally listed T&E species, the SCE Biologist will contact a USFWS law enforcement agent for coordination (see current [USFWS Special Purpose Permit](#) for contact information. If the bird is a state-listed species, the SCE

Biologist will notify the CDFW before the end of the next business day.

**5.3.6.4.** If the carcass is a T&E species, the SCE Avian Protection Specialist shall follow directions from USFWS and/or CDFW regarding disposition of the carcass.

**5.3.6.5.** If the SCE Biologist determines that the bird is **not** a T&E species, the SCE Biologist shall instruct the SCE Employee to dispose of the bird. The SCE Employee shall bag and transport the carcass to the closest SCE facility and dispose of it in a dumpster at the SCE facility.

5.3.7 The SCE Employee will complete an EHSync Avian Incident Report within five (5) business days of the discovery date. This deadline may be extended upon approval of the SCE Avian Protection Specialist.

5.3.8 Eagle, non-eagle raptor, or T&E species:

**5.3.8.1.** Within five (5) business days of the discovery, the SCE Employee will create a work request (or notify the appropriate organization within SCE's T&D to create a work request) to retrofit the pole to comply with SCE's current design specifications for avian protection (refer to SCE DOH DC-535). This time frame may be extended upon approval of the SCE Avian Protection Specialist.

**5.3.8.2.** A Priority 2-150 notification will be initiated for reactive post-fatality retrofits (not including pole replacement) with a completion date of 90 days for the installation of covers or other protective devices pursuant to Distribution Overhead Construction Standards (DOH) DC 535 - Avian Safe Power Line Construction; and Transmission Overhead Construction Standards (TOH). 5.3.5.3. Variances may be authorized by the appropriate District or Grid Manager (T&D) and the Biological and Archaeological Resources (BAR) Manager in consultation with the Avian Protection Specialist and shall be documented in a confirmatory email from each and tracked by the SCE Avian Protection Specialist. In the event that a consensus date cannot be established, the authorized T&D Director, in consultation with the Director of ESD, shall make the final decision.

5.3.9 Eagle. Two structures in each direction from the incident pole are expected to be evaluated for similar configurations and retrofits as a part of the work request.

5.3.10 Non-eagle raptors. Only the incident pole is to be reviewed for retrofit.

5.3.11 All other bird species. Retrofits are expected to be scheduled as determined by the responsible T&D group, but normally not to exceed two (2) years from receipt of the Priority 2 notification.

**Note:** Variances to the process above may be authorized by a joint decision made by the authorized T&D Director and the Director of ESD. Such variances



must be documented in the Priority 2 notification and tracked by the SCE Avian Protection Specialist.

#### **5.4 Proactive Retrofits**

During non-emergency repairs, planned maintenance, and/or scheduled construction, T&D field employee shall ensure that construction at the working level and below complies with avian protection standards, if practical. If, for any reason, the avian protection standards cannot be implemented at the working level and below, a priority 2-150 notification will be initiated, triggering a return to the structure to complete avian compliance requirements. See DOH DC 535 for approved avian protection materials.

Avian Mortality Procedure Overview

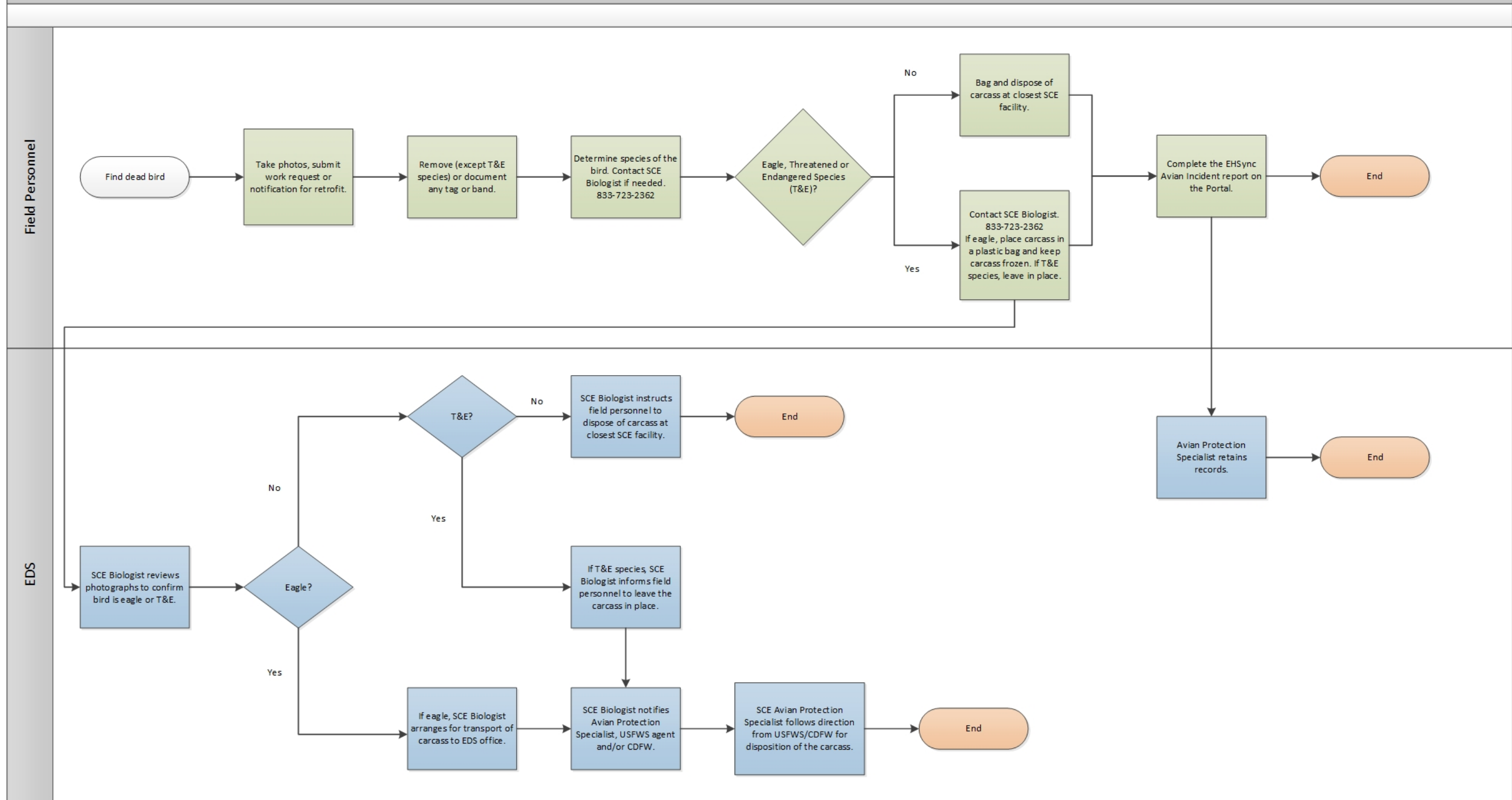


Figure 1. Avian Mortality Procedure Flowchart

## 5.5 Bird Nest Removal

### WARNING

**Diseases can be transmitted by contact with Bird Nests. Section 5.9 contains safety requirements to implement before any contact with Nests.**

This section applies to nests that occur on SCE facilities and projects. Contact the SCE Avian Protection Specialist or the project EPM for guidance on the definition of an Active Nest under CDFW ([See also 2.6, Nest](#)).

Figure 2, Nest Issues Procedure Flowchart, shows an overview of the process described in this section.

Bird Nests (active and inactive) may be disturbed or removed only under the following circumstances:

- For all Active Nests, and Inactive Nests of Eagles or T&E species: only if the Nest poses an Imminent Danger that threatens system reliability (e.g. risk of causing outages or fires, or downed equipment) or safety (of the public or SCE Employees or Contractors);
- For Inactive Nests that are not Eagle or T&E species, but only if the Nest:
  - Threatens system reliability;
  - Is on vegetation or structures to be trimmed or removed during course of normal system maintenance; or
  - Is within an SCE work area and may be impacted by work activities.

**Note:** Only an Authorized SCE Employee shall determine if there is an Imminent Danger.

### 5.5.1 Imminent Danger Circumstances

#### 5.5.1.1 Active Nest (not Eagle or T&E)

- The SCE Employee or Contractor shall immediately notify the on-call SCE Biologist. Imminent Danger circumstances are required for Take of a Nest.
- If the Nest requires removal or relocation, the SCE Biologist shall provide support to aid in the relocation or retrieval of nest contents for transport to a wildlife rehabilitation facility or disposal (as appropriate). Nest relocation is the preferred option with removal only considered when relocation is not feasible. Consult with the SCE Avian Protection Specialist or T&D construction manuals for nest platform options to relocate the removed nest. The SCE Employee or Contractor shall submit the EHSync Avian Incident report within five (5) business days of the discovery.
- If the nest does not need to be removed, the SCE Biologist shall provide instruction to the SCE Employee or

Contractor regarding working near an Active Nest and/or provide a biological monitor during work activities.

- The SCE Biologist shall provide the SCE Employee or Contractor with oral instructions on how to manage the nest to be followed up with written instructions.

#### **5.5.1.2. Active or Inactive Nest of Eagle or T&E**

- If the Nest requires removal or relocation, the SCE Biologist shall promptly contact USFWS and/or CDFW, and if the Nest lies within a Major Project footprint, contact the respective EPM. Consult with the SCE Avian Protection Specialist or T&D construction manuals for nest platform options.
- If the Nest does not need to be removed, the SCE Biologist shall provide instruction to the SCE Employee or Contractor regarding working near an Active Nest and/or provide a biological monitor during work activities.
- The SCE Biologist shall provide the SCE Employee or Contractor with oral instructions on how to manage the nest to be followed up with written instructions, as well as copies of any permits issued by USFWS or CDFW related to removing or relocating the Nest.

#### **5.5.1.3. Inactive Nest (not Eagle or T&E)**

- The Nest may be trimmed, removed, or relocated.
- No EHSync Avian Incident report is required unless the Nest is relocated. If the Nest is relocated, submit the EHSync Avian Incident report within five (5) business days of relocation. Consult with the SCE Avian Protection Specialist or T&D construction manuals for nest platform options.

### **5.5.2 Nest is a hazard or obstructs work, but is not an Imminent Danger to system reliability or safety**

#### **5.5.2.1. Active Nest (not Eagle or T&E)**

- The SCE Employee or Contractor shall not alter the Nest and shall report to the SCE Biologist or SCE Avian Protection Specialist within 24 hours of discovery via telephone (833-723-2362) or email. The SCE Employee or Contractor shall submit the EHSync Avian Incident report within five (5) business days of the discovery.
- If the Nest requires removal or relocation, the SCE Biologist shall provide support in determining when the Nest will become Inactive and allow for work to proceed. Consult with the SCE Avian Protection Specialist or T&D construction manuals for nest platform options.
- If the Nest does not need to be removed, the SCE Biologist shall provide support in determining when the Nest will become Inactive and allow for work to proceed or,

when circumstances allow because risk of nest failure is low, shall provide instruction to the SCE Employee or Contractor regarding working near an Active Nest, and/or provide a biological monitor during work activities.

- The SCE Biologist shall provide the SCE Employee or Contractor with oral instructions to be followed up with written instructions if requested.

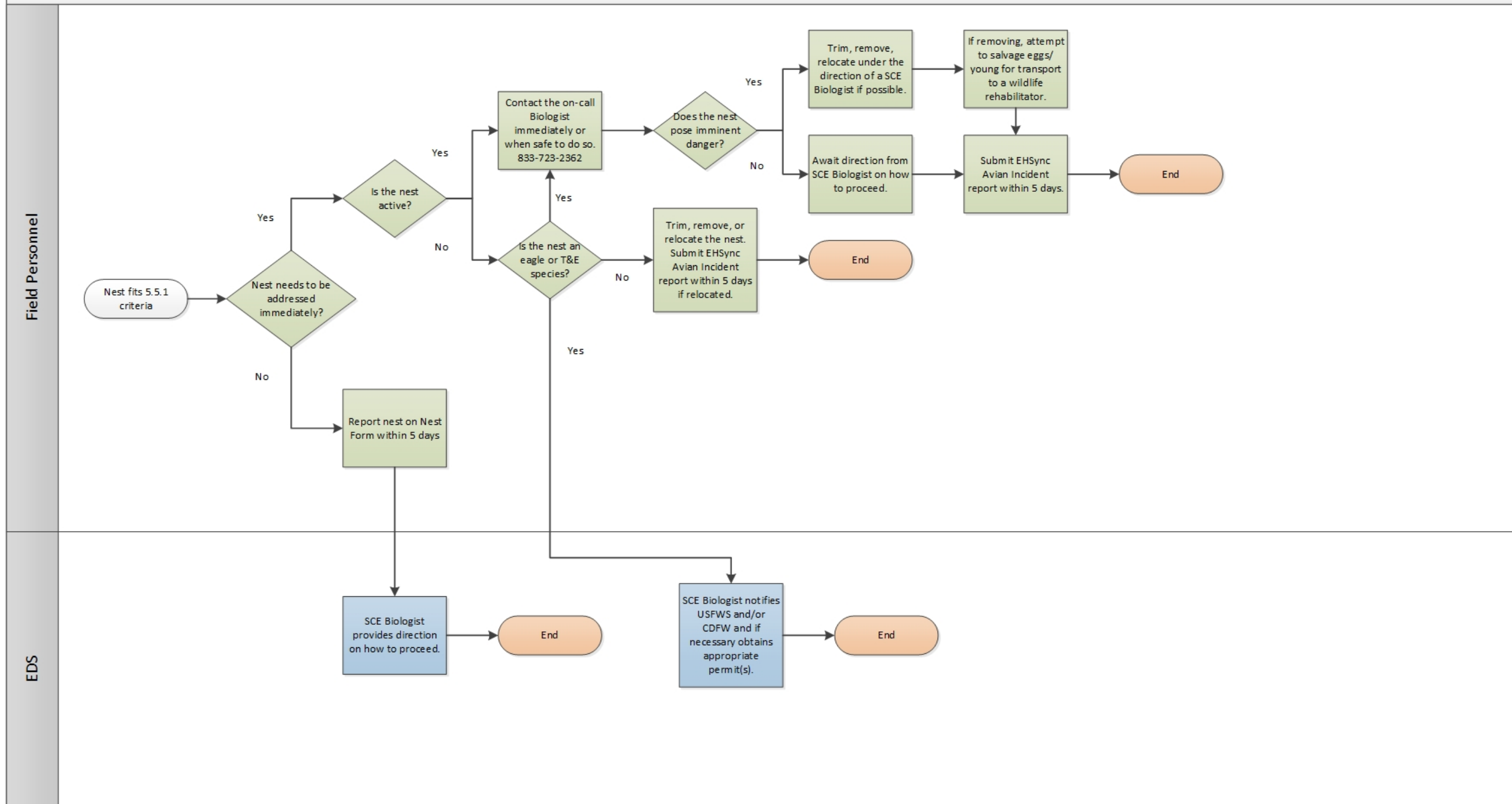
#### **5.5.2.2. Active or Inactive Nest of Eagle or T&E**

- If the Nest belongs to an Eagle or T&E species, the SCE Employee or Contractor shall not alter the Nest and shall report to the SCE Biologist or SCE Avian Protection Specialist within 24 hours of discovery via telephone or email. The SCE Employee or Contractor shall submit the EHSync Avian Incident Report within five (5) business days of the discovery.
- The SCE Biologist or Avian Protection Specialist shall request a permit from the USFWS to remove the Nest, and/or contact CDFW for further direction (as appropriate). The SCE Biologist or Avian Protection Specialist shall direct the SCE Employee or Contractor regarding the appropriate actions to take related to the Nest.

#### **5.5.2.3. Inactive Nest (not Eagle or T&E)**

- Nest may be trimmed, removed, or relocated.
- No EHSync Avian Incident report is required unless the Nest is relocated. If the Nest is relocated, submit the EHSync Avian Incident report within five (5) business days of relocation. Consult with the SCE Avian Protection Specialist or T&D construction manuals for nest platform options.

Nest Issues Procedure Overview



Figure

2. Figure 2. Nest Issues Procedure Flowchart

## 5.6 Injured Birds

- 5.6.1 Unless they are qualified, SCE Employees and Contractors shall not handle injured birds. Refer to [Section 5.9 - Safety Procedures](#). Qualified personnel are biologists or are determined by the SCE Avian Protection Specialist through an interview.
- 5.6.2 If an SCE Employee or Contractor encounters a bird injured due to contact with a SCE facility, the SCE Employee or Contractor will immediately contact the on-call SCE Biologist, who will identify a licensed wildlife rehabilitator.
- 5.6.3 The on-call SCE Biologist (or an ESD-hired biological contractor with avian expertise) will recover the injured bird and transport it to the wildlife rehabilitator.
- 5.6.4 The on-call SCE Biologist will notify the SCE Avian Protection Specialist, who will follow up with the wildlife rehabilitator for the final disposition of the bird. The SCE Avian Protection Specialist will include the disposition information on the injured bird in the annual report to USFWS in compliance with the Special Purpose Permit.
- 5.6.5 The SCE Employee or Contractor shall submit the EHSync Avian Incident report within five (5) business days of the discovery

## 5.7 Information Management

- 5.7.1 All completed reports are expected to be reviewed and managed by the SCE Avian Protection Specialist.
- 5.7.2 Records kept for compliance with the USFWS Special Purpose Permit shall be maintained for five (5) years from the date of expiration of the permit pursuant to 50 C.F.R. Section 13.46. Per company policy, ESD shall maintain all records related to this APP for 10 years after expiration of the USFWS Special Purpose Permit.

## 5.8 Construction Standards

SCE will apply avian-safe design principles where feasible and with appropriate consideration to effectiveness, cost, and biological resource significance.

5.8.1 SCE avian-safe construction standards are expected to be maintained in the following standards: Distribution Overhead Construction Standards ([DOH](#)) DC 535 - Avian Safe Power Line Construction; Transmission Overhead Construction Standards ([TOH](#)); and Electrical Construction Station ([ECS](#)) Section 57 – Animal Protection (Substations).

**5.8.1.1.** Changes to the SCE avian-safe construction standards are expected to be sponsored by a T&D Director and initiated through the T&D Standards Request/Q&A Submittal Form.

5.8.2 At the recommendation of T&D or the SCE Avian Protection Specialist, certain poles may be fitted with covers to mitigate the potential for electrocution or certain spans of wires may be fitted with line marking devices to mitigate the potential for line collisions of protected bird species using standard SCE materials and hardware.

5.8.3 SCE has designated Eagle Zones within which additional phase-to-phase and phase-to-ground clearances are expected to be maintained on new and rebuilt facilities, unless such efforts would compromise public or worker safety. Refer to T&D Standards & Publications for process to deviate from SCE standards as well as the DOH for documentation required for submittal to the SCE Avian Protection Specialist.

**5.8.3.1.** Current maps and information on Eagle Zones can be found [here](#) on the SCE Portal within the T&D Standards & Publications section. Click [here](#) to access Eagle Zones on eWorld (Layers>SCE>Eagle Zones).

**5.8.3.2.** An Eagle Zone Review Team shall be formed in response to new information (e.g. new human developments, eagle fatalities outside Eagle Zones) that suggest Eagle Zones may need to be modified. The SCE Avian Protection Specialist chairs the Eagle Zone Review Team. The team shall be comprised of representatives of T&D and other SCE employees as specified by the SCE Avian Protection Specialist and the authorized T&D Director or designee. The team will review the Eagle Zone boundaries on an as-needed-basis. When changes are required, the team will establish criteria for expanding or contracting Eagle Zones and include these criteria in a report produced, which will be posted to the APP document library maintained by the SCE Avian Protection Specialist.

**5.8.3.3.** To change Eagle Zone boundaries, the Eagle Zone Review Team will submit a [T&D Standards Request Form](#). Standards & Publications will update the Distribution Design Standards ([DDS](#)) manual with any approved changes to the Eagle Zones.



## 5.9 Avian-Specific Safety Requirements

### 5.9.1 Nest Safety

**5.9.1.1.** Prior to climbing any structure to inspect or remove a nest, SCE Employees and Contractors shall evaluate safety hazards and, if conditions warrant, take an outage on the line before climbing the structure.

**5.9.1.2.** When removing a Nest, the following personal protective equipment (PPE) shall be used:

- Goggles
- Face Shield
- Hardhat
- Gloves appropriate for the work performed
- Flame resistant (FR) coveralls (as required); or FR shirt with sleeves rolled down
- A N95 or P100 filtering facepiece (dust mask) should be used. **Note:** The supervisor will provide the SCE Employee with a copy of Appendix D from the respiratory standard as specified in SCE's Respiratory Protection Program.

**5.9.1.3.** If the removal of a Nest could release airborne dust containing dried fecal matter and/or nesting materials, protective measures such as wetting the nesting material and working upwind shall be employed to avoid inhalation of nest material. A pre-job tailboard or job hazard analysis shall be conducted to address such issues.

**5.9.1.4.** While removing or trimming a nest, do not eat, drink, or smoke. Clean tools, such as hot sticks, if they contact the nest. Upon completion of the job, wash hands and any other exposed areas with soap and water. If potable water is unavailable, use hand sanitizer.

### 5.9.2 Carcass Safety

**5.9.2.1.** If handling a bird carcass, wear protective clothing, including coveralls, nitrile gloves, and safety glasses. Wear nitrile gloves and/or use an inverted plastic bag to pick up carcasses. Do not eat, drink, or smoke while handling carcasses. Wash hands and any other exposed area with soap and water after disposing of a carcass. If potable water is unavailable, use hand sanitizer.

## 5.10 Training

SCE conducts avian protection training for SCE Employees and Contractors with APP responsibilities. ESD will develop and maintain training programs under the APP. Operational units are expected to determine which employees require training. Training is provided by or with input from the SCE Avian Protection Specialist. ESD will determine when updated training is needed for employees not receiving annual training.

### 5.10.1 Operational Employees

The annual training program educates those SCE Employees who maintain the SCE T&D system regarding the APP and their responsibilities. Training topics may include avian construction standards and mitigation products, reporting and carcass disposal, Nest management procedures, and injured bird procedures.

### 5.10.2 ESD Environmental Employees

ESD Environmental employees are expected to receive initial instruction on the SCE responsibilities under the USFWS Special Purpose Permit. Designated employees, such as Field Environmental Specialists, biologists, and archaeologists, are expected to receive initial instruction on how to implement EHSync Avian Incident reports.

### 5.10.3 SCE Contractors

SCE Contractors working on T&D systems are expected to receive initial training from ESD on environmental matters, including avian protection. On Major Projects, all contractors are required to receive environmental training prior to entering the project area.

## 5.11 Quality Control

### 5.11.1 Inspections

See the [Distribution Inspection and Maintenance Program \(DIMP\)](#) manual and the [Transmission Operations and Maintenance Policies and Procedures \(TOM\)](#) for additional information.

**5.11.1.1.** SCE inspects wood poles and equipment according to California Public Utilities Commission (CPUC) General Order 165 (GO 165). These inspections include examination of the pole for avian safety and Nests that could impact reliability or safety, or create high fire risk.

**5.11.1.2.** The Oversight & Quality Assurance group in T&D inspects distribution capital work orders for compliance with SCE standards including the avian protection standard DOH DC 535.

5.11.2 ESD will maintain the Avian Information Management System (AIMS), a Geographic Information System (GIS) database for tracking avian interaction data.

## 6. Major Projects

Major Projects are generally subject to requirements imposed by the CPUC and resource agencies that address the specific issues associated with wildlife and habitat impacts within the project area.

In addition to the requirements in the APP, there are additional requirements applicable to Major Projects.

### 6.1 Applicant-Proposed Measures

Several federally and state listed bird species occur in SCE's territory (see [Attachment 8.1, Bird Dimensions and Listing Status in SCE Territory](#)).

- 6.1.1 SCE has standardized Applicant-Proposed Measures (APMs) for reducing potentially significant impacts to protected bird species to less than significant levels. Contact the Major Environmental Projects Principal Manager for the most recent version of the APMs. If impacts to Protected Species are expected to be less than significant, avian species APMs may not be necessary. The SCE Development Contractor will initially determine whether or not there are significant biological impacts. The Development Contractor will then review applicable APMs or suggest alternatives. The SCE Biologist may be consulted by the Environmental Project Manager to verify whether biological APMs are required and will be consulted to validate contractor alternatives to include in the Proponent's Environmental Assessment (PEA).
- 6.1.2 SCE's Major Projects Organization (MPO) maintains processes for updating APMs and reviewing PEAs. Those processes apply to this subsection.

### 6.2 Nesting Bird Management Plan

- 6.2.1 The Nesting Bird Management Plan (NBMP) is often required by the CPUC and will describe measures to be undertaken by SCE and/or the Contractor to comply with the MBTA and California Fish and Game Code (Sections 3503 and 3503.5). In the absence of a requirement from the CPUC, ESD and MPO shall determine whether an NBMP is appropriate for a Major Project based on contractor recommendations for the project or agency requirements.
- 6.2.2 ESD maintains the NBMP template. Contact the SCE Avian Protection Specialist for the current version.
- 6.2.3 Modifications to the NBMP template must be approved by the ESD Director or designee.
- 6.2.4 Guidance on Preparation  

The habitat assessment and initial biological surveys for the project will determine whether a NBMP should be developed. The information from these surveys should be used to guide the development of appropriate buffers based on conditions specific to the project. In addition, these surveys will determine which portions of the NBMP template are necessary for management of nests within the project area.

### 6.3 Projects without an NBMP

If an NBMP is not required, the project should follow the APMs and/or mitigation measures in the final environmental document. This likely means that buffers are defined in the final environmental document, and buffer reductions would be obtained by a request to the resource agencies or the CPUC, depending on the mitigation measures. In the absence of an APM or mitigation measure, a project team may decide to develop an internal NBMP to manage nest issues on a project without the plan requiring approval from the agencies.

### 6.4 Avian-Safe Design

ESD shall review Major Project designs to ensure compliance with any CPUC mitigation measures that require concurrence with APLIC's Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (APLIC 2006) and/or Reducing Avian Collisions: the State of the Art in 2012 (APLIC 2012).

#### 6.4.1 Review of Design

- 6.4.1.1. The Environmental Project Manager places a request with the MPO Project Manager to obtain project avian-safe design such as transmission towers, distribution poles, and substation(s) components.
- 6.4.1.2. The designs should refer to particular standards within T&D construction manuals, for example, DOH DC 535 Section 2.2, 4/12/16kV, 3-Wire or 4-Wire, Straight Line Post-Suspension Construction.
- 6.4.1.3. For substations, only the animal protection covers applied on equipment within the substation require ESD review, not the substation design itself.
- 6.4.1.4. Any designs not in compliance with the relevant CPUC mitigation measure(s) are expected to be documented and reported to the Environmental Project Manager for MPO correction. Subsequent approval of updated project designs are performed by the Environmental Project Manager, in consultation with the SCE Avian Protection Specialist.

#### 6.4.2 Documentation for the CPUC

- 6.4.2.1. The SCE Avian Protection Specialist drafts the documentation confirming compliance with the avian-safe design requirement. The documentation will include separate analysis of each

project component (transmission, distribution, and substation) and each pole and/or tower design.

**6.4.2.2.** The Environmental Project Manager obtains approval from MPO for the documentation.

**6.4.2.3.** The documentation is submitted to the CPUC by SCE's Regulatory Affairs representative to the Project.

## **6.5 Reporting**

Each project will require procedures for reporting information such as avian mortality or nesting, both internally within SCE and externally to the appropriate agencies. Reporting should be based on project requirements laid out in the environmental documents and permits. Reporting shall be executed via a project reporting system, if used on the affected Project. Contact the SCE Avian Protection Specialist for current reporting procedures flowchart templates. Birds killed by electrocution or line collision on SCE facilities shall also be reported using EHSync Avian Incident report as described in the [Avian Mortality](#) section above.

## 7. References

### 7.1 Federal

- 50 C.F.R. § 10.13
- 50 C.F.R. §§ 17.11-17.12
- 50 C.F.R. § 17.31
- 50 C.F.R. Part 21, Migratory Bird Permits
- 50 C.F.R. § 22
- Endangered Species Act, 16 U.S.C. §§ 1531-1544
- Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-668d
- Migratory Bird Treaty Act, 16 U.S.C. §§ 703-712

### 7.2 State

- California Endangered Species Act, Cal. Fish & Game Code §§ 2050-2069
- Cal. Fish & Game Code §§ 2081.7, 2835, 3503, 3503.5, 3503, 3511, 3513
- CPUC General Order 165 (GO 165)

### 7.3 SCE

- Avian Power Line Interaction Committee (APLIC) 2006
- Distribution Overhead Construction Standards DOH DC-535 – Avian Safe Power Line Construction.
- Transmission Overhead Construction Standards (TOH)
- Electrical Construction Station (ECS) Section 57 – Animal Protection (Substations)
- Distribution Design Standards (DDS) manual
- Eagle Zone Maps
- SCE's Respiratory Protection Program, Appendix D
- Endangered Species Alert Program (ESAP) Manual
- Birds and Power Lines
- Respiratory Protection Program
- Distribution Inspection and Maintenance Program (DIMP)
- Ground-Disturbing Activities
- Avian Information Management System (AIMS)

#### **Other**

- California Natural Diversity Database (CNDDB)

- Birds of North America Online
- Catalina Island Conservancy

#### 7.4 Hyperlinks

- SCE's Environmental Corporate Policy <https://edisonintl.sharepoint.com/ssc/Pages/myenvironment.aspx>
- SCE's Avian Protection Plan <https://edisonintl.sharepoint.com/ssc/Pages/Document%20Library%20Pages/environmentalstandardsmanuals.aspx?RootFolder=%2Fssc%2FEnvironmental%20Standards%20%20Manuals%2FAvian%20Protection%20Plan&FolderCTID=0x01200006EC5D54ADCBB747B43E6E25BC6E3278&View=%7B05CC3848%2DD1C1%2D4FBD%2DB52A%2D80CDBBE1B0B0%7D>
- USFWS Special Purpose Permit <https://ecm.sce.eix.com/livellink/livellink.exe/fetch/2000/20590221/20591101/20570387/20554973/20570059/usfaw-mb72848.pdf?nodeid=40935751&vernum=3>
- EHSync Avian Incident Report [https://sapportal.edisonintl.com/iri/portal?NavigationTarget=pcd:portal\\_content/SCE/com.sce.Operations\\_Support/com.sce.My\\_Company/com.sce.iViews/com.sce.EnvironmentHealthandSafety/forms/com.sce.iVu.spill\\_notification\\_form&NavMode=3](https://sapportal.edisonintl.com/iri/portal?NavigationTarget=pcd:portal_content/SCE/com.sce.Operations_Support/com.sce.My_Company/com.sce.iViews/com.sce.EnvironmentHealthandSafety/forms/com.sce.iVu.spill_notification_form&NavMode=3)
- Endangered Species Alert Program (ESAP) Manual <https://edisonintl.sharepoint.com/ssc/Pages/Document%20Library%20Pages/environmentalstandardsmanuals.aspx?RootFolder=%2Fssc%2FEnvironmental%20Standards%20%20Manuals%2FBiological%20Resources&FolderCTID=0x01200006EC5D54ADCBB747B43E6E25BC6E3278&View=%7B05CC3848%2DD1C1%2D4FBD%2DB52A%2D80CDBBE1B0B0%7D>
- DOH [https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Distribution%20Overhead%20Construction%20Standards%20\(DOH\).pdf](https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Distribution%20Overhead%20Construction%20Standards%20(DOH).pdf)
- TOH [https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Transmission%20Overhead%20Construction%20Standards%20\(TOH\).pdf](https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Transmission%20Overhead%20Construction%20Standards%20(TOH).pdf)
- ECS [https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Electrical%20Construction%20Station%20\(ECS%203-C\).pdf](https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Electrical%20Construction%20Station%20(ECS%203-C).pdf)
- T&D Standards Request Form <https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Standards%20Change%20Request%20Form.pdf#search=standards%20request>



- DDS [https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Distribution%20Design%20Standards%20\(DDS\).pdf](https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Distribution%20Design%20Standards%20(DDS).pdf)
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- TOM [https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Transmission%20Operations%20and%20Maintenance%20Policies%20and%20Procedures%20\(TOM\).pdf](https://edisonintl.sharepoint.com/sites/TD/org/Standards%20%20Publications/Transmission%20Operations%20and%20Maintenance%20Policies%20and%20Procedures%20(TOM).pdf)

Rev.	Date	Description of Revision	Contact
0	04/30/14	Approved APP	K. Donohue
1	07/15/15	Revised APP Language changes that improve the accuracy and readability of the document, but do not change implementation are throughout the APP. Section 5.3.7 Reactive retrofit have been given timeframes of 90 days for raptors, eagles and T&E species and 2 years for all other protected bird species. Section 5.4 has been added for Proactive Retrofits when opportunities arise.	K. Donohue
2	8/8/16	Changed references from Corporate Environmental Health & Safety to Environmental Services Department (ESD). Clarified procedure for bird nest removal in 5.5. Updated hyperlinks. Modifications to Major Projects related to Operational Excellence organization changes.	K. Donohue
3	11/20/18	<ul style="list-style-type: none"> <li>•Definitions and Responsibilities updated to sync with BAR standards</li> <li>•Rearrangement and removal of text in Regulatory Background for better flow</li> <li>•Procedures updated to reporting in EHSync Avian Incident and calls to new phone number</li> <li>•Titles added to sections in 5.3 Avian Mortality for clarity</li> <li>•Text in section 5.3 rearranged for better flow</li> <li>•Global change from “is expected to” to “will”</li> <li>•Eagle Zone Review Team language updated to state a team shall be formed in response to new information suggesting Eagle Zones need to be modified rather than every two years</li> <li>•Deleted section 5.9 Ground-Disturbing Activities as the environmental screening process is address elsewhere outside of the APP</li> <li>•Separated section 5.9 on Safety into Nest Safety and Carcass Safety for clarity</li> <li>•Updated section 6 Major Projects to reflect changes from OpX</li> <li>•Hyperlinks updated</li> </ul>	K. Donohue



## 8. Attachments

### 8.1 Listing Status of Avian Species in SCE's Service Territory

#### Listing Status of Avian Species Susceptible to Collision or Electrocutation Risks in SCE's Service Territory

Common Name	Scientific Name	Federal Status <sup>1</sup>	California Listing <sup>1</sup>	Risk <sup>2</sup>	SJV	SN	D	CZ	SCI	CR	IV
American White Pelican	<i>Pelecanus erythrorhynchos</i>	MBTA	SSC	C <sup>3</sup>	•	•	•	•		•	•
California Brown Pelican	<i>Pelecanus occidentalis californicus</i>	MBTA	CFP	C <sup>3</sup>				•	•		
Great Blue Heron	<i>Ardea herodias</i>	MBTA		C & E	•	•		•		•	•
Great Egret	<i>Ardea alba</i>	MBTA		C & E	•			•		•	•
Turkey Vulture	<i>Cathartes aura</i>	MBTA		E	•	•	•	•		•	•
California Condor	<i>Gymnogyps californianus</i>	FE	SE, CFP	C <sup>3</sup> & E	•	•		•			
Osprey	<i>Pandion haliaetus</i>	MBTA		E				•	•	•	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	MBTA, BGEPA	SE, CFP	C & E	•	•	•	•	•	•	
Red-shouldered Hawk	<i>Buteo lineatus</i>	MBTA		E	•	•		•		•	
Swainson's Hawk	<i>Buteo swainsoni</i>	MBTA	ST	E	•		•	•		•	
Red-tailed Hawk	<i>Buteo jamaicensis</i>	MBTA		E	•	•	•	•	•	•	•
Ferruginous Hawk	<i>Buteo regalis</i>	MBTA		E			•			•	•
Rough-legged Hawk	<i>Buteo lagopus</i>	MBTA		E		•	•			•	
Golden Eagle	<i>Aquila chrysaetos</i>	MBTA, BGEPA	CFP	C <sup>3</sup> & E	•	•	•	•		•	•

Common Name	Scientific Name	Federal Status <sup>1</sup>	California Listing <sup>1</sup>	Risk <sup>2</sup>	SJV	SN	D	CZ	SCI	CR	IV
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	MBTA	CFP	C & E	•	•	•	•		•	•
Prairie Falcon	<i>Falco mexicanus</i>	MBTA		C & E	•		•	•		•	•
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	MBTA	ST, CFP	C	•		•				•
Barn Owl	<i>Tyto alba</i>	MBTA		C & E	•	•	•	•	•	•	•
Great Horned Owl	<i>Bubo virginianus</i>	MBTA		E	•	•	•	•		•	•
Yellow-billed Magpie	<i>Pica nuttalli</i>	MBTA		E	•			•		•	
American Crow	<i>Corvus brachyrhynchos</i>	MBTA		E	•	•	•	•		•	•
Common Raven	<i>Corvus corax</i>	MBTA		E	•	•	•	•	•	•	

Sources: California Natural Diversity Database (CNDDB) (2012), Birds of North America Online (2012), Catalina Island Conservancy (2009)

<sup>1</sup>Status: FE/SE=federal/state endangered; FT/ST=federal/state threatened; CFP=California fully protected species, SSC=species of special concern; MBTA=Migratory Bird Treaty Act; BGEPA=Bald and Golden Eagle Protection Act


<sup>2</sup>Typical Risk: C=Collision, E=Electrocution

SJV=San Joaquin Valley, SN=Sierra Nevada, D=Desert, CZ=Coastal Zone, SCI=San Clemente Island, CR=Coastal Ranges, IV=Imperial Valley

<sup>3</sup>Typically midspan electrocution on distribution voltage lines

8.2 Signature Page

SCE	EHS	ENVIRO	PL	Doc. No	1
				Version	1
Responsible Department: Corporate Environmental, Health and Safety					
Eff. Date		Latest Signature Date			
Supersedes		SCE-CEHS-EP-PL-1		NA	




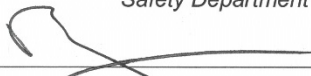
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## Avian Protection Plan


**Corporate Environmental, Health and Safety  
Corporate Plan**

**SCE-EHS-ENVIRO-PL-1**

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Page 1 of 34

**APPENDIX B**  
**NESTING BIRD GUIDANCE FOR SMALL PROJECTS**

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# **Nesting Bird Management Guidance for Small Projects**

**Southern California Edison**

Corporate Environmental Services

April 2016

# Contents

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<b>1.0</b>	<b>Management for Nesting Birds</b> .....	<b>2</b>
1.1	Management Summary.....	2
1.2	Definition of an active nest .....	2
1.3	Active Nest Avoidance and Documentation .....	3
1.3.1	Determination of Species-specific or Avian Group/Family Specific Buffers .....	3
1.3.2	Implementation of Species-Specific Buffers .....	5
1.3.3	Buffer Distances for Access Roads .....	6
1.3.4	Active Substations and Yards .....	7
1.4	Inactive Nest Management .....	7
1.4.1	Raptors .....	7
1.4.2	Species Not Mentioned in this Guidance .....	8
1.4.3	Non-listed, Non-Game Bird Species Nest Removal.....	8
<b>2.0</b>	<b>Field Approach</b> .....	<b>9</b>
2.1	Survey Requirements .....	9
2.1.1	Survey Experience and Training .....	9
2.2	Nesting Season Survey Methodology.....	10
2.2.1	Nest identification .....	10
2.2.2	Nest Observation.....	10
2.2.3	Active Nest Determination.....	10
2.3	Monitoring.....	11
2.4	Reporting.....	11
2.4.1	Data Sheets .....	11
2.4.2	Communication .....	11

## Tables

1	Buffers for Construction
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# 1.0 Management for Nesting Birds

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## 1.1 Management Summary

Management of nesting birds means avoiding or minimizing project activities that have the potential to cause active nest failures as well as to minimize or avoid construction delays. Protecting active nests involves establishing construction disturbance-free buffers within which construction activities are restricted. Establishing and maintaining buffers is designed to prevent take of active nests, eggs, nestlings, or nesting birds as a result of construction activities. Tolerance to disturbance can vary from one bird species to another. Therefore, it is feasible to establish species-specific, or family/group-specific, recommended buffers that will permit successful nesting, while reducing constraints on construction activities. This Guidance details buffers per species or family/group based on construction type, activity, and duration; natural history; individual behavior; stage of the reproductive cycle; known tolerances; and environmental site conditions.

This section describes the definition of an active nest, determination, and implementation of reduced species-specific or family/group-specific buffers, implementation of nest buffers, and the removal of inactive nests.

## 1.2 Definition of an active nest

Active nests of native bird species are protected in the state of California by both state and federal law. If this project is outside of California, other state laws may be applicable.

While MBTA does not clearly define what an active (or inactive) nest is, the U.S. Fish and Wildlife Service (USFWS; 2003) has clarified that the federal regulations do not pertain to the destruction of nests alone (without birds or eggs).

Though nests without birds or eggs are not protected from destruction by MBTA, CDFW has not provided clarification on protection of nests. California Fish and Game Code 3503 protects nests and eggs from “needless” destruction. Therefore, non-raptor, non-special status species nests without eggs or chicks are considered inactive for the purposes of this Guidance. For raptors and special status species, a nest is considered active upon initiation of construction. In most cases, a previously active nest becomes inactive when it no longer contains viable eggs and/or living young and is not being used by a bird as part of the reproductive cycle (eggs, young, fledging young still dependent upon nest). In some cases, a nest can be abandoned by the bird constructing it and become inactive prior to egg laying. In such cases, determination that the nest is inactive is made on a case-by-case basis based on consistent observations and the determination of an avian biologist. Using this approach, buffers are established around an active nest and will remain established until the nest is determined to be inactive by an avian biologist or construction activities are complete in the area.

Because a moderate number of avian species never “build” nests, special attention will be provided to potential nests, known old nests and the behavior of adults of any member of the order Strigiformes (owls), or Caprimulgiformes (nightjars), Cathartidae (new world vultures) or families in the order Falconiformes (diurnal birds of prey) including Falconidae (falcons), and Accipitridae (eagles, hawks, and kites).

## 1.3 Active Nest Avoidance and Documentation

### 1.3.1 Determination of Species-specific or Avian Group/Family Specific Buffers

The buffers around active nests for the various groups of birds are depicted in Table 1 and are the recommended distances at which light construction activities can theoretically occur without disturbing the nest, adults and/or young to the point of potential nest failure.

Light construction activities are considered to be foot traffic, manual labor, hand work and the temporary use of motor vehicles and light construction equipment such as bobcats, manlifts, utility trucks, and/or bucket trucks. These activities are minor in scale and have no (below ambient) - to low- noise disturbance associated with them.

Moderate and heavy construction activities include the installation and removal of concrete footings, dismantling, and installation of structures. Moderate construction activities include large equipment traffic (i.e., graders, bulldozers, cranes, and loaders), loud construction noise (jackhammers, sawing, generators, etc.), and/or offloading of fill or other materials. Heavy construction activities include active dirt movement by large equipment, trenching, repetitive use of large equipment in one area, auguring, demolition of structures, use of cranes, and loud constant construction noise. These activities involve more ground disturbance and increased noise levels in comparison to light construction activities. If moderate or heavy construction activity is scheduled in the vicinity of a nest, a species-specific buffer larger than the identified buffer per Table 1 may be determined by the avian biologist. As with light construction activity, a biological monitor and/or avian biologist should be present during the construction activity. If the nesting pair becomes agitated or the incubating bird leaves the nest as a result of the construction activity, then the buffer may need to be larger than the implemented buffer as determined by the avian biologist.

Earth disturbing activities may include: grading; scraping; and vegetation alteration (clearing, brushing, tree trimming or removal). These activities involve direct removal of potential nest substrate and generally contain increased noise levels in comparison to light construction activities. However, it should be noted that noise levels associated with earth disturbing activities can be greatly reduced with the use of hand tools. If construction activities include earth disturbance (grading, scraping), vegetation alteration (clearing, brushing, tree trimming or removal) or other activities that may impact an active nest, the buffer distance may need to be adjusted as determined by an avian biologist.

The duration and frequency of activity in the vicinity of a nest should also be taken into consideration when evaluating whether or not the buffer requirement is met. The distance buffers were established based on construction activities that are temporary or infrequent in nature. If a construction crew will be working in the vicinity of an active nest for an extended period depending on the nature of the work (an extended period can be defined as a few minutes for heavy construction to an hour or more for light construction), then the species-specific buffer may need to be larger.

It is important to emphasize that species-specific buffers are measured from the nest to the site of the construction activity outwards and accounts for the nest's location, including the height of the nest.

In Table 1, some species fall into more than one category and may therefore have more than one species-specific buffer associated with it. A blue-gray gnatcatcher (*Polioptila caerulea*), for example, nesting in a thicket or understory is less likely to be disturbed than one nesting in a more exposed location in a shrub or small tree even though both nests are the same distance from the construction activity. Likewise, a red-tailed hawk (*Buteo jamaicensis*) that has acclimated to human activities is less likely to be disturbed at its

nest (and thus placed in Birds of Prey Category 2) than one that is not accustomed to human activity (placed in Birds of Prey Category 3). For similar reasons, birds assigned to a category based on their nesting habits are not all likely to have similar thresholds of disturbance. In these instances, a range of species-specific buffers is indicated in Table 1.

Buffer reductions will consider known species tolerances for disturbance. Larger buffers are used for large avian species and for species that are not tolerant of disturbance. Smaller buffers are generally used for smaller avian species and also species that have a high tolerance for disturbance, such as those that are commonly found nesting close to development. Several species have been identified as common species that use the electric power transmission structures (Lattice Steel Towers) or build nests in/on equipment that is stored at a site. These include some red-tailed hawks, common ravens, western kingbirds, Cassin’s kingbirds, and house finches.

Refer to current lists for species protected by federal and state laws. Assume most species are protected with the exception of house sparrows, European starlings, rock pigeons, and other similar introduced species.

**Table 1. Buffers for Horizontal and Vertical Ground Construction**

<b>Avian Group</b>	<b>Species</b>	<b>Minimum Horizontal Buffer for Ground Construction (feet)</b>
Quail	California/Gambel’s quail (see note)	75
Birds of Prey (Category 1)	American kestrel, barn owl	100
Birds of Prey (Category 2)	red-tailed hawk (some), great horned owl, burrowing owl	150-250
Birds of Prey (Category 3)	turkey vulture, red-tailed hawk (some), peregrine falcon, prairie falcon	300-500
Eagles	Golden eagle	1 mile line of sight 0.5 mile no line of sight
Shorebirds	Killdeer, snowy plover (the larger buffers for snowy plover)	125-150
Doves	mourning dove	25-50
Roadrunners	greater roadrunner	100
Nightjars	lesser nighthawk, common poorwill	100
Swifts	white-throated swift	50
Hummingbirds	Anna’s hummingbird, Costa’s hummingbird,	25
Woodpeckers	ladder-backed woodpecker	25
Passerines (cavity and crevice nesters)	Say’s phoebe, ash-throated flycatcher, rock wren, canyon wren, Bewick’s wren, juniper titmouse, white-breasted nuthatch	25
Passerines (bridge, culvert, and building nesters)	Say’s phoebe, northern rough-winged swallow, house finch	25-50
Passerines (ground nesters, open habitats)	horned lark, rock wren, western meadowlark	100
Passerines (understory and thicket nesters)	gray vireo, bushtit, Bewick’s wren, blue-gray gnatcatcher, spotted towhee, green-tailed towhee, black-throated gray warbler, Brewer’s sparrow, black-chinned sparrow, sage sparrow, American goldfinch	25

Avian Group	Species	Minimum Horizontal Buffer for Ground Construction (feet)
Passerines (shrub and tree nesters)	Cassin's kingbird, western kingbird, loggerhead shrike*, common raven*, verdin, bushtit, blue-gray gnatcatcher, cactus wren*, northern mockingbird, Bendire's thrasher*, Le Conte's thrasher*, phainopepla*, black-throated gray warbler, black-throated sparrow, great-tailed grackle, Scott's oriole*, house finch, lesser goldfinch*	50-100
Passerines (open scrub nesters)	Loggerhead shrike*, verdin, cactus wren*, black-tailed gnatcatcher, northern mockingbird, Le Conte's thrasher*, Phainopepla*, black-throated sparrow, Brewer's blackbird, Scott's Oriole*, lesser goldfinch*	50-100
Passerines (tower nesters)	western kingbird, common raven, house finch	25

Note: Start with 300-for birds marked with an \*

### 1.3.2 Implementation of Species-Specific Buffers

This section describes the process of implementing species-specific buffers for active nests. Implementation of species-specific buffers does not include listed species. Species-specific nesting buffer implementation during construction will be designed to avoid take of an active nest. Buffers implemented for each particular nest may be greater or less than the buffers detailed in this Guidance (Table 1). Implemented buffers for non-special-status species may be reduced to smaller buffers detailed in the Guidance (Table 1), as determined by an avian biologist. Implemented buffers for special status species may be reduced to smaller buffers through consultation with the appropriate resource and land management agencies.

When an active nest is discovered, a biological monitor will delineate and restrict construction as necessary per the standard buffer (Table 1). A biological monitor will document the construction type, activity, and duration; the individual behavior of the bird; the stage of the reproductive cycle; and the site conditions. An avian biologist will be consulted and will determine if a reduced species-specific buffer can be applied to the active nest. An avian biologist will make this determination based on the information provided by a biological monitor, the species' natural history, and its known tolerances. If a reduced species-specific buffer can be implemented, the SCE biologist will be consulted prior to the reduction of the standard buffer. Buffer reductions will take place only after consideration of site-specific conditions such as distance to construction, type and anticipated duration of construction, microhabitat at the location of the nest that may provide visual and acoustic barriers, behavior of the pair, and its reproductive stage.

For ground-based construction activities, vertical separation of the nest from the construction area will be considered when selecting the appropriate horizontal buffer. Some species build their nests very high in trees and structures. For example, a common raven nest 150 feet off the ground in an existing structure is less likely to be affected by ground work occurring directly below than a nest 50 feet off the ground. The horizontal and vertical buffers will be implemented using the guidelines as described in this Guidance.

The habitat and infrastructure surrounding a nest location will be evaluated for its ability to provide a visual and/or acoustic barrier to construction. This information will be used to help determine an appropriate buffer. As an example, a more concealed nest may require a smaller buffer than a nest that has a direct line of sight to construction.

The observed behavior of an individual bird during the nest search process and consequent nest monitoring will help determine the appropriate buffer distance. For example, an incubating adult that appears more skittish and is readily disturbed could receive a larger buffer than an incubating adult that sits tight and appears more acclimated to disturbance.

Generally, nesting birds are most susceptible to failure early in the nesting cycle when fewer resources have been invested towards the nest. Therefore, it is more important to reduce disturbances during egg laying rather than later in the nesting cycle, which could result in the determination of a larger buffer being necessary early on, then reducing its size later in the nesting season.

Extreme weather events may produce conditions that would increase the likelihood of nest failure. Combined with the stress of nearby construction activity, a nest might fail that would otherwise succeed. On unseasonably hot or cold days, species-specific buffers *may* need to be temporarily increased.

A nesting bird database will be maintained for all nests identified within active construction areas. At a minimum, for each nest, the following information will be documented:

- Status (active or inactive)
- Species
- Nest location
- Behavioral observations
- Site conditions
- Estimated date of nest establishment
- Estimated fledge date
- Buffer size implemented

To avoid the take of active nests in active construction areas, an avian biologist or biological monitor will implement and maintain the established buffer, monitor adjacent construction activities, and document the nesting birds' behavior observations and active nest status. SCE will ensure that the construction contractor is made aware of the buffers through the use of construction maps outlining environmental and biological constraint areas, and/or flagging, staking and signage, and direct communication in the field.

### **1.3.3 Buffer Distances for Access Roads**

Substations, material storage yards, helicopter landing zones, assembly and support yards, contractor yards, and construction areas may be accessed by a single ingress/egress point. These access roads into construction areas are frequently located adjacent to vegetation (e.g., shrubs and trees), including vegetation planted to screen substation facilities that provide suitable nesting habitat for birds. Implementing buffers for active nests that become established along access roads may restrict access to and construction activities within substations and yards.

Ingress/egress to the project work areas will be managed to avoid take of an active nest while allowing use of these roads for construction activities. Take of an active nest from vehicular travel along project access roads can be avoided through the implementation of the following management practices:

- The areas along access roads will be surveyed by the biological monitor to document locations of active nests and to assess buffers,
- The speed limit on all project access roads will be restricted to no more than 25 mph,
- Vehicles will not stop or idle along project access roads within an active nest buffer,
- Construction personnel will not loiter through or within an active nest buffer,
- Watering of access roads for dust control will be limited to prevent direct watering of an active nest within active nest buffers

### **1.3.4 Active Substations and Yards**

Once construction or clearance of vegetation for a yard or substation is complete and the yard or substation is established and is in active operation, reduced buffers for non-special status species' nests found inside or outside of the yard or substation will be implemented. Reduced buffers for nests inside of yards and substations are acceptable for non-special status species due to acclimation to the regular construction activities. Indirect impacts to the individual nests are not anticipated as work will occur within the yard or substation only. However, if a major change in the activity level or activity type within the yard or substation will occur, there may be situations where larger appropriate nest buffers will be implemented within the yard or substation specific to that activity.

## **1.4 Inactive Nest Management**

This section discusses the protocol to remove inactive nests in compliance with MBTA and California Fish and Game Code in active construction areas, including yards, substations, and materials and equipment. In most cases, a previously active nest becomes inactive when it no longer contains viable eggs and/or living young and is not being used by a bird as part of the reproductive cycle (eggs, young, fledged young still dependent upon nest). Based on the Migratory Bird Permit Memorandum (USFWS 2003), inactive nests are defined as nests without birds or eggs.

This protocol does not cover listed species or bald or golden eagles. The purpose of inactive nest removal/deterrence is to prevent or reduce the potential reuse of a currently inactive nest (e.g., return of a pair to the specific site) in a problematic location. In addition, as part of SCE's routine operation and maintenance (O&M), nests that pose an imminent threat to SCE facilities will be removed pursuant to existing permits/agreements with resource agencies and are not the subject of this Guidance.

The following sections describe inactive nest removal/deterrence for raptors, colonial bird species, and other non-listed, non-game native birds. Active nests outside of the construction area will be protected through establishment of above-mentioned buffers to avoid the take of an active nest, as discussed in other sections. All inactive nest removals/ deterrent placements for the project will be documented.

### **1.4.1 Raptors**

Since raptors exhibit nest site fidelity, inactive raptor nests may be protected even though no eggs or young are present. The removal of raptor nests under construction may still qualify as take and be in violation of the California Fish and Game Code. Inactive or partially built raptor nests will be documented by the biological monitor.

In accordance with the definition of inactive nest for raptors provided in this Guidance, inactive raptor nests that will impact construction activities will be removed according to the following protocol:

- A biological monitor/avian biologist will observe the nest for four consecutive hours or for consecutive two hour periods over two successive days to determine if there is any activity at the nest site.
- If an avian biologist determines that the nest is unlikely to be active based on these observations, the construction team will provide personnel to inspect the nest if it is not accessible by a biological monitor/avian biologist due to safety concerns;
- For inaccessible nests, the construction team will take a photo of the nest contents and provide the photograph to a biological monitor/avian biologist;
- Once a biological monitor/avian biologist has confirmed from the photo that the nest is inactive, the construction contractor will remove the nest.

Nests will not be collected or taken off site by biologists because this would be in violation of the MBTA and Native Bird sections of the California Fish and Game Code.

Removal of all inactive raptor nests will be documented on a daily basis to the SCE biologist.

#### **1.4.2 Species Not Mentioned in this Guidance**

Consult with the SCE Avian Protection Specialist for any species not covered within this guidance before proceeding.

#### **1.4.3 Non-listed, Non-Game Bird Species Nest Removal**

Removal/ deterrence of non-listed, non-game bird inactive nests for species other than raptors and colonial bird species will be completed as discussed below. The USFWS and CDFW do not need to be notified prior to removal/deterrence of these inactive nests when they are removed in compliance with federal and state regulations.

Inactive nests found within construction areas, including substations, yards, materials, and equipment, may either be removed and dropped to the ground, or placed with a deterrent. The Construction Contractor will provide personnel to inspect the nest and take a photograph of the contents if it is not accessible by a biological monitor/avian biologist. Nests will not be collected or taken off site (this would be in violation of the MBTA and the California Fish and Game Code).

When construction takes place during the nesting season, inactive nests will be identified during preconstruction surveys and during construction monitoring, if not previously identified during earlier project- or non-project SCE surveys or monitoring. To determine if a passerine nest is inactive, a minimum of one uninterrupted, consecutive hour of monitoring in suitable conditions or confirmation the nest is empty is required prior to removal. The construction contractor will provide personnel to inspect the nest and take a photograph of the contents if it is not accessible by a biological monitor/avian biologist. After the biological monitor/avian biologist confirms that the nest is inactive and that it does not belong to a listed species, the nest can be immediately removed and left on site.

No nests will be taken off site or collected (this is in violation of the MBTA and the California Fish and Game Code). The nest location will be subsequently monitored to detect any re-nesting attempts.

## 2.0 Field Approach

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Nesting bird surveys will be carried out in several stages during the nesting season. A preconstruction survey for biological resources that includes a survey for nesting birds in areas of suitable habitat will be conducted. The first day of construction and, if necessary based on changing construction activity levels and locations, for each day during construction during the nesting season, the biological monitor will perform daily sweeps to look for resources, including nesting birds. The daily or weekly (depending on construction) sweeps will be conducted to identify new nests (partially built, active, or inactive) not detected during the preconstruction survey or clearance sweep and to also document the status (active or inactive) of known nests in a construction area. The preconstruction survey, clearance sweep, and daily/weekly sweeps will be conducted within suitable habitat for nesting birds within the construction areas and include a 300-foot survey buffer, collectively referred to as the Biological Survey Area (BSA). Care will be taken to avoid potential take of a nest due to surveying and monitoring efforts.

### 2.1 Survey Requirements

#### 2.1.1 Survey Experience and Training

As different species have different nesting niches and different breeding strategies, surveyors must be able to readily distinguish species that may breed locally from those that do not and know the habitat contexts and types of behaviors to look for when evaluating nesting potential. For example, surveyors must know whether the species normally nests on the ground or high in trees, or whether only females construct the nest, in which case watching the male would be counterproductive. Surveyors will receive training on the information and procedures detailed within this Guidance.

#### 2.1.2 Field Maps

Maps showing the project disturbance limits, ROW, access roads and other project features and current nest and buffer data will be available on demand in the database. Surveyors will have access to the database to view all previously collected data. The database and associated mapping interface will be regularly updated so real-time biological resource data, including nests, will be available to the surveyor.

A major factor affecting the rate of coverage for nesting bird surveys is the rate at which birds visit a nest site. Depending on species, nest stage, and other factors such as food availability and recent disturbance near the nest, birds may visit their nest almost constantly or at intervals of several hours. Smaller birds generally visit nests more frequently than larger birds.

In some open areas with minimal potential for inconspicuous nests, the rate of coverage for surveyors may be as high as 10 acres per hour. Under very difficult circumstances, such as dense brush with some bird activity, a 2,500-square-foot site (0.06 acres) may require two (2) hours. However, both rates are acceptable, with typical survey rates expected to average around 0.5 to 1 acre per hour.



## 2.2 Nesting Season Survey Methodology

### 2.2.1 Nest identification

A survey visit will consist of a pedestrian search by a surveyor for both direct and indirect evidence of bird nesting. Direct evidence will include the visual search of an actual nest location. Indirect evidence will include observing birds for nesting behavior, such as copulation, nest building, adult agitation or injury feigning, feeding chicks, removal of fecal sacks, and other characteristic behaviors that indicate the presence of an active nest. The size of the survey area will vary on site specific conditions. Ideally the surveyor should be able to survey a substantial portion of the perimeter from one inconspicuous location to detect birds entering and leaving the survey area. Much of the surveyor's time will require sitting quietly in inconspicuous locations when other types of disturbance are absent; and intensively listening and observing all bird behaviors for discernible direct and indirect evidence of nesting. When moving through vegetation, surveyors will watch for distraction displays, aggressive responses and interactions, and birds flushing suddenly from atypically close range (often an indicator of a nest site). If defensive or distraction displays from birds are observed, an active nest is likely to be nearby. Surveyors will utilize visual observations of nests and bird behavior as a method for detecting potential nests.

### 2.2.2 Nest Observation

Once a nest is found, it will be approached to check the status. If no adult or juvenile bird activity is observed within one hour (four hours for raptor nests), the nest can be considered inactive. If the nest will be directly impacted by project activities, then the removal procedures outlined in Section 2.6.1 of this guidance will be implemented. If an avian biologist/biological monitor determines that an hour (or four hours for raptors) is not sufficient to make a determination on the nest status, then one hour increments will be employed until a final determination regarding nesting status can be made. Every effort will be made as to not expose the nest to potential predation as a result of survey and/or monitoring activities. All nest visits will be conducted by a single surveyor and will last only as long as necessary to check the nesting stage or until circumstances necessitate departure (e.g., potential nest predator detected or sustained indications of stress by any protected bird).

When approaching a nest, surveyors will first determine whether there are any potential nest predators nearby (e.g., western scrub-jays [*Aphelocoma californica*], common raven [*Corvus corax*], cactus wren [*Campylorhynchus brunneicapillus*], house wren [*Troglodytes aedon*]). If no predators are observed, the surveyor will approach the nest. Surveyors will be carefully aware of the possibility of additional, undetected nests nearby. They will avoid creating a scent or visual path that directs animals to the nest (e.g., leaving no trampled spot by the nest and continuing past the nest upon leaving it rather exiting on the entrance path). Surveyors will also briefly look in at least two empty potential host plants for bird nests before and after looking in the nest in an attempt to deter predators.

### 2.2.3 Active Nest Determination

When an active nest (defined in section 2.2) is confirmed, the species-specific buffer will be implemented per the Guidance and avian biologist's discretion and work within the new nest buffer will cease immediately. If a bird is seen building a nest or feeding nestlings, but the vegetation is too dense for the surveyor to visually locate the nest, the approximate nest location will be inferred by the surveyor based on observed bird behaviors. Surveyors are not to risk the failure of a nest in an effort to discern an exact location or exact status (e.g., number of eggs, size of nestlings, etc.). The surveyor will then observe the nest and the parental behavior to determine if a reduced buffer can be implemented if appropriate. Active

nests will be monitored before implementing a reduced buffer. Prior to implementation, all buffer reductions will require the approval of an SCE biologist.

A nest completion date can be estimated by combining the stage of nesting at discovery and the known nesting stage range. However, since the date will be estimated, it is important to note that a nest may be active for a shorter or longer period of time. For altricial species, a time buffer from three days up to three weeks will be added to every nest to allow for post-fledging nest dependence.

## **2.3 Monitoring**

As a part of the construction monitoring, a biological monitor will check the status of any active nests within the survey area and update the nest monitoring database.

Biologists will be responsible for documenting new nests, providing status updates of previously identified active nests, and monitoring implemented buffers within and adjacent to construction areas. They will utilize construction monitoring maps, flagging, staking, and signage, and in-field communication to monitor for compliance with project requirements. Biologists will utilize monitoring methods as described in section 2.0 to minimize disturbance to active nests while conducting updates and documenting behavioral reaction to construction. Nests updates will be conducted only as often as necessary to determine egg laying, hatching and fledging, but may be modified to accommodate adverse weather conditions where flushing an adult off of the nest could threaten the nest outcome. All nest visits shall be documented in the database as appropriate.

## **2.4 Reporting**

The avian biologist will provide a final report appropriate to the size of the project. All data collected for the project will be included with the report.

### **2.4.1 Data Sheets**

All nesting bird data will be entered into a database. This will provide the SCE biologist, avian biologist, and biological monitor current information pertaining to that nest, as well as the ability to print maps with the nest data (nest location and buffers).

### **2.4.2 Communication**

Refer to nesting bird management flowcharts.

**APPENDIX C**  
**PLAN FOR STORAGE AND/OR DISPOSAL OF EXCESS**  
**CONSTRUCTION/TUNNEL SPOILS AND SLIDE MATERIALS**

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REGULATORY COMMISSION

**PLAN FOR STORAGE AND/OR DISPOSAL  
OF EXCESS CONSTRUCTION/TUNNEL SPOILS  
AND SLIDE MATERIALS**

**LEE VINING HYDROELECTRIC PROJECT**

**FERC NO. 1388 - 016**

**September 1997**

ORIGINAL

**SECTION 1.0 - INTRODUCTION**

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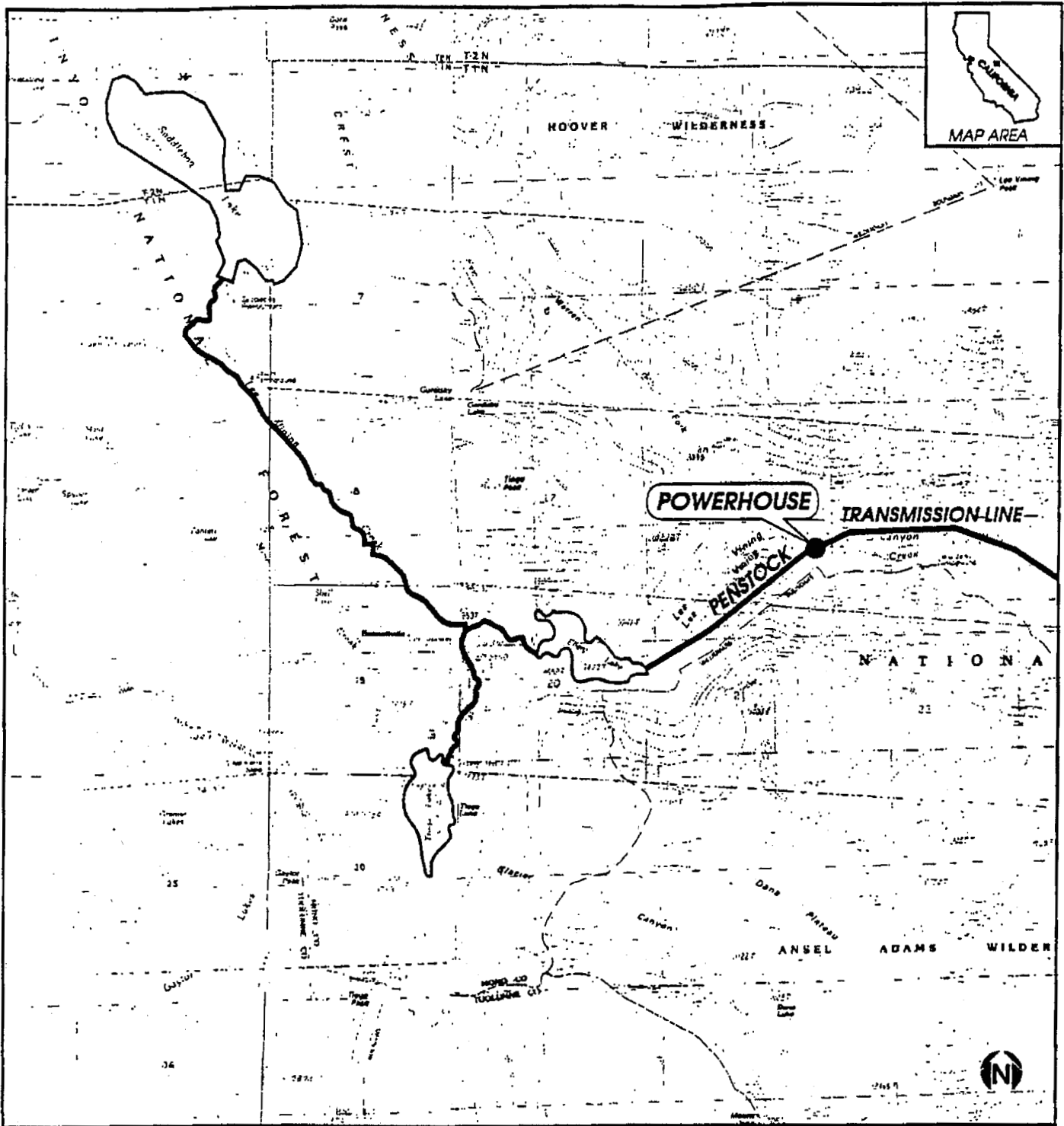
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FEDERAL ENERGY  
REGULATORY COMMISSION

Southern California Edison Company's (Edison's) Lee Vining Hydroelectric Project is located on Lee Vining Creek in the Sierra Nevada Mountains in Mono County, California, about 80 miles west of the town of Lee Vining. The Project (Figures 1 and 2) consists of three dams: 1) the Saddlebag Dam which impounds the 317-acre Saddlebag Lake; 2) the Tioga Dams (main and auxiliary) which impound the 73-acre Tioga Lake; and 3) the Rhinedollar Dam which impounds the 66-acre Rhinedollar (Ellery) Lake. The Project also includes an intake structure at Rhinedollar, a pipeline, a penstock, the Poole Powerhouse, and a 6.4-mile, 115 kV transmission line from Poole Powerhouse to the Lee Vining Substation. The original license Project description also included a 15.2-mile, 115 kV transmission line from the Lee Vining Substation to the Rush Creek Powerhouse. However, in their March 30, 1993 Environmental Assessment, the Federal Energy Regulatory Commission (FERC) determined that this transmission line is no longer subject to license and, therefore, is not included in this Plan.

The Lee Vining Project (FERC No. 1388) operates under a permit (License) from the FERC. Edison has applied for a permit renewal (New License) and anticipates that FERC will require a plan for the storage and/or disposal of excess construction/tunnel spoils and slide material. The Plan presented herein is intended to satisfy this anticipated FERC condition. This Plan will be reviewed and approved by the Forest Service prior to submittal to the FERC.

Most of the Lee Vining Project facilities have been in existence since the early 1900's. No major changes in the existing facilities nor in the maintenance of those facilities are proposed under the New License. No tunneling or major excavation projects are anticipated. Therefore, planned construction activities will generally be limited to minor improvements and routine operation and maintenance activities such as desiltation. This Plan also applies to material generated by accidental events such as occasional land slides or earth movements.



**Figure 1: Lee Vining Project Facilities Sites.**

~ Project streambed

○ Project lake

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MAP SOURCE: USGS 7.5' Tioga Pass (1990) and Mount Dana (1988) Quads.

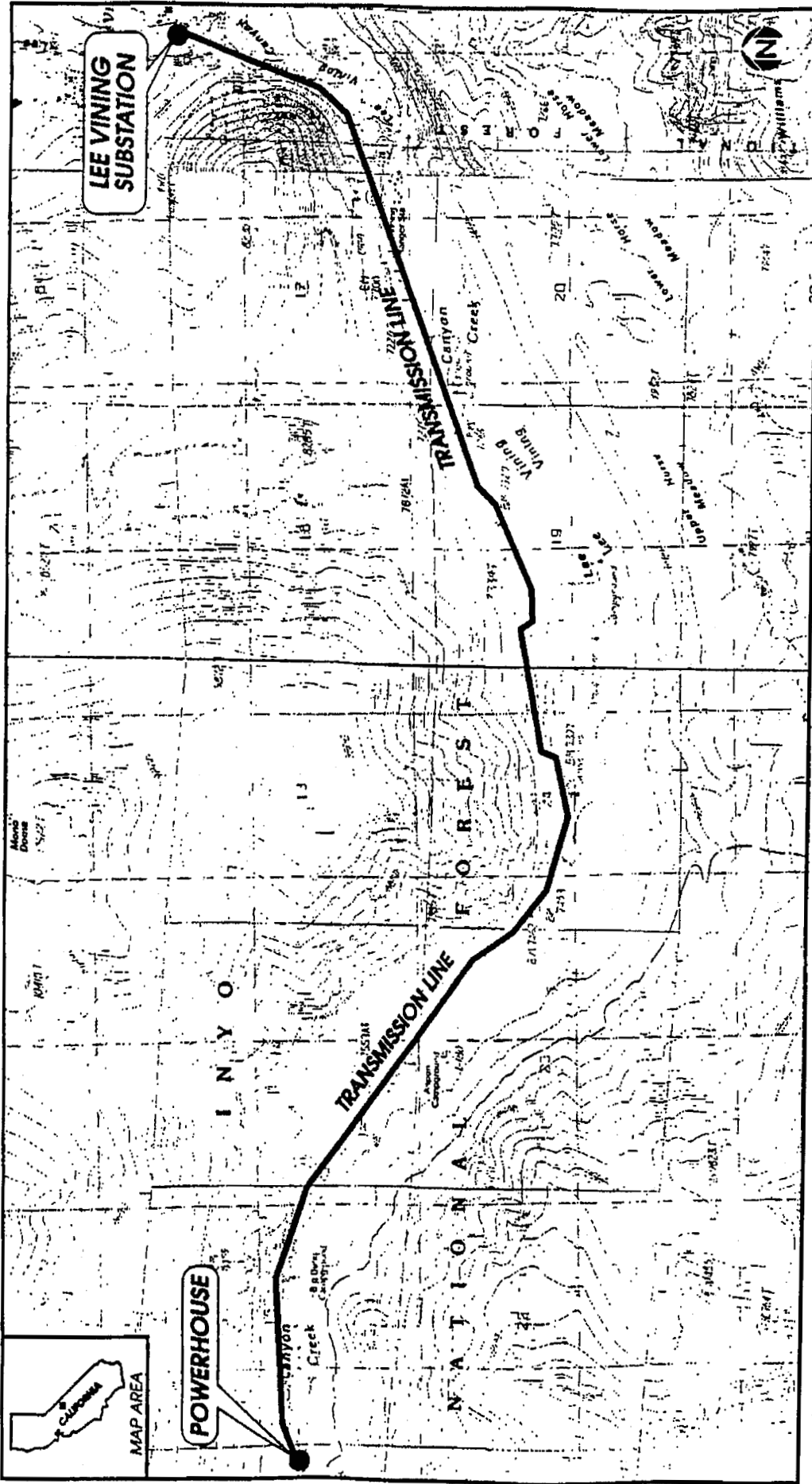


Figure 2: Lee Vining Project Transmission Line.

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MAP SOURCE: USGS 7.5' Mount Dana (1988) and Lee Vining (1986) Quads.

## 2.0 - DESCRIPTION OF CURRENT AND FUTURE ACTIVITIES

### 2.1 REQUIREMENTS FOR APPROVAL

Prior written approval must first be obtained from the Forest Service before initiating any activity the Forest Service deems as affecting or potentially affecting resources on National Forest System lands. The approval will be contingent upon compliance with federal laws, including, but not limited to, the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, Clean Air Act, Clean Water Act, and the National Forest Management Act.

### 2.2 CURRENT DISPOSAL ACTIVITIES

No large-scale tunneling or excavation activities related to the Lee Vining Project are under way or proposed. There are occasions, however, when material is generated as a result of desiltation programs or from land slides or other earth movements. Material from these activities is used as fill material either on Edison property or on other property with the owner's permission. If excess construction/tunnel spoils and slide material are to be disposed of on National Forest System land, or major construction activities are planned such as dredging of an intake, a separate Plan will be submitted to the Forest Service on a case-by-case basis. This Plan will address contouring and compacting of storage piles and fill sites to conform to adjacent landforms and slopes, stabilization and rehabilitation of all spoil sites and borrow pits, and prevention of water contamination by leachate and runoff. Erosion controls such as sand bags and water bars are used as needed. Revegetation is implemented on a case-by-case basis. The Plan will include an implementation schedule and maintenance program. No activity will commence prior to approval of this Plan.

Use of material as fill is carefully controlled. Fill material is tested as to type and then is compacted to required specifications. The material is contoured and revegetated to conform to adjacent landforms and slopes. If fill sites are not available, then the material is disposed of at existing landfills. Material is usually not stockpiled.

### 2.3 FUTURE ACTIVITIES AND PROCEDURES

No major construction activities are planned in the future for the Lee Vining Project. Therefore, no significant tunnel spoils or other material are expected to be generated. All spoils that occur in the future will be controlled and/or disposed of as discussed in Section 2.2.



**APPENDIX D**  
**PLAN FOR CONTROL OF EROSION, STREAM SEDIMENTATION, SOIL MASS**  
**MOVEMENT, AND DUST**

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**PLAN FOR CONTROL OF EROSION, STREAM SEDIMENTATION,  
SOIL MASS MOVEMENT, AND DUST**

**LEE VINING HYDROELECTRIC PROJECT**

**FERC NO. 1388 — 016**

**September 1997**

## SECTION 1.0 - INTRODUCTION

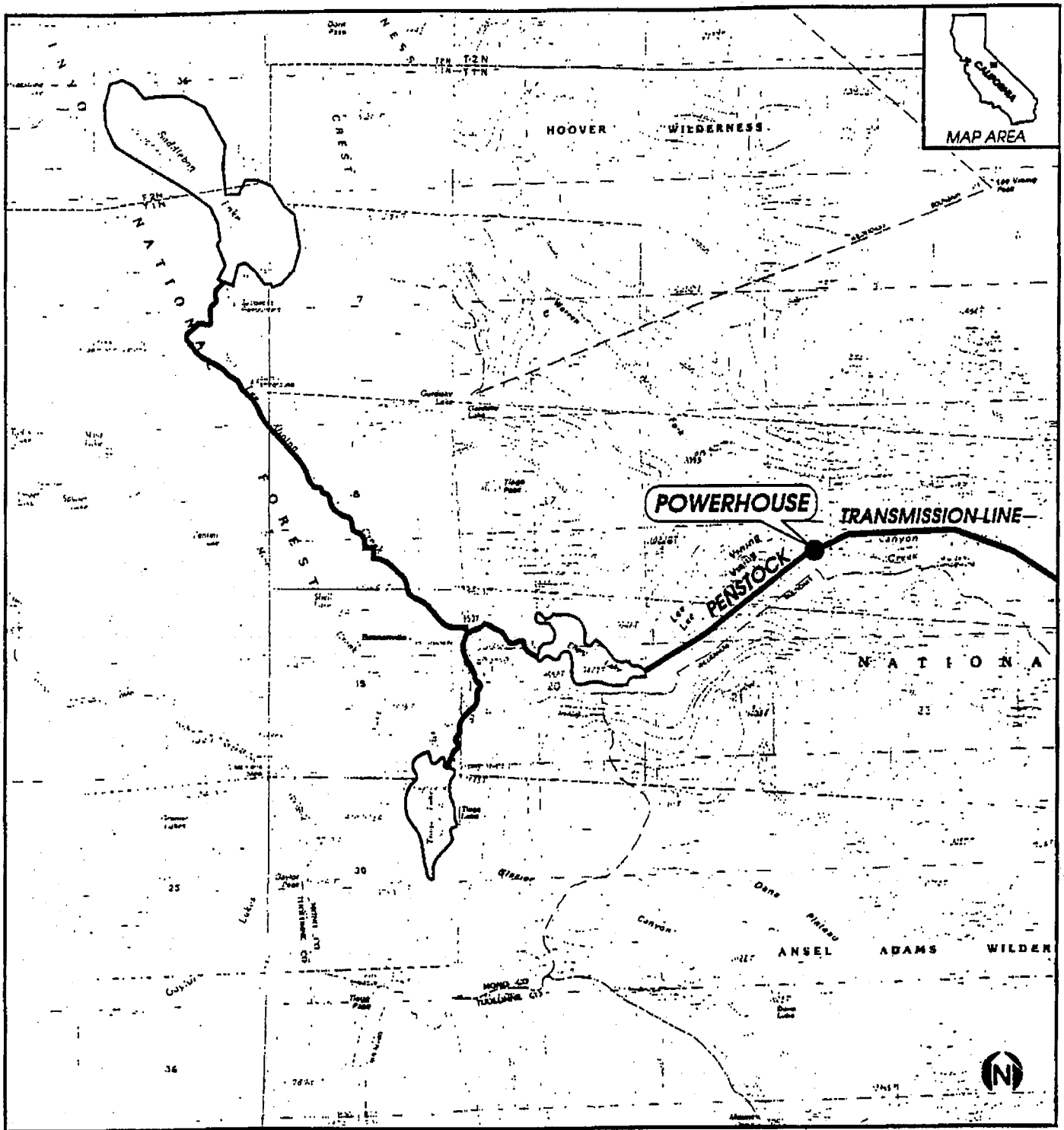
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REGULATORY COMMISSION

Southern California Edison Company's (Edison's) Lee Vining Hydroelectric Project is located on Lee Vining Creek in the Sierra Nevada Mountains in Mono County, about 9 miles west of Lee Vining, California. The Project (Figures 1 and 2) consists of three dams: 1) the Saddleback Dam which impounds the 317-acre Saddlebag Lake; 2) the Tioga Dams (main and auxiliary) which impound the 73-acre Tioga Lake; and 3) the Rhinedollar Dam which impounds the 66-acre Rhinedollar (Ellery Lake). The Project also includes an intake structure at Rhinedollar, a pipeline, a penstock, the Poole Powerhouse, and a 6.4-mile, 115 kV transmission line from Poole Powerhouse to the Lee Vining Substation. The original license Project description also included a 15.2-mile, 115 kV transmission line from the Lee Vining Substation to the Rush Creek Powerhouse. However, in their March 30, 1993 Environmental Assessment, the Federal Energy Regulatory Commission (FERC) determined that this transmission line is no longer subject to license and, therefore, is not included in this Plan.

The Lee Vining Project (FERC No. 1388) operates under permit (License) from FERC. Edison has applied for a permit renewal (New License) and anticipates that FERC will require a plan for the control of erosion, stream sedimentation, dust, and soil mass movement. The Plan presented herein is intended to satisfy this anticipated FERC condition. This Plan will be reviewed and approved by the Forest Service prior to submittal to the FERC.

Most of the Lee Vining Project facilities have been in existence since the early 1900's. No major changes in the existing facilities nor the maintenance of those facilities are proposed under the New License. Project-related activities will generally be limited to routine operation and maintenance activities. This Plan has been developed to 1) provide general measures to control erosion, stream sedimentation, soil mass movement, and dust occurring as the result of planned small-scale construction associated with normal operation of the facilities; and 2) provide the basis for the formulation of specific measures which will be addressed on a case-by-case basis with the Forest Service to cover accidental occurrences such as a pipeline rupture.

Edison has a long-standing relationship with the Forest Service implementing erosion control. Through this relationship, procedures have been established for control of erosion and sedimentation for small construction projects. Additionally, measures for control and remediation of washouts and soil movements associated with accidental occurrences such as rupture of flow lines have been established on a case-by-case basis. Many general elements of these procedures have been incorporated into this Plan.



**Figure 1: Lee Vining Project Facilities Sites.**

 Project streambed

 Project lake

**PSOMAS**



MAP SOURCE: USGS 7.5' Tioga Pass (1990) and Mount Dana (1988) Quads.

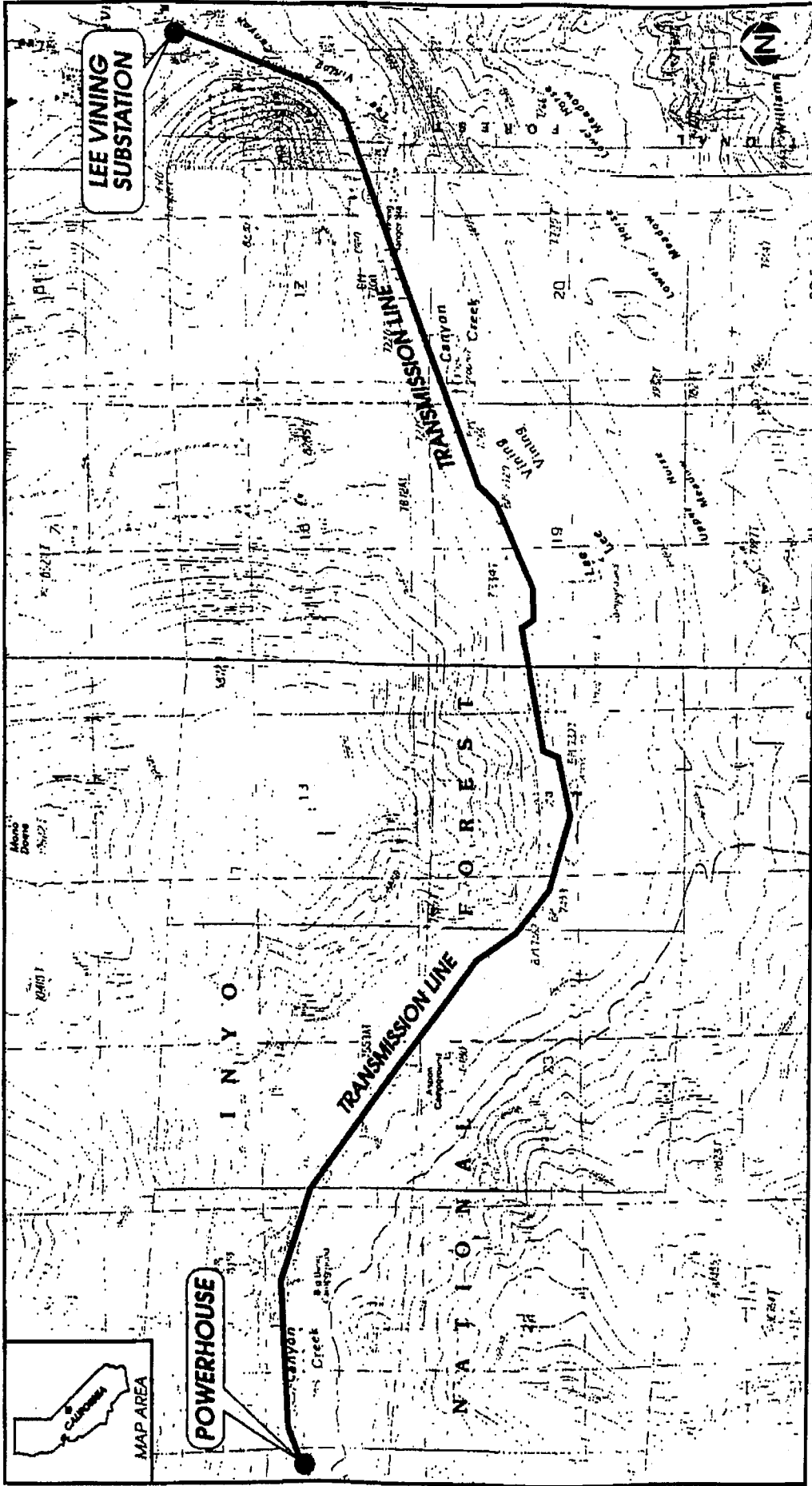


Figure 2: Lee Vining Project Transmission Line.

**PSOMAS**

MAP SOURCE: USGS 7.5' Mount Dana (1988) and Lee Vining (1986) Quads.

## **2.0 - DESCRIPTION OF POTENTIAL SOURCES FOR EROSION, SEDIMENTATION, MASS SOIL MOVEMENTS, AND DUST**

No major changes to the existing Lee Vining Project facilities or in the maintenance of these facilities are proposed under the New License; therefore, potential sources of erosion, dust, sedimentation, and mass soil movements will be associated with minor construction activities associated with operation, minor improvements, and maintenance of the existing facilities. Minor activities that may occur periodically include:

1. Access roadway repair;
2. Bridge repair;
3. Maintenance of dams and diversion structures;
4. Repair of flow lines;
5. Replacement/repair of buildings and other facilities within existing Edison property boundaries;
6. Repair of transmission facilities;
7. Removal of sediment from reservoirs and forebays; or
8. Other channel maintenance and facility modifications as may be required by the FERC as a result of their periodic inspections.

Mass soil movements and major sedimentation impacts are normally associated with accidental events such as the rupture of a flow line or landslides on access road cuts.

### **3.0 - DESCRIPTION OF MEASURES FOR SOIL STABILIZATION AND EROSION PROTECTION, SEDIMENT REDUCTION, AND DUST CONTROL**

This section describes general measures that will be used, where applicable, for erosion control and soil stabilization. Specific measures will depend upon the site and physical conditions encountered and will be determined in consultation with the Forest Service on a site-specific basis.

The Regional Water Quality Control Board (Lahontan Region) and the California Department of Fish and Game will also be consulted, when appropriate.

#### **3.1 REQUIREMENTS FOR APPROVAL**

Prior written approval must first be obtained from the Forest Service before initiating any activity the Forest Service deems as affecting or potentially affecting resources on National Forest System lands. The approval will be contingent upon compliance with federal laws, including, but not limited to, the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, Clean Air Act, Clean Water Act, and the National Forest Management Act.

#### **3.2 MEASURES TO REDUCE EROSION AND SEDIMENTATION**

The following describes general measures that will be implemented, where applicable, for construction activities that result in grading or disturbance of soil:

##### **3.2.1 Grading and Contouring**

After ground-disturbing activities such as trenching are completed, the site will be graded to conform with natural ground contours. Whenever possible, efforts will be made to retain the original drainage patterns and not create patterns that will accelerate erosion.

##### **3.2.2 Construction of Erosion-Control Structures**

In areas prone to significant flows and in areas prone to erosion, structures such as riprap, rock gabions, or small concrete retaining structures may be necessary. Where required, sedimentation basins may be utilized to control sediments where work is conducted within or adjacent to streams. Except where required by the Forest Service, the basins will be temporary structures that will be used during construction and as an interim measure before revegetation measures become effective.

### 3.2.3 Water Bars, Sediment Fences, Etc.

Where applicable, water bars will be used on slopes to dissipate the energy of flowing water and reduce soil erosion. The water bars will be placed at about 30 degrees from perpendicular from the slope. The water bars may be constructed from earth, concrete, or sand bags.

Where applicable, sediment fences may be used near streams and in areas subjected to high runoff. These fences would be placed so that the screen material will slow down water and trap sediments. Straw bales may also be used to reduce sedimentation in and adjacent to streams. The straw bales also filter and trap sediment.

### 3.2.4 Slope Stabilization

Where applicable, straw and/or jute matting may be used in the stabilization of slopes. This material would be placed on graded slopes and used to hold the slope prior to revegetation and after revegetation until plants have been established. Jute matting is effective with revegetation efforts since plants can be placed in openings of the mats. Straw would be placed as mulch and is effective on small or gently-sloping areas where heavy erosion is not expected.

### 3.2.5 Revegetation

Where applicable, revegetation may be used in the control of erosion and sedimentation on a long-term basis. Revegetation methods and plant pallets are site-specific and would require preparation of a revegetation plan to identify types of plants to be used and the appropriate method and time of planting. The revegetation plan would be reviewed with the Forest Service for approval before implementation.

Plant material may either be planted in a traditional manner and/or the seeds may be mixed with bonding and mulching material and hydro seeded. Whenever feasible, plant and seed material would be gathered near the revegetation site in order to maintain the genetic viability of the plant population. If this is not feasible, the plant material would conform as closely as possible to vegetation in surrounding areas.

Where feasible, a revegetation-monitoring program would be established to determine survival thresholds, growth objectives and the success of the revegetation effort.

Areas where grading or other surface disturbances has occurred will be monitored periodically for establishment of noxious weed species. Eradication measures will be taken, as appropriate, where noxious weeds become established that are not already common in the surrounding area.



### 3.2.6 Wind Erosion

Long-term wind erosion can be reduced through revegetation or through the intermittent use of dust palliative chemicals if revegetation is not an option. Lath fences or earthen berms may be used to reduce wind velocities in areas prone to wind erosion.

### 3.2.7 Monitoring

The effectiveness of all erosion and sedimentation-control measures would be monitored both during and after storm events. If needed, erosion control structures would be repaired and resultant erosion damage remediated. Monitoring results would be reported to the Forest Service and other applicable agencies, as required.

## 3.3 MEASURES TO REDUCE SEDIMENTATION FROM SEDIMENT REMOVAL ACTIVITIES

Forebays and other impoundments may require removal of sediments on a periodic basis. Additionally, dam faces and other facilities require maintenance. These activities may result in short-term sedimentation or siltation. Several agencies including the Regional Water Quality Control Board (Lahonton Region), Department of Fish and Game, and the Forest Service may be involved in granting permission for these activities. Project-specific sediment removal procedures will be developed in consultation with applicable agencies on a case-by-case basis. Procedures may include ramping of releases to reduce the amount of sediments released, sediment removal (e.g., sluicing, dredging, or removal by clamshell), and material disposal methods and locations.

## 3.4 MEASURES FOR REMEDIATION OF MAJOR LAND MOVEMENTS

Rupture of flow lines or failure of slopes along the flow line may result in major land movements requiring remediation. Also, cut slopes for roadways or other facilities may fail and result in major land movements.

The remediation of land movements would be conducted in consultation with the Forest Service and under the supervision of a registered engineering geologist. In general, slope failures would be repaired through remedial grading and slope stabilization and, where necessary, with retaining walls, riprap, or other structures. Areas would be revegetated, as appropriate.

Areas where grading or other surface disturbances has occurred will be monitored periodically for establishment of noxious weed species. Eradication measures will be taken, as appropriate, where noxious weeds become established that are not already common in the surrounding area.

### 3.5 MEASURES FOR DUST CONTROL

Dust emissions primarily occur during construction operations from vehicular activities and from lofting of dust from sites where vegetation has been removed. Dust will be primarily controlled through application of water from water trucks. Water will be applied to soil surfaces at least twice a day and more frequently as needed to prevent blowing dust. Non-toxic dust palliative may be added, as necessary, to control dust.

**APPENDIX E**  
**PLAN FOR OIL AND HAZARDOUS WASTE STORAGE AND SPILL**  
**PREVENTION AND CLEANUP**

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**PLAN FOR OIL AND HAZARDOUS WASTE  
STORAGE AND SPILL PREVENTION AND CLEANUP**

**LEE VINING HYDROELECTRIC PROJECT**

**FERC NO. 1388 — 016**

**September 1997**

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## SECTION 1.0 - INTRODUCTION

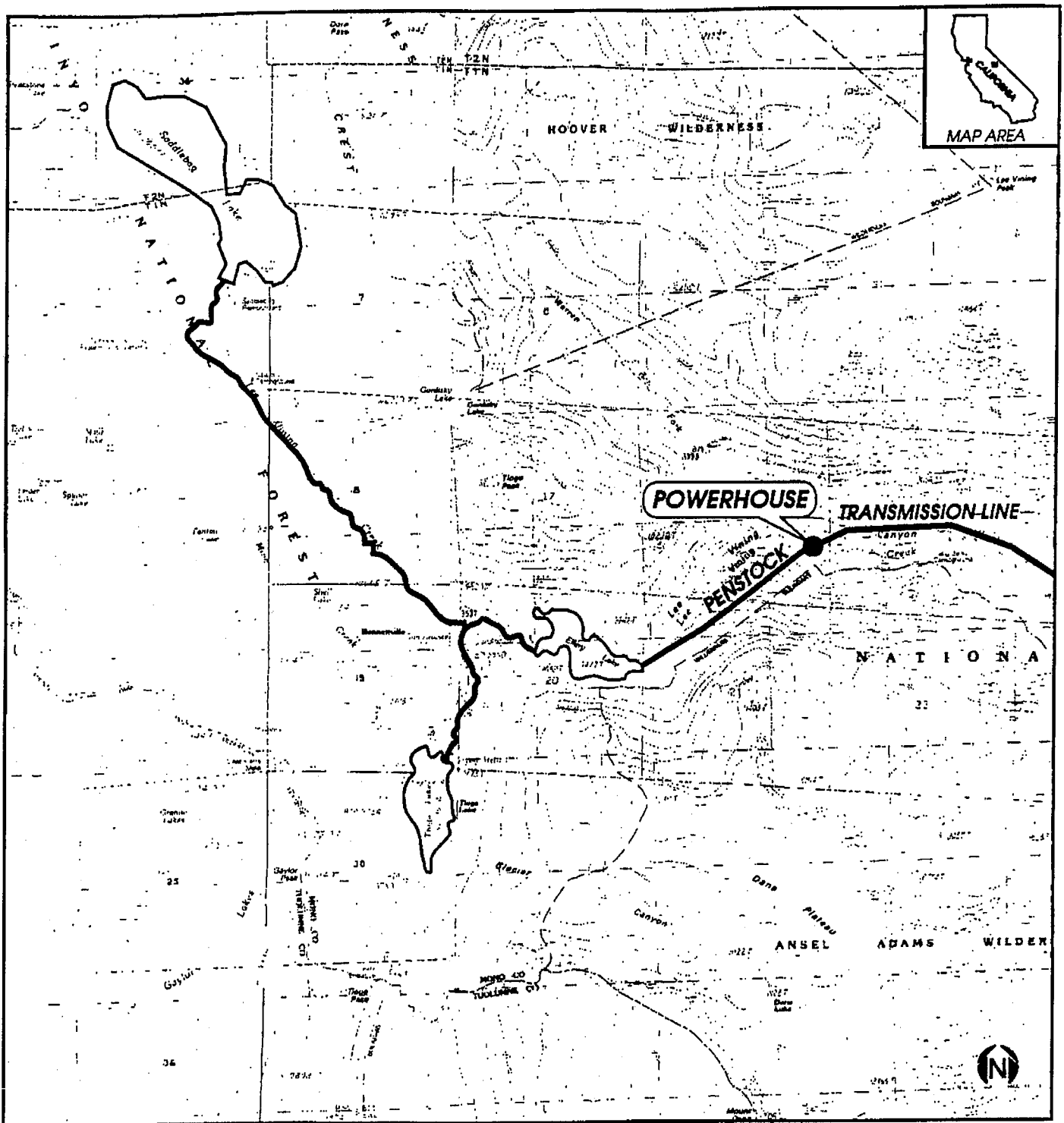
Southern California Edison Company's (Edison's) Lee Vining Hydroelectric Project is located on Lee Vining Creek in the Sierra Nevada Mountains in Mono County, about 9 miles west of the town of Lee Vining. The Project (Figures 1 and 2) consists of three dams: 1) the Saddlebag Dam which impounds the 317-acre Saddlebag Lake; 2) the Tioga Dams (main and auxiliary) which impound the 73-acre Tioga Lake; and 3) the Rhinedollar Dam which impounds the 66-acre Rhinedollar (Ellery) Lake. The Project also includes an intake structure at Rhinedollar, a pipeline, a penstock, the Poole Powerhouse, and a 6.4-mile, 115-kV transmission line from Poole Powerhouse to the Lee Vining Substation. The original license Project description also included a 15.2-mile, 115 kV transmission line from the Lee Vining Substation to the Rush Creek Powerhouse. However, in their March 30, 1993 Environmental Assessment, the Federal Energy Regulatory Commission (FERC) determined that this transmission line is no longer subject to license and, therefore, is not included in this Plan.

The Lee Vining Project (Project No. 1388) operates under permit (License) from FERC. Edison has applied for a permit renewal (New License) and anticipates that FERC will require a Plan for oil and hazardous waste substances storage and spill prevention and cleanup. The Plan presented herein is intended to satisfy this anticipated condition. This Plan will be approved by the Forest Service prior to submittal to FERC.

The facilities associated with the Project were constructed in the early 1900's and have been upgraded and modified as required over the succeeding years. No major changes in the existing facilities nor in the maintenance of those facilities are proposed under the New License. Therefore, Project-related activities associated with the New License will generally be limited to routine operation and maintenance of existing facilities and scheduled construction activities.

Currently, oil and hazardous substances used and stored at the Lee Vining Project facilities include lubricating and hydraulic oils used in the operation of equipment at the Poole Powerhouse, oil used for cooling of transformers and circuit breakers at the powerhouse, and miscellaneous lubricating oils and solvents used in the maintenance of equipment. Lubricating oil, hydraulic oil, and oil used for cooling transformers and circuit breakers and miscellaneous oils and solvents are also used and stored at the substation adjacent to the Poole Powerhouse. Mobile construction equipment may be used throughout the Lee Vining Project area. This equipment uses fuels, lubricating oils, and hydraulic fluids.

Since no new major facilities are proposed under the New License, there is no anticipated increase in types or quantities of oils and hazardous substances used or stored at the Lee Vining Project facilities. Additionally, Edison has maintained a program in reducing the amount and types of oil and hazardous substances used at their facilities through ongoing programs to comply with state and local laws. For example, underground storage tanks have been identified,



**Figure 1: Lee Vining Project Facilities Sites.**

 Project streambed

 Project lake

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MAP SOURCE: USGS 7.5' Tloga Pass (1990) and Mount Dana (1988) Quads.

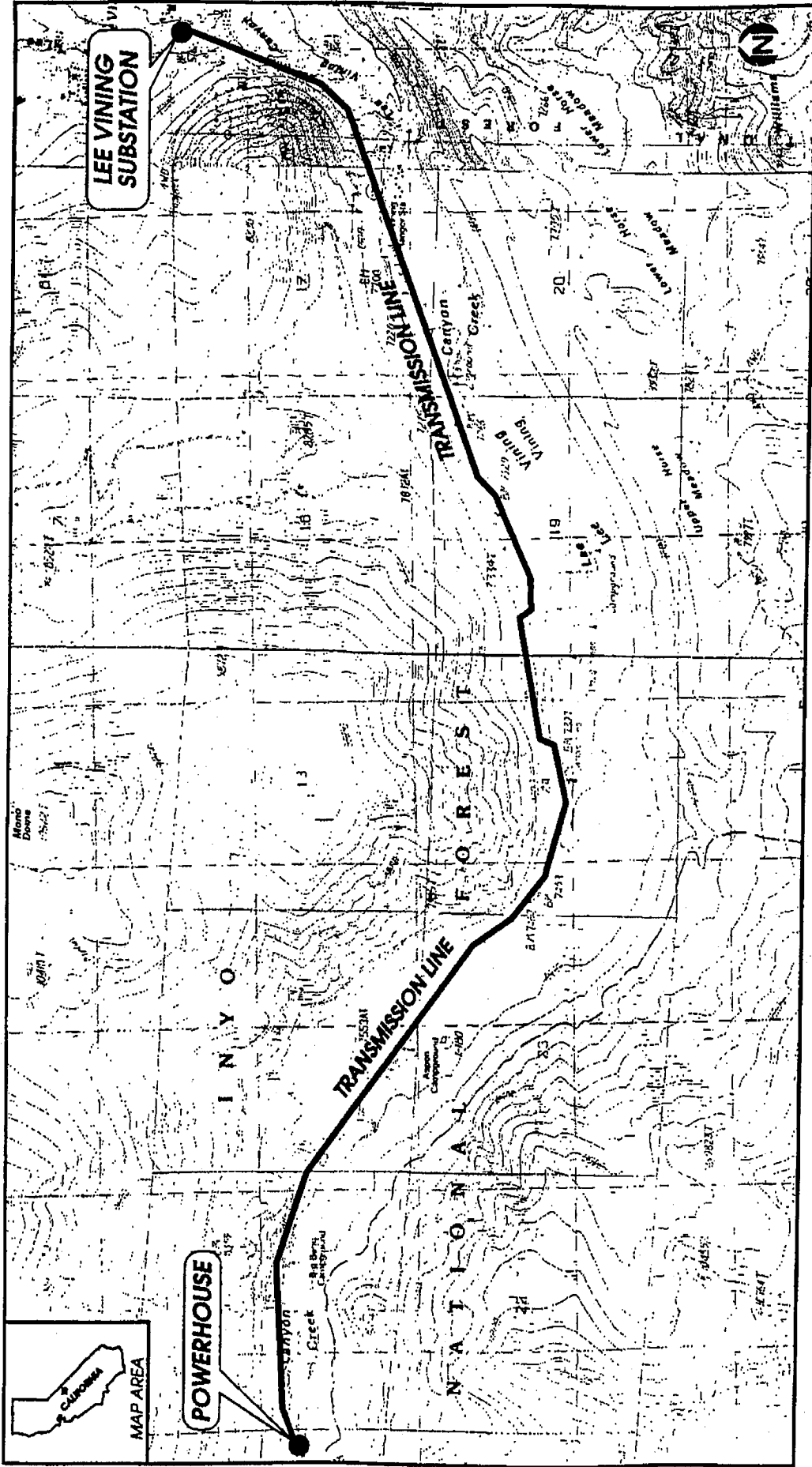


Figure 2: Lee Vining Project Transmission Line.

**PSOMAS**

MAP SOURCE: USGS 7.5' Mount Dana (1988) and Lee Vining (1986) Quads.

emptied/cleaned, and, in most cases, removed. Additionally, all transformers have been tested for PCB's and those containing this substance have been removed.

This Plan requires the licensee (Edison) to 1) maintain in the Project area a cache of spill clean-up equipment suitable for any spill from the Project; 2) to periodically inform the Forest Service of the location of the spill clean-up equipment on Forest Service lands and of the location, type, and quantity of oil and hazardous substances stored and of the location, type, and quantity of oil and hazardous substances stored in the Project area; and, 3) to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill. The following sections of this Plan describe the types and approximate quantities of materials used and stored within Edison's Lee Vining Project, procedures for storage, spill prevention measures, and measures for cleanup of any spilled substances. Since Edison already has an extensive Spill Prevention Control and Countermeasure (SPCC) Plan in effect, much of this plan focuses upon those procedures already in place and how these measures meet the expected FERC requirements.

Prior written approval will first be obtained from the Forest Service before initiating any activity the Forest Service deems as affecting or potentially affecting resources on National Forest System lands. The approval will be contingent upon compliance with federal laws, including, but not limited to, the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, Clean Air Act, Clean Water Act, and the National Forest Management Act.



**SECTION 2 - DESCRIPTION OF OIL AND HAZARDOUS SUBSTANCE  
USE AND STORAGE**

**2.1 MATERIAL USE AT FACILITIES**

Most of the oil and hazardous substance use and storage associated with the Lee Vining Project are at the Poole Powerhouse and the adjacent substation. Materials used and stored in the generator buildings at the powerhouse include mineral oils for transformers and circuit breakers, lubricating oils for governors turbines, and other miscellaneous equipment and waste oils. The substation adjacent to the Poole Powerhouse also contains mineral oil within transformers, circuit breakers and voltage regulators, a mineral oil storage tank, and three empty heating oil storage tanks. A general summary of the type and approximate quantities of materials stored at each Lee Vining Project facility location is presented in Table 1. Additional details for each project facility are contained in the Spill Prevention Control and Countermeasure (SPCC) Plan which is provided in Appendix A.

**2.2 OFF FACILITY USE ASSOCIATED WITH OPERATION AND MAINTENANCE**

Oil or hazardous materials are not permanently stored off site of Edison's facilities. Periodically, equipment use associated with operation and maintenance of the Project occurs at other off-site locations. Typical equipment use may include skip loaders, wheeled loaders, bulldozers, generators, compressors, and a variety of trucks. This equipment contains diesel fuel or gasoline, lubricating oils, and hydraulic fluid. This equipment is occasionally refueled on site.

<b>TABLE 1: SUMMARY OF TYPES AND QUANTITIES (IN GALLONS) OF OIL AND HAZARDOUS SUBSTANCES AT LEE VINING PROJECT FACILITIES</b>					
<b>Facility</b>	<b>Governor Oil</b>	<b>Transformer/ Circuit Breaker Mineral Oil</b>	<b>Lube Oil/ Hydraulic Fluids</b>	<b>Waste Oil</b>	<b>Heating Oil</b>
Poole Powerhouse	25	280	180	55	0
Adjacent Substation	0	21,295	0	0	0

## 3.0 - SPILL PREVENTION AND CLEANUP PROCEDURES

### 3.1 POTENTIAL FOR SPILLS

Storage and use as well as transfer of oils and fuels create a real, but remote, potential for an accidental spill of these materials. These spills can potentially occur from equipment failures resulting in line ruptures or other releases of materials. Additionally, accidents or human error can occur during handling of these materials.

### 3.2 EXISTING PLANS AND REPORTING REQUIREMENTS

Edison has been a responsible corporate entity in the proper use, storage, and disposal of oil and other hazardous substances. On a corporate level, the firm has published a Hazardous Waste Guidance Manual (Appendix B) which sets general guidance for the proper storage, transport, and disposal of hazardous substances. In addition to setting out emergency guidelines, the Manual identifies internal and external procedures for reporting of spills and identifies specific contractors authorized to clean up and transport hazardous substances.

A Spill Prevention Control and Countermeasure (SPCC) Plan has been prepared by Edison for the Lee Vining Project facilities as required by federal law (40 CFR, Part 112). This Plan outlines the type, quantities, and locations of oils and hazardous substances at each Project facility location. This Plan is provided in Appendix A of this document.

Edison has prepared an Oil Spill Contingency Plan that outlines procedures for notification of internal Edison groups and emergency agencies in the event of a hazardous spill at the Lee Vining Project facilities. This Plan also identifies clean-up supplies and equipment at the Project facility sites and delineates methods of reporting and responding to a spill. This Plan is provided in Appendix C of this document.

As required by the FERC, an Overall Emergency Action Plan has also been prepared for the Lee Vining Project that outlines procedures for notification of internal groups and emergency agencies in the event of hazardous spills as well as catastrophic events such as dam failures. This Plan is provided in Appendix D.

### 3.3 NOTIFICATION REQUIREMENTS

In the event of a spill or other hazardous-materials-related emergency within the Lee Vining Project area, all reports will be directed to the Operator at Edison's Central Control Operations Center which is located within the Control Substation in Bishop, California. This Center is continually manned and is in contact with the Poole Powerhouse and the distribution network operations. Bishop Creek Project Managers rotate as the On-Call Manager who is immediately notified by the Operator in the event of a spill. The Operator and the On-Call Manager have

emergency procedures manuals which are used to assess the seriousness of a spill and the contact of applicable Edison personnel as well as Mono County/Forest Service/BLM fire crews, police/sheriffs, and emergency medical personnel in the event of a serious spill or resulting fire. The Department of Fish and Game is immediately notified if any spill either affects or has a potential to affect lakes or streams. These manuals also identify the location and mobilization procedures of lean-up equipment, Edison clean-up crews, and Edison Contractors.

### 3.4 SPILL PREVENTION

#### 3.4.1 Edison Facilities

The SPCC Plans as well as Edison's internal procedures require periodic inspection of all oil- and fuel-containing equipment to ascertain if this equipment is in good working condition and to identify worn equipment that could result in creation of a spill. Minor leaks are detected and corrective action taken. A tank integrity testing program has recently been initiated for all oil storage tanks. The integrity tests will detect the potential for tank rupture.

A higher potential for spills exists during transfer of hazardous substances which involves temporary piping and equipment. Special safety procedures are implemented during this transfer operation including the stationing of clean-up materials and clean-up trained personnel at the point of transfer.

#### 3.4.2 Field Operations

Another potential spill source is the use of equipment in the field that use fuel, lubricating oils, and hydraulic fluids. Edison is initiating a program that will reduce the potential from this source. Major features of this program include:

1. Inspection of all Edison and Contractor's equipment prior to the commencement of work at a site to identify any leaks or equipment malfunctions;
2. Job site briefings of personnel to discuss measures for spill prevention, reporting, and clean-up;
3. Prohibition of storage of oils or other hazardous substances on site without appropriate agency notifications and approvals;
4. Designation of refueling locations away from streams and sensitive biological habitats; and
5. Periodic inspection of the construction site by Edison personnel and a final site inspection after construction completion in order to certify that no unreported spills have occurred. All detected spills will be reported to the appropriate agency.

### 3.5 CLEAN-UP PROCEDURES

#### 3.5.1 On-Site Equipment

All Lee Vining Project facilities have clean-up material (see Appendix C) located on site for rapid deployment and cleanup. These clean-up materials include absorbent materials, metal drums, and clean-up equipment. The absorbent material and drums are at each facility with clean-up equipment at some, but not all, facilities.

Spills of oil and hazardous materials at facility sites will normally be contained within paved areas and surfaces. The first response activity will be the containment of spilled material within the facility. In the remote possibility of a larger spill, existing containment facilities will be augmented by earth berms or sand bags to assure containment. In most instances, the spills will be rather small and will be cleaned up using absorbent materials stored on site. Contaminated soil, absorbent material, and other debris will be placed and properly labeled in 55-gallon drums and disposed of by licensed waste haulers/disposal contractors.

#### 3.5.2 Off-Site Equipment

Edison maintains additional clean-up equipment and materials off site of the Lee Vining Project area that can be used when needed. Additionally, Edison has contracts with several hazardous waste clean-up and disposal firms to provide rapid deployment of clean-up personnel and equipment for major or dangerous spills.

#### 3.5.3 Field Locations

Edison crews and contractors are required to carry absorbent materials for small spills that may occur at any work site. Initially, the spill would be contained by the use of absorbent material or, if necessary, the construction of dikes. Clean-up crews from either Edison facilities and/or clean-up contractors will be dispatched to the site for major spills. Contaminated soil will be excavated, placed in 55-gallon drums, and disposed of by licensed waste haulers. In the event of more extensive contamination, clean-up plans would be developed in cooperation with affected agencies on a case-by-case basis.

## **SECTION 4 - NOTIFICATIONS AND PLAN UPDATES**

### **4.1 NOTIFICATIONS**

All applicable agencies will be notified as to the type, day and time, and response to all spills affecting their jurisdiction. In the event of a major spill affecting plant or animal resources or creating public health concerns, notification will be immediate. Other incidents will be reported within three days of occurrence.

### **4.2 PLAN UPDATES**

In general, this Plan will be updated on a yearly basis. This Plan will also be updated within 30 days of a change in the oil or hazardous waste material quantity or material type.

**APPENDIX A**

**SPILL PREVENTION CONTROL  
AND COUNTERMEASURE (SPCC) PLAN**



**SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN**

**SOUTHERN CALIFORNIA EDISON COMPANY**

**POOLE POWERHOUSE**

**I. General Information**

**A. Facility Name**

Poole Powerhouse

**B. Location**

Lee Vining Creek, off State Highway 120 (Tioga Pass Road), 5 miles west of Lee Vining, California and U. S. Highway 395 (SE1/4, Sec 16, T1N, R25E, MDB&M)

**C. Type of Facility**

Hydroelectric generation facility

**D. Date of Initial Operation**

1924

**E. Owner's Name and Address**

Southern California Edison Company  
2244 Walnut Grove Avenue  
Rosemead, CA 91770

**F. Oil Spill History**

There is no known occurrence of an oil spill at Poole Powerhouse in which oil of any type has entered Lee Vining Creek.

**G. Responsibility for Oil Spill Prevention**

Gary L. Aubrey, Bishop Area Manager, Eastern Hydro Region  
(619) 872-3694, PAX 13714, Home (619) 873-8747



## II. Facility Description

### A. General

The Poole Powerhouse is a hydroelectric generation facility which only utilizes oil incidental to its primary function of generating electrical energy from water power. There is however, a total container capacity of 21,835 gallons of various types of oil located within the plant. All tanks and equipment containing oil are manufactured of material compatible with that oil. The generating plant is located adjacent to Lee Vining Creek and the potential exists, although unlikely, for oil within the plant to "spill" and reach the waters of Lee Vining Creek.

### B. Building

The building is a single story structure with a single generating unit. All equipment containing oil and the related piping systems inside the main power-house building are identified along with their locations in Appendix A. This equipment consists mainly of the governor and lube oil systems, small transformers, small circuit breakers and oil storage drums.

### C. Outdoor Facilities

The oil containing equipment or sources of oil outside the main powerhouse building are also identified in Appendix A. This equipment consists of transformers, circuit breakers, a voltage regulator, a transformer oil storage tank and three heating oil storage tanks. The largest potential storage volume is in the transformer oil tank (4465 gallons) with the largest transformer containing 3900 gallons of oil.

## III. Spill Prevention and Control

### A. Building

The equipment containing oil is subject to leakage, and under unusual circumstances some of the equipment could rupture. During a rupture oil could spray or be rapidly flowing in any direction. This release could include a transformer rupture, a circuit breaker rupture or a rupture in any of the pressurized oil systems.

In general oil spilling from equipment within the structure would flow into the generator pit or transformer overhaul pit and be controlled at that point. Fundamentally the building itself is the primary means for oil spill control. Regardless of the nature of the leakage or the oil source, the building will provide the overall oil containment. The objective for the oil spill control is to confine the oil inside the building. Thresholds have been constructed at the maintenance door,

control room to tunnel personnel door, east personnel door and basement door. Seals have been installed around the generator floor access hatches. Valves have been installed on the needle, transformer repair and governor deflector pits.

The possibility also exists, although unlikely, for oil to leak into the water system of the internally water-cooled main unit bearings and bearing oil sump tank. Water is circulated from the cooling water system through the bearing and sump tank; then discharged into the tailrace. As long as this water is circulating under a net positive pressure inside the bearing, leakage if any, will occur by water leaking into the bearing. Provisions have been made to assure a net positive pressure on the water cooling system.

#### B. Outdoor Facilities

The outdoor equipment is also subject to leakage and may under unusual circumstances rupture. Each of the pieces of equipment listed in Appendix A is a potential source of an oil spill.

Containment of oil due to a postulated spill at any of these locations is best achieved at the source location. The effects of snow, rainwater flooding, and drainage are considerations for these facilities. Consequently, provisions are made to contain an oil spill at each piece of equipment. These provisions are also meant to preclude rainwater flooding in the contained area. A cinder block wall has been constructed around the transformer bank with the wall attaching to the powerhouse building on the south side. Thresholds have been built at the maintenance and personnel gates. Drain valves have been installed for the removal of water. These valves are normally closed.

The possibility also exists, although unlikely for oil to leak into the water system of the internally water-cooled No. 1 7/115 kV transformers. Water is circulated from the cooling water system through the transformers and back to the tailrace. As long as this water is circulating under a net positive pressure inside the transformer, leakage if any will occur by water leaking into the transformer. Valves and gauges have been installed to provide a means of assuring a net positive pressure on the transformer cooling systems.

#### C. Transfer Operations

Oil is received or removed from this facility by truck. There is no permanent oil transfer system at this facility. There is however a transformer oil storage tank (normally empty) located in the 115 kV switchyard and it requires mobile equipment to transfer oil in or out of the tank. It is recognized that during a transfer operation, oil could spill from a truck or other piece of mobile equipment.

During oil transfer operations, provisions are made to have sufficient personnel and sorbent materials readily available to control a spill from an oil truck or related equipment.

Lubricating oil and other oils are normally received in 55 gallon steel drums. While in the yard area, during off-loading, similar provisions as above are required to control the potential spill of oil from a steel drum.

#### IV. Security, Inspection and Records

##### A. Plant Security

Poole facility equipment containing oil is confined to either the powerhouse building or in the fenced substation area. The powerhouse building access doors are only open during the time the facility is manned. The substation gates are only opened when access is needed. In general, equipment containing oil or oil source locations are inside the security fencing or have their own security provisions with locks.

##### B. Inspections

The Station Orders written for the inspection of the Poole facility include specific provisions for the following:

1. the periodic inspection of those devices or facilities that prevent an oil spill from escaping the main powerhouse building and outdoor facilities
2. the periodic inspection to verify the net positive pressure in the generator bearing and transformer water cooling systems
3. the periodic inspection of plant security systems
4. the periodic inspection of all equipment containing oil

##### C. Records

All inspections are documented and records kept for a minimum of three years. Records of personnel training are also kept a minimum of three years.

## V. Personnel, Training and Spill Prevention Procedures

### A. Personnel

Sufficient manpower will be allocated to cleanup any spill that may occur. Sufficient manpower will be available onsite to control any spill in the yard area that may occur during oil transfer operations

### B. Training

All Eastern Hydro Region operating and maintenance personnel receive annual training on spill prevention, control and containment procedures. Any new operating and maintenance employees receive such training before being assigned to field work.

### C. Spill Prevention Procedures

The Station Orders inherently include operating instructions to prevent oil spills, since oil spills are contrary to good operating practice. The Station Orders include specific provisions for the following:

1. the onsite and backup storage of sorbent material
2. the sorbent material to control a spill in the yard area during oil transfer operations
3. the cleanup of an oil spill and the proper disposal of oil saturated sorbent materials
4. the expeditious performance of any repairs necessary to stop or prevent leaks

## VI. List of Oil Containing Equipment

A listing of all of the facility's equipment that contains oil is given in Appendix A.

## VII. Plot Plan

Plot plans of the powerhouse and the entire facility are shown in Figures 1 and 2 respectively. These plans show the location of all buildings, the location of major pieces of equipment containing oil, and the direction that any spilled oil would flow.

### VIII. Facility Improvements

The following facility improvements are required to improve the spill control capability of the facility:

- A. The generator pit walls need to be sealed to prevent seepage from the surrounding terrain and a valve needs to be installed on the pit's drain line.
- B. The transformer repair pit should also be sealed to prevent seepage from the surrounding terrain.
- C. The transformers and CBs on the mezzanine should have small spill containment pans put under them.
- D. The heating oil storage tanks that are no longer being used should be removed.
- E. The switchyard drain lines should be sealed off from the other area drains.

The above work should be completed by October 1, 1994.

APPENDIX A

POOLE POWERHOUSE

OIL CONTAINING EQUIPMENT

<u>Equipment</u>	<u>Capacity Gallons</u>	<u>Total Gallons</u>	<u>Location</u>
<b>POWERHOUSE BUILDING</b>			
Governor Oil System	25	25	Generator Floor
Bearing Oil System	85	85	Generator Pit
Unit Bearings (2)	20	40	Generator Floor
Generator 7kV CB	180	180	Mezzanine
Station Light & Power Transformers (5)	20	100	Mezzanine
Turbine Oil Drum	55	55	Generator Floor
Waste Oil Drum	55	55	Generator Floor
<b>OUTDOOR FACILITIES</b>			
No. 1 7/115 kV Bank Transformers (4)	3900	15600	South End of Substation
No. 2 7/115 kV Bank Transformers (4)	180	720	North End of Substation
12 kV Voltage Regulator	400	400	North End of Substation
No. 2 Bank 7 kV CB	110	110	Center of Substation
Transformer Oil Storage Tank	4465	4465	South End of Substation
Heating Oil Storage Tanks (3)	1400	-	Cottage Area

**APPENDIX B**

**HAZARDOUS WASTE  
GUIDANCE MANUAL**

## ENVIRONMENTAL AFFAIRS CONTACT PERSONNEL

Robert V.D. Reid, Supervisor .....PAX 29765  
Water Quality and Hazardous Waste

George Becker .....PAX 22216  
Hazardous Waste, Water Quality, Visalia Pole Yard

David Kay .....PAX 22149  
Water Quality, Hazardous Waste, SPCC, PCBs

Ron Jensen .....PAX 29561  
Hazardous Waste, Manufactured Gas Plants

Tom Gross .....PAX 29545  
Hazardous Materials Transportation, Superfund Reform

Jennie King .....PAX 24257  
Manufactured Gas Plants, Fuel Oil Systems

Danielle Chupa .....PAX 22153  
Legislative Analysis, RMP, Business Emergency Plans,  
Underground & Aboveground Tanks, Haz Mat Disclosure,  
CUPA

Katy Vanderslice .....PAX 29320  
CHWMS Support, Chemical Analysis  
Permits/Fees

It is our goal in Environmental Affairs to provide you with useful resources and tools to help you comply with environmental regulations applicable to your facility. These resources are available on-line to all Edison employees with Internet access and are located in the Environmental Affairs' on-line Environmental Notebook. Access to the Environmental Notebook can be obtained via the following Internet address:

<http://www-go.sce.com>

Please direct your questions and comments regarding the Environmental Notebook to  
Kelly A. Garcia at PAX 24073 or e-mail [garciaka@sce.com](mailto:garciaka@sce.com)



# **HAZARDOUS WASTE**

**guidance  
manual**



**EDISON  
INTERNATIONAL™**

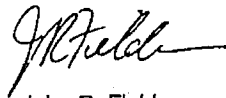
**january 1997**

January, 1997

**T**he **Hazardous Waste Guidance Manual** has been developed by Environmental Affairs and updated over the years to provide a quick and easy reference on the management of hazardous waste to Edison employees. The Manual is a comprehensive document outlining the proper procedures for the handling, storage and transportation of hazardous wastes according to state and federal regulations. These requirements are continually changing, therefore it is essential that this document take precedence over the 1996 version and it be reviewed and kept onsite. Your current hazardous waste handling procedures should be consistent with this Manual.

The recent restructuring and deregulation of California's electric power industry is substantially changing the way we do business. But, these industry changes do not alter our fundamental commitment to environmental protection. Edison has maintained and will continue to maintain a leadership role in addressing and balancing the issues of economic competitiveness and environmental quality. As emphasized in Edison's corporate environmental policy, we are continuously working to improve our environmental performance, minimizing any environmental impact of our daily operations and striving to meet a high standard of environmental excellence.

For a periodic update of changes in regulations during the 1997 year, read the *HazMat Bulletin* also produced by Environmental Affairs. If you need additional manuals and/or have any comments, please forward them to Danielle Chupa at PAX 22153 (CHUPAD).



John R. Fielder  
Vice President  
Regulatory Policy and Affairs

# TABLE OF CONTENTS

PURPOSE .....	2
GENERAL INFORMATION .....	2
Hazardous Materials .....	2
Hazardous Wastes .....	2
Recycled Wastes .....	2
Waste Characterization .....	2
ABBREVIATED OR "MILK-RUN" MANIFESTS .....	3
GENERAL REQUIREMENTS .....	3
DISPOSAL ARRANGEMENTS .....	3
LAND DISPOSAL RESTRICTIONS, OR "LAND BAN" .....	4
EMERGENCIES .....	4
STORAGE OF HAZARDOUS WASTES .....	4
Time Limits on Storage .....	4
"Accumulation" in the Workplace .....	4
Inspections and Other Requirements .....	4
HAZARDOUS WASTE CONTAINERS AND LABELING REQUIREMENTS .....	5
Containers .....	5
Empty Containers .....	5
LABELING DURING STORAGE .....	5
Recyclable Wastes .....	5
PCBs .....	5
Non-PCB Hazardous Wastes .....	6
Non-Hazardous Petroleum Contaminated Soil .....	6
Other Non-Hazardous Wastes .....	6
LABELING FOR TRANSPORTATION .....	7
Reportable Quantities .....	7
VEHICLE PLACARDING .....	7
SHIPPING PAPER .....	7
HAZARDOUS WASTE MANIFEST REQUIREMENTS .....	7
EPA ID Numbers .....	7
Filling Out the Manifest Form .....	8
Items Required by Federal Law .....	8
Items Required by State Law .....	8
Distribution and Retention of Manifests .....	8
Manifest Exceptions .....	8
Uniform Hazardous Waste Manifest Example .....	9
APPENDIX 1 — EPA ID Numbers .....	10
APPENDIX 2 — Approved Hazardous Waste Disposal/Transport Suppliers .....	12
APPENDIX 3 — Straight Bill of Lading Example .....	13
APPENDIX 4 — Oily Water Acceptance Criteria .....	14
Corporate Policy Statement .....	15

## PURPOSE

The purpose of this guidance manual is to provide information establishing uniform practices and procedures for the handling and disposal of hazardous wastes that (a) minimize human exposure, (b) protect the environment, and (c) adhere to current regulatory requirements.

## GENERAL INFORMATION

### Hazardous Materials

A variety of chemicals, as purchased, are classified as hazardous materials. The use, transportation, and storage of hazardous materials is regulated by various agencies including the Occupational Safety and Health Administration (OSHA), the California Highway Patrol (CHP), the federal Department of Transportation (DOT), and local fire and health jurisdictions.

Each Edison location that stores hazardous materials or hazardous wastes is required to file an annual Hazardous Materials Disclosure (Inventory) form with the local county or city jurisdiction that is responsible for the program. The local agency will send an inventory form annually to each facility. Generally, the only quantities of hazardous materials and wastes that are reportable are those that are more than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas. Such locations must also prepare and maintain a Business Emergency Plan.

Most administering agencies require that the Business Emergency Plan be prepared on a form which they provide. Agency forms may be obtained through Danielle Chupa at PAX 22153. All Business Plans, Inventories, and related permits will now be handled through Environmental Affairs. Be sure to keep a copy of the Business Emergency Plan and Inventory at the facility before forwarding the original to Environmental Affairs.

### Hazardous Wastes

Hazardous materials do not become regulated as **Hazardous Wastes** until the particular hazardous material is no longer intended for use.

Potential sources of hazardous waste include acids, asbestos, contaminated gasoline and diesel fuel, liquid paints, paint thinner, solvents, oil and any soil contaminated from a spill of these materials. **ALL HAZARDOUS MATERIALS WHEN SPILLED MAY BE REGULATED AS HAZARDOUS WASTES.**

When a material containing hazardous chemicals is to be discarded, the material becomes a hazardous waste and must be handled, stored and disposed of according to the regulations of the California Environmental Protection Agency — Department of Toxic Substances Control (DTSC).

The DTSC is the primary agency of jurisdiction for hazardous waste control and is empowered to enforce the federal regulations of the Environmental Protection Agency (EPA). The DTSC has shared its authority for the enforcement of hazardous waste regulations with some county or city departments of health.

### Recycled Wastes

Waste oil and transformer oil that is recycled **within the company** as pipeline cutter stock is not subject to regulation as hazardous waste. No Uniform Hazardous Waste Manifests are required for shipment of these materials to Material and Equipment Sales, or to the Dominguez Hills Fuel Oil Facility. The guidance on not having to use a manifest applies to shipments in company vehicles or contractor vehicles. The general guidance is that these materials are "excluded recyclable materials" whose re-use is intended. However, a shipping paper such as the Modified Bill of Lading (SCE 35-3) must accompany the shipment.

Other wastes such as solvents and waste oil water mixtures that are recycled by an outside contractor **are** subject to regulation as hazardous wastes and require the use of a Uniform Hazardous Waste Manifest, and a contractor vehicle (registered hazardous waste hauler). **DO NOT** use the Excluded Recyclable Materials Label for such wastes.

### Waste Characterization

Waste generators are responsible for characterizing their wastes to determine if they are hazardous or not. Generators may use their knowledge of a waste's composition or the process that generated it to determine if the waste is hazardous. Where such "generator knowledge" is insufficient, analytical testing of the waste must be performed.

In general, if a waste contains any of the wastes listed in state or federal regulations, then the waste is hazardous. Also, if a waste is potentially toxic, corrosive, reactive, or ignitable, it may also be hazardous. Environmental Affairs is available to assist generators in characterizing their wastes and documenting the process. Refer to EA's Hazardous Waste Characterization Guidebook, available at the Environmental Reference Manual internet site.

Any time a generator first asserts that a particular industrial waste is non-hazardous, they should have some analytical testing done to support the assertion. The data may be from the generator's own waste or from similar wastes generated elsewhere. Environmental Affairs has compiled such data on many of the commonly generated wastestreams in the Company and will make that data available to individual generators if needed.

### **ABBREVIATED OR "MILK-RUN" MANIFESTS**

Frequently, the recycler will have the authority from the DTSC to operate under an "abbreviated" manifest procedure which allows the use of a single manifest to record shipments from a number of pick-up locations. In this instance, the recycler becomes the "generator" and is responsible for all manifest obligations; the recycler will leave an invoice describing the wastes transported instead of a copy of the manifest. You **must** receive and retain for 3 years an invoice, receipt, or bill of lading for each such shipment. Verify that the generator's and transporter's name, address, EPA ID Number, contact name and telephone number are all correctly indicated on the receipt.

### **GENERAL REQUIREMENTS**

1. A generator of hazardous waste must not treat, store, dispose of or offer for transportation, hazardous wastes without having an EPA Identification Number (EPA ID Number).
2. Hazardous wastes must not be offered to a transporter, treatment or disposal facility that does not have an EPA ID Number. Refer to Appendix 2 for a list of approved disposal facilities.
3. Hazardous wastes, except PCBs, must be transported only by a transporter who is licensed by the State of California as a Registered Hazardous Waste Hauler. Edison vehicles participating in the Centralized Hazardous Waste Management Service (CHWMS) are registered hazardous waste haulers.
4. PCB wastes and oil for recycling **ONLY** can be transported in unregistered SCE vehicles. Edison vehicles operate under a state variance from the Hazardous Waste Hauler Requirements for PCBs. A current copy of the variance and a shipping paper (Form 14-78 in the case of PCBs) must be carried in the vehicle whenever PCBs are transported. Oil waste transported to a company facility for recycling are "excluded recyclable materials" and exempt from regulation under the California Health and Safety Code, Section 25143.2 but also require a shipping paper.

5. Small amounts of remotely generated hazardous waste may be transported in unregistered vehicles under a special state exemption. Contact Tom Gross at PAX 29545 or your environmental coordinator for details.

### **DISPOSAL ARRANGEMENTS**

Any hazardous waste that is accumulated in containers may be transported by the company's Centralized Hazardous Waste Management Service (CHWMS). Investment Recovery and Hazardous Materials Division (IRHMD) operates the CHWMS utilizing Material Transport Vehicles to pick up drums of hazardous waste for delivery to predetermined recycling or disposal facilities. Your organization is charged only for actual transportation and disposal costs. Hazardous wastes may be disposed of only at one of the pre-approved facilities listed in Appendix 2. Do not arrange for disposal of your hazardous wastes through an outside supplier unless such disposal is part of a turnkey operation such as asbestos abatement and you have been trained to use the CHWMS.

Procedures for using the CHWMS are found in a separate document, "Procedures for Generators Using the Centralized Hazardous Waste Management Service." If you do not have a copy of these procedures and/or you have not been trained to use the service, contact your facility/department environmental coordinator, or contact Katy Vanderslice at PAX 29320.

Outside of CHWMS, there is no centralized location within the company for the disposal of hazardous wastes other than PCBs and waste oils destined for recycling. Each department is responsible for the transportation and disposal of wastes generated within their jurisdiction.

Hazardous waste treatment and disposal companies need detailed laboratory data on the composition of the wastes. The CHWMS will arrange for waste analyses if necessary.

Unusual or unconventional jobs involving the removal and disposal of hazardous wastes from spill sites or demolitions can be arranged through the Supervisor of Environmental Engineering (PAX 24025); an ED 26 form will be required. Environmental Engineering will act as the general contractor on the job.

## **LAND DISPOSAL RESTRICTIONS, OR "LAND BAN"**

"Land Ban" rules enacted over the last several years prohibit the landfilling of certain hazardous wastes unless the wastes have first been treated to reduce their hazardous characteristics. The rules require we attach a notification or signed certification form to each manifest for wastes which are "land banned." Generally, the only Edison wastes which are covered by this rule are spent chlorinated solvents, PCBs, heavy metals (i.e., mercury), and acids. However, there are always exceptions, so if you are not certain whether your waste is "land banned," call David Kay at PAX 22149 for assistance.

The CHWMS will provide you with a notification or certification form, if needed, along with a manifest. You must keep a copy of each form in your file for **five years** along with the corresponding manifest. If you ship waste outside of the CHWMS, ask the contractor to provide any applicable Land Ban forms.

If your waste *does not* meet its "land ban" treatment standard (this is usually the case), you must attach a notification form to the manifest. If your waste *does* meet its treatment standard (unlikely), you must sign and attach a certification form.

## **EMERGENCIES**

Each facility is responsible to respond in an event of an emergency. If additional assistance is required, contact the Edison operator.

## **STORAGE OF HAZARDOUS WASTES**

"Storage" of hazardous wastes is regulated in California based on the time duration of storage. Hazardous wastes generated at Edison facilities may be stored **FOR ONLY 90 DAYS**.

### **Time Limits on Storage**

Hazardous wastes generated in the "field" and transported to the nearest Edison location (with an EPA ID Number) may be stored at that location **FOR ONLY 90 DAYS**. For purposes of this document, the "field" is an unmanned location such as a pole, vault, substation, etc.

PCBs and PCB wastes generated in the field and transferred to another location (such as a Customer Service Center) must be shipped to Investment Recovery and Hazardous Materials Division (IRHMD) **WITHIN 240 HOURS** of the transfer. This is because IRHMD is the generator of record for PCBs, and the shipping location is only considered a "transfer station."

### **"Accumulation" in the Workplace**

Hazardous wastes routinely generated at a work station may accumulate in a 55 gallon drum for up to 270 days or until the drum is full, whichever occurs first. **The workstation must be under the control of an operator.** Examples of workplace accumulation would include cutting oil accumulated by a lathe operator, solvent accumulated at a parts cleaning station, or rags accumulated at any workstation.

The quantity limitation at each accumulation point is 55 gallons for each type of waste. There is no limit on the number of workstations within a facility that may accumulate wastes in this manner.

Each container used for workplace accumulation must be marked with Edison Label No. 14-174-219 showing the initial date of accumulation (see "Labeling During Storage"). The label must also indicate the facility EPA ID Number and the waste type. **NO MORE THAN ONE WASTE TYPE SHOULD BE ACCUMULATED OR STORED IN ANY SINGLE DRUM.** That is, do not mix oil with solvent, solvent with paint, paint with asbestos, etc.

Within 3 days of filling a 55 gallon container, it shall be marked with the date the container was filled or reached 270 days old (storage start date) and moved into the hazardous waste storage area. Once the container is in the storage area, it may remain there for another 90 days from the storage start date (See Figure 2).

### **Inspections and Other Requirements**

All containers holding hazardous wastes, including drums, bags, and roll-off bins, must be inspected **weekly** for compliance with container and labeling requirements as discussed in the next section. All hazardous wastes should be stored on a paved area that is located away from yard drains, preferably under protection from the weather.

## HAZARDOUS WASTE CONTAINERS AND LABELING REQUIREMENTS

### Containers

Containers must be properly labeled **before** accumulation begins. Generally, all hazardous materials that have become hazardous wastes may be stored and transported in their original containers since those containers are required to meet all applicable Department of Transportation (DOT) regulations. However, some product containers are "one trip-approved" only and may not be reused.

The contents of containers which are no longer serviceable may be transferred to company approved "PCB barrels":

- 55 Gal. Bung Top (DOT 17-E) — Material Code 997 10105
- 55 Gal. Removable Top (DOT 17-C) — Material Code 997 10204
- 16 Gal. Removable Top — Material Code 997 00221

"PCB barrels" are available from the Corporate Warehouse.

"Recovery drums" are containers large enough to hold an unserviceable 55 gallon drum and may be available in limited quantity from IRHMD.

"Roll-off bins" are available from transportation contractors or through Material Transport Division. Be sure the bin you receive has a cover.

Refurbished 55 gallon Bung Top barrels may be obtained from IRHMD at a reduced cost.

Roll-off bins used for the transportation of hazardous waste must be certified by the Department of California Highway Patrol or the transporter, if the transporter has been authorized by the CHP to self-certify their bins. Contact Tom Gross at PAX 29545 for more information.

### Empty Containers

Empty containers of 5 gallon capacity or less which held hazardous materials may be disposed of with non-hazardous refuse provided that (1) all pourable liquid has been removed, and (2) all solid material has been removed by conventional means. Containers greater than 5 gallon capacity must either be disposed of as hazardous waste, recycled by the product vendor, or salvaged for scrap value. Aerosol containers are non-hazardous if they have been emptied of all product and propellant.

## LABELING DURING STORAGE

### Recyclable Wastes

Waste oil, oily waste, or oily water which is intended to be recycled within the company, must be labeled "**Excluded Recyclable Material.**" Acceptance criteria can be found in Appendix 4. A description of the waste must also be written on the label. The blank label pictured is **SCE Form 37-342** and is available from the Corporate Warehouse (See Fig. 1).

**EXCLUDED RECYCLABLE MATERIAL**

STATE AND FEDERAL LAW PROHIBIT ILLEGAL IMPROPER DISPOSAL  
IF FOUND, PLEASE CONTACT SOUTHERN CALIFORNIA EDISON COMPANY  
AT (800) 621-8516

PROPER D/T SHIPPING NAME \_\_\_\_\_ UN IF NAME \_\_\_\_\_  
GENERATOR INFORMATION \_\_\_\_\_ ORUM NO \_\_\_\_\_  
NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
EPA ID NO \_\_\_\_\_ DATE \_\_\_\_\_  
CONTENTS \_\_\_\_\_

PHYSICAL STATE: SOLID \_\_\_\_\_ LIQUID \_\_\_\_\_ HAZARDOUS PROPERTIES: CORROSIVE \_\_\_\_\_ REACTIVITY \_\_\_\_\_ OTHER \_\_\_\_\_ FLAMMABLE \_\_\_\_\_ TOXIC \_\_\_\_\_

**HANDLE WITH CARE!**  
MAY CONTAIN HAZARDOUS MATERIALS

Fig. 1

### PCBs

Fluorescent and HID lamp ballasts manufactured before 1978 may contain PCBs. However, these ballasts are not managed as PCB waste, but rather as Non-RCRA hazardous waste via the CHWMS. Normal hazardous waste labeling and accumulation rules therefore apply.

Individuals should refer to their appropriate Division or Station Orders for guidance on labeling PCB shipments. Currently, only the following label is being used for wastes containing in excess of 500 ppm PCB:

Yellow — PCB warning label (Edison Form 14-174-202B)

**Non-PCB Hazardous Wastes**

State and federal regulations require that hazardous wastes be labeled during storage with most of the information requested on the label as listed below. Place the label on the waste drum rather than on the lid to prevent the accidental switching of lids. Many departments have pre-printed labels available. The blank label pictured below is SCE Form 14-174-219 and is available from the Corporate Warehouse.

Fig. 2

The information required during storage includes:

- The words "Hazardous Waste"
- The date when accumulation began
- The date placed into 90-day storage
- The composition and physical state of the waste (e.g., Solvent/Liquid)
- The hazardous properties (Flammable, etc.)
- The name and address of the generator and the generator's EPA ID Number

If your waste is managed by CHWMS, they will provide you with the proper DOT shipping name in advance of pick-up.

**Non-Hazardous Petroleum Contaminated Soil**

Petroleum-contaminated soil, commonly known as oily dirt, is usually non-hazardous unless the oil that leaked or spilled was mixed with solvents or came out of an internal combustion engine. Fuel oil, mineral oil and lubricating oils, when spilled or leaked onto soil, will generally result in such non-hazardous oily

dirt. If you have oily dirt, gravel, or mineral absorbent that meets certain criteria, it could be disposed of as hazardous waste at a reduced cost. However, it also cannot be disposed of with regular trash.

Environmental Affairs has an arrangement to recycle this type of waste through an outside supplier. If you have non-hazardous oily dirt, place it in 55 gallon ring-top drums or roll-off containers. The choice of container depends on the job conditions and the amount of soil. Typically, if you have 20 yards or less it is more cost-effective to use drums. If you have >20 yards, use roll offs. Label each container with the Non-Hazardous Waste label, SCE Form 37-366 (See Fig. 3). Then, using a straight bill of lading (SCE 37-285), ship the drums on an Edison vehicle to Investment Recovery & Hazardous Material Division. Complete and submit the required tracking form as specified in the CHWMS Procedures Manual.

Fig. 3

**Other Non-Hazardous Wastes**

Non-hazardous wastes that cannot be placed in the trash, such as some sandblast grits or drilling muds, should be labeled with SCE Form 37-366. Use this label only if you have analytical results showing the waste is not hazardous, or you can reasonably assume this by your knowledge of the waste or the process that generated it.

**IMPORTANT: A WATERPROOF PEN MUST BE USED ON ALL LABELS (Edison Code 791-00244).**



## **LABELING FOR TRANSPORTATION**

All information requested on the Hazardous Waste label must be in place prior to transportation. In addition to the information required during storage, the following items are required for transportation:

- Proper DOT Shipping Name
- EPA ID Number
- UN or NA Number
- Manifest Document Number

The CHWMS will provide this information to you in advance of the waste pick-up.

Material Transportation will assist the generator in applying the appropriate DOT hazardous material marking for DOT regulated material. The generator is responsible for ensuring that this is accomplished.

### **Reportable Quantities**

The "RQ" designation that appears in the "Proper Shipping Name" of some wastes is a part of the proper shipping name and indicates the "Reportable Quantity". You must indicate the RQ designation if the reportable quantity exists in a single container. Environmental Affairs and regulatory agencies must be notified if more than the RQ is spilled in or near bodies of water, or leaves the company property.

IF A SPILL OF A CHEMICAL HAVING AN "RQ" OCCURS, ENVIRONMENTAL AFFAIRS MUST BE CONTACTED AS SOON AS POSSIBLE BUT NOT LATER THAN 24 HOURS (see inside front cover for Environmental Affairs Contact Personnel). EA staff may be contacted after hours through the Edison operator.

## **VEHICLE PLACARDING**

Just as hazardous waste containers must be labeled, vehicles transporting hazardous wastes must be placarded. Placards are usually hinged metal signs attached to the transporter's vehicle that can be turned to read different hazard classes.

You, the generator, must assure that transporter's vehicle is equipped with placards that describe the hazard class of the wastes being hauled.

If two or more hazard classes of wastes are being hauled, the vehicle may be placarded as "DANGEROUS" in place of separate placards for each hazard class in the shipment.

## **SHIPPING PAPER**

DOT regulations require that any shipment of hazardous waste or hazardous material be accompanied by a shipping paper. The shipping paper can be a manifest or bill of lading (See Fig. 4). The paper must contain in this sequence: the proper DOT shipping name, hazard class, UN or NA Number, packing group number and a 24-hour emergency response telephone number.

When sending ANY excluded recyclable material into the Fuel Pipeline system, such as used transformer oil to the Dominguez Hills cutter tank, you **MUST** use a Modified Bill of Lading — Excluded Recyclable Material (SCE 35-3) which is available from the Corporate Warehouse.

Emergency response information must also be provided. If the transporter carries the DOT 1993 (DOT 1996, when available) Emergency Response Guide in the vehicle, this requirement is fulfilled. Alternatively, you may use a copy of the page from the ERG which corresponds to the hazardous material(s) being shipped. However, you must have the proper DOT shipping name, hazard class, UN or NA number and packing group number written on the photocopy.

Corporate Materials Management provides proper shipping documentation to material transport drivers for all DOT regulated materials. Other departments involved in shipping or transporting regulated hazardous materials must also meet this legal requirement.

## **HAZARDOUS WASTE MANIFEST REQUIREMENTS**

A Uniform Hazardous Waste Manifest (Form DHS 8022 A, rev. 7-92) must be prepared before hazardous waste is offered for transportation in the State of California. Earlier manifest forms are now obsolete. The CHWMS will provide a manifest when wastes are picked up.

The State of California Hazardous Waste Manifest forms are generally available from the Registered Hazardous Waste Hauler, or internally from Environmental Affairs or Investment Recovery and Hazardous Materials Division.

### **EPA ID Numbers**

**EPA ID Numbers are site specific.** Each number is unique and will be issued to a specific location as required.

ID Numbers for each facility are listed in Appendix 1. If you have questions regarding the appropriate number for use at any Edison facility and the information is not available in Appendix 1, contact Environmental Affairs for guidance PRIOR to proceeding with manifesting or shipping any hazardous wastes.

If you need to obtain a permanent, emergency or provisional generator ID number, contact Environmental Affairs. DO NOT, at any time, use an EPA generator number unless you are certain that it is the appropriate number for the location from which the waste is being generated.

### Filling Out the Manifest Form

An example of the Uniform Hazardous Waste Manifest (See Fig. 4) is included in this chapter. Items on the manifest that require special attention are listed on page 9.

### Items Required by Federal Law

Item 1: Be sure to use the generator EPA ID Number which corresponds to the generator's site address (Item 3).

Item 3: Generator's name and mailing address should include a notation of the location where the wastes were generated if it is different than the mailing address. The site location address may also be written under Item 15.

Item 11: All information requested must be provided. The Proper Shipping Name must be the EXACT wording as provided in the CHWMS Procedures Manual (Appendix A).

Item 13: Field locations that are unable to **measure** the total quantity of wastes should estimate the total quantity.

Item 15: A 24-hour emergency contact phone number must be provided. You may use 1-818-302-1212 if no other emergency response number can be provided.

### Items Required by State Law

Item "B": Edison's Hazardous Waste Tax Account Number should be inserted in this space. The number for all Edison locations is HY HQ 36-006959.

Item "I": California Waste Numbers are selected from Table III of the manifest instructions (back of manifest). See the CHWMS Procedures Manual for common numbers.

If applicable, "EPA/Other" Waste Codes for common Edison generated wastes are listed in the CHWMS Procedures Manual. Environmental Affairs (PAX 29320) should be contacted for unlisted waste numbers.

Item "J": For mixtures or solutions of hazardous and non-hazardous wastes (e.g. oil and soil) an approximate percentage of each component should be listed (i.e. 10% oil, 90% soil).

Profile numbers assigned by the disposal facility may be included in this item.

### Distribution and Retention of Manifests

1. Retain one YELLOW copy (marked Generator Retains) and the BLUE copy of the manifest.
2. Forward BLUE copy to DTSC at the address indicated within 30 days.
3. All remaining copies of the manifest will accompany the shipment.
4. A YELLOW copy that has been signed by the disposal facility must be returned to you within 30 days (see Manifest Exceptions below). **Both of these YELLOW copies must be retained at your location for 3 years.**  
If a Land Ban certification form is attached, the retention period is 5 years.

### Manifest Exceptions

A generator who does not receive a signed copy of the manifest from the designated recipient within 35 days of the date the waste was accepted for transport must contact the designated facility and/or the transporter to determine the status of the hazardous waste. If the hazardous waste was sent through CHWMS, IR&MD will follow up on this issue for the generator.

**IF A SIGNED COPY OF THE MANIFEST HAS NOT BEEN RECEIVED WITHIN 45 DAYS, ENVIRONMENTAL AFFAIRS MUST BE CONTACTED IMMEDIATELY.**

This situation requires an Exception Report to be filed with the California Environmental Protection Agency — Department of Toxic Substances Control. Environmental Affairs will file this report and supply a copy to the generator's location.

# UNIFORM HAZARDOUS WASTE MANIFEST

State of California—Environmental Protection Agency  
 Form Approved OMB No. 2050-0039 (Expires 9-30-94)  
 Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control  
 Sacramento, California

92814246  
 IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550  
 GENERATOR  
 FACILITY

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.		2. Page 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address					A. State Manifest Document Number <b>92814246</b>				
4. Generator's Phone ( )					B. State Generator's ID				
5. Transporter 1 Company Name			6. US EPA ID Number		C. State Transporter's ID				
7. Transporter 2 Company Name					D. Transporter's Phone				
9. Designated Facility Name and Site Address			10. US EPA ID Number		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone				
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste Number	
				No.	Type				
a.								State	
b.								EPA/Other	
c.								State	
d.								EPA/Other	
12. Additional Description for Materials Listed Above					K. Handling Codes for Wastes Listed Above				
					a.				
					b.				
					c.				
					d.				
15. Special Handling Instructions and Additional Information									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.									
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name				Signature		Month		Day	Year
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature		Month		Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month		Day	Year
19. Discrepancy Indication Space									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name				Signature		Month		Day	Year

DO NOT WRITE BELOW THIS LINE.

## APPENDIX 1

### EPA ID Numbers All Edison Facilities State Board of Equalization Hazardous Waste Tax Account No. HY HQ 36-006959 EPA IDENTIFICATION NUMBERS

#### Generating Stations

Alamitos .....	CAD 009 694 795
Cool Water .....	CAD 000 630 905
Ellwood .....	CAD 980 365 167
El Segundo .....	CAD 000 630 962
Etiwanda .....	CAD 079 548 574
Highgrove .....	CAD 000 631 028
Huntington Beach .....	CAD 000 631 085
Long Beach .....	CAD 000 631 143
Mandalay .....	CAD 000 630 913
Mohave .....	NVD 000 630 970
Ormond Beach .....	CAD 000 631 036
Redondo Beach .....	CAD 000 631 093
San Bernardino .....	CAD 000 631 150
San Onofre Units II & III .....	CAD 000 630 921
SONGS Mesa .....	CAD 983 629 650

#### Hydro Generation

##### Eastern Region

Bishop Creek Plant 4 .....	CAD 981 682 818
Borel PH .....	CAD 981 649 379
East End Hydro Shop Facility .....	CA0 000 852 483
Fontana PH .....	CAD 981 683 477
Kern River No. 1 PH .....	CAD 981 649 130
Kern River No. 3 PH .....	CAD 981 649 072
Lee Vining Substation .....	CAD 981 682 933
Lytile Creek PH .....	CAD 981 683 410
Mill Creek No. 1 .....	CAD 981 683 535
Mill Creek No. 2/3 .....	CAD 981 683 592
Ontario No. 1 .....	CAD 981 683 238
Ontario No. 2 .....	CAD 981 683 295
Rush Creek Plant .....	CAD 981 682 875
San Geronio No. 1 .....	CAD 981 684 988
Santa Ana River No. 3 .....	CAD 981 683 105
Sierra PH .....	CAD 981 683 352

##### Northern Region

Big Creek 1 Hydro Division Office .....	CAD 983 649 872
Big Creek 2/2a .....	CAR 000 002 253
Big Creek 3 Hydro Plant .....	CAD 981 684 806
Big Creek 4 Hydro Plant .....	CAD 981 684 749
Big Creek 8 Powerhouse .....	CAD 981 990 401
Eastwood Powerhouse .....	CAR 000 002 246
Kaweah No. 1 .....	CAD 981 682 990
Kaweah No. 2 .....	CAD 981 683 055
Kaweah No. 3 .....	CAD 981 683 113
Mammoth Pool .....	CAR 000 002 261
Tule PH .....	CAD 981 683 170

#### Fuel Pipeline Operations

Alnor Pump Station .....	CAL 000 084 757
Dominguez Hills .....	CAD 980 694 392
El Real Pump Station .....	CAL 000 084 774
Euclid Pump Station .....	CAL 000 084 775
Port Hueneme .....	CAD 980 694 335
Santa Fe Springs Pump Station .....	CAL 000 084 803
Tonner Pump Station .....	CAL 000 084 808

#### Transmission/Substation Division

Barre Substation .....	CAD 981 694 060
Calectric Substation .....	CAD 981 694 425
Center Substation .....	CAD 981 694 003
Chino Substation .....	CAD 981 694 367
Daisy Substation .....	CAD 983 615 618
Dalton Substation .....	CAD 981 694 300
Del Amo Substation .....	CAD 981 694 037
Devers Substation .....	CAD 981 694 243
El Nido Substation .....	CAD 981 694 516
Eldorado Substation .....	NVD 000 618 934
Ellis Substation .....	CAD 981 694 151
Gage Substation .....	CA0 000 552 067
Goleta Substation .....	CAD 981 694 458
La Cienega Substation .....	CAD 981 694 391
La Fresa Substation .....	CAD 981 694 334
Laguna Bell Substation .....	CAD 981 694 276
Lancaster Substation .....	CAD 983 615 600
Lighthipe Substation .....	CAD 981 694 755
Lugo Substation .....	CAD 981 694 698
Magunden Substation .....	CAD 981 694 631
Mesa Substation .....	CAD 981 694 813
Mira Loma Substation .....	CAD 981 694 573
Moorpark Substation .....	CAD 981 695 117
Olinda Substation .....	CAD 981 695 059
Padua Substation .....	CAD 981 694 995
Pardee Substation .....	CAD 981 694 938
Rector Substation .....	CAD 981 694 870
Santa Barbara Substation .....	CAD 983 615 667
Santa Clara Substation .....	CAD 981 693 849
Santiago Substation .....	CAD 981 693 948
Saticoy Substation .....	CAD 983 615 675
Serrano Substation .....	CAD 983 615 634
State Street Substation .....	CAD 981 693 781
Tulare Substation .....	CAD 981 693 724
Valley Substation .....	CA0 000 562 157
Vestal Substation .....	CAD 981 693 765
Victor Substation .....	CAD 983 615 683
Villa Park Substation .....	CAD 981 694 094
Vincent Substation .....	CAD 981 693 708
Vista Substation .....	CAD 981 694 185
Walnut Substation .....	CAD 981 694 128
Support Services, Brea .....	CAD 981 649 197
Central T/S Office, Rosemead .....	CAD 981 681 554

#### Corporate Warehouse

Alhambra .....	CAD 045 530 821
Big Creek 1 .....	CAD 981 684 921
Irwindale .....	CAD 981 682 693
Lighthipe Poleyard .....	CAD 981 694 755
Tulare .....	CAD 981 681 661
Visalia Poleyard .....	CAD 980 816 466

**Customer Service Centers**

**Dominguez Hills**

Compton .....CAD 000 552 067  
 Long Beach .....CAD 981 681 430  
 Monrovia .....CAD 020 153 912  
 Montebello .....CAD 980 881 775  
 Santa Monica .....CAD 000 562 140  
 South Bay .....CAD 981 681 786

**Foothill**

Foothill .....CAD 000 552 166  
 Ontario .....CAD 981 681 604  
 Victorville .....CAD 981 975 097

**San Jacinto**

Palm Springs .....CAD 000 562 165  
 Redlands .....CAD 981 681 497  
 San Jacinto .....CAD 981 681 547

**San Joaquin**

San Joaquin .....CAD 981 681 661

**Santa Ana**

Covina .....CAD 981 681 612  
 Fullerton .....CAD 981 681 240  
 Huntington Beach .....CAD 981 681 901  
 Saddleback .....CAD 982 027 237  
 Santa Ana .....CAD 000 149 245  
 Whittier .....CAD 000 235 689

**Ventura**

Antelope Valley .....CAD 981 681 364  
 Santa Barbara .....CAD 981 681 679  
 Thousand Oaks .....CAD 981 681 737  
 Valencia .....CAD 981 681 794  
 Ventura .....CAD 000 562 215

**Area 6**

Arrowhead .....CAD 981 682 636  
 Barstow .....CAD 981 681 257  
 Bishop .....CAD 981 681 315  
 Blythe .....CAD 981 681 372  
 Catalina .....CAD 981 689 912  
 Kernville .....CAD 981 681 851  
 Mammoth .....CAD 981 689 797  
 Ridgecrest .....CAD 981 447 022  
 Shaver Lake .....CAD 981 682 750  
 Tehachapi .....CAD 000 552 216  
 Twenty-Nine Palms/Yucca .....CAD 981 681 919

**Other Facilities**

Aircraft Operations — Ontario .....CAL 000 112 397  
 CTAC .....CAL 921 353 980  
 General Office .....CAD 006 908 818  
 Irvine Operations Center (IOC) .....CAL 930 693 380  
 Long Beach Office .....CAD 981 681 422  
 Paramount Steam Div. Lab .....CAD 981 574 536  
 Rialto .....CAD 981 446 909  
 SSID/Westminster .....CAD 981 689 730  
 Visalia Pole Yard .....CAD 980 816 466

**Transportation Service**


Alamitos .....CAD 009 694 795  
 Alhambra .....CAD 045 530 821  
 Antelope Valley .....CAD 981 681 364  
 Arrowhead .....CAD 981 682 636  
 Barstow .....CAD 981 681 257  
 Big Creek .....CAD 000 553 396  
 Bishop .....CAD 981 681 315  
 Blythe .....CAD 981 681 372  
 Catalina .....CAD 981 689 912  
 Central Orange County .....CAD 000 149 245  
 Central T/S (Metro) .....CAD 981 681 554  
 Covina .....CAD 981 681 612  
 Dominguez Hills .....CAD 981 681 125  
 Etiwanda .....CAD 079 548 574  
 Foothill Garage .....CAD 000 552 166  
 General Office .....CAD 006 908 818  
 Irwindale .....CAD 981 682 693  
 Kernville .....CAD 981 681 851  
 Long Beach Building .....CAD 981 681 422  
 Long Beach S/C .....CAD 981 681 430  
 Mohave .....NVD 000 630 970  
 Monrovia .....CAD 020 153 912  
 Montebello .....CAD 980 881 775  
 Northern T/S .....CAD 981 694 938  
 North Orange County .....CAD 981 681 240  
 Ontario .....CAD 981 681 604  
 Orange Coast .....CAD 981 681 901  
 Palm Springs .....CAD 000 562 165  
 Perris .....CAD 000 552 208  
 Pomona Assembly Facility .....CAD 981 681 489  
 Redlands .....CAD 981 681 497  
 Rialto .....CAD 981 446 909  
 Ridgecrest .....CAD 981 447 022  
 Rosemead .....CAD 000 138 339  
 Saddleback .....CAD 982 027 237  
 San Jacinto .....CAD 981 681 547  
 San Joaquin .....CAD 981 681 661  
 San Onofre .....CAD 981 574 593  
 Santa Monica .....CAD 000 562 140  
 Santa Barbara .....CAD 981 681 679  
 Shaver Lake .....CAD 981 682 750  
 South Bay .....CAD 981 681 786  
 Thousand Oaks .....CAD 981 681 737  
 Valencia .....CAD 981 681 794  
 Ventura .....CAD 000 562 215  
 Victor Valley (Victorville) .....CAD 981 975 097  
 Whittier .....CAD 000 235 689  
 Yucca Valley .....CAD 981 681 919

## APPENDIX 2

### APPROVED HAZARDOUS WASTE DISPOSAL/TRANSPORT SUPPLIERS

Supplier	Waste Types Accepted	US EPA ID No.	Telephone
Aptus, Inc. Aragonite, UT	Miscellaneous Incinerables	UTD 981 552 177	(800) 326-9176
Asbury Environmental Compton, CA	Clarifier Waste, Oily Water, Waste Oil	CAD 028 277 036	(310) 886-3400
Azusa Land Reclamation Azusa, CA	Asbestos	CAD 009 007 626	(818) 334-0719
Cyprus Miami Mining Claypool, AZ	Boiler Cleaning Waste Filter Cake	AZD 060 624 251	(602) 473-7003
Chemical Waste Management Kettleman City, CA	PCBs, Miscellaneous Wastes	CAT 000 646 117	(209) 386-9711
D. F. Goldsmith Evanston, IL	Mercury	ILD 031 081 004	(708) 869-7800
Demunno/Kerdoon Compton, CA	Antifreeze, Waste Oil, Oily Water	CAT 080 013 352	(310) 537-7100
East Carbon Development Co. Salt Lake City, UT	Cooling Tower Wood	UTC 093 012 201	(800) 444-4451
Evergreen Oil Inc. Carson, CA	Waste Oil	CAD 981 696 420	(800) 645-4855
Laidlaw Environmental Services Upland, CA	Miscellaneous Wastes	CAT 080 034 184	(800) 544-7199
Lighting Resources, Inc. Pomona, CA	Flourescent Light Tubes, HID Lamps	CAL 000 827 758	(800) 572-9253
Mercury Recovery Services Monrovia, CA	Flourescent Light Tubes, HID Lamps	CAL 000 043 715	(818) 301-1372
Mercury Technologies, Inc. Hayward, CA	Flourescent Light Tubes, HID Lamps	CAL 982 411 993	(510) 429-1129
Norris Industries Los Angeles, CA	Chromates	CAD 097 030 993	(213) 588-7111
Pacific Resource Recovery Los Angeles, CA	Paints, Paint Sludge, Paint Solvents	CAD 008 252 405	(800) 752-1566
Recycling Resources Phoenix, AZ	Miscellaneous Lab Chemicals	AZD 049 318 009	(602) 258-6155
Rollins Environmental Services Deer Park, TX	PCBs, Miscellaneous Incinerables	TXD 05 514 1378	(713) 930-2300
Safety-Kleen Corporation Santa Ana, CA	Recyclable Degreasing Solvents	DED 90 091 8858	(714) 435-0605
S.D. Myers Kingman, AZ	PCB Transformers	AZD 982 465 866	(602) 757-1314
U. S. Pollution Control, Inc. Lake Point, UT	PCBs, Miscellaneous Wastes	UTD 99 130 1748	(405) 557-0600

## APPENDIX 3 Straight Bill of Lading

 **Southern California Edison Company**  
P.O. Box 800, 8831 Rush Street  
Rosemead, CA 91770

043055

**STRAIGHT BILL OF LADING — SHORT FORM — Original — Not Negotiable.**

Shipper's No. \_\_\_\_\_  
Carrier's No. \_\_\_\_\_

Carrier \_\_\_\_\_

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at \_\_\_\_\_ 19 \_\_\_\_\_ from \_\_\_\_\_

the property described below in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery of said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. This bill of lading incorporates the general terms and conditions titled "Heavy Haul and Related Services" dated July 5, 1988, as agreed to between the carrier and Southern California Edison.

Consigned to \_\_\_\_\_ (Mail or street address of consignee — For purposes of notification only)

Destination \_\_\_\_\_ State \_\_\_\_\_ County \_\_\_\_\_

Delivery Address ★ \_\_\_\_\_  
(★ To be filled in only when shipper desires and governing tariffs provide for delivery thereto.)

Route \_\_\_\_\_

Delivering Carrier		Car or Vehicle Initials			No.	
NO. PACKAGES	HM	KIND OF PACKAGE	DESCRIPTION OF ARTICLES, SPECIAL MARKS, AND EXCEPTIONS	WEIGHT (SUB TO CAR)	CLASS OR RATE	CHECK COLUMN
<p><small>This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.</small></p> <p><small>* If the shipment moves between two ports by a carrier by water the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".</small></p> <p><small>NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.</small></p> <p><small>The agreed or declared value of this property is hereby specifically stated by the shipper to be not exceeding _____ per _____</small></p> <p><small>† The three boxes used for the shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Uniform Freight Classification.</small></p> <p><small>‡ Shipper's imprint in lieu of stamp not a part of bill of lading approved by the Interstate Commerce Commission.</small></p>						
<p style="text-align: right;"><small>SUBJECT TO SECTION 7 OF CONDITIONS OF APPLICABLE BILL OF LADING IF THIS SHIPMENT IS TO BE DELIVERED TO THE CONSIGNEE WITHIN FREIGHT CLASSIFICATION THE CONSIGNEE SHALL SIGN THE FOLLOWING STATEMENT:</small></p> <p style="text-align: right;"><small>The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</small></p> <p style="text-align: right;"><small>SIGNATURE OF CONSIGNEE</small></p> <p style="text-align: right;"><small>Charges are to be prepaid, unless so stamped here: To Be Prepaid</small></p> <p style="text-align: right;"><small>Received \$ _____ to apply in payment of the charges on the property described hereon.</small></p> <p style="text-align: right;"><small>AGENT OF CARRIER</small></p> <p style="text-align: right;"><small>Per _____ (the signature here guarantees only the amount prepaid)</small></p> <p style="text-align: right;"><small>Charges Advanced</small></p> <p style="text-align: right;"><small>\$ _____</small></p>						

Shipper, Per \_\_\_\_\_ Agent, Per \_\_\_\_\_ 1

Permanent post-office address of shipper: \_\_\_\_\_

## APPENDIX 4

### WASTE OIL ACCEPTANCE CRITERIA IR&MD OR EPTC, DOMINGUEZ HILLS

#### OIL PORTION

#### Parameter

#### Acceptance Limits

PCB's	Polychlorinated Biphenyls	$\leq 2$ (mg/l)
TOX	Total Organic Halides (Halogens)	<1000 (mg/kg)
F. P.	Flash Point	>150 degrees F
As	Arsenic	<5 (mg/kg)
Cd	Cadmium	<2 (mg/kg)
Cr	Chromium	<10 (mg/kg)
Pb	Lead	<50 (mg/kg)



## Environmental Responsibility

### A. Principle

The Company seeks to conduct its business in a cost effective manner while balancing the public interest in the demand for reliable, economic electric energy and an improved environment.

### B. Action Rules

1. The company shall give consideration to environmental values in carrying on its public utility obligations.
2. The company shall, in the development of new generation facilities, seek to reduce air emissions, especially in the South Coast Air Basin.
3. The company shall minimize solid waste disposal through reuse, to the extent feasible, and shall dispose of waste in a manner which minimizes negative environmental effects.
4. The company shall utilize appropriate hazardous material handling and disposal techniques in its operations, to protect the public health and the environment.
5. The company shall take necessary actions to mitigate the effects of accidental hazardous substance releases into the environment.
6. The company shall, to the extent possible, design generating facilities to provide flexibility for the utilization of future abatement systems which may become feasible as the state of the art advances.
7. The company shall consider reliability, cost and environmental factors in transmission line design and routing to determine how electric needs may best be supplied in the public interest. This shall include consideration of the use of underground subtransmission systems and efficient utilization of existing rights-of-way.
8. The company's facilities shall be located and designed to consider the uses of adjoining land, air and water quality, aesthetics, noise levels, and natural and cultural resources.
9. The company shall encourage secondary uses of company-owned land when compatible with the company's needs and the environment. Such uses may include multiple use of company rights-of-way for parks, bicycle and hiking trails, truck farms, and tree farms.
10. The company's forests shall be managed for multiple uses including: watershed protection, recreation, timber production, reforestation, and wildlife conservation.
11. The company shall pursue the protection of endangered, threatened and rare biological species and their critical habitat and sensitive and unique ecosystems during all phases of facility construction and operation and during management of company-owned land.
12. The company shall encourage the conservation and efficient utilization of all energy resources.
13. The company shall pursue research and development programs, both company- and industry-wide, related to the environment. The objectives of such programs shall include:
  - a. Continued reduction of atmospheric contaminants from power plants.
  - b. Increased undergrounding of transmission lines.
  - c. Development of feasible alternative energy systems having environmental advantages.
  - d. Reduction of the adverse effects and development of beneficial uses of waste heat and solid wastes from power plants.
  - e. Reduction of impacts on prime and unique agricultural lands of transmission facilities.
  - f. Development of criteria for the siting and operation of company facilities to optimize their interaction with the environment.
14. The company shall communicate its future facility plans to local governments and regional planning agencies to permit land use and environmental compatibility to be considered in their general plans and/or related planning documents.
15. The company shall communicate its policies, actions and costs for protection of the environment to the public. When necessary, appropriate educational techniques shall be used to explain the impact of company facilities upon the environment.

### C. Definitions

None

### D. References

1. Corporate policy 22.1.1 Secondary Uses of Company Transmission Line Rights-of-Way.

46.1.1

**APPENDIX C**

**OIL SPILL CONTINGENCY PLAN**

**HYDRO GENERATION DIVISION**

**OIL SPILL CONTINGENCY PLAN**

**CODE OF FEDERAL REGULATIONS  
(CFR)**

**40 CFR PART 109**

**REGIONAL OIL REMOVAL CONTINGENCY PLANS**

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TABLE OF CONTENTS

Introduction.....	1
Personnel Roles.....	1
Training.....	2
Recognition.....	2
Emergency Alerting & Response.....	2
Emergency Notification & Assistance Numbers.....	3
Prevention of Flow from Site Perimeter.....	4
Personal Protective Equipment.....	4
Spill Response Operations Center.....	5
Emergency Spill Materials and Equipment.....	5
Other Available SCE Resources.....	6

## **INTRODUCTION**

Generation and switchyard equipment contains various oils for insulating and lubricating purposes in varying amounts, dependent on the purpose, size and voltage rating of the particular equipment.

Operations and Maintenance personnel perform daily, weekly, and monthly inspections of station and switchyard equipment and tank storage areas. Each employee must be aware of the potential for an unexpected and uncontrolled leak or spill of these oils.

The purpose of this procedure is to identify a course of action in the event of a spill at any Hydro location. Qualified employees are expected to understand the purpose of this plan and be prepared to implement its actions, if necessary.

Emergency hazardous materials response, beyond the capabilities of our Operations and Maintenance personnel, will be deferred to qualified outside agencies identified in established blanket purchase order files under the guidance of the Procurement and Material Management (PAMM) Division of Southern California Edison (SCE).

## **PERSONNEL ROLES**

### **Emergency Response Coordinator**

The responsible Station Chief is designated as the Emergency Response Coordinator and has the responsibility of coordinating the activity associated with implementation of this plan. The responsible Maintenance Foreman will be the alternate Emergency Response Coordinator.

### **Incident Commander**

The responsible Maintenance Foreman is designated as the Incident Commander and has the responsibility for controlling, coordinating, and managing emergency response activities of qualified personnel engaged in spill response.

### **Spill Response Personnel**

All Maintenance Personnel will have the necessary training to recognize, control, and contain an uncontrolled, release of lubricating or insulating oil into the work place.

## Recognition/Awareness

Operations and Utility Personnel will have the necessary training to recognize and report an uncontrolled release of lubricating or insulating oil to the on-duty system operator at the nearest switching center.

## TRAINING

All affected station employees typically receive initial training and annual refresher training, as applicable, in the following subjects:

- Hazard Communication Program
- Fire Prevention and Response
- Emergency Preparedness
- First Aid Procedures
- Inspection, Monitoring, & Maintenance Procedures
- Respiratory Protection (where applicable)
- Spill Control and Cleanup

## RECOGNITION

A leak or spill of lubricating or insulating oil from generation equipment, a storage container or electrical equipment, determined to pose a threat to the environment or damage to equipment, requires urgent action and shall be reported immediately to the on-duty Station Chief at the nearest switching center.

## EMERGENCY ALERTING & RESPONSE

Upon discovery of an imminent or actual leak or spill that will, or is likely to, require an emergency response, the \_\_\_\_\_ at the switching center will be notified immediately. The \_\_\_\_\_ will, in turn, notify the appropriate Hydro supervisory personnel during normal working hours. Notification will be directed to the responsible \_\_\_\_\_ and/or the responsible Maintenance Foreman. During non-work hours, notification will be directed to the assigned "On-call" area or \_\_\_\_\_, who is responsible for:

- Effecting necessary immediate spill control measures.

- Assessing the situation.
- Initiating appropriate response of Hydro personnel.
- Notification of off-site Hydro management (Region and Division).
- Notification of Environmental Affairs, who will determine the necessity for notification to regulatory agencies.

## **EMERGENCY NOTIFICATION AND ASSISTANCE NUMBERS**

### **Hydro Division Environmental Coordinator**

Business Telephone: \_\_\_\_\_

After Hours Telephone: \_\_\_\_\_

### **Hydro On-Call Duty Supervisor**

Refer to current weekly on-call list.

### **SCE On-Call Supervisory Assistance and Notification Numbers**

All other SCE Department Assistance:

(818) 302-1212 or (800) 621-8516

Ask for "On-Call Duty Person" for Department or Division needed.

### **Available and Approved Waste Cleanup and Disposal Services**

- Reference Environmental Affairs current Hazardous Waste Guidance Manual, Appendix 3, Page 14.
- Reference Hydro Division Waste Management Guide, Section 1.0, Supplier Listing.
- Consult PAMM Division on-call duty supervisor for local approved vendor availability.

## Local Emergency Agencies

- Dial 911

## PREVENTION OF FLOW FROM SITE PERIMETER

The immediate control of flowing or spreading lubricating or insulating oil is critical in limiting the potential for offsite contamination. The placement of absorbent materials or earthen berms shall be mandatory to limit or prevent the oil from spreading. Priority shall be given to spill control in areas where the possibility of flow into storm drains/waterways or natural or manmade drainage systems may occur (see SPCC Plan, Sections IIA and III E). The ability of the person who detects or recognizes a leak or spill to effect immediate control measures, may be limited by:

1. Safety hazards from damaged electrical equipment.
2. Concern for restoration of critical electrical service.
3. Magnitude of spill.

In no event shall the concern for safety become secondary; however, a quick evaluation and swift notification may limit the ultimate effect of a spill condition.

**NOTE:** Since a majority of the Hydro facilities exist on or near navigable bodies of water, during post-spill cleanup activity, where the threat of inclement weather creates the potential for oil project to be carried offsite through natural sheet flow water drainage, good control measures shall be installed by placing appropriate barriers (absorbent material, sandbags, dams, berms, etc.) around the perimeter of contaminated soils and surface areas.

## PERSONAL PROTECTIVE EQUIPMENT

Employees performing post-emergency cleanup will wear appropriate personal protective equipment. The following items are available at each workbase location:

- Impervious Gloves
- Rubber Boots
- Disposable Suits
- Eye & Ear Protection (Goggles/Shields)
- Respirator (if applicable)



Type and amount of required personal protective equipment may vary, dependent on magnitude of spill. The Maintenance Foreman has the responsibility to assure that all employees are adequately attired for each situation.

### SPILL RESPONSE OPERATIONS CENTER

The operating Control Room at the nearest Hydro switching center to a spill location is designated as the Operations Center. These Control Rooms are equipped with necessary telephone, computer link, and mobile/base station equipment to effect and maintain adequate communications during spill response and cleanup activity.

### EMERGENCY SPILL MATERIALS AND EQUIPMENT

Emergency materials for responding to an uncontrolled hazardous material leak or spill shall be maintained at all workbase locations. Employees qualified to control and contain spilled material will know the location of materials and equipment necessary for an emergency response. In the event of a spill condition at an unmanned facility, these materials and equipment shall be delivered to the affected locations.

<u>Material/Equipment</u>	<u>Location</u>
1. Personal Protective Equipment	Workbase
2. Absorbent Matl. (Approx. 500#)	Workbase
3. Tractor (Location or NA)	Within Region or Rental
4. Shovels/Rakes (Min. 5/2)	Workbase
5. Barrels (Min. 10)	Workbase
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

## **OTHER AVAILABLE SCE RESOURCES**

1. **Pumper/Tanker Trucks - Material Transport Division Irwindale Warehouse.**
2. **Materials and equipment required in addition to workbase supply may be secured from adjacent workbase(s).**
3. **Additional materials and equipment may be secured from responding contractors (if spill exceeds cleanup capability of SCE personnel.).**

**APPENDIX F  
INVASIVE MUSSEL PREVENTION PLAN**

# **Southern California Edison Invasive Mussel Prevention Plan**



**July 2017**

## TABLE OF CONTENTS

I. Executive Summary .....	1
II. Introduction.....	2
Dreissenid Mussels and Their Distribution.....	2
Life History of Dreissenid Mussels .....	5
Physical Tolerances .....	5
Impacts of Dreissenid Mussels .....	5
State Legislation and SCE’s Role.....	6
III. Vulnerability Assessment .....	6
IV. Preventive measures .....	10
Public Education .....	10
Monitoring and Detecting Quagga/Zebra Mussel Infestations.....	11
V. Safety Considerations .....	12
VI. Documentation.....	13
References.....	14
Additional Online Resources .....	15
Appendix I: Fish and Game Code §2302.....	16
Appendix II: Title 14 CCR § 672.1 .....	18
Appendix III: Artificial Substrate Monitoring Protocol .....	22
Appendix IV: CDFW Public Display Material.....	30

## I. EXECUTIVE SUMMARY

Southern California Edison Company (SCE) generates hydroelectric power to in the Sierra Nevada Mountains. SCE manages 18 lakes in the Northern and Eastern Sierras, 14 of which provide launch ramp facilities for recreational boating, fishing, and personal watercraft. Due to the discovery of invasive quagga and zebra mussels in the western United States (e.g., Lakes Mead, Havasu, and Mojave), public access lakes (including SCE's hydro facilities) may be susceptible to the introduction of these nonnative mussels.

Quagga and zebra mussels are freshwater bivalves native to Eastern Europe and Western Asia that made their way into the United States Great Lakes in the late 1980s. They have been highly successful invaders, reproducing and adapting quickly to hundreds of freshwater lakes and waterways in the Midwestern and Eastern United States. The mussels have significant adverse impacts to aquatic ecosystems and water delivery systems, because they impede water flow by attaching in large numbers to equipment such as pipes, pumps, water intake structures and delivery systems. The physical damage associated with the mussel invasion has cost billions of dollars in remediation and control, and the economic losses have affected resource agencies, private industry and recreational fisheries.

The rapid westward expansion of quagga and zebra mussel distribution led the State of California to adopt legislation to prevent the introduction of these invasive species (Assembly Bill 2065, integrated as Fish & Game Code §2302). The statute requires an owner or manager of a publicly accessible reservoir to assess its vulnerability to infestation and to develop a prevention plan which shall include an assessment of the vulnerability of the reservoir for the introduction of both adult and veliger dreissenid mussels, a monitoring program to detect the presence of adult and/or veliger dreissenid mussels and the Management of recreational activities to prevent the introduction of mussels and to keep them from being moved from the waterbody if present, that includes public education and outreach.<sup>1</sup> SCE hydro facility personnel have not reported any sightings or indications of quagga or zebra mussels, but the extensive network of waterways and reservoirs, coupled with the multiple public access launch ramps and popular recreational sites, presents a risk of introduction to SCE's managed water bodies.

SCE has developed a quagga and zebra mussel prevention plan presented here, which (1) outlines the results of the assessments of the vulnerability of invasion to SCE lakes, (2) summarizes the monitoring program to detect the presence of adult and/or veliger dreissenid mussels, (3) summarizes the long-term management steps to ensure continued recreational use of healthy SCE lakes including the educational outreach to inform members of the public about the biology and management of the mussels.

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<sup>1</sup> Violations of Section 2302 are punishable by a civil fine of \$1,000 per incident. Fish & Game Code § 2302 (f).

SCE began its monitoring program in September 2009. This document will be updated as the SCE Invasive Mussel Team continues to collect data and gather new information through the monitoring program.

## II. INTRODUCTION

### Dreissenid Mussels and Their Distribution

Quagga (*Dreissena rostriformis bugensis*) and zebra mussels (*Dreissena polymorpha*) are members of the taxonomic family Dreissenidae, which comprises a group of freshwater bivalves native to Europe. Both are quasi-triangular in shape and relatively small (zebra mussels ~15 mm, quagga mussels ~22 mm in length). Although the color patterns may vary, zebra mussels tend to be darker with alternating dark and lighter bands, while quagga mussels are altogether lighter with some darker concentric bands around the edge of the shell (Figure 1).

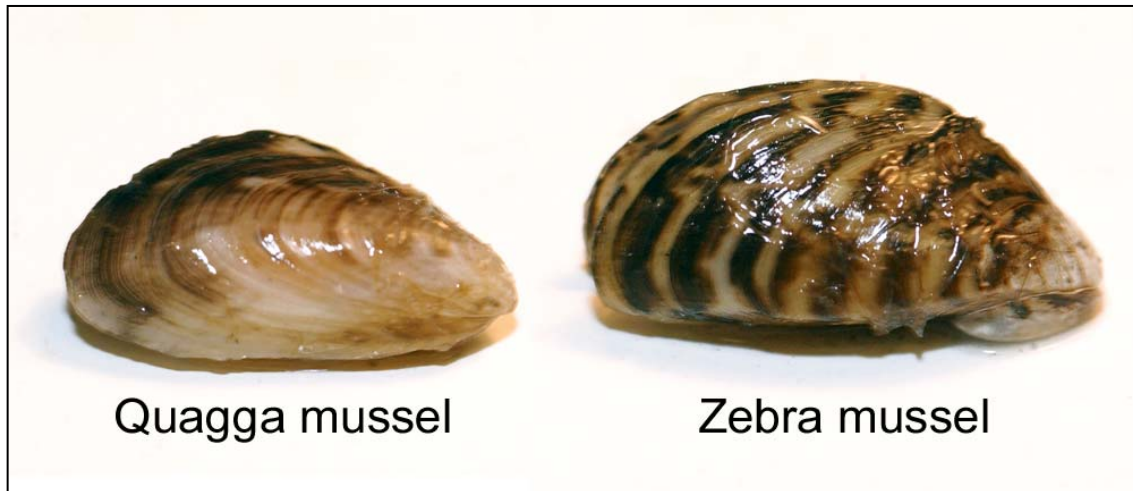


Figure 1. Photographic comparison of quagga and zebra mussels. Image adapted from SeaGrant.

Both species were introduced to the Great Lakes in 1988 via ballast water from transoceanic vessels and have invaded U.S. waters for the past 20 years (Jones and Ricciardi 2005). From the Great Lakes, their distribution spread into hundreds of lakes in the eastern United States (Figure 2). Quagga mussels were found in Lake Mead, Arizona in 2007. Since then, they populated the Colorado River system and have more recently been discovered in southern California. Infested watercraft and water conveyance are the primary paths of introduction.

Quagga mussels have been more successful at establishing themselves in a broader range of aquatic environments than zebra mussels in the west and, at this point, pose a higher threat of invasion in California, where they have recently been established (Figure 3). However, because the infestation in the west has not reached the magnitude of that in the

east, managers now have an opportunity to contain these species and prevent further infestations.

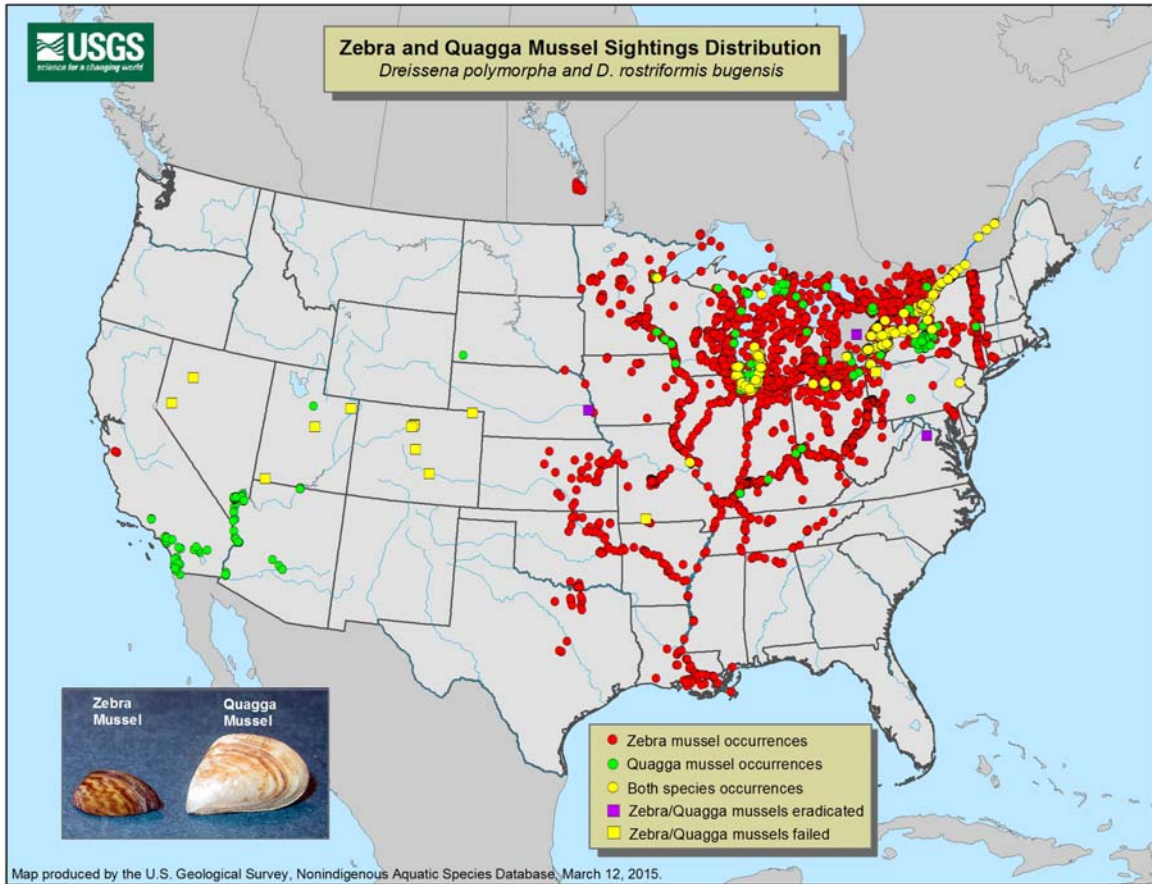


Figure 2. Sightings and distribution of invasive quagga and zebra mussels throughout the United States. Image produced by the U.S. Geological Survey, March 12, 2015, [http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/maps/current\\_zm\\_quag\\_map.jpg](http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/maps/current_zm_quag_map.jpg)





Data Sources: California Dept. of Fish and Wildlife, City of San Diego Water Authority, Imperial Irrigation District, Helix Water District, Irvine Ranch Water District, Coachella Valley Water District, National Park Service. Map produced by the U.S. Geological Survey, October 20, 2015.



Figure 3. Distribution of quagga and zebra mussels in California. Map produced by the U.S. Geological Survey, October 20, 2015

### Life History of Dreissenid Mussels

Quagga and zebra mussels are found in fresh water (< 2 ppt salinity). Zebra mussels occur at depths from the surface to 180 feet, while quagga mussels can be found from the surface to 120 feet down.

Both species are very prolific; a single female can produce and release over one million eggs in a single reproductive cycle. California’s climate is conducive for mussels to complete four to six spawning cycles per year. Planktonic larvae, called veligers, may drift in the water column for several weeks before settling to a suitable substrate. They may attach themselves to aquatic plants, boat hulls and engines, trailers, dock pilings, and recreational equipment.

### Physical Tolerances

The suitability of an environment for dreissenid mussel survival has typically been determined primarily by individual environmental variables, with calcium being the most important for shell formation and long-term survival, followed by pH. Other variables such as dissolved oxygen, salinity and presence of suitable food also affect dreissenid survival, but only if adequate calcium is present (Prescott and Claudi 2014)

The pH and Calcium concentration necessary to support dreissenid mussel survival can be summarized as below in Table 1. (Prescott and Claudi 2014)

Table 1 pH and Calcium levels and ability to support Dreissenid mussels

	Ca ≤ 12mg/L	12 < Ca < 15mg/L	CA > 15 mg/L
pH ≤ 7.3	Unable to support	Unable to support	Unable to support
7.3 < pH ≤ 7.8	Unable to support	Potentially able to support	Potentially able to support
pH > 7.8	Unable to support	Potentially able to support	Able to support

### Impacts of Dreissenid Mussels

Because they are filter feeders, quagga and zebra mussels remove significant amounts of phytoplankton and zooplankton from the water column, depleting important food sources for native and commercially important fishes. In addition, these invasive mussels often bioaccumulate organic pollutants in high concentrations, which results in poisoning some species of birds that feed on them.

Quagga and zebra mussels compete with each other, but the former can adapt to more substrate types, and live at greater depths and in colder temperatures than the latter. Both clog water intake structures, filters, pipelines, and screens, resulting in reduced flow rates and inefficient pumping capabilities for power plants and wastewater treatment facilities. Recreational activities are also affected, as the mussels foul boat hulls and docks, and

overtake breakwalls, beaches, and buoys. The overall effects of quagga and zebra mussels can be devastating on the environment and local and regional economies.

### **State Legislation and SCE’s Role**

Billions of dollars spent on remediation in the eastern United States, together with the westward spread of quagga and zebra mussels, compelled the California legislature to enact Assembly Bill 2065 (now codified as Fish & Game Code §2302 and 14 CCR 672.1), which took effect on January 1, 2009 and January 1, 2016, respectively. The statute requires an owner or manager of a publicly accessible reservoir to assess its vulnerability to infestation and to develop a control plan and prevention plan (Appendix I & II).<sup>2</sup> In this document, SCE provides a detailed plan to satisfy the requirements of the prevention and control plan.

Lakes were categorized as low, medium, or high risk, depending on several biological and physical factors of the lake, boat launch access, and public use traffic. The classification of each lake determined the initial frequency at which each lake was sampled for plankton, mussel recruits (newly settled larvae), and water chemistry. Designated. Concurrent with assessment and monitoring activities, SCE has implemented a public education and outreach program, providing information through signs at specified locations, as well as handouts and fliers available for employees, management, stakeholders and the public.

### **III. VULNERABILITY ASSESSMENT**

The purpose of the lakes operated by SCE are to provide water storage for hydroelectric power generation, thus most of the lakes and reservoirs operate in a chain, with lakes at higher elevations feeding into those below for additional storage and generation. This information is important as potential mussel infestation in a lake may travel to other lakes downstream. General lake information is provided in Table 2, SCE Lakes Information, below.

Table 2. SCE Lakes Information

Lake	County	Stream or Downstream Lake	Land Ownership	Concessionaires	Storage (acre ft.)	Elevation (ft.)
South Lake	Inyo	Bishop Creek	USFS	Licensed by USFS	12,833	9758
Sabrina Lake	Inyo	Bishop Creek	USFS	Licensed by USFS	7350	9138
Intake 2 Reservoir	Inyo	Bishop Creek	USFS	N/A	78	8103
Saddlebag Lake	Mono	Lee Vining Creek	USFS	Licensed by USFS	9789	10,093
Tioga Lake	Mono	Lee Vining Creek	USFS	N/A	1254	9654

<sup>2</sup> Violations are punishable by a civil fine of \$1,000 per incident. Department of Fish & Game Code § 2302 (f), 14CCR A (8), B(6)

Southern California Edison  
 Invasive Mussel Prevention Plan

Lake	County	Stream or Downstream Lake	Land Ownership	Concessionaires	Storage (acre ft.)	Elevation (ft.)
Ellery Lake	Mono	Lee Vining Creek	USFS	N/A	493	9498
Lundy Lake	Mono	Mill Creek	USFS	Licensed by USFS	4113	7816
Rush Meadows	Mono	Rush Creek	USFS	N/A	5277	9416
Gem Lake	Mono	Rush Creek	USFS	N/A	17,229	9502
Agnew Lake	Mono	Rush Creek	USFS	N/A	810	8496
Balsam Meadow Forebay	Fresno	Shaver Lake	SCE	n/a	1960	6675
Edison Lake	Fresno	Mammoth Pool Reservoir	USFS	Licensed by USFS	125,000	7651
Florence Lake	Fresno	Mammoth Pool Reservoir,	USFS	Licensed by USFS	64,400	7329
Huntington Lake	Fresno	Shaver Lake, Redinger Lake, Balsam Forebay	USFS	Licensed by USFS	89,000	6954
Mammoth Pool Reservoir	Fresno / Madera	Redinger Lake	USFS	Licensed by USFS	119,500	3361
Portal Forebay	Fresno	Huntington Lake, Shaver Lake, Mammoth Pool Reservoir	USFS	N/A	330	7185
Redinger Lake	Fresno / Madera	San Joaquin River	USFS	N/A	25,000	1414
Shaver Lake	Fresno	Balsam Forebay, Redinger Lake	SCE	Licensed by SCE	135,000	5371

Because most lakes are open for public access and some experience heavy recreational activity, particularly during summer months, all lakes have the potential for invasion. The risk of introduction into the lakes was evaluated based on the recreational use, the number of boat launches and the estimated number of annual visitors. Data on the number of annual visitors is collected as part of the Federal Energy Regulatory Commission (FERC) license conditions for the hydro facilities. Recreational use data was collected at recreational facilities to estimate annual, peak season, and peak weekend daytime and nighttime use in Recreation Days (RDs). A RD is defined as a visit by a person to a development for recreational purposes during any portion of a 24-hour period. Annual recreational use estimates are based on the sum of peak season and non-peak season use. Vehicle counts were used to estimate daytime recreation use at recreation facilities and to estimate nighttime recreational use. Peak season recreational use is estimated based on vehicle counts conducted between Memorial Day weekend (beginning Saturday May 24, 2014) through Labor Day weekend (ending Monday September 1, 2014). Non-peak season recreational use was estimated based on a percent reduction in use from peak-season levels through consultation conducted with the USDA-Forest Service (FS) and SCE.

For the purposes of this plan, low levels of visitors means less than 400 visitors, whereas the estimated numbers are used for more than 400 visitors. This information is displayed in Table 3 SCE Lake Introduction Data below.

Southern California Edison  
Invasive Mussel Prevention Plan

Table 3. SCE Lakes Introduction Data

Lake	Recreational Use	Fish Stocked	# Boat Launches	# Annual Visitors	Notes
South Lake*	boating fishing	No	1	Low	for all Eastern Hydro: 3,425,400 recreational visits, of which 89,060 motorized and 99,336 non-motorized visits
Sabrina Lake*	boating fishing	No	1	Low	
Intake 2 Reservoir*	fishing float tubes	No	0- limited	Low	No vehicular access to shoreline
Saddlebag Lake*	boating fishing	No	1	400-500	
Tioga Lake	fishing	No	0	Low	No formal boat launches, limited access to shoreline by vehicles
Ellery Lake	fishing	Yes	0	Low	
Lundy Lake*	fishing	No	1	400-500	
Rush Meadows	fishing float tubes	No	0 - limited	Low	Remote lake, No vehicle access to shoreline, drained every year
Gem Lake	fishing float tubes; one SCE pontoon	No	0 - limited	Low	Remote lake, No vehicle access to shoreline
Agnew Lake	fishing float tubes; one SCE pontoon	No	0 - limited	Low	Remote lake, No vehicle access to shoreline
Balsam Meadow Forebay	walk-in only - very minimal	No	0 - limited	Low	No boat launching facilities. Float tubes/kayaks may be carried in
Edison Lake	boating fishing	Yes	1	Low	1 launch site
Florence Lake	boating fishing	Yes	1	Low	1 launch site
Huntington Lake	boating fishing	Yes	2	Over 3,000	1 launch site
Mammoth Pool Reservoir	boating fishing	Yes	2	Low	two launch sites, one concrete ramp and one gravel roadbed that descends into the bottom of the lake small fishing boats allowed only
Portal Forebay	bank fishing	Yes	1	Low	4X4 vehicles may launch aluminum boats, but it's very rare
Redinger Lake	boating fishing	Yes	1	Less than 3,000	
Shaver Lake	boating fishing swimming	Yes	4	802,391	2 SCE- licensed launch sites; Fishing Club and Boy Scout Camp on south side could launch small boats with 4x4 vehicles

\* = Lake is part of the Eastern Hydro System.

The vulnerability assessment was conducted in 2009 and 2010. The assessment considered all SCE lakes and water bodies and their elevation, depth, water temperature, number of public access launch ramps, whether or not the lakes were stocked with fish (conducted by the Department of Fish and Wildlife) and estimated number of annual visitors. In 2010, lakes were tested for water chemistry parameters pH and Calcium levels. This information is displayed in Table 4 below.

Table 4. SCE Dreissenid Establishment Data

Lake	Ca <sup>2+</sup> (mg/L)	pH
South Lake	2.41	7.06
Sabrina Lake	2.61	6.99
Intake 2 Reservoir	3.52	6.69
Saddlebag Lake	3.13	6.91
Tioga Lake	3.95	6.87
Ellery Lake	2.24	6.85
Lundy Lake	7.35	6.77
Rush Meadows	0.92	7.03
Gem Lake	1.31	6.35
Agnew Lake	4.29	7.35
Balsam Meadow	1.20	6.9
Edison Lake	1.35	7.0
Florence Lake	0.97	7.0
Huntington Lake	1.15	7.0
Mammoth Pool Reservoir	2.46	6.8
Portal Forebay	1.20	6.4
Redinger Lake	1.90	6.8
Shaver Lake	1.69	6.4

Table Footnote: Data were compiled and collected in 2009 and 2010. pH measurements taken at 23°C and 24 °C.

To date there are no known invasions of either quagga or zebra mussels in SCE lakes. All lakes were evaluated for their vulnerability based on their use and physical factors that may limit or promote mussel invasion. Based on the aforementioned factors, each of the SCE lakes were categorized by introduction risk based on activities, and establishment risk as displayed in Table 5 below. All lakes were determined low risk for establishment. Shaver Lake and Huntington Lake were determined Medium Risk for introduction, all other lakes were determined to be low risk for introduction.

Table 5. Introduction Risk, Establishment Risk of SCE Lakes

Lake	Introduction Risk	Establishment Risk
South Lake	Low	Low
Sabrina Lake	Low	Low
Intake 2 Reservoir	Low	Low
Saddlebag Lake	Low	Low
Tioga Lake	Low	Low
Ellery Lake	Low	Low

Lake	Introduction Risk	Establishment Risk
Lundy Lake	Low	Low
Rush Meadows	Low	Low
Gem Lake	Low	Low
Agnew Lake	Low	Low
Balsam Meadow Forebay	Low	Low
Edison Lake	Low	Low
Florence Lake	Low	Low
Huntington Lake	Medium	Low
Mammoth Pool Reservoir	Low	Low
Portal Forebay	Low	Low
Redinger Lake	Low	Low
Shaver Lake	Medium	Low

#### **IV. PREVENTIVE MEASURES**

Based on the vulnerability assessment results of March 2010, SCE has identified all lakes at low risk of mussel invasion. Lakes with a Medium Introduction Risk (Huntington Lake and Shaver Lake) will serve as the company’s focus for monitoring and the campaign to educate boat owners and other users about the effects of mussel invasions and the most effective methods to prevent them. In addition to information kiosks and brochures, it is also useful to provide boat owners with a list of resources that will better guide them to inspection stations, or other sources of information.

In cases where further preventive measures are required, SCE will discuss viable options and proceed as necessary.

##### **Public Education**

One of the most important tools for preventive measures is public outreach and education. It is critical that the public, particularly boat owners, understand the economic damage that may occur as a result of an invasive mussel introduction. SCE will post information at points of entry into lakes with moderate boating use and lakes where a suitable bulletin board is installed near boat launch areas. An example of the public information signs that will be posted at certain boat launches is provided in Appendix IV.

SCE welcomes partnerships (e.g., CalTrans, Chambers of Commerce, Department of Water and Power, Pacific Gas & Electric, U.S. Forestry Service, Bureau of Land Management, Los Angeles Department of Water and Power, California Department of Fish and Game) that will facilitate the distribution of information with the goal of maintaining a flow of information that is congruent with other agencies.

### **Monitoring and Detecting Quagga/Zebra Mussel Infestations**

Monitoring plans will likely vary across reservoirs and lakes, as there may be site specific logistics that need to be addressed. Factors to evaluate when selecting a sampling site include availability of habitat (hard substrate to attach to), proximity to points of introduction, water flow (inlets/outlets, wind current), depth and safety. California's Department of Fish & Wildlife (CDFW) provides a sampling protocol for substrate monitoring (Appendix III) and plankton tows. Because plankton tows only provide a snapshot of a lakes biological make-up, they are not as effective at identifying the inhabitation of dreissenid mussels. For this reason and due to low calcium levels in the SCE waters covered under this plan, plankton tow monitoring will not be included in SCE's monitoring program.

Quagga and zebra mussels will settle and grow on most hard surfaces. Settling plates or other similar artificial substrate provide a small, easy-to-work-with tool to monitor for the presence of settled larvae and new recruits without requiring boat operations. Artificial substrate where utilized, will be deployed in April and will be inspected monthly May through September. Monitoring will only be conducted at the two lakes (Huntington Lake and Shaver Lake) with a medium risk of introduction. Methodology and data sheets are provided in Appendix III. Monitoring plans may be modified as necessary.

Table 6 below summarizes the public information postings and sampling that will occur at each of SCE's lakes.



Table 6. Public Education and Monitoring at SCE Lakes

Lake	Public information location	Sampling type
South Lake	Boat Launch	N/A
Sabrina Lake	Boat Launch	N/A
Intake 2 Reservoir	N/A	N/A
Saddlebag Lake	N/A	N/A
Tioga Lake	N/A	N/A
Ellery Lake	N/A	N/A
Lundy Lake	N/A	N/A
Rush Meadows	N/A	N/A
Gem Lake	N/A	N/A
Agnew Lake	N/A	N/A
Balsam Meadow Forebay	N/A	N/A
Edison Lake	N/A	N/A
Florence Lake	N/A	N/A
Huntington Lake	Boat Launch	Artificial Substrate
Mammoth Pool Reservoir	Boat Launch	N/A
Portal Forebay	N/A	N/A
Redinger Lake	Boat Launch	N/A
Shaver Lake	Camp Edison Marina Sierra Marina	Artificial Substrate

## V. SAFETY CONSIDERATIONS

Much of the prevention program requires field work and special operations such as boat use and sample collection. SCE employees and contractors will evaluate the field work and assess safety risks prior to execution to ensure that safety is not compromised. Field work for the mussel prevention program may involve:

- boat launching
- loading vehicles and/or boat
- boat operating
- deploying equipment over the side of the boat
- retrieving equipment from the water while on the boat
- driving
- towing boat trailers
- decontamination of personnel and equipment
- field work where personal protective equipment (PPE) is used (e.g. water, sunscreen, eye protection)
- effluent disposal

No work should take place until the appropriate level of safety controls and considerations have been reviewed and implemented.

## **VI. DOCUMENTATION**

In order to satisfy the legal requirements of the legislation in place, this Plan will be made available to any official who requests it within 90 days of the request. Program implementation shall be demonstrated through submission of an annual report for the previous year (January 1 – December 31) to the Department and Fish and Wildlife by March 31 of each year summarizing any changes in the reservoirs vulnerability, monitoring results, and management activities. Additionally, the discovery of a dreissenid mussel in any reservoir or lake will be reported as soon as possible to the Department of Fish and wildlife as required by Fish and Game Code section 2301, subdivision (e).

## References

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- Spidle, A. 1994. A comparison of exotic bivalves, the quagga mussel (*Dreissena bugensis* Andrusov) and the zebra mussel (*D. polymorpha* Pallas), using genetic variation and tolerance to temperature and salinity. M.S. Thesis, Cornell University, Ithaca, New York.

### **Additional Online Resources**

100<sup>th</sup> Meridian Initiative  
[www.100thmeridian.org](http://www.100thmeridian.org)

Protect Your Waters  
[www.protectyourwaters.net](http://www.protectyourwaters.net)

California Department of Fish & Wildlife Invasive Species Program  
<https://www.wildlife.ca.gov/Conservation/Invasives/Quagga-Mussels>

California Department of Water Resources Zebra Mussel Watch  
[http://www.water.ca.gov/environmentalservices/invasive\\_program\\_overview.cfm](http://www.water.ca.gov/environmentalservices/invasive_program_overview.cfm)

USGS Zebra Mussel Sightings Distribution  
<http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/zebramusseldistribution.asp>

Dreissenid Mussel infestations in California, September 2011  
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=39027&inline>

**Appendix I: Fish and Game Code §2302**

## Fish and Game Code §2302

- (a) Any person, or federal, state, or local agency, district, or authority that owns or manages a reservoir, as defined in Section 6004.5 of the Water Code, where recreational, boating, or fishing activities are permitted, except a privately owned reservoir that is not open to the public, shall do both of the following:
  - (1) Assess the vulnerability of the reservoir for the introduction of nonnative dreissenid mussel species.
  - (2) Develop and implement a program designed to prevent the introduction of nonnative dreissenid mussel species.
- (b) The program shall include, at a minimum, all of the following:
  - (1) Public education.
  - (2) Monitoring.
  - (3) Management of those recreational, boating, or fishing activities that are permitted.
- (c) Any person, or federal, state, or local agency, district, or authority, that owns or manages a reservoir, as defined in Section 6004.5 of the Water Code, where recreation, boating, or fishing activities of any kind are not permitted, except a privately owned reservoir that is not open to the public, shall, based on its available resources and staffing, include visual monitoring for the presence of mussels as part of its routine field activities.
- (d) Any entity that owns or manages a reservoir, as defined in Section 6004.5 of the Water Code, except a privately owned reservoir that is not open to the public for recreational, boating, or fishing activities, may refuse the planting of fish in that reservoir by the department unless the department can demonstrate that the fish are not known to be infected with nonnative dreissenid mussels.
- (e) Except as specifically set forth in this section, this section applies both to reservoirs that are owned or managed by governmental entities and reservoirs that are owned or managed by private persons or entities.
- (f) Violation of this section is not subject to the sanctions set forth in Section 12000. In lieu of any other penalty provided by law, a person who violates this section shall, instead, be subject to a civil penalty, in an amount not to exceed one thousand dollars (\$1,000) per violation, that is imposed administratively by the department. To the extent that sufficient funds and personnel are available to do so, the department may adopt regulations establishing procedures to implement this subdivision and enforce this section.
- (g) This section shall not apply to a reservoir in which nonnative dreissenid mussels have been detected.

**Appendix II: Title 14 CCR § 672.1**

**§ 672.1. Dreissenid Mussel Control and Prevention**

## § 672.1. Dreissenid Mussel Control and Prevention

### (a) Control Plan.

If a public or private agency that operates a water supply system detects dreissenid mussels, the agency shall immediately begin developing a dreissenid mussel control plan and implement measures to prevent further spread.

(1) A control plan shall be submitted to the department either:

(A) Within 60 business days of the date the department requests a control plan from the operator of a water supply system that has previously reported dreissenid mussel detections; or,

(B) Within 60 business days of dreissenid mussels being detected; or,

(C) Within 60 business days of changes to the approved control plan.

(2) Control plans shall be revised within 60 business days of receipt of comments from the department.

(3) Control plans that have been approved prior to the effective date of these regulations are not required to be resubmitted for review by the department. The authorization contained in such control plans is deemed to be in effect as of the date it was approved.

(4) The department shall maintain a list of waterbodies where dreissenid mussels have been detected.

(5) Control plans shall consist of a written document describing the status of the dreissenid mussel population at the time the plan is developed, control activities, and monitoring to determine changes in the population. A control plan may also include a description of maintenance activities to maintain functionality of the water supply facility.

(6) Monitoring activities associated with an approved control plan per Fish and Game Code section 2301 do not require a separate permit for collection, transport to laboratories, or analysis, unless activities are associated with scientific research.

(7) Plan implementation shall be demonstrated through submission of annual reports (January 1-December 31) to the department by March 31 of each year, that summarize changes in dreissenid mussel populations, control activities implemented, and monitoring results.

(8) Any public or private agency that violates this section by failing to submit a control plan, revision, or annual report is subject to a maximum penalty of \$1,000 that shall be imposed administratively by the department. The administrative penalty and appeal process are described in section 672.2.

### (b) Prevention Program.

It is unlawful for any person, or federal, state, or local agency, district or authority that owns or manages a reservoir, as defined in section 6004.5 of the Water Code, where recreational, boating, or fishing activities are permitted, to operate without developing and implementing a dreissenid mussel prevention program that meets the requirements of this subsection.

(1) Dreissenid mussel prevention programs shall include, at a minimum, a report summarizing the following:

(A) An assessment of the vulnerability of the reservoir for the introduction of both adult and veliger dreissenid mussels.

(B) A monitoring program to detect the presence of adult and/or veliger dreissenid mussels.

(C) Management of recreational activities to prevent the introduction of mussels and to keep them from being moved from the waterbody if present, that includes public education and outreach.



(2) Possession of dreissenid mussels as a result of early detection monitoring is not a violation of Fish and Game Code section 2301, subdivision (a) provided that monitoring is conducted under a prevention program being implemented consistent with Fish and Game Code section 2302.

(3) A written document describing the prevention program shall be submitted to the department within 90 business days of the date the department requests documentation of the prevention program.

(4) Prevention programs shall be revised within 60 business days of receipt of comments from the department.

(5) Program implementation shall be demonstrated through submission of an annual report (January 1 - December 31) to the department by March 31 of each year that summarizes any changes in the reservoir's vulnerability, monitoring results, and management activities.

(6) Any person, or federal, state, or local agency, district or authority that violates this section by failing to submit a prevention program, revision, annual report, or fails to report a new discovery of dreissenid mussels as required by Fish and Game Code section 2301, subdivision (e) is subject to a maximum penalty of \$1,000 that shall be imposed administratively by the department. The administrative penalty and appeal process are described in section 672.2.

(c) Inspection of Conveyances.

It is unlawful for any person to fail to fully comply with any verbal or written order, or to resist, obstruct, delay or interfere with any department employee or any other state agency representative who has been delegated the authority to enforce Fish and Game Code section 2301. Full compliance with an order shall include, but is not limited to, the order being followed in the manner, time frame, and to the degree directed by an agency representative authorized to implement Fish and Game Code section 2301.

(1) Any department employee or any other state agency representative, to whom the department has delegated the authority to implement Fish and Game Code section 2301, may impound or quarantine any conveyance known or suspected to contain dreissenid mussels for the period of time necessary to ensure the removal or death of any such mussels. Impounded or quarantined conveyances shall be stored at a location determined by the enforcing authority, and all costs associated with the impounding or quarantine are the responsibility of the owner of the conveyance or the person in possession of the conveyance. The department is not responsible for any costs that are in any way, whether directly or indirectly, related to or resulting from quarantine or storage.

(2) State agencies delegated authority to implement Fish and Game Code section 2301 are not obligated to impound or quarantine conveyances.

(3) Tags, stickers or other methods used to identify a conveyance as quarantined shall not be tampered with or destroyed prior to the conveyance being released from quarantine by the department.

(4) When a conveyance is quarantined by the department, the owner or person in possession of the conveyance will receive a copy of Quarantine Notice, DFW 1015 (NEW 09/25/14), incorporated by reference herein. If the owner is not present at time of the department-issued quarantine, the department shall provide a copy of the Quarantine Notice electronically or by mail to the owner. The conveyance will remain under quarantine until the department has re-inspected the conveyance, determined it has been properly treated to remove or kill all dreissenid mussels, and/or has released it from quarantine. The owner of the conveyance is responsible for contacting the department for re-inspection of the conveyance.

(5) In addition to any other penalty provided by law, any person who violates this section, section 2301 of the Fish and Game Code, or any verbal or written order issued pursuant to these sections,

or who resists, delays, obstructs, or interferes with the implementation of these sections, is subject to a penalty of not less than one hundred dollars (\$100) and not more than one thousand dollars (\$1,000), that shall be imposed administratively by the department. Any such person shall be issued an Administrative Penalty Citation Form DFW 1016 (NEW 04/10/15), incorporated by reference herein. The owner of any conveyance involved in the violation or quarantine may be held responsible for the violation, impoundment, or quarantine. In determining the amount of the penalty, the department may consider the willfulness of the action or failure to act, the nature and gravity of the action or failure to act, including the potential impacts on public safety, recreation, or natural resources of the state, the history of past acts or failures to act, and any other relevant factors as justice may require. The administrative penalty and appeal process is described in section 672.2 of these regulations.

Note: Authority cited: Sections 702, 2301 and 2302, Fish and Game Code. Reference: Sections 2301 and 2302, Fish and Game Code.

### **Appendix III: Artificial Substrate Monitoring Protocol**

**Quagga/Zebra Mussel Artificial Substrate Monitoring Protocol\***  
**California Department of Fish and Wildlife**

\*This protocol was adapted from the California Department of Water Resources *Monitoring Instructions for Zebra/Quagga Mussel Plate Samplers*, April 2, 2008.

**Description of Quagga and Zebra Mussels**

The quagga mussel, *Dreissena bugensis*, and the zebra mussel, *Dreissena polymorpha*, are small mussels found only in freshwater. They look very similar to each other. They commonly have alternating light and dark brown stripes, but can also be solid light brown or dark brown. They have 2 smooth shells that are shaped a little bit like the letter "D". These mussels are usually less than 2 inches in length. In new populations, most mussels are young and therefore very small (under ¼ -inch long).

<p><b>Quagga Mussel</b> <i>Dreissena bugensis</i></p> 	<p><b>Zebra Mussel</b> <i>Dreissena polymorpha</i></p> 
<ul style="list-style-type: none"> <li>• Shell: D-shaped and triangular; thin, fragile; smooth or shallowly ridged; solid light to dark brown or dark concentric rings; paler near hinge</li> <li>• Attaches to hard and soft surfaces</li> </ul>	<ul style="list-style-type: none"> <li>• Shell: D-shaped and triangular; thin, fragile; smooth or shallowly ridged; solid light to dark brown or striped</li> <li>• Attaches to hard surfaces</li> </ul>



*Color variation in quagga and zebra mussels*

Quagga and zebra mussels are freshwater mussels that can physically attach onto hard substrates. Like the mussels found clinging to the rocks along the California coastline, quagga and zebra mussels attach onto hard surfaces (e.g. pipes, screens, rock, logs, boats, etc.). They form colonies made up of many individuals attached onto an object and even onto each other. Small newly settled mussels feel like gritty sandpaper when attached to a smooth surface. Larger mussels will feel coarser (like a small pebble or sunflower seed) or be visually apparent.

## Other Organisms Mistaken for Quagga/Zebra Mussels

### *Asian clam, Corbicula fluminea*

People often mistake the very common Asian clam (also introduced) for quagga or zebra mussels. The Asian clam is widespread and abundant in California. It is brown and has ridges in concentric rings on its shells. The shells of older clams or of dead clams are white at the hinge (where the two shells join together). These clams do not attach onto surfaces. They live in mud or sand.



### *Snails and Freshwater Limpets*

Small snails and freshwater limpets cling to hard substrates and can be mistaken for small juvenile mussels. They are similar in color and size to small quagga and zebra mussels. Snails have a spiral shape. Limpets have one shell and are flat. Quagga and zebra mussels attach on the edge of their shell and stick up and away from the surface.



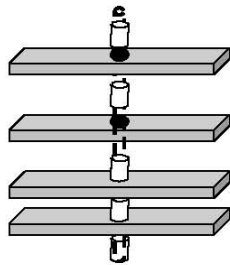
## Artificial Substrate Construction and Assembly

To construct the artificial substrate you will need the following materials cut to size:

- (4) 6" x 6" x 0.25" black/grey PVC with 1" hole through center
- (5) 1.5" x 1.375" (35mm) exterior diameter PVC or ABS tube
- (1) 8.5" x 0.8125" (21 mm) exterior diameter PVC or ABS tube

~25 ft plastic coated cable or rope  
Some form of attachment to keep plates from floating up  
Weight  
Laminated label with your contact information

To assemble the substrate, run the cable or rope through the 8.5" tube and secure at one end. From the loose end of the rope string on the remaining pieces, alternating between the short segments of tube and the plates, beginning and ending with the short tubes (see figure). Secure the top tube to the rope to prevent the pieces from floating up. If necessary, attach a weight to the bottom of the assembly. Attach the label to the cable where the cable is secured to the structure.



Example of a label



### Selection of Monitoring Site

Quagga and zebra mussels are transported between waterbodies by watercraft (boats, wave runners, etc), water diversions, and the natural downstream flow of a river system. Monitoring sites are selected with these factors in mind. Prime sites are areas with high boat traffic and downstream of source water. If you are sampling at a waterbody that allows boating, select a site that has a lot of boat traffic. Examples are boat ramps, gas docks or dockside marina stores. Then find a location with low flow and protection from vandalism. Marinas often offer all of these features. Within a marina, find a location with restricted public access. Avoid placing the artificial substrate at unsupervised boat ramps because of tampering by the general public and entanglement with the dock cabling system when the water level changes or the ramp is moved. If these types of structures are not available, find a site downstream of the boat traffic that offers as much protection from vandalism as possible. Examples include water quality monitoring

stations or towers and government agency boathouses. Always ask for permission before attaching artificial substrates to structures. Again, find a location that offers protection from vandalism and has low flow.

### **Deployment and Inspection of the Artificial Substrate**

Depending on water clarity and depth, the artificial substrate should be set below the euphotic zone (below the depth of light penetration) or 6 feet, whichever is deeper, and at least two feet above the bottom. One to two substrates are deployed per site. If the site is shallower than 2 m, then raise the substrate about 0.5 m (2 ft) off of the bottom. Record the actual sampling depth. At sites that are deep and have little vertical mixing, a second substrate is installed at a depth of approximately 15 meters (50 feet) below the surface (or 1 meter off the bottom if the depth is less than 15 meters).

A visual and tactile examination of the artificial substrate is conducted every month for attached quagga and zebra mussels. When mussels first attach they are very small (invisible to the naked eye) and are very delicate (shells are thin and easily crushed). A single mussel may feel like a grain of sand. If many mussels cover a surface, the surface feels gritty like sandpaper. In approximately 1 to 2 months a mussel grows large enough (1/4 inch) to be seen upon close inspection, but the shell is still very delicate. At this size it feels like a small pebble or sunflower seed.

To check an artificial substrate, first carefully lift it out of the water and place it in a large plastic tub (the tub will capture any mussels that fall off). Avoid knocking the substrate as you pull it out of the water because you may dislodge or crush any attached mussels. First visually inspect each plate (top, bottom, and sides), the spacers, the cable and the weight. After looking closely, attempt to gently push any attached organism that might be a mussel. Freshwater limpets and snails easily move or slide across the plate. Quagga and zebra mussels stick in place or are more securely attached. In all cases, if in doubt, bag it.

If no mussels are detected, lower the substrate back into the water and check again in a month. Quagga and zebra mussels are more likely to attach to a substrate that has some algal growth, however if the substrate becomes too heavily coated it may be unsuitable for mussel settlement. As necessary, gently remove heavy accumulations of algae to maintain suitable conditions for settlement.

### **Specimen Collection**

If you suspect you have found a mussel immediately contact the appropriate CDFW regional mussel contact (list attached). To aid identification, first take a close-up digital photograph of each specimen. Next, collect the specimen(s) and place in a vial with 70% ethanol. Label the vial with location, date, and name of collector. If ethanol is not available, place the sample in a rigid container (to prevent crushing) without water, label, and refrigerate. E-mail the photos to the CDFW contact and they will try to

identify the specimens from the photographs, and may request the actual specimen(s) to make a positive identification.

If the entire artificial substrate needs to be retained for laboratory processing, place the entire unit in a large Ziplock bag or small garbage bag and keep it in a cooler with ice while in the field. Store the substrate in the freezer until ready to mail. Mail it "overnight delivery" on ice.

#### **Replacement of Artificial Substrate**

Replace a missing or broken artificial substrate with a new one. If the substrate is repeatedly lost or damaged look for a new deployment site that offers more protection. Report any incidents and the action(s) taken.

To prevent any possibility of contamination between monitoring sites (should mussels be present and not yet detected), never take a substrate from one site and place it at a different site (even within a single waterbody).

#### **Data Recording and Reporting**

Every time an artificial substrate is checked the data must be recorded on a datasheet before leaving the field. Absence data is as important to document as presence, so complete and submit a datasheet even if no mussels were found. Send datasheets to the appropriate CDFW regional contact. All data will be entered into a data reporting system and the datasheets will be retained on-site.



**Artificial Substrate Datasheet**  
**California Department of Fish and Wildlife**  
 (One datasheet for each artificial substrate)

<b>Collection Information</b>		
Date:		
Waterbody:		
Substrate location (GPS or site description):		
Substrate depth (meters):		
Collector(s):	Affiliation:	
Contact information (email or phone # if not CDFW):		
<b>Substrate</b>		
Substrate (circle one):	Present	Missing
Condition (circle one):	Intact	Damaged
Comments:		
<b>Mussels</b>		
Mussels (circle one):	Present    Absent	Species (circle one):    Quagga    Zebra    Unknown
Where (circle all that apply):	Total # of mussels on each part of substrate	
Plate surface	_____	
Plate edge	_____	
Spacers	_____	
Rope (depth _____)	_____	
Other (_____)	_____	
Plate dimensions (units): _____ x _____(____)	Plate area (multiply plate dimensions):	
Plates:	Number of mussels	Density (# of mussels ÷ area)
Side 1 (top side of top plate)		
Side 2 (bottom side of top plate)		
Side 3 (top side of second plate)		
Side 4 (bottom side of second plate)		
Side 5 (top side of third plate)		
Side 6 (bottom side of third plate)		
Side 7 (top side of bottom plate)		
Side 8 (bottom side of bottom plate)		
<b>Additional Information</b>		
Other organisms present:		
Comments:		

Return completed datasheets to the appropriate California Department of Fish and Wildlife Regional office.

Revised 10/13/2015

6

### **CDFW Regional Office Contacts for Quagga Mussel Monitoring**

**Region 1 – Northern Region**

Counties: Del Norte, Humboldt, Lassen, Mendocino, Modoc, Shasta, Siskiyou, Tehama, and Trinity  
601 Locust Street, Redding, CA 96001  
L. Breck McAlexander  
[Louis.McAlexander@wildlife.ca.gov](mailto:Louis.McAlexander@wildlife.ca.gov)  
Office: (530) 225-2317  
Fax: (530) 225-2381

**Region 2 – North Central Region**

Counties: Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lake, Nevada, Placer, Plumas, Sacramento, San Joaquin, Sierra, Sutter, Yolo and Yuba  
1701 Nimbus Road, Rancho Cordova, CA 95670  
Angie Montalvo  
[Angie.Montalvo@wildlife.ca.gov](mailto:Angie.Montalvo@wildlife.ca.gov)  
Mobile: (530) 333-7749  
Fax: (916) 358-2912

**Region 3 – Bay Delta Region**

Counties: Alameda, Contra Costa, Marin, Napa, Sacramento, San Mateo, Santa Clara, Santa Cruz, San Francisco, San Joaquin, Solano, Sonoma, and Yolo  
7329 Silverado Trail, Napa, CA 94558  
Catherine Mandella  
[Catherine.Mandella@wildlife.ca.gov](mailto:Catherine.Mandella@wildlife.ca.gov)  
Mobile: (831) 588-1463  
Fax: (707) 944-5563

**Region 4 – Central Region**

Counties: Fresno, Kern, Kings, Madera, Mariposa, Merced, Monterey, San Benito, San Luis Obispo, Stanislaus, Tulare and Tuolumne  
1234 E. Shaw Avenue, Fresno, CA 93710  
Kelley Aubushon  
[Kelley.Aubushon@wildlife.ca.gov](mailto:Kelley.Aubushon@wildlife.ca.gov)  
Office: (559) 243-4017 X-285  
Fax: (559) 243-4004

**Region 5 – South Coast Region**

Counties: Los Angeles, Orange, San Diego, Santa Barbara and Ventura  
4665 Lampson Avenue, Los Alamitos, CA 90720  
Eloise Tavares  
[Eloise.Tavares@wildlife.ca.gov](mailto:Eloise.Tavares@wildlife.ca.gov)  
Office: (562) 342-7155  
Fax: (562) 342-7153

**Region 6 – Inland Deserts Region**

Counties: Imperial, Inyo, Mono, Riverside and San Bernardino  
P.O. Box 2160, Blythe, CA 92226  
David Vigil  
[David.Vigil@wildlife.ca.gov](mailto:David.Vigil@wildlife.ca.gov)  
Office: (760) 668-9029  
Fax: (760) 922-5638

**Appendix IV: CDFW Public Display Material**



# DON'T MOVE A MUSSEL

## Clean, Drain, Dry

In California it is illegal to import, transport, or possess live or dead quagga or zebra mussels, including water that may contain their microscopic juveniles. All conveyances are subject to inspection and may be quarantined. Violations are subject to penalty of up to \$1000. Fish and Game Code §2301; 14 CCR §672.1



### HELP PREVENT THE SPREAD OF QUAGGA AND ZEBRA MUSSELS

<p><b>REMOVE</b> plants, animals &amp; mud from gear, boat, trailer &amp; vehicle before you leave the area.</p> <p><b>CLEAN</b> your gear before entering &amp; leaving the recreation area.</p> <p><b>DRAIN</b> bilge, ballast, wells &amp; buckets before you leave the area.</p>	<p><b>DRY</b> equipment before launching into another body of water.</p> <p><b>DISPOSE</b> of unwanted bait in the trash.</p> <p><b>WAIT</b> before launching into different fresh waters. Waiting periods can vary – check with your local water body.</p>
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www.wildlife.ca.gov/mussels | 866-440-9530



**Figure 1: Sample of CDFW public outreach poster from CDFW website.**



**Figure 2: Example of signs deployed at Lundy Lake.**

**APPENDIX G**  
**VEGETATION MANAGEMENT OPERATIONS MANUAL**

**SOUTHERN CALIFORNIA EDISON  
TRANSMISSION AND DISTRIBUTION**

**Vegetation Management  
Operations Manual  
(VMOM)**

**2017 ISSUE  
March 31, 2017**

**This document is classified “Internal”  
per EPPC Policy 04.001.001.**

**► SCE Internal ◀**

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# Vegetation Management Operations Manual (VMOM)

**2017 Edition**

Effective Date: March 31, 2017

## Getting Help

### Content Revisions

If you have any comments, corrections, questions, or suggestions concerning manual revisions, please contact the following individual:

- Jon Pancoast — PAX: 35216, Outside: (310) 608-5216 — [jon.pancoast@sce.com](mailto:jon.pancoast@sce.com)

### Address Corrections

Send address changes to:

Southern California Edison  
Dominguez Hills  
2000 Cashdan St.  
Compton, CA 90220  
ATTN: Jon Pancoast

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**TABLE OF  
CONTENTS**

**TOC**

## Table of Contents

Section	Chapter	Current Effective Date
IN: Introduction		6-1-2013
DR–TOC: Duties and Responsibilities		6-1-2013
	DR–1: Southern California Edison Vegetation Management Operations	6-1-2013
	DR–2: Contract Vegetation Management Operations	6-1-2013
GP–TOC: General Procedures		3-31-2017
	GP–1: Tree Trimming Requests Procedures	6-1-2013
	GP–2: Tree Trim or Removal Refusal Request Procedures	6-1-2013
	GP–3: Work Review Procedures	6-1-2013
	GP–4: Tree-Caused Circuit Interruption Fact-Finding Procedures	6-1-2013
	GP–5: Fire Prevention Plan	3-31-2017
	GP–6: Environmental Conditions: Sensitive Habitats SCE Operations	6-1-2013
	GP–7: General Operation and Maintenance Plan on Public Lands	6-1-2013
	GP–8: Southern California Edison Corporate Emergency Response Plan	6-1-2013
	GP–9: Summer Readiness	6-1-2013
GR–TOC: Government Regulations		6-1-2013
	GR–1: California Public Utilities Commission General Order 95, Rules 35 and 37	6-1-2013
	GR–2: California Code of Regulations Electrical Safety Orders (Title 8, Section 2951)	6-1-2013
	GR–3: Responsibilities to Transmission Regulatory Agencies	6-1-2013
	GR–4: Public Resources Codes 4292 and 4293	6-1-2013
PC–TOC: Pole Clearing Program		6-1-2013
	PC–1: Pole Clearing Program	6-1-2013
RM–TOC: Reference Material		6-1-2013
	RM–1: List of Reference Material	6-1-2013
TP–TOC: Tree Programs		6-1-2013
	TP–1: Tree Line USA Program	6-1-2013
	TP–2: Awareness Tree Program	6-1-2013
VM–TOC: Vegetation Management Procedures		6-1-2013
	VM–1: Tree/Vegetation-Related Circuit Interruption Cause Codes	6-1-2013
	VM–2: Tree Species Growth Rate Characteristics for Trees on SCE Edison System	6-1-2013
	VM–3: Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property	6-1-2013

EFFECTIVE DATE 3-31-2017	Table of Contents	TOC
APPROVED <i>B. C.</i>	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

Section	Chapter	Current Effective Date
VM-4: USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts		6-1-2013
GL: Glossary		6-1-2013

<b>TOC</b>	<b>Table of Contents</b>	EFFECTIVE DATE 3-31-2017
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED <i>B. e.</i>







## IN: Introduction

### 1.0 Introduction

Southern California Edison (SCE) is responsible for the delivery of quality power to its customers as safely and economically as possible. Trees and vegetation present major obstacles in meeting those responsibilities.

Service interruptions, fires, damage, and power systems failures can be caused by trees, tree limbs, or palm fronds contacting or falling across utility power lines. Weather-related storms can cause trees or their branches to break and fall onto power lines. High temperatures, wind, snow, and ice loading conditions can cause wires to sag into trees below.

Tree owners plant trees for many reasons, including shade, beauty, energy conservation, and crop harvesting. It is SCE's Vegetation Management Department's responsibility to perform inspection and maintenance of transmission and distribution systems to comply with governmental regulations and safety standards.

### 2.0 Mission Statement

It is SCE's intent that trees will be pruned or removed to provide safety and reliability, and ensure conformance with current governmental regulations as prescribed by the California Public Utilities Commission (CPUC) General Order (G.O.) 95, Rule 35 and 37; California Public Resources Code (PRC), Sections 4292 and 4293 (referenced in California Department of Forestry and Fire Protection (CALFIRE) Power Line Fire Prevention Field Guide); NERC/WECC/CAISO Transmission Standards, current revisions of the American National Standards Institute (ANSI) Z 133-2012, ANSI A300 (Part1) - 2008 Pruning, ANSI A300 (Part 7) - 2006 IVM, and ANSI A300 (Part 9) - 2011.

### 3.0 History

The first hard copy of the SCE Line Clearing Manual (LCM) was produced in 1967.

The purpose of the original manual was to provide SCE tree trimmers with a manual to be used for training and reference in Utility tree maintenance operations.


Some of the information for the 1967 (First Edition) manual was based on material originally published in 1940 by Consumer Power Company of Jackson, Michigan.

The LCM was revised (Second Edition) in July 1983 and divided into separate sections for SCE tree trimmers, company policies, training materials, and a new removal policy for a cost-sharing program with the customer. Industry arboricultural information and practices were also updated.

The LCM was revised (Third Edition) in October 1991 to identify the start of SCE's 6-foot clearance guidelines (enforced where practical) which is at or around the secondary line construction level. Sections for Line Clearing Inspector and Supervisor classifications along with tree growth regulator operations were added.


The LCM was revised (Fourth Edition) in June 1995 to eliminate all material for the SCE "Tree Trimmer" job classification (now defunct), and update the Contract Specifications section of the manual.

The LCM was revised (Fifth Edition) in December 2003 to update changes from the 1997 CPUC OII (18-inch rule), SCE internal classification changes, PRC requirements, and Contract Operations.

EFFECTIVE DATE 6-1-2013	Introduction	IN
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

The LCM was revised (Sixth Edition) in September 2007 to update changes in SCE management classifications, CPUC G.O. 95 requirements, ANSI Z133.1 safety requirements, and ANSI A300 (Part 7) IVM tree care operations. Updates were made to GP-2 (Tree Trim/Removal Request Refusal Procedures), LC-5 (Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property), LC-6 (USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts), RM-1 (Contract Line Clearing Daily Tree Log), RM-2 (Tree Trimming Grid/Circuit Inspection Report), and RM-3 (Tree Trim/Removal Refusal Notice). Contract information was moved from the LCM into the Contract Purchase Order under a Master Services Agreement. Various clerical corrections and editorial revisions also were made.

The LCM was revised (Seventh Edition) June 1, 2013, to update mandatory changes in CPUC G.O. 95, Rule 35 and 37; change to existing terms from “tree trimming” to “Vegetation Management”; change the term “compliance” to “conformance”; interim revisions to Appendix E that increase the minimum vegetation clearance at time of trim for Extreme and Very High Fire Threat Zones; and Rule 37 to expand the minimum vertical vegetation clearances for certain electric lines in Extreme and Very High Fire Threat Zones in Southern California. Sections were added to reference the Transmission Vegetation Management of NERC Standard FAC-003. Additional changes were made to update current contract operations and practices. The name of this manual was changed from the Line Clearing Manual (LCM) to the Vegetation Management Operations Manual (VMOM). Forms, brochures and publications were removed from the LCM and placed on the Vegetation Management Data Center shared drive or retained at the local work site.

<b>IN</b>	<b>Introduction</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED 




**DR DUTIES AND RESPONSIBILITIES**

**DR-TOC: Duties and Responsibilities**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
DR-1:	Southern California Edison Vegetation Management Operations	6-1-2013
DR-2:	Contract Vegetation Management Operations	6-1-2013

EFFECTIVE DATE 6-1-2013	<b>Duties and Responsibilities</b>	<b>TOC</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## DR-1: Southern California Edison Vegetation Management Operations

### 1.0 Purpose

This procedure provides the responsibilities of the Vegetation Department Manager, Supervisors, Technical Specialists, and Data Center Analyst.

### 2.0 Policy Statements

The intent of the Vegetation Management Department is to be in full compliance with all governmental rules and regulations and Southern California Edison's (SCE) Ethics and Compliance Code. SCE's Ethics and Compliance Code states: "Edison employees are expected to refrain from improperly using their positions for any personal gain or advantage. We should not pursue business opportunities that would cause us to compete with Edison or benefit financially from Edison's decisions."

In addition, the Vegetation Management Department has established the following supplemental policies specifically applicable to our department.

No Vegetation Management employee specifically engaged in direct or indirect contact with our customers and in direct contact with our current contractors is to perform any work solicited by a customer while the employee is deemed a representative of SCE either during or after normal business hours.

- No SCE employee is to perform any tree trimming activities in or around SCE-owned conductors, trees, or vegetation of any kind outside of the "conformance zone" adjacent to the SCE conductors. Nor is any SCE employee to perform any tree-trimming activities in or around any vegetation or trees anywhere on an SCE customer's property during or after normal working hours.
- Failure to adhere to this policy will result in disciplinary action up to and including termination.

### 3.0 References


- 3.1 All Governmental rules and regulations affecting vegetation management operations.
- 3.2 SCE Ethics and Compliance Code (December 2011)
- 3.3 Professional Conduct, Human Resources (HR) Policy 301H1T-Heading 1 Text
- 3.4 Corrective Action, HR Policy 302

### 4.0 Operations

#### 4.1 Vegetation Department Manager

The Vegetation Department Manager has a responsibility to:

- Ensure overall management of a comprehensive vegetation management program from a staff level by establishing policies and procedures which meet all governmental laws and regulations.
- Ensure safety and training of SCE Vegetation Management personnel.
- Obtain operational efficiency by overseeing a cost-effective Vegetation Management business plan.
- Monitor, track, and report Vegetation Management performance for Central Construction Management (CCM) and T&D operations.

EFFECTIVE DATE 6-1-2013	<b>Southern California Edison Vegetation Management Operations</b>	<b>DR-1</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

- Support the EIX company goals.
- Mentor direct reports.
- Monitor and score direct reports' Performance and Development Plan (PDP).
- Monitor, track, and report the Vegetation Management Department budget, time and material expenditures and all pole clearing (weed abatement) operations.
- Perform all other duties as requested by the manager of Central Construction Management.

#### 4.2 Vegetation Management Supervisor


The Vegetation Management Supervisors have a responsibility to:

- Ensure overall supervision for field operations under the direction of the Vegetation Department Manager.
- Supervise internal manpower and assignments of SCE Vegetation Management Technical Specialists.
- Monitor and make recommendations for progress, conformance, reliability, and safety of field operations.
- Act as mediators between contract Vegetation Management field operations and SCE Master Service Agreement (MSA) operations.
- Mentor direct reports.
- Monitor and score direct reports' Performance and Development Plan (PDP).
- Interpret the contract.
- Perform all other duties as directed by the Vegetation Department Manager.

#### 4.3 Vegetation Management Technical Specialists

The Vegetation Management Technical Specialists have a responsibility to:

- Ensure conformance to the Master Service Agreement (MSA) through audits and inspections of completed work in the field under the direction of the Vegetation Management Supervisor.
- Monitor and make recommendations for progress, completion, conformance, and reliability as regards to governmental laws and regulations, customer safety, and SCE system operations.
- Perform reviews of completed field work and perform fact findings on tree-related outages.
- Review and monitor the progress and completion of all incomplete work as submitted by the contractor as non-conforming.
- Ensure the timely processing and escalation of customer refusals relating to non-conforming trees and vegetation.
- Ensure all WECC transmission lines having trees in the Vegetation Management database are patrolled annually for conformance.
- Monitor and oversee the issuing of work and the completion of trouble orders, work order requests, and work notifications.
- Interface with local fire agencies in regards to inspection, operations, and refusal issues.
- Become members of, and acquire certification with, the International Society of Arboriculture (ISA). They may also participate in select fire safe councils and canyon wildfire watch committees.

<b>DR-1</b>	<b>Southern California Edison Vegetation Management Operations</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 



- Coordinate with appropriate department personnel to gain access to substations for maintenance of trees inside and adjacent to substation properties.
- Perform all other duties as directed by the Vegetation Management Supervisor.

4.4 Vegetation Management Business Analyst

The Vegetation Management Business Analyst has a responsibility to:


- Update the database and retain paperwork at the Vegetation Management Data Center.
- Maintain and update the Vegetation Management database interface.
- Track and report major woody stem exemption trees.
- Produce reports for use internally and/or by external regulatory bodies.
- Respond to records requests from Claims.
- Coordinate with Transmission regarding patrols by senior patrolmen.
- Track and distribute work notifications assigned to Vegetation Management.
- Track invoices and create service entry sheets.
- Work with Joint Pole Organization regarding weed abatement tracking in SAP.
- Log and scan inspection reports.
- Maintain the contractor's annual grid and circuit trim schedule.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

EFFECTIVE DATE 6-1-2013	Southern California Edison Vegetation Management Operations	DR-1
APPROVED 	Vegetation Management Operations Manual ► SCE Internal ◀	PAGE 3

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## DR-2: Contract Vegetation Management Operations

### 1.0 Purpose

This procedure describes the responsibilities of the following contractor roles: Contract Management, General Foreman, and Tree Crew Foreman.

### 2.0 Policy Statements

N/A

### 3.0 References

N/A

### 4.0 Operations

#### 4.1 Contract Management (personnel from Upper Supervision to Vice President of Operations)

Contractor Management personnel have a responsibility to:

- Provide the necessary supervision, labor, material, tools, and equipment to perform utility vegetation management maintenance tree work, as required by Southern California Edison's (SCE) Power Delivery (T&D) and governmental laws and regulations in accordance with SCE's technical and non-technical specifications.
- Ensure conformance with the SCE Master Services Agreement.
- Ensure adequate crew manning to meet the everyday requirements for field coverage and emergency response.
- Meet the quality trim standards identified in the Master Services Agreement.
- Ensure adequate management and communications to effectively manage contract operations.

#### 4.2 General Foreman

The General Foreman has a responsibility to:

- Act as a first line contact between SCE, contract field operations, and SCE customers.
- Receive and submit completed work assignments supplied by SCE, including customer communications and notification of intended work.
- Review tree crews' completed work (both paperwork check and field check) before submitting work to Vegetation Management Technical Specialists.
- Ensure crews' conformance with the Master Services Agreement and all applicable governmental laws and regulations.
- Submit accurate documentation for customer refusal, completed work, and storm assignments.
- Interface with SCE representatives on all matters of Vegetation Management operations.

EFFECTIVE DATE 6-1-2013	<b>Contract Vegetation Management Operations</b>	<b>DR-2</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

**4.3 Tree Crew Foreman**

The Tree Crew Foreman has a responsibility to:

- Make customer contact and schedule maintenance of non-conformance trees to ensure safety, compliance, and reliability of SCE's transmission and distribution systems under normal conditions.
- Meet the quality pruning standards identified in the Master Services Agreement.
- Identify and report non-conformance trees where permission for work has been refused.
- Provide accurate documentation of completed work in a timely manner.
- Deliver customer awareness door hangers and brochures to all locations worked or visited during all operations.
- Accurately report field work.
- Report any crew caused service interruptions.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>DR-2</b>	<b>Contract Vegetation Management Operations</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED 



GENERAL  
PROCEDURES

GP

**GP-TOC: General Procedures**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
GP-1:	Tree Trimming Requests Procedures	6-1-2013
GP-2:	Tree Trim or Removal Refusal Request Procedures	6-1-2013
GP-3:	Work Review Procedures	6-1-2013
GP-4:	Tree-Caused Circuit Interruption Fact-Finding Procedures	6-1-2013
GP-5:	Fire Prevention Plan	3-31-2017
GP-6:	Environmental Conditions: Sensitive Habitats SCE Operations	6-1-2013
GP-7:	General Operation and Maintenance Plan on Public Lands	6-1-2013
GP-8:	Southern California Edison Corporate Emergency Response Plan	6-1-2013
GP-9:	Summer Readiness	6-1-2013

EFFECTIVE DATE 3-31-2017	<b>General Procedures</b>	<b>TOC</b>
APPROVED <i>B. C.</i>	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## GP-1: Tree Trimming Requests Procedures

### 1.0 Purpose

This procedure provides the practices for customer contact, identification of work, and document retention of customer or storm trouble order tree trimming requests.

### 2.0 Policy Statements

The Vegetation Management Department or its authorized contractor will field check, document, determine trim/removal requirements, and complete all orders assigned them. This will include advising the customer of actions to be taken to resolve tree trim requests. The Southern California Edison (SCE) representative will deliver all work order requests to the contractor. The SCE representative will also record in the Call Workflow Optimization (CWO) system all pertinent information supplied by the contractor, including the date the work was completed.


### 3.0 References

- 3.1 Master Service Agreement
- 3.2 Contract Specifications
- 3.3 SCE Operating Policies and Procedures
- 3.4 California Public Utilities Commission (CPUC) General Order (G.O.) 95, Rule 35 and 37
- 3.5 California Public Resources Code (PRC), Sections 4292 and 4293
- 3.6 California Department of Forestry and Fire Protection (CALFIRE) Power Line Fire Prevention Field Guide

### 4.0 Operations

Tree trimming requests will be field checked by SCE or its authorized contractor with findings conveyed to the customer in person, by door hanger, by phone message, or by written communications within five working days of the tree trim order issue date.

- 4.1 If the tree is a CPUC or PRC conformance issue, it should be worked within thirty days of the investigation date.
- 4.2 If the tree is a tree-line contact (TLC) non-conformance issue, it should be worked within 24 hours of the field check date. Imminent threat issues may require immediate work for safety and system reliability.
- 4.3 If the tree is not a conformance issue and needs to be worked, it should be worked as determined by the SCE or contract representative.
- 4.4 All pertinent information should be identified on each tree trim request and recorded in CWO for documentation and records retention. This will include the following:
  - Date of investigation
  - Time of investigation
  - Name of investigator

EFFECTIVE DATE 6-1-2013	<b>Tree Trimming Requests Procedures</b>	<b>GP-1</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

- Investigation findings
- Action taken
- Date of completion
- Work Order number assigned

4.5 A copy of the tree trim request should be attached to the contractor's daily tree log and forwarded to the Vegetation Management Data Center with the contractor's completed field work documentation.

4.6 The contractor may retain and file a copy of the tree trim order for historical retention. All customer information should be considered personal and confidential and should not be disclosed to any person or agency without SCE approval.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GP-1</b>	<b>Tree Trimming Requests Procedures</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

## GP-2: Tree Trim or Removal Refusal Request Procedures

### 1.0 Purpose

This procedure identifies the requirements for documentation and mitigation of vegetation that is out of conformance, or could become out of conformance before the next scheduled trim with governmental rules or regulations because of a customer refusal to allow Southern California Edison (SCE) to perform required work to ensure public safety, SCE system reliability and fire prevention. The issuing of a "Tree Trim or Removal Refusal Notice" (SCE 14-720) is required to document all refusals that do not meet required regulatory conformance standards.

### 2.0 Policy Statements

It is SCE's duty and responsibility to trim or remove trees or vegetation in order to comply with the California Public Utilities Commission (CPUC) General Order (G.O.) 95, Rule 35 and 37, California Public Resources Code (PRC), Sections 4292 and 4293, FAC-003 transmission circuit operations, SCE system reliability, fire, and public safety requirements. SCE should issue a "Tree Trim or Removal Refusal Notice" to any homeowner, municipality, or agency having ownership or legal responsibility of any tree or vegetation when a request to trim, remove, or access has been refused, and where a violation of the above rules and regulations exist. Vegetation Management should maintain a working file of all active trim or removal refusals or denials.


### 3.0 References

- 3.1 Contract Purchase Order (Master Services Agreement)
- 3.2 Contract Specifications
- 3.3 SCE Operating Policies and Procedures
- 3.4 CPUC General Order (G.O.) 95, Rule 35 and 37
- 3.5 California Department of Forestry and Fire Protection (CALFIRE) Power Line Fire Prevention Field Guide
- 3.6 FAC-003-1 Transmission Operations

### 4.0 Operations

Vegetation Management Operations should issue a "Tree trim or refusal notice" when permission to prune or remove tree/s have been identified as being out of conformance with governmental regulations, posing an imminent threat, affecting system reliability, or having the potential to cause a fire or safety hazard due to a trees structural health, location, or growth characteristics. Emergency conditions may require immediate actions for protection of life or property without approval, but should require follow-up contact with the tree owner.

- 4.1 SCE or its authorized contract representative should request permission to prune or remove tree(s) or vegetation to meet governmental rules or regulations, ensure system reliability, and protect the public from fires and safety hazards. Should the initial request be refused, and the location is not an imminent threat, a second attempt should be made by SCE or its authorized representative. This second attempt should again explain the need for tree removal or maintenance. If the second attempt is again refused, the customer should be informed of SCE's refusal policy procedures.

EFFECTIVE DATE 6-1-2013	<b>Tree Trim or Removal Refusal Request Procedures</b>	<b>GP-2</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

- 4.2 When a refusal form is issued, it should include, but not be limited to: the date, district work location, grid number, line number, tree species, number of tree(s), condition of tree(s), CPUC or PRC area, homeowner name and address, local fire agency name and address (if available), and comments made by the refusing party. The trees legal owner should be identified.
- 4.3 A "Tree Trim or Removal Refusal Notice" should be filled out completely and delivered or mailed to the legal owner of the refused location. If given in person directly to the owner, a signature should be required at time of delivery. If mailed, the form should be sent certified delivery with return receipt requested by an authorized postal agency.
- 4.4 Should the homeowner refuse acceptance or signature of the refusal form, the representative must (NOTE: rest of document is in third person, not indicating "You") identify property surroundings, color of house or anything that proves he or she was present at the location (include in the Refusal Form comments section). As best practice, a second observer should be on hand if a refusal issue is imminent.
- 4.5 All copies of the refusal notice should be distributed as follows:
  - Goldenrod: Customer copy
  - White: Line Clearing Data Center for file
  - Canary: Legal/Claims Department
  - Green: Work Location File of TSP issuing the refusal
  - Pink: Local Fire Department or Authority (If identified)



**NOTE**

If the refusal gets resolved, the SCE Technical Specialists will destroy all copies and forward any trim/removal records to the Vegetation management Data Center. The claims Department should be advised of resolution.


- 4.6 If a tree-line-contact (TLC) is evident, immediate notation (within 24 hours) should be given to the SCE representative by the contractor or person who identifies the condition. If the tree or vegetation is an imminent threat to life, safety, fire or system reliability, the tree or vegetation will be made safe before leaving the location and followed up with the owner the next working day. Assistance may be required from SCE Operations, Fire Authority or local Law Enforcement.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GP-2</b>	<b>Tree Trim or Removal Refusal Request Procedures</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

## GP-3: Work Review Procedures

### 1.0 Purpose

This procedure provides the requirements for Southern California Edison (SCE) to review the contractors grid/circuit pre-inspections, completed work, grid audits, documentation, and processing of paperwork.

### 2.0 Policy Statements

It is the SCE representative's responsibility to perform a sampling of the contractors completed vegetation management work, and contractors documentation to ensure conformance with the Master Services Agreement and Governmental laws and regulations.


### 3.0 References

- 3.1 Master Services Agreement
- 3.2 Contract Specifications
- 3.3 SCE Operating Policies and Procedures
- 3.4 CPUC General Order (G.O.) 95, Rules 35 and 37
- 3.5 California Department of Forestry and Fire Protection (CALFIRE) Power Line Fire Prevention Field Guide
- 3.6 NERC/WECC/CAISO laws and regulations

### 4.0 Operations

SCE should perform a sampling review of vegetation management work completed by the contractor to ensure conformance to the MSA and Governmental laws and regulations. The inspector, or Vegetation Management Technical Specialists, should look at the contractor's "Incomplete Work Status Report" to identify any work identified by the contractor as non-conforming. Work identified as "non-conforming" on the incomplete work status report should be addressed with the contractor and remedied. An additional review of the grid may be performed prior to the next routine maintenance schedule. This inspection should be documented on a "Grid/Circuit Review Report" and forwarded to a Vegetation Management Supervisor for review. If any work is identified as needing work to conform to governmental regulations during the additional review, the work should be given to the contractor for completion. The supervisor will review the completed inspection report and forward to the Vegetation Management Data Center for retention.

- 4.1 All grid/circuit reviews should ensure conformance with the following:
  - CPUC G.O. 95, Rules 35 and 37
  - PRC, Sections 4292 and 4293
  - American National Standards Institute (ANSI) A300-2008 Pruning Specifications
  - T&D operating policies and procedures
  - NERC/WECC/CAISO procedures

EFFECTIVE DATE 6-1-2013	Work Review Procedures	GP-3
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

4.2 The reviewed grid should be processed as follows:


- If the grid has no non-conformance trees/vegetation, the Grid/Circuit Review Report should be forwarded to a Vegetation Management Supervisor for review.
- If the grid contains identified non-conformance trees/vegetation, the Grid/Circuit Review Report should be given to the contractor for work.
- The Grid/Circuit Review Report should be returned by the contractor to a Vegetation Management Technical Specialist after work completion.
- The Vegetation Management Technical Specialist should forward the completed Grid/Circuit Review Report and all supporting documentation of work to a Vegetation Management Supervisor for review and signature.
- The Vegetation Management Supervisor should forward the reviewed/signed documentation to the Vegetation Management Data Center for update and retention.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GP-3</b>	<b>Work Review Procedures</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED 

## GP-4: Tree-Caused Circuit Interruption Fact-Finding Procedures

### 1.0 Purpose

This procedure provides the requirements for field review of tree-caused circuit interruptions (TCCIs) and validation of interruption causes.

### 2.0 Policy Statements

It is a practice of the Vegetation Management department to review, validate, and document in the Vegetation Management database findings of known tree-caused circuit interruptions charged against the Vegetation Management Department. The Vegetation Management Department should maintain a listing of validated tree-caused circuit interruptions.

### 3.0 References

- 3.1 Grid Control Center (GCC) and T&D Joint Morning Reports
- 3.2 Vegetation Management Tree-Caused Circuit Interruption Report

### 4.0 Operations

Reported tree-caused circuit interruptions should be reviewed by Vegetation Management Technical Specialists to determine cause, validity, and correction.

- 4.1 If the identified tree is determined not to be the actual cause of the circuit interruption, Vegetation Management Technical Specialists will notify the Distribution Operations Center (DOC) that the field review shows the identified tree as not being the cause of the reported interruption. The Vegetation Management Technical Specialists will request the cause code be changed from "Tree Caused" to "No Cause Found" or another cause code determined by the DOC.
- 4.2 If the tree is determined to be the reported cause of the circuit interruption, Vegetation Management Technical Specialists will create a Vegetation Management Interruption Data Report. The Vegetation Management Technical Specialists will identify all outage-related data. The Vegetation Management Interruption Data Report should contain the following:
  - Work location
  - Circuit name
  - Date/time
  - Number of operations
  - Tree normally trimmed
  - Determination of whether the outage was controllable
  - Type of tree
  - Name of investigator
  - Tree location
  - Determination of cause
  - Action/remarks
- 4.3 The Vegetation Management Technical Specialists will schedule any required tree maintenance to correct the cause of the circuit interruption. This may include a request to trim/remove the identified tree.

EFFECTIVE DATE 6-1-2013	<b>Tree-Caused Circuit Interruption Fact-Finding Procedures</b>	<b>GP-4</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GP-4</b>	<b>Tree-Caused Circuit Interruption Fact-Finding Procedures</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED 



## GP-5: Fire Prevention Plan

### 1.0 Purpose

This procedure provides the requirements for Southern California Edison (SCE) to conform to CPUC Decision 12-01-032 and Decision 14-05-020.

### 2.0 Policy Statements

It is the responsibility of SCE's Vegetation Management Department to ensure conformance with CPUC Decision 12-01-032 and Decision 14-05-020

### 3.0 References

- 3.1 Most recent Contract Master Services Agreement
- 3.2 Most recent Contract Specifications
- 3.3 SCE's Fire Prevention Plan
- 3.4 California Public Utilities Commission Decision (D.) 12-01-032 and Decision 14-05-020
- 3.5 California Public Utilities Commission General Order 95 Rule 37
- 3.6 Public Resources Codes 4292 and 4293

### 4.0 Operations

SCE's Vegetation Management Department will maintain operations that support the California Public Utilities Commission Decision 12-01-032 and Decision 14-05-020.


- 4.1 Conform to CPUC Decision 12-01-032 and 14-05-020.
- 4.2 Maintain conformance to Public Resources Codes 4292 and 4293.
- 4.3 Track and retain the costs associated with SCE's Fire Management Plan.
- 4.4 Track and retain the work associated with SCE's Fire Management Plan.

### 5.0 Maintenance


N/A

### 6.0 Attachments

[Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan \(Page 2\)](#)

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan**

 <p>SOUTHERN CALIFORNIA <b>EDISON</b> An EDISON INTERNATIONAL Company</p>	<p><b>SOUTHERN CALIFORNIA EDISON</b> <b>Power Delivery</b></p>	<p><b>Review Cycle</b> Annual</p>
<p><b>Policy Owner</b></p>	<p><i>This policy is maintained by the Power Delivery Policy Maintenance Team. Only the version found on the PWRD Documents WebPages <a href="http://edna.sce.com/td2/pd/pdd/siteindex.shtml">http://edna.sce.com/td2/pd/pdd/siteindex.shtml</a> should be considered current.</i></p>	<p><b>Last Update</b> August 2014</p>
<p><b>POLICY TITLE:</b> Fire Prevention Plan</p>		
<p><b>Contact:</b> Joseph Bauza</p>		
<p><b>1.0 PURPOSE</b></p> <p>This document describes measures implemented by Southern California Edison (SCE or Company) to mitigate the threat of overhead power-line fire ignitions within its service territory.</p> <p><b>2.0 APPLICABILITY</b></p> <p>This Fire Prevention Plan is applicable to Transmission and Distribution (T&amp;D) departments and organizations responsible for the operation, design, construction, inspection and maintenance of SCE overhead lines and structures and is supported by applicable SCE or T&amp;D policies, practices, and procedures to reduce the probability of power-line caused ignitions.</p> <p><b>3.0 COMPLIANCE</b></p> <p>D.12-01-032 required SCE to prepare a fire-prevention plan to identify 3-second wind gusts in real time and address situations where all three of the following conditions occur simultaneously: (i) 3-second wind gusts exceeding the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a period of high fire danger, and (iii) the affected facilities are located within a high fire-threat area.</p> <p>D.14-05-020 modified D.12-01-32 and eliminated the requirement to identify 3-second wind gusts in real time if a utility does not deploy fire-prevention measures that rely on real time observations of wind gusts. D.14-05-020 also required SCE to "identify the parts of its service territory where it is reasonably foreseeable that the following conditions may occur simultaneously: (i) 3-second wind gusts exceed the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a Red Flag Warning, and (iii) the affected facilities are in a high fire-threat area; and further that "[i]n making this determination, the utility shall use a minimum probability of 3% over a 50-year period that 3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high fire-threat area."</p>		

<p><b>GP-5</b></p>	<p><b>Fire Prevention Plan</b></p>	<p>EFFECTIVE DATE 3-31-2017</p>
<p>PAGE 2</p>	<p><b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀</p>	<p>APPROVED <i>B. e.</i></p>

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

This Fire Prevention Plan is compliant with D.14-05-020 in that it is applied during Red Flag Warning conditions, regardless of measured wind speed, and requires specified and necessary actions to be taken whether or not the Red Flag Warning occurs in a high fire area and whether or not wind speeds in the area may exceed design criteria for the affected overhead facilities; and does not require or depend on real-time wind speed measurements or monitoring.

**4.0 DEFINITIONS**

For the purpose of this plan, the following definitions apply:

**3-second gust** - the highest sustained gust over a 3 second period having a probability of being exceeded per year of 1 in 50 (ASCE 7-05).

**Structural and mechanical design standards** - the material strengths and working stresses set forth in Section IV of General Order (GO) 95.

**High fire danger** - the period covered by a Red Flag Warning issued by the United States National Weather Service and/or Riverside Fire Weather Office.

**High fire-threat or High Fire Areas** - areas designated as such on the fire-threat maps adopted by D.12-01-032 or SCE's Bulletin 322 area, whichever is greater.

**5.0 OPERATIONS**

**5.1.1 Grid Operations**

Grid Operations is responsible for the monitoring and operation of SCE's electric system. During significant events, Grid Control Center personnel act as SCE's official representatives in matters concerning the operation of the system when senior management or an "Officer in Charge" is unavailable. Grid Operations is also responsible for applying System Operating Bulletins which encompass operating protocols, remedial actions, communication and notification protocols, ratings and limits of lines and equipment, and system protection schemes.

Qualified employees, typically Troublemens, Senior Patrolmen, Foremen, or Field Supervisors may contact Grid Operations at any time to request a line or line segment be temporarily de-energized, or sectionalizing equipment be set to "non-automatic" to promote public safety and system reliability.

To reduce power-line ignitions during dry weather conditions, including periods of drought, overhead lines and line sections are subject to operating restrictions described in SCE's System Operating Bulletin 322, as summarized below:

A. From December 1st to September 30<sup>th</sup>, reclosers associated with non-automated distribution circuits are set to "automatic."

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED <i>B. C.</i>	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 3

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

1. When a Red Flag Warning **is not** in effect, if the line or line section relays and tests good or relays to lockout:
  - a. The line or line section may be isolated and tested without restriction. A line patrol is not required before re-energizing.
  - b. Once the trouble has been isolated, the recloser may be returned to automatic.
  
2. When a Red Flag Warning **is** in effect, if the line or line section relays and tests good or relays to lockout:
  - a. The recloser is made non-automatic until patrolled.
  - b. If locked out, the line or line section is not re-energized until patrolled.
    - Patrolled line section may be sectionalized and re-energized until the faulted line section is found or the entire line has been patrolled
  - c. Once the fault is located and isolated, the line section is patrolled from the fault to the source circuit breaker or source boundary line prior to energizing.
  - d. After the patrol is completed, if the problem is found and isolated; or if no cause is found; the line or line section recloser remains non-automatic until the Red Flag Warning expires or is cancelled.
  
- B. From October 1st to November 30<sup>th</sup>, reclosers associated with non-automated distribution circuits are set to "non-automatic."
  1. When a Red Flag Warning **is not** in effect, if a line relays:
    - a. The recloser remains non-automatic during this period.
    - b. The line or line section may be isolated and tested without restriction.
      - A line patrol is not required before re-energizing.
  2. When a Red Flag Warning **is** in effect, if the line relays:
    - a. Lines or line sections are patrolled prior to being re-energized.
      - Subsequent line sections are patrolled, isolated, and may not be re-energized until the faulted line section is found or the entire line has been patrolled.
    - b. Once the fault is located and isolated, the line section is patrolled from the fault to the source circuit breaker or boundary line prior to energizing.
    - c. Once the patrol has been completed, whether the problem was found and isolated or there was no cause found, the line or line section recloser shall remain non-automatic until November 30th.
  
- C. Reclosers associated with automated distribution circuits are normally "automatic" unless Operating Restrictions are in effect. Operating Restrictions are implemented by

<b>GP-5</b>	<b>Fire Prevention Plan</b>	EFFECTIVE DATE 3-31-2017
PAGE 4	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED <i>B. e.</i>

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

each GMC Manager for their entire area of responsibility on lines or line sections that have been identified as traversing a fire hazard area when a Red Flag Warning is in effect for that area.

Note: If remote control of an Automated Distribution Circuit is temporarily unavailable, the circuit is operated as though it is a Non-Automated Distribution Circuit in the period of December 1st to September 30th until repairs are made.

1. Upon notification that Operating Restrictions are in effect, jurisdictional Switching Center System Operators will make all reclosers associated with Automated Distribution Circuits non-automatic as soon as practical.

- a. If the line or line section relays, it will not be re-energized until patrolled.
- b. A patrolled line section may be sectionalized and re-energized. Subsequent line sections may then be patrolled, isolated and re-energized until the faulted line section is found or the entire line has been patrolled.
- c. When a line or line section relays and the fault is located and isolated, the line section will be patrolled from the fault to the source CB or boundary line prior to energizing. This is to ensure that all line faults or abnormalities have been identified prior to energizing.
- d. Once the patrol has been completed, whether the problem was found and isolated or there was no cause found, the line or line section recloser will remain non-automatic until the Red Flag Warning expires or is cancelled.

**6.0 SUPPORT ORGANIZATIONS**

**6.1 Emergency Response**

6.1.1 The Emergency Response group provides Fire Management Representatives to serve as liaisons to local, county, state, and federal, fire agencies on a 24/7 basis.

The Fire Management team also assists Grid Operations by providing timely and useful information to employees working in Fire Threat Areas, especially during Red Flag Warnings and peak fire conditions. Additionally, certain Transmission and Distribution department personnel have been identified and trained to act as Fire Watchers to supplement the Fire Management Representatives to assure coverage should multiple fires occur simultaneously within the service territory.

6.1.2 During a Red Flag Warning, certain T&D personnel shall display the *Red Flag Fire Patrol* magnetic vehicle signs. When SCE receives notice that a Red Flag Warning has been issued, all participating area personnel are to:

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED <i>B. C.</i>	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 5

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

- Display the "Red Flag Fire Patrol" magnetic signs on designated vehicles.
- Suspend all non-essential work within known fire hazard areas.
  - If work must be continued or performed within fire hazard areas, exercise additional fire awareness during the work process and keep adequate firefighting equipment readily available. (e.g., backpack pumps, shovels, and fire extinguishers, etc.)
- Be extra alert for fires, or the possibility of a fire, while traversing fire hazard areas.
- Report all fires, or possible fires, to the appropriate Switching Center or GMC without intentional delay. Accuracy in reporting, particularly of *location* and *fuel source* information, is essential.

**6.2 Transmission and Distribution**

6.2.1 Engineering and Construction

Overhead electric and communication lines and structures comprising SCE's bulk-electric system are engineered and constructed to meet or surpass the requirements set forth in the CPUC's GO 95. Where necessary and appropriate, based either on a predictive model or study, material strengths may be increased to exceed GO 95 minimum requirements.

6.2.2 Design and Construction

Overhead electric and communication lines and structures comprising SCE's subtransmission and distribution system are designed to meet or surpass the requirements set forth in the CPUC's GO 95. Where necessary and appropriate, based either on a predictive model or study, material strengths of structures may be increased to exceed GO 95 minimum requirements.

A supplemental design criterion is applied to overhead lines throughout the service territory (including fire threat areas) known to experience high winds. This criterion is contained in T&D's Pole Loading Manual. T&D's design and construction manuals also include standards for Avian Safe construction; and encompass special Heavy Loading Areas above 5,000 ft. elevations in support of short and long term efforts to prevent power-line ignitions and in support of system reliability.

- In conformance with D.14-05-020, Attachment 1 is included to identify areas in SCE's service territory where "3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high fire-threat area" utilizing a minimum probability of 3% over a 50-year period (1 occasion in 1,642 years).

<b>GP-5</b>	<b>Fire Prevention Plan</b>	EFFECTIVE DATE 3-31-2017
PAGE 6	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED <i>B. E.</i>

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

Further, where hot work (arc welding/cadwelding, burning, grinding, brazing, thawing pipes, etc.) is performed, each site develops a site-specific Hot Work Plan. The Hot Work Plan identifies hazards and control measures associated with Hot Work Activities. The plan is maintained at each site and made available for employees to review at any time. (See Attachments 2, 3 and 4)

**6.2.3 Inspection and Maintenance**

Inspection and maintenance programs help ensure conformance with applicable regulatory requirements. Scheduled patrols of transmission, distribution, and communication lines (and structures) located in high fire areas "Are performed annually". Supplemental patrols are also performed as-needed, typically following circuit interruptions, storms, or in advance of approaching fires. Detailed inspections of overhead distribution and communication lines located in high fire areas are performed on a five-year cycle. In-service wood poles are inspected in accordance with GO 165 requirements and T&D standards.

The Distribution Inspection and Maintenance Program, Transmission Inspection and Maintenance Program, and Edison Carrier Solutions (ESC) Inspection and Maintenance Program meet or exceed the requirements set forth in General Order 95, General Order 128, and General Order 165. (GO 166 does not include inspection/maintenance requirements.)

**6.2.4 Vegetation Management**

The Vegetation Management organization oversees the inspection, pruning, and removal of vegetation adjacent to T&D overhead power-lines. T&D Vegetation Management staff meets and accompanies local, county, and/or state fire agency personnel in the performance of supplemental patrols of overhead power-lines each year before the high-fire season. This activity is known as "Operation Santa Ana."

SCE's "summer readiness" program includes the performance of supplemental vegetation inspections before June 1, within and outside of high fire areas, to identify trees for pruning or removal based on proximity to transmission lines, visible health, and expected growth (or decline) due to known or anticipated environmental conditions, such as drought.

In response to CPUC Resolution ESRB-4, supplemental patrols and inspections of vegetation within SCE's High Fire Areas are performed quarterly to identify and remove dead or declining trees affected by drought conditions.

**6.2.5 Pole Assessment and Remediation**

Utilizing proprietary wind load design maps, T&D's Pole Loading Program (PLP) is focused on performing pole load calculations on subtransmission and distribution poles. Subsequently, poles requiring remediation are prioritized, and repaired or replaced. Inspections and resulting work are performed throughout the SCE service

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED <i>B. C.</i>	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 7

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

territory, with an initial focus on high fire areas. 'PLP' is part of SCE's ongoing investment in facility maintenance to promote public safety and system reliability.

**6.3 Transportation Services**

Aircraft Operations assists in the patrolling of transmission and distribution lines. Air Operations also provides aerial surveillance as-necessary following fire and weather related storms and as conditions allow, assist in the transport of personnel and material to remote locations.

**7.0 ASSOCIATED SPECIFICATIONS, STANDARDS, and GUIDES**

**7.1 Transmission Engineering**

- Design Specification D 2005-198, 220kV/ 500 kV Transmission Lines
- Transmission Planning Criteria and Guidelines (TPG)

**7.2 T&D Design / Construction / Maintenance**

- Transmission Design and Right-of-Way Manual (TDR)
- Transmission Operations and Maintenance Manual (TOM)
- Transmission Overhead Construction Standards (TOH)
- Transmission Inspection and Maintenance Program (TIMP)
- ECS Inspection and Maintenance Program
- Distribution Design Standards (DDS)
- Distribution Operations and Maintenance Manual (DOM)
- Distribution Overhead Construction Standards (DOH)
- Distribution Inspection and Maintenance Program (DIMP)

**7.3 Grid Control Center**

- System Operating Bulletin 0014 – Authority and Obligation of Grid Control Center
- System Operating Bulletin 0008 – Initial Event Notifications
- System Operating Bulletin 0800 – Major Disaster Notification Process
- System Operating Bulletin 0322 – Operation of Distribution Voltage Lines Traversing Fire Hazard Areas

**7.4 Vegetation Management**

- Vegetation Management Operations Manual (VMOM)

**7.5 Air Operations**

- OS-TSD-AO-PL-005 – Power Line Patrols
- OS-TSD-AO-PL-008 – Helicopter External Load Operations

**7.6 Safety**

- SCE-CHS-CS-PG-5 – Fire Prevention Plan
- EHS-CS-PG-007 – Hot Work Program

**7.7 Industry**

- CAL-FIRE, Power Line and Fire Prevention Guide (2008)

<b>GP-5</b>	<b>Fire Prevention Plan</b>	EFFECTIVE DATE 3-31-2017
PAGE 8	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED <i>B. e.</i>



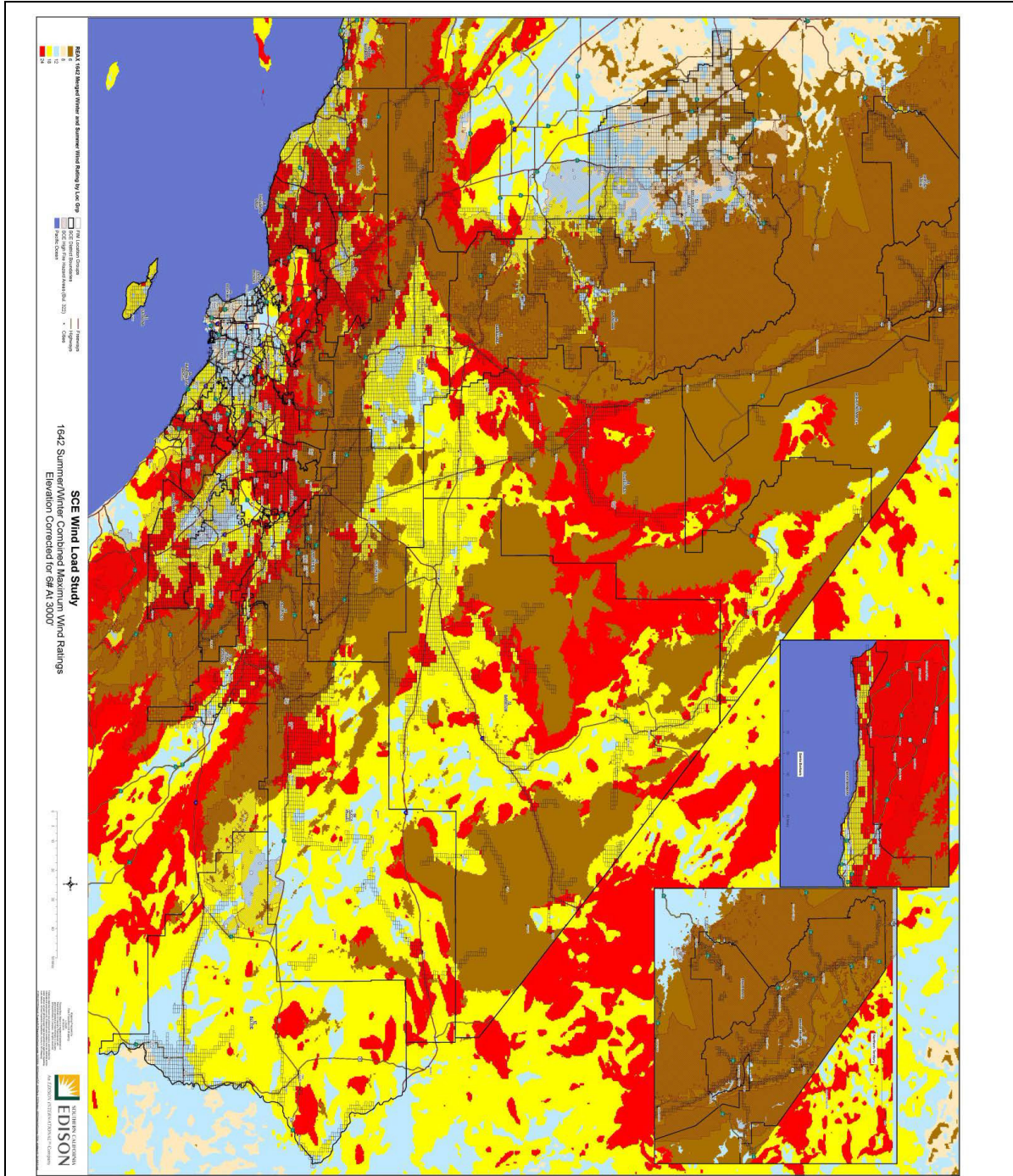
**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

- CPUC General Orders 95, 128, 165 and 166

**ATTACHMENT 1: SCE Territory Extreme Wind Maps**

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED <i>B. C.</i>	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 9

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**



**ATTACHMENT 2: Safety Bulletin (July 2012)**

GP-5	Fire Prevention Plan	EFFECTIVE DATE 3-31-2017
PAGE 10	Vegetation Management Operations Manual ▶ SCE Internal ◀	APPROVED <i>B. e.</i>

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

# ENVIRONMENT

## Wildfire Season Safety Tips

*When a wildfire is on the loose, SCE crews may be called to duty.*

**E**veryone who lives in Southern California is familiar with wildfires. In recent years, we have seen hundreds and thousands of acres scorched by wind-driven flames. Wildfires not only threaten homes and other structures, they can also potentially cause serious damage to Southern California Edison's infrastructure.

Wildfires have multiple triggers. Some are deliberately set, but many occur naturally due to changes in the climate. For example, on June 1, 2012, the National Interagency Fire Center's Predictive Services (NIFC) issued a National Wildland Significant Fire Potential Outlook report. The report indicated that "severe to extreme drought conditions worsened across much of the Great Basin and Southwest, and drought continues to dominate the southwestern quarter of the country." This has created areas of below-normal fuel moisture conditions across New Mexico, spreading west through California and north to southern Oregon, Idaho and Wyoming. The report concludes that during July through September above-normal significant fire potential will develop over the mountains and foothills of southern and central California as well as the inland valleys.

**Hot Work Safe Practices**

Since our climate is dry, employees should be aware of potential fire risks in their work area. Prior to starting a job, ask yourself:

- Is there flammable material near where I am working?
- If there is a fire, can I put it out?
- Should I call for a second person to help?
- What if this gets out of my control?

A site Hot Work Plan identifies approved site work locations and designated areas where hot work activities can be performed safely. If hot work is necessary outside a designated area, a Hot Work Authorization (Hot Work Permit) must be issued. This

work includes but is not limited to tasks involving: welding/cad welding, oxy-fuel gas welding, oxygen and arc cutting, open flame soldering, brazing, thawing pipes, grinding and burning. Before initiating hot work, ensure precautions are in place, for instance, make sure an appropriate fire extinguisher is readily available and that a fire-watch is set up.

There are other activities our crews perform that do not require formal Hot Work Authorization but still pose a fire danger. Even though making up a hot secondary circuit, closing a fuse into a faulted line or even parking your truck in tall weeds is not considered hot work, it's good practice to make sure the area is safe and clear of combustible materials prior to starting a job. For instance, grading roads can cause sparks that could ignite a fire. Certain work requires a permit issued by the United States Forest Service (USFS) while working within their borders.

**On-Scene Fire Safety Practices**

Although at SCE we work primarily with electricity, our crews play an integral part when it comes to addressing the effects of wildfires. In the past, SCE crews have responded to several local wildfires to assist with restoration. Responding to wildfires might not be an everyday scenario for SCE crews, but there are special points to consider when working in fire zones:

- Ensure that you are authorized by the appropriate fire agency to enter an area
- Be alert. Keep calm. Think clearly. Act decisively. continued on page 11



**The aftermath of a wildfire poses dangerous hazards, such as damaged structures and poles like the one shown above.**

4 SAFETY FOCUS

JULY 2012

**ATTACHMENT 3: EH&S Bulletin - Hot Work Program ( May 2012)**

EFFECTIVE DATE 3-31-2017	Fire Prevention Plan	GP-5
APPROVED <i>B. C.</i>	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 11

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**

HOT WORK PROGRAM

## EH&S Site Team Compliance Program Talking Points

**Background and General Information**  
The Hot Work Program (EHS-CS-PG-007) is designed to help prevent fire or explosions from occurring during Hot Work Activities that involve arc welding/cadwelding, burning, grinding, brazing, thawing pipes, etc. The Hot Work Program does not apply to high-voltage electrical work, which is regulated under the High-Voltage Electrical Safety Orders.

Each site, where hot work is performed, must develop a site-specific Hot Work Plan. The Hot Work Plan identifies hazards and control measures associated with Hot Work Activities. The plan must be maintained at each site and made available for employees to review at any time. For an unstaffed location, the site Hot Work Plan will be maintained at the staffed location responsible for that site.

**Site-Specific Responsibility**  
Ensure that a site-specific Hot Work Plan is developed, implemented, maintained, and has the following elements:

- 1. Hot Work Activities**
  - A site Hot Work Plan shall identify work activities that are capable of initiating a fire or explosion at the site. Activities may include: *(Revision)*
    - Arc Welding/Cadwelding
    - Oxygen & Arc Cutting
    - Brazing
    - Grinding
    - Oxy-fuel gas welding
    - Open Flame Soldering
    - Thawing Pipes
    - Burning
- 2. Approved Locations for Hot Work Activity**
  - A site Hot Work Plan shall identify approved site work locations and designated areas that are or have been made fire-safe for Hot Work Activities. A written Hot Work Authorization Form and Fire Watch are NOT required for such locations.
  - Non-designated Permit-Required Areas are locations where Hot Work Activities are performed outside of designated areas. These areas require a Fire Watch and the completion of a Hot Work Authorization Form to ensure fire safety. *(Revision)*
  - Nonpermissible Areas (e.g. areas not authorized by the Site Manager or Employee in Charge, locations in the presence of explosive atmosphere, etc.) are locations in which Hot Work shall not be permitted. *(Revision)*
- 3. Hot Work Authorization (Hot Work Permit) Process**
  - Periodically review and verify the accuracy of the Hot Work Plan to ensure the contacts are current and that the appropriate individuals or job families are listed as authorized to approve Hot Work in a non-designated area.
  - Ensure all elements of the Hot Work job are in compliance. This means there is no debris or combustible material (e.g. wood, cardboard, paper, rags, etc.) within 35 ft. of the designated area. For Hot Work performed outside of the designated area, ensure the authorization process has been followed and that all employees are properly completing Hot Work Authorization Forms (Attachment A within the site-specific plan). *(Form Revised)*

**Note: Begin using the revised authorization forms immediately.**
- 4. Housekeeping**
  - A site Hot Work Plan shall identify housekeeping procedures used in the designated Hot Work Areas to control the accumulation of flammable combustible materials.
- 5. Training**
  - Ensure that the appropriate information and training for the Hot Work Plan is provided. Per TDBU policy, employees who have not received Hot Work Compliance Training shall not perform Hot Work activities.
  - The site Hot Work Plan shall identify Hot Work Plan training for site personnel performing Hot Work Tasks, serving as a Fire Watch, or issuing Hot Work Authorizations.
- 6. Recordkeeping**
  - Ensure proper recordkeeping of the Hot Work Authorization Forms. All forms must be placed in the "Hot Work" folder (or the folder must contain directions to where the forms are maintained) within the facility's EH&S compliance files and retained on site for one year. Verify that employees who are listed on the forms as the Employee in Charge, Hot Work Operator, and Fire Watch have received Hot Work Compliance Training.
- 7. Working with Contractors**
  - Before starting a job, the SCE Representative or designated Point of Contact shall discuss the planned project completely, identify approved site work locations, review the site-specific emergency procedures with the contractor, and ensure the work procedures do not conflict with the objectives of the SCE Hot Work Program. *(Revision)*

The program is available in its entirety on the Environment, Health and Safety page of the Edison Portal. If any questions arise concerning Hot Work Activity or there are additional Hot Work areas you would like to designate at your facility, please contact your TDBU Safety Specialist for assistance.

*Updated May 2012*

**ATTACHMENT 4: Hot Work Permit**

<b>GP-5</b>	<b>Fire Prevention Plan</b>	EFFECTIVE DATE 3-31-2017
PAGE 12	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED <i>B. e.</i>

**Attachment 1: Power Delivery Policy Maintenance Team Fire Prevention Plan (Continued)**



## HOT WORK PERMIT

BEFORE INITIATING HOT WORK, ENSURE PRECAUTIONS ARE IN PLACE!  
 MAKE SURE AN APPROPRIATE FIRE EXTINGUISHER IS READILY AVAILABLE!

This Hot Work Permit is required for any activities that are capable of initiating a fire or explosion. Activities may include: Arc Welding/Cadwelding, Oxy-fuel gas welding, Burning, Oxygen and Arc cutting, Grinding, Open flame soldering, Brazing, Thawing pipes, Torch applied roofing, Thermal spraying, etc.

INSTRUCTIONS	Precautions Checklist
Verify precautions listed at right (or do not proceed with the work).	<input type="checkbox"/> Available sprinkler, hose streams, and extinguishers are in service/operable. <input type="checkbox"/> Hot work equipment in good repair. <input type="checkbox"/> Floors swept clean. <input type="checkbox"/> Fire-resistant tarpaulins suspended beneath work. <input type="checkbox"/> Construction is noncombustible and without combustible covering or insulation. <input type="checkbox"/> Combustibles on other side of walls moved away. <input type="checkbox"/> Enclosed equipment cleaned of all combustibles. <input type="checkbox"/> Containers purged of flammable liquids/vapors. <input type="checkbox"/> Fire watch is trained in use of this equipment and in sounding alarm. <input type="checkbox"/> Fire watch may be required for adjoining areas, above, and below. <input type="checkbox"/> Area protected with smoke or heat detection.
DATE:	
LOCATION:	
WORK TO BE DONE:	
The employee performing hot work in non-designated hot work areas must obtain the approval from the Employee in Charge prior to performing hot work.	
NAME OF PERSON DOING HOT WORK:	
I verify the above location has been examined, the precautions checked on the Precautions Checklist have been taken to prevent fire, and permission is authorized for work.	
SIGNED:	Fire watch required: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date/Time	Permit Expires: Date: _____ Time: _____ AM/PM

EFFECTIVE DATE 3-31-2017	<b>Fire Prevention Plan</b>	<b>GP-5</b>
APPROVED <i>B. C.</i>	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 13

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## GP-6: Environmental Conditions: Sensitive Habitats SCE Operations

### 1.0 Purpose

The purpose of this section is to identify the practices required while working in the proximity of nesting birds or when working in sensitive habitats where rare, threatened, endangered, or otherwise protected species may be found.

### 2.0 Policy Statements

Southern California Edison's (SCE) corporate policies for environmental and avian protection on or near power lines should be followed (see [Reference 3.3](#)).

### 3.0 References

- 3.1 SCE Corporate Environmental Policy
- 3.2 Endangered Species Alert Program (ESAP) Manual
- 3.3 Environmental Policies and Procedures (EN) Manual, EN-5: Avian Protection On or Near Power Lines
- 3.4 SCE Avian Protection Plan

### 4.0 Operations

Many state and federal laws protecting species and their habitat govern vegetation management activities within SCE's service territory. In order to ensure Company compliance with laws and regulations protecting these species, it is necessary to have procedures in place that will allow SCE to determine where impacts are most likely to occur, what additional measures may need to be implemented to achieve compliance, if mitigation of impacts is needed, and to undertake other activities to facilitate protection of these legally protected species on or near SCE power lines, substations, and other facilities.

All SCE line clearing personnel and contractor supervisors should receive annual training on compliance with the conditions outlined in this chapter. SCE's Corporate Environmental Health and Safety (CEHS) Department, Natural and Cultural Resources (NCR) group personnel will provide training as requested.

#### 4.1 Nesting Birds

Nests of most all bird species in California are protected under the California Department of Fish and Wildlife (CDFW) Code and the federal Migratory Bird Treaty Act (MBTA). Rock pigeon, European starling, and English house sparrow are a few of the species not protected by state or federal law. Active nests (nests with eggs or young in the nest) of protected species must be avoided. Nests of eagles and endangered species are protected year round under additional laws and regulations, and impacts to these nests must be avoided at all times of the year.

Vegetation management contract tree crews should be particularly careful during the bird nesting season. Nesting season in Southern California generally extends from February 1 through August 31. The nesting season varies according to species, local weather conditions, and elevation. Removing inactive nests is permitted under SCE's United States Fish and Wildlife Service (USFWS) permit. The permit should be carried at all times to demonstrate compliance with MBTA.

EFFECTIVE DATE 6-1-2013	<b>Environmental Conditions: Sensitive Habitats SCE Operations</b>	<b>GP-6</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

Contract field crews should inspect trees to be trimmed for active bird nests prior to any trimming activity. If an active nest is discovered during the course of trimming activities, work on that tree or at that site should be suspended until after the birds have fledged and the nest is no longer active. If the tree is an imminent threat to Public Health and Safety, contact a biologist from the CEHS NCR group immediately. The biologist will contact the appropriate resource agencies for approval to remove the nest and/or eggs and young, and make arrangements for a permitted wildlife rehabilitator to take possession of eggs or young.

**4.2 Sensitive Habitats**

SCE's CEHS NCR biologists should be contacted and, if necessary, the appropriate permits obtained, prior to vegetation management crews entering and/or conducting trimming activities within sensitive habitats. As used here, "sensitive habitats" include "natural areas," and other areas where protected, rare, threatened, or endangered species may occur. The ESAP Manual should be consulted as an initial reference for where these areas may be found within the SCE service territory. Sensitive habitats may include lakes, riparian (streamside) areas such as the Prado Basin; wildlife refuges; national forests, monuments, and parks; other public lands; or any habitats containing species protected under the federal and/or state Endangered Species Act. Certain areas or habitats (for example, elderberry bushes in the San Joaquin Valley below 3,000 feet elevation) have a high potential for endangered species occurrence. These areas should be avoided until guidance can be obtained from NCR biologists. Operations within several of the sensitive habitats should only occur outside of nesting season to avoid impacts to sensitive species.

If a state or federally listed threatened or endangered species is involved, then SCE and the appropriate land management agency may also need to consult with CDFW and/or USFWS regarding the potential impacts to the species from the vegetation management activity. This consultation can take place concurrently with the permit process, but can, in some cases result in additional delays of 90 to 145 days if a formal response from CDFW or USFWS is needed.

If the vegetation management is to occur on state or federal lands, access to these lands requires coordinating with the appropriate land management agency, and often requires additional permits and/or authorizations. Real Properties Government Lands will coordinate with the NCR group to obtain the necessary permits or authorizations. An additional 30 to 90 days lead time in planning projects on these lands is needed in order to obtain these state and/or federal permits or authorizations. These government agencies may include: USFWS, U.S. Army Corps of Engineers, U.S. Bureau of Land Management, US Forest Service, State Lands Commission, CDFW, and/or local counties.

**4.3 CEHS Biological Resource Contact Information**


The Principal Manager of the NCR group can provide the current contact information for the CEHS biologist assigned to vegetation management projects. In addition, CEHS biologists are available through the SCE telephone operator at all times.

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GP-6</b>	<b>Environmental Conditions: Sensitive Habitats SCE Operations</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 



**GP-7: General Operation and Maintenance Plan on Public Lands**

**1.0 Purpose**

This procedure describes Southern California Edison's (SCE) required activities to operate and maintain safe and reliable electric and communication facilities throughout SCE's service territory. It also identifies SCE's operation and maintenance activities that are covered under Public Agency's (Agency) authorization (Right of Way Authorization of Easement) for SCE agency-specific resource measures.

**2.0 Policy Statements**

On an annual basis, SCE's Real Properties Department, Government Land Section will contact the Agency to schedule a coordination meeting to communicate to the agency all known SCE activities, such as inspections, grading and vegetation management and anticipate repair and maintenance work to be conducted within the right-of way area for the upcoming year.

**3.0 References**

N/A

**4.0 Operations**

Regular tree pruning must be performed to be in compliance with existing state and federal laws, rules, and regulations. Trees, limbs and their branches can contact energized lines which are a potential cause of power outages, and a possible ignition source for fires. SCE Vegetation Management Operations must prune vegetation to meet the minimum clearances for transmission and distribution lines as established by internal procedures. SCE must also determine hazard trees that extend out from the edge of the ROW. The width of this zone is determined by terrain, tree height, and sway of the conductors. Any tree that can fall and hit the line is a potential hazard. Hazard trees, as defined by PRC 4293, will be felled or topped to avoid outages and to reduce fire hazards.

**5.0 Maintenance**

N/A

**6.0 Attachments**

Entire document, or portions of this document, to be attached at final approval.

EFFECTIVE DATE 6-1-2013	<b>General Operation and Maintenance Plan on Public Lands</b>	<b>GP-7</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

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**GP-8: Southern California Edison Corporate Emergency Response Plan**

**1.0 Purpose**

The Corporate Emergency Response Plan (CERP) and associated documentation (procedures, policies and other supporting documents) is to outline a systematic and organized approach to prepare for and respond to, emergency events causing power outages or other disruptions.

**2.0 Policy Statements**

The Corporate Emergency Response Plan (CERP) is part of Southern California Edison's (SCE) effort to respond to a range of crises and is in line with SCE principles and the protocols of Incident Command System (ICS) as it applies to their response.

**3.0 References**

N/A

**4.0 Operations**

SCE's Vegetation Management Department will prepare for and respond to emergency events as one team using common protocols, terminology, and organization that integrate with the National Incident Management System when set in force for an actual event. Vegetation Management Operations will participate under SCE's Corporate Emergency Storm Response when activated, and will follow guidelines as outlined under the SCE Corporate Emergency Response Plan.

**5.0 Maintenance**

N/A

**6.0 Attachments**

Entire document, or portions of this document, to be attached at final approval.

EFFECTIVE DATE 6-1-2013	Southern California Edison Corporate Emergency Response Plan	GP-8
APPROVED 	Vegetation Management Operations Manual ► SCE Internal ◀	PAGE 1

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## GP-9: Summer Readiness

### 1.0 Purpose

The Summer Readiness program is an annual effort lead by Transmission Interconnection Planning (TIP) and Field Engineering (FE) to review the status of the electric system for the upcoming summer. As part of this effort, vulnerabilities of the electric system are identified and if mitigation plans are not already in place, they are created prior to the summer months. This program creates visibility for projects that mitigate reliability concerns in order to prevent delays and avoid further degradation to the system.

### 2.0 Policy Statements

Vegetation Management will support the Summer Readiness program by identifying and providing information regarding the status of transmission vegetation line maintenance and inspections, and distribution high fire program activity throughout the annual vegetation maintenance period. These reports will provide risk assessment and status of vegetation maintenance.

### 3.0 References

- 3.1 Summer Readiness Program
- 3.2 Vegetation Management transmission line maintenance tracking
- 3.3 High fire canyon patrols

### 4.0 Operations


Once all information is gathered from multiple stakeholder organizations, TIP and FE inform senior management what risks exist in the system for that particular summer. In addition, this information is reviewed at regional grid team meetings where individuals responsible for certain regions in the Southern California Edison (SCE) electric grid are informed of vulnerabilities in their areas and are prepared for potential issues which may arise during the summer.

### 5.0 Maintenance

N/A

### 6.0 Attachments

N/A

EFFECTIVE DATE 6-1-2013	Summer Readiness	GP-9
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

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**GOVERNMENT  
REGULATIONS**

**GR**



**GR-TOC: Government Regulations**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
GR-1:	California Public Utilities Commission General Order 95, Rules 35 and 37	6-1-2013
GR-2:	California Code of Regulations Electrical Safety Orders (Title 8, Section 2951)	6-1-2013
GR-3:	Responsibilities to Transmission Regulatory Agencies	6-1-2013
GR-4:	Public Resources Codes 4292 and 4293	6-1-2013

**Note:** *These governmental regulations and rules publications are documents used as reference in the development of Southern California Edison's (SCE) Vegetation Management maintenance program.*

EFFECTIVE DATE 6-1-2013	<b>Government Regulations</b>	<b>TOC</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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**GR-1: California Public Utilities Commission General Order 95, Rules 35 and 37**

**1.0 Purpose**

The purpose of the California Public Utilities Commission (CPUC) General Order 95, Rules 35 and 37, is to identify the requirements Southern California Edison (SCE) must conform with to meet the minimum clearances established by the commission and the various exceptions identified under the different cases.

CPUC General Order 95, Rule 35: Tree Trimming outlines the requirements that apply to SCE's Vegetation Management Department in maintaining prescribed clearances from energized overhead electric power lines.

CPUC General Order 95, Rule 37: Tree Trimming outlines the requirements that apply to SCE's Vegetation Management Department in maintaining prescribed clearances from energized overhead electric power lines. The clearances in Rule 37 are those radial clearances of bare line conductor from vegetation in Extreme and Very High Fire Threat Zones in Southern California.

**2.0 Policy Statements**

It is SCE's responsibility to conform to the latest revisions of CPUC General Order 95, Rules 35 and 37: Tree Trimming.

SCE's Vegetation Management Department will initiate a maintenance and inspection (M&I) program that conforms to the requirements of CPUC General Order 95, Rule 35.

SCE's Vegetation Management Department will initiate a maintenance and inspection (M&I) program that conforms to the requirements of CPUC General Order 95, Rule 37.

**3.0 References**

N/A

**4.0 Operations**

SCE will be familiar with and conform to the latest revisions of CPUC General Order 95, Rules 35 and 37: Tree Trimming.

SCE's Vegetation Management Department will oversee an internal inspection and external maintenance program to conform to the requirements of CPUC General Order 95, Rule 35 Tree Trimming operations for the safety, reliability and service demand in order that wires will clear branches and foliage by a reasonable distance as established in Table 1, Case 13 and Appendix E.

SCE's Vegetation Management Department will oversee an internal inspection and external maintenance program to conform to the requirements of CPUC General Order 95, Rule 37 Tree Trimming operations for the safety, reliability and service demand in order that wires will clear branches and foliage by a reasonable distance as established in Table 1, Case 13; and Appendix E. SCE Vegetation Management will initiate operations under SCE's Fire Plan to mitigate the threat of overhead power-line fire ignitions within its service territory.


**5.0 Maintenance**

N/A

**6.0 Attachments**

[Attachment 1: CPUC General Order 95, Rule 35: Tree Trimming \(Page 2\)](#)

[Attachment 2: CPUC General Order 95, Rule 37: Tree Trimming \(Page 4\)](#)

EFFECTIVE DATE 6-1-2013	California Public Utilities Commission General Order 95, Rules 35 and 37	GR-1
APPROVED 	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 1

**Attachment 1: CPUC General Order 95, Rule 35: Tree Trimming**

Where overhead wires pass through trees, safety and reliability of service demand that tree trimming be done in order that the wires may clear branches and foliage by a reasonable distance. The minimum clearances established in Table 1, Case 13 , measured between line conductors and vegetation under normal conditions, should be maintained. (Also see Appendix E for tree trimming guidelines.)

When a utility has actual knowledge, obtained either through normal operating practices or notification to the utility, dead, rotten and diseased trees or portions thereof, that overhang or lean toward and may fall into a span, should be removed.

Communication and electric supply circuits, energized at 750 volts or less, including their service drops, should be kept clear of limbs and foliage, in new construction and when circuits are reconstructed or repaired, whenever practicable. When a utility has actual knowledge, obtained either through normal operating practices or notification to the utility, that any circuit energized at 750 volts or less shows strain or evidences abrasion from tree contact, the condition should be corrected by slacking or rearranging the line, trimming the tree or placing mechanical protection on the conductor(s). For the purpose of this rule, abrasion is defined as damage to the insulation resulting from the friction between the tree and conductor. Scuffing or polishing of the insulating covering is not considered abrasion. Strain on a conductor is present when there is additional tension causing a deflection of the conductor beyond the slack of the span. Contact between limbs and these conductors, in and of itself, does not constitute a violation of the rule.


**Note(s):** *Note: Revise January 13, 2006*

Exceptions:

1. Rule 35 requirements do not apply to conductors, or aerial cable that complies with Rule 57.4-C , energized at less than 60,000 volts, where trimming or removal is not practicable and the conductor is separated from the tree with suitable materials or devices to avoid conductor damage by abrasion and grounding of the circuit through the tree.
2. Rule 35 requirements do not apply where the utility has made a "good faith" effort to obtain permission to trim or remove vegetation but permission was refused or unobtainable. A "good faith" effort should consist of current documentation of a minimum of an attempted personal contact and a written communication, including documentation of mailing or delivery. However, this does not preclude other action or actions from demonstrating "good faith". If permission to trim or remove vegetation is unobtainable and requirements of exception 2 are met, the utility is not compelled to comply with the requirements of exception 1.
3. The Commission recognizes that unusual circumstances beyond the control of the utility may result in nonconformance with the rules. In such cases, the utility may be directed by the Commission to take prompt remedial action to come into conformance, whether or not the nonconformance gives rise to penalties or is alleged to fall within permitted exceptions or phase-in requirements.


**Note(s):** *Revised November 6, 1992 by Resolution No. SU-15, September 20, 1996 by Decision No. 96-09-097 and January 23, 1997 by Decision No. 97-01-044.*

4. Mature trees whose trunks and major limbs are located more than six inches, but less than 18 inches, from primary distribution conductors are exempt from the 18-inch minimum clearance requirement under this rule. The trunks and limbs to which this exemption applies should only be those of sufficient strength and rigidity to prevent the trunk or limb from encroaching upon the six-inch minimum clearance under

<b>GR-1</b>	<b>California Public Utilities Commission General Order 95, Rules 35 and 37</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

**Attachment 1: California Public Utilities Commission General Order 95,  
Rule 35: Tree Trimming (Continued)**

reasonably foreseeable local wind and weather conditions. The utility should bear the risk of determining whether this exemption applies, and the Commission shall have final authority to determine whether the exemption applies in any specific instance, and to order that corrective action be taken in accordance with this rule, if it determines that the exemption does not apply.

EFFECTIVE DATE 6-1-2013	California Public Utilities Commission General Order 95, Rules 35 and 37	GR-1
APPROVED 	Vegetation Management Operations Manual ► SCE Internal ◀	PAGE 3

**Attachment 2: CPUC General Order 95, Rule 37: Tree Trimming**

Table 1: Basic Minimum Allowable Vertical Clearance of Wires above Railroads, Thoroughfares, Ground or Water Surfaces; Also Clearances from Poles, Buildings, Structures or Other Objects (nn) (Letter References Denote Modifications of Minimum Clearances as Referred to in Notes Following This Table)

Wire of Conductor Concerned								
Case No.	Nature of Clearance	A Span Wires (Other than Trolley Span Wires) Overhead Guys and Messengers	B Communications Conductors (including Open Wire, Cables and Service Drops) Supply Service Drops of 0-750 Volts	C Trolley Contact Feeder and Span Wires, 0-5,000 Volts	D Supply Conductors of 0-750 Volts and Supply Cable Treated as in Rule 57.8	E Supply Conductors and Supply Cables, 750-22,500 Volts	F Supply Conductors And Supply Cables, 22.5-300 kV	G Supply Conductors and Supply Cables, 300-550 kV(mm)
14	Radial clearance of bare line conductors from vegetation in Extreme and Very High Fire Threat Zones in Southern California (aaa) (ddd) (hhh)(jjj)					48 inches (bbb) (iii)	48 inches (fff)	120 inches (ggg)
<p>(fff) Clearances in this case shall be increased for conductors operating above 88 72 kV, to the following:            1. Conductors operating between 88 72 kV and a 110 kV shall maintain a 60 72 inch clearance.            2. Conductors operating above 110 kV shall maintain a 120 inch clearance.            (ggg) Shall be increased by 0.40 inch per kV in excess of 500 kV.            (hhh) Extreme and Very High Fire Threat Zones are defined by California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) Fire Threat Map. The FRAP Fire Threat Map is to be used to establish approximate boundaries for purposes of this rule. The boundaries of the map are to be broadly construed, and utilities should use their own expertise and judgment to determine if local conditions require them to adjust the boundaries of the map. Southern California shall be defined as the following: Santa Barbara, Ventura, San Bernardino, Riverside, Los Angeles, Orange, and San Diego Counties.            (iii) May be reduced to 18 inches for conductors operating less than 2.4 kV.            (jjj) Clearances in this case shall not apply to orchards of fruit, nut or citrus trees that are plowed or cultivated. In those areas Case 13 clearances shall apply.</p>								

Note(s): Where overhead wires pass through trees, safety and reliability of service demand that tree trimming be done in order that the wires may clear branches and foliage by a reasonable distance. The minimum clearances established in Table 1, Case 13, measured between line conductors and vegetation under normal conditions, shall be maintained. (Also see Appendix E for tree trimming guidelines.)

**GR-2: California Code of Regulations Electrical Safety Orders (Title 8, Section 2951)**

**1.0 Purpose**

The purpose of the California Code of Regulations Electrical Safety Orders (Title 8, Section 2951) is to outline the line clearing tree trimming safety and worker qualification requirements for tree trimming operations around high-voltage power lines and equipment.

**2.0 Policy Statements**

Southern California Edison (SCE) should be familiar with and understand the requirements of Title 8, Section 2951 and its subchapters.

**3.0 References**

N/A

**4.0 Operations**


SCE should be familiar with the requirements of Title 8, Section 2951 while observing all tree trimming operations around SCE's electrical systems.

**5.0 Maintenance**

N/A

**6.0 Attachments**

[Attachment 1: Line Clearance Operations \(Title 8, Section 2951\) \(Page 2\)](#)

EFFECTIVE DATE 6-1-2013	California Code of Regulations Electrical Safety Orders (Title 8, Section 2951)	GR-2
APPROVED 	Vegetation Management Operations Manual ► SCE Internal ◀	PAGE 1

**Attachment 1: Line Clearance Operations (Title 8, Section 2951)**

California Code of Regulations, Title 8, Section 2951, Line Clearance Operations

**Subchapter 5. Electrical Safety Orders**  
**Group 2. High Voltage Electrical Safety Orders**  
**Article 38. Line Clearance Tree Trimming Operations (Formerly Article 87)**

**§2951. Line Clearance Operations**

- (a) Prior to commencing line clearance tree trimming operations, the employer shall ensure that an inspection of the work locations is made in order to identify potential hazards and a tail gate briefing is conducted to discuss the work procedures to be followed.
- (b) Only qualified line clearance tree trimmers, or trainees under the direct supervision and instruction of qualified line clearance tree trimmers, shall be permitted to perform line clearance tree trimming operations as described in Section 2950. Under no circumstances shall the minimum distance specified in Section 2940.2(b) Table 2940.2, be violated.
- (c) The employee in charge of each independent crew shall coordinate the de-energizing and re-energizing of high-voltage lines with the operator of the high-voltage line(s).
- (d) During all tree trimming operations performed in accordance with the requirements of subsection (b) above, there shall be another qualified line clearance tree trimmer or trainee at each work location to render immediate assistance.

**Note(s):** *A qualified high-voltage electrical worker shall be permitted to be the second employee, provided the employee doing the line clearance tree trimming is a qualified line clearance tree trimmer.*


- (e) Branches contacting energized conductors or equipment shall be removed only by using nonconductive equipment.
- (f) With the exception of emergency restoration procedures, line clearance tree trimming work shall not be performed when adverse weather conditions such as thunderstorms in the immediate vicinity, high winds, snow storms or ice storms, make the work hazardous in spite of the work practices required by this section.

**Note(s):** *A high wind is one which would expose an employee to being blown from an elevated location, or cause an employee or material handling equipment to lose control of the material being handled, or expose the employee to other hazards not controlled by the requirements of this section. Winds exceeding 40 miles per hour, or 30 miles per hour if material handling is involved meet this criteria unless precautions are taken to protect employees from the hazards described herein.*

**Note(s):** *Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.*

HISTORY

1. Amendment filed 12-10-87; operative 1-9-88 (Register 88, No. 1).
2. New subsection (e) and following Note filed 12-12-94; operative 1-11-95 (Register 94, No. 50).
3. New subsection (c) and subsection relettering filed 11-19-97; operative 12-19-97 (Register 97, No. 47).

<b>GR-2</b>	<b>California Code of Regulations Electrical Safety Orders (Title 8, Section 2951)</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 



## GR-3: Responsibilities to Transmission Regulatory Agencies

### 1.0 Purpose

This procedure provides the requirements to conform to Transmission Regulatory agencies.

### 2.0 Policy Statements

It is the responsibility of Southern California Edison's (SCE) Transmission Department to maintain a Transmission Vegetation Management Program (TVMP) to ensure conformance with legal and regulatory requirements as they relate to vegetation management in proximity to high voltage transmission power lines.


### 3.0 References

- 3.1 Master Services Agreement
- 3.2 Contract Specifications
- 3.3 North American Electric Reliability Corporation (NERC) FAC-003
- 3.4 Federal Energy Regulatory Commission (FERC) rules and regulations
- 3.5 Western Electricity Coordinating Council (WECC) rules and regulations
- 3.6 California Independent System Operator (CAISO) rules and regulations
- 3.7 California Public Utilities Commission (CPUC) General Order (G.O.) 95, Rule 35
- 3.8 California Public Resources Code (PRC), Sections 4292 and 4293

### 4.0 Operations

Transmission lines should be scheduled, maintained, and inspected annually for conformance with governmental requirements. A program should be established and maintained to record maintenance activities in accordance with the Transmission Vegetation Management Program.

- 4.1 An annual maintenance schedule should be created by the Vegetation Management Business Analyst and distributed in the fourth quarter of each year to the contractor.
- 4.2 Contract employees will pre-identify and record trimming and removal maintenance needs for each transmission line.
- 4.3 SCE Certified arborists familiar with transmission operations will perform annual inspections on transmission circuits after the contractor has completed maintenance.
- 4.4 All vegetation maintenance records should be maintained under the control of the Vegetation Management organization at the Vegetation Management Data Center.
- 4.5 Vegetation Management will produce a monthly quality assurance report. Among other information, this report details contractor activity and findings reported by Vegetation Management Technical Specialists as part of their grid/circuit inspections.

EFFECTIVE DATE 6-1-2013	<b>Responsibilities to Transmission Regulatory Agencies</b>	<b>GR-3</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

<b>GR-3</b>	<b>Responsibilities to Transmission Regulatory Agencies</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	APPROVED 

**GR-4: Public Resources Codes 4292 and 4293**

**1.0 Purpose**

This procedure provides the requirements to conform to Public Resources Codes 4292 and 4293.

**2.0 Policy Statements**

It is the responsibility of Southern California Edison's (SCE) Vegetation Management Department to conform to the requirements of Public Resources code 4292 and 4293.

**3.0 References**

- 3.1 Latest revision of the Power Line Fire Prevention Field Guide Sections 4292 and 4293
- 3.2 Contract Master Services Agreement
- 3.3 Adherence to Red Flag alert warnings
- 3.4 SCE Vegetation Management Procedures
- 3.5 Any current requests or advisories from the Department of Forestry and Fire Protection Agencies
- 3.6 SCE Fire Prevention Plan

**4.0 Operations**

SCE and Contract Vegetation Management Operations should comply with all requirements and statues of the Power Line Fire Prevention Field Guide.


- 4.1 Perform required maintenance around subject poles as outlined in Section 4292.
- 4.2 Perform required maintenance to trees as outlined in Section 4293.
- 4.3 Perform joint field patrols with fire agencies when requested.
- 4.4 Attend Fire Safe Council meeting with fire agencies when requested.
- 4.5 Initiate and maintain records for vegetation management work and pole clearing activities to conform to the requirements of the Power Line Fire Prevention Field Guide under Sections 4292 and 4293.
- 4.6 Conform to, and understand, SCE's Fire Prevention Plan

**5.0 Maintenance**

N/A

**6.0 Attachments**

N/A

EFFECTIVE DATE 6-1-2013	Public Resources Codes 4292 and 4293	GR-4
APPROVED 	Vegetation Management Operations Manual ▶ SCE Internal ◀	PAGE 1

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**POLE CLEARING  
PROGRAM**

**P  
C**

**PC–TOC: Pole Clearing Program**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
PC–1: Pole Clearing Program		6-1-2013

EFFECTIVE DATE 6-1-2013	Pole Clearing Program	TOC
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## PC-1: Pole Clearing Program

### 1.0 Purpose

The purpose of this program is to comply with California Public Resources Code (PRC), Section 4292, "Power Line Hazard Reduction," during such times and in such areas as are determined to be necessary by the Director of Forestry and Fire Protection, or by the agency which has primary responsibility for fire protection.

### 2.0 Policy Statements

Southern California Edison (SCE) will maintain around and adjacent to any pole or tower which supports non-exempt equipment or hardware a firebreak as defined by Public Resources Code Section 4292.

### 3.0 References

- 3.1 California Public Resources Code, Section 4292, "Power Line Hazard Reduction"
- 3.2 California Department of Forestry and Fire Protection (CALFIRE) Power Line Fire Prevention Field Guide
- 3.3 SCE Purchase Order (Weed Abatement)

### 4.0 Operations

SCE's Vegetation Management Department will contract operations to ensure weed abatement operations are in conformance with PRC 4292.


- 4.1 Vegetation Management will establish a schedule to ensure all districts/work locations have a weed abatement program.
- 4.2 Contract weed abatement operations will complete all maintenance work as requested by the SCE representative.
- 4.3 Vegetation Management Technical Specialists will review a portion of completed work to ensure conformance with PRC 4292.
- 4.4 Contract operations will submit an invoice for payment once the pole maintenance work has been completed.

### 5.0 Maintenance

N/A

### 6.0 Attachments

N/A

EFFECTIVE DATE 6-1-2013	Pole Clearing Program	PC-1
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

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REFERENCE  
MATERIAL

RM


REFERENCE  
MATERIAL

RM

**RM-TOC: Reference Material**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
RM-1:	List of Reference Material	6-1-2013

EFFECTIVE DATE 6-1-2013	Reference Material	TOC
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## RM-1: List of Reference Material

### 1.0 Purpose

This procedure provides a sampling of documents and forms used by Southern California Edison (SCE) and Contract operations to identify, record and review work, or pending work to be performed, or scheduled for Vegetation Maintenance Operations. These documents and forms may be modified or deleted to meet the needs of current Vegetation Management Operations and Practices.

### 2.0 Policy Statements

Vegetation Management Operations has created documents and forms to assist in identifying the contractors vegetation management work performed in the field, and to document exceptions to work or customer refusals. In addition, documents and forms are used for SCE to review the contractor work.

### 3.0 References

- 3.1 Contract Purchase Order
- 3.2 SCE Master Services Agreement
- 3.3 Vegetation Management practices and procedures

### 4.0 Operations


SCE will supply the contractor with the documents and forms needed to perform, and capture all vegetation management work performed under its Contract Purchase Order and Master Services Agreement. These forms may be modified, deleted or created to meet the ongoing services provided for Vegetation Management.

### 5.0 Maintenance

N/A

### 6.0 Attachments

[Attachment 1: List of Reference Material \(Page 2\)](#)

EFFECTIVE DATE 6-1-2013	List of Reference Material	RM-1
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

### Attachment 1: List of Reference Material

The following reference material is used by Southern California Edison's (SCE) Vegetation Management and/or contract operations.

Item	Purpose
Contract Line Clearing Daily Tree Log	Used to document contractors work completion
Tree Trimming Grid/Circuit Review Report	Used by SCE to review contractors work
Tree Trim/Removal Refusal Notice	Form issued to customer when work is refused
Tree Trim/Removal Form	Used by SCE or contractor to document non-routine work
Door Hangers — Various	Used by SCE or contractor for customer notifications
Grid Cover Sheet	Used by contractor to document work progress for grid maintenance
"Look up and Live!" Door Hanger	Used to identify work dates and safety information
"Look up and Live!" Brochure	Safety brochure provided to customers; used for outreach
"Tree Planting, Trimming, and Removal Safety Guidelines"	Located on SCE's Web site
"Right Tree, Right Place" brochure	Information brochure about trees around utility lines
"High Fire Customer Notification Door Hanger(s)"	Specific to high fire areas
"Incomplete Work Status Sheet"	Identifies contractor work that is non-conforming
"Mid-Cycle Exception Report"	Identifies contractor work that may not hold cycle
"Add Sheet"	Form used to add new trees into inventory






TREE  
PROGRAMS

TP

**TP-TOC: Tree Programs**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
TP-1:	Tree Line USA Program	6-1-2013
TP-2:	Awareness Tree Program	6-1-2013

EFFECTIVE DATE 6-1-2013	<b>Tree Programs</b>	<b>TOC</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## TP-1: Tree Line USA Program

### 1.0 Purpose

The Tree Line USA Program was developed to meet the requirements established by the National Arbor Day Foundation to recognize public and private utilities that demonstrate practices which protect and enhance America's urban forests. This program promotes the dual goals of dependable utility service and healthy tree maintenance.

### 2.0 Policy Statements

It is the intent of Southern California Edison (SCE's) Vegetation Management Department to adopt and perform goals, guidelines, and techniques that would meet approval status for the Tree Line USA program.

### 3.0 References

- 3.1 National Arbor Day Foundation Tree Line USA Application
- 3.2 American National Standards Institute (ANSI) A300 Guidelines
- 3.3 A Field Pocket Guide for Qualified Line-Clearance Tree Workers Operations
- 3.4 A Field Pocket Guide for Trenching and Tunneling near Trees

### 4.0 Operations

SCE will attempt to meet the requirements for maintaining qualification as a Tree Line USA utility by meeting the following requirements:

- 4.1 Quality Tree Care
  - Adopt work practices which follow the guidelines established in ANSI A300.
  - Adopt work practices for trenching and tunneling near trees.
- 4.2 Annual Worker Training
  - Document annual training for SCE employees.
  - Designate a Utility Forester or Utility Arborist to ensure training takes place.
- 4.3 Tree Planting and Public Education
  - Work with community tree-planting program sponsors.
  - Produce one or more mailings which include educational information about trees.
  - Sponsor or participate in an annual Arbor Day event.
- 4.4 Submit an annual Tree Line USA Application to the California State Forester by the first day of November of each year.

### 5.0 Maintenance

N/A

EFFECTIVE DATE 6-1-2013	Tree Line USA Program	TP-1
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

**6.0 Attachments**

N/A

<b>TP-1</b>	<b>Tree Line USA Program</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

## TP-2: Awareness Tree Program

### 1.0 Purpose

A tree awareness program has been developed by Southern California Edison (SCE) to provide educational awareness to homeowners about the dangers of trees growing under, over, or next to high voltage power lines.

### 2.0 Policy Statements

SCE will maintain a safety Web site that identifies information about the dangers of trees growing next to high voltage power lines. This Web site will provide information on some proper tree selections near power lines and a phone number to call for additional safety information. This program also will provide customer awareness about tree and power line safety.

### 3.0 References

3.1 SCE Web Site ([www.sce.com](http://www.sce.com))

### 4.0 Operations

Edison's Corporate Communications Department should promote customer safety awareness about trees and power lines on its Web page and through outreach sites.


- 4.1 The SCE Web site should be monitored to ensure that updated and current information on trees and power lines is available to customers.
- 4.2 SCE should promote its electric power lines and "Trees Don't Mix"/"Look Up and Live!" tree brochures wherever possible, including Arbor Day events and at tree locations inspected/trimmed by contract tree crews.
- 4.3 A customer bill stuffer may be inserted in customer billings to promote tree and power line safety awareness.
- 4.4 SCE may promote "Right Tree, Right Place" awareness on select billboard advertising or through other advertisement channels.
- 4.5 SCE may place articles in local newspapers promoting tree and power line awareness.

### 5.0 Maintenance

N/A

### 6.0 Attachments

N/A

EFFECTIVE DATE 6-1-2013	Awareness Tree Program	TP-2
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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**VEGETATION  
MANAGEMENT  
PROCEDURES**

**VM**

**VM-TOC: Vegetation Management Procedures**

**Table of Contents**

<b>Chapter No.</b>	<b>Title</b>	<b>Current Effective Date</b>
VM-1:	Tree/Vegetation-Related Circuit Interruption Cause Codes	6-1-2013
VM-2:	Tree Species Growth Rate Characteristics for Trees on SCE Edison System	6-1-2013
VM-3:	Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property	6-1-2013
VM-4:	USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts	6-1-2013

EFFECTIVE DATE 6-1-2013	<b>Vegetation Management Procedures</b>	<b>TOC</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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## VM-1: Tree/Vegetation-Related Circuit Interruption Cause Codes

### 1.0 Purpose

To provide Southern California Edison (SCE) vegetation management employees with the latest table of circuit interruption cause codes for tree-caused circuit inspection and validation for input into the vegetation management resource center outage report.

### 2.0 Policy Statements

N/A

### 3.0 References

3.1 Attached table of circuit interruption cause codes.

### 4.0 Operations


See [GP-4: Tree-Caused Circuit Interruption Fact-Finding Procedures](#).

### 5.0 Maintenance

N/A


### 6.0 Attachments

[Attachment 1: Circuit Interruption Codes and Explanations \(Page 2\)](#)

EFFECTIVE DATE 6-1-2013	<b>Tree/Vegetation-Related Circuit Interruption Cause Codes</b>	<b>VM-1</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1


## Attachment 1: Circuit Interruption Codes and Explanations

Code	Explanation
100	SCE contractor relayed circuit while trimming
101	SCE contractor relayed circuit while removing tree
102	SCE contractor relayed circuit while removing ivy
103	Other
114	Contract tree trimmer faulted
116	Private tree trimmer faulted
205	Non-Edison contractor relayed while trimming (not normally trimmed by SCE)
211	Non-Edison contractor relayed circuit while trimming
217	Private party relayed circuit while trimming
218	Vegetation faulted pad mount
223	Private party relayed circuit while removing tree
229	Vegetation grown into Line
240	Tree or tree limb/palm frond contact
242	Falling tree or limb
243	Tree cut into line
254	Contacted by adjacent distribution line
259	De-energized for switching
301	Opened for repairs
305	Eucalyptus beetle killed tree
309	Unknown cause killed tree
356	Opened for switching
360	Source substation interrupted
363	Opened - district orders
370	Source line interrupted
380	Fault in adjacent district
414	Distribution pole broken - storm
424	Anchor guy washed out
436	Snow unloading swung limb or tree into equipment
442	Wind blew pole or tower over
450	Wind blew tree into line
451	Wind blew tree limb/palm frond into equipment
452	Wind blew tree into station equipment
464	Rainstorm - no cause found
466	Tree/tree limb in equipment - storm
475	Tree-caused outage - storm
501	Wind blew frond from tree ___ feet away from line
505	Wind blew frond into conductor
507	High winds blew conductor into tree
509	Wind blew branch from tree ___ feet away from line
511	High winds blew branches into phone/CATV caused phases to come together
513	Branch broke/fell from tree ___ feet away from line

<b>VM-1</b>	<b>Tree/Vegetation-Related Circuit Interruption Cause Codes</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

<b>Code</b>	<b>Explanation</b>
515	Wind blew branch into conductor, impaired clearance
517	High winds blew conductor into tree
519	Tree uprooted, normal conditions
535	High winds uprooted a healthy tree (proper clearance maintained)
537	High winds blew tree into phone/CATV causing phases to come together
545	Healthy tree uprooted due to soil erosion
547	Soil erosion, tree fell into phone/CATV causing phases to come together
555	Snow loading, limb broke and fell into line
559	Snow loading on tree adjacent to line, top broke out and fell into line
561	Snow loading on conductors, conductors sagged into tree
565	Lightning hit tree causing it to split and fall into lines
567	Heat caused conductors to sag into tree
601	Customer refused trim, outage occurred prior to resolution of problem
603	Customer refused trim to allow proper clearance, outage occurred prior to resolution
850	Bark Beetle caused - unplanned interruption
860	Bark Beetle caused - planned outage
999	No appropriate code

**Note:** Cause codes may change over time. Use latest department codes.

EFFECTIVE DATE 6-1-2013	<b>Tree/Vegetation-Related Circuit Interruption Cause Codes</b>	<b>VM-1</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 3

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**VM-2: Tree Species Growth Rate Characteristics for Trees on SCE Edison System**

**1.0 Purpose**

To provide an estimated growth rate of tree species located in the SCE territory.

**2.0 Policy Statements**

This list is to be used as a reference and not the actual growth of any tree due to many different growth habits, environmental conditions, soil conditions, tree health and other contributing factors.

**3.0 References**

Current provided growth rate tree species list for SCE territory. List may change or be updated as new trees are identified.

**4.0 Operations**


N/A

**5.0 Maintenance**

N/A

**6.0 Attachments**

[Attachment 1: Tree Species Growth Rate Characteristics for Trees on the SCE System \(Page 2\)](#)

EFFECTIVE DATE 6-1-2013	<b>Tree Species Growth Rate Characteristics for Trees on SCE Edison System</b>	<b>VM-2</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

**Attachment 1: Tree Species Growth Rate Characteristics for Trees on the SCE System**

**Table 1: Tree Species Names and Growth Rates**

Species Name	Growth Rate	Species Name	Growth Rate
Acacia-Blow	Medium	Joshua	Slow
Ailanthus	Fast	Juniper	Slow
Albizzia	Medium	Lemon	Medium
Alder, White	Medium	LiqAmber-Gum	Medium
Almond	Medium	Locust	Fast
Ash	Fast	Magnolia	Slow
Aspen	Slow	Maple	Medium
Athel	Medium	Melaleuca	Medium
Avocado	Medium	Mesquite	Medium
Bamboo	Fast	Mimosa	Slow
Banana	Slow	Monkey Puzzle	Slow
Bay	Slow	Mulberry	Fast
Birch	Slow	Myoporum	Slow
Bird of Paradise	Medium	Oak	Slow
Bottle	Slow	Oleander	Slow
Bottlebrush	Slow	Olive	Medium
Brisbane Box	Medium	Orange	Medium
Buckeye	Slow	Orchid	Medium
Camphor	Medium	Other	Medium
Carob	Medium	Palm	Fast
Carrotwood	Medium	Palo Verde	Slow
Casuarina	Medium	Pear	Medium
Catalpa	Medium	Pecan	Fast
Cedar	Slow	Pepper	Fast
Century Plant	Slow	Persimmon	Medium
Cherry	Medium	Pine	Medium
Chinaberry	Medium	Pistache	Medium
Citrus	Slow	Pistachio	Medium
Coral	Medium	Pittysporum	Medium
Cottonwood	Fast	Plum	Medium
Cow Itch	Slow	Podocarpus	Medium
Crape Myrtle	Slow	Poplar	Fast
Cypress	Slow	Privet	Medium
Deodara	Slow	Redwood	Medium
Dogwood	Slow	Rubber	Medium
Elder, Box	Medium	Salt Cedar	Medium
Elderberry	Medium	Sequoia	Slow
Elm	Fast	Spruce	Medium
Eucalyptus	Fast	Sumac	Medium
Eugenia	Medium	Sycamore	Fast

**Table 1: Tree Species Names and Growth Rates**

Species Name	Growth Rate	Species Name	Growth Rate
Ficus	Medium	Tallow	Medium
Fig	Medium	Tipuana Tipu	Fast
Fir	Slow	Tulip	Medium
Floss, Silk	Medium	Unknown	Unknown
Ginkgo	Slow	Vine	Fast
Golden Rain	Slow	Walnut	Fast
Grevillea	Fast	Willow	Fast
Hackberry	Medium	Yucca	Slow
Jacaranda	Fast	Zelkova	Medium

**Approximate Growth Rate:**  
(S) Slow: 0 to 3 feet annually  
(M) Medium: 3.1 to 6 feet annually  
(F) Fast: More than 6 feet annually

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**VM-3: Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property**

**1.0 Purpose**

N/A

**2.0 Policy Statements**

N/A

**3.0 References**

N/A

**4.0 Operations**

N/A

**5.0 Maintenance**

N/A

**6.0 Attachments**

[Attachment 1: Class 1 and Class 2 Routine Maintenance Activities \(Page 3\)](#)

EFFECTIVE DATE 6-1-2013	Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property	VM-3
APPROVED 	Vegetation Management Operations Manual ► SCE Internal ◀	PAGE 1

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**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities**

**Operation and Maintenance Plan for Southern California Edison  
Easement on U.S. Forest Service Property**

**A. Description of Transmission Facilities**

The existing SCE transmission system, consisting of wood poles, tubular steel poles, and steel lattice towers supporting power lines with voltages ranging from 33 kV to 220 kV, in the Easement area is critical to establishing and maintaining service to SCE customers within SCE's service area. Ongoing operation and maintenance activities are necessary to ensure reliable service, as mandated by the California Public Utilities Commission (CPUC). SCE transmission facilities are under operational control of the California Independent System Operator and are subject to Federal Energy Regulatory Commission jurisdiction.


The transmission system within the Easement area generally consists of overhead facilities and related access roads, as shown on Exhibit A to the Easement. Overhead facilities include conductors (power lines) supported by wood or steel poles or by steel lattice towers. Typically wood poles are installed using direct burial foundations. Steel poles and towers are installed using concrete foundations. Anchors, guy wires, and stub poles are used to resist pole deflection. Stub poles may be wood or steel and sometimes require concrete foundations. Transmission towers and poles support insulators and conductors and a variety of other electrical equipment such as switches, lightning arresters and vibration dampers. Insulators are attached directly to the wood or steel poles or to crossarms mounted on the structures. The insulators on towers are connected to the tower crossarm or bridge.

**B. Description of Operation and Maintenance Activities**

In general, regular operation and maintenance activities of overhead facilities are performed from existing access roads with no surface disturbance. Frequency of maintenance varies in relation to the level of dirt, dust, bird droppings, and so forth, present in a particular geographic area, the level of vandalism of facilities (for example, gunshot insulators), the severity of storms (for example, Santa Ana winds) and other natural disasters (fires, floods, and earthquakes) and accidents. Operation and maintenance activities are broken down into the following categories.

**1. Class 1 – Regular Maintenance Activities**

Regular inspection and maintenance of overhead facilities is crucial for maintaining uniform, adequate, safe and reliable service. Regular inspection and maintenance activities are those that take place at scheduled intervals, are conducted from existing access roads and trails, and do not involve new surface disturbance. With the possible exception of stream crossings during the rainy season, Class 1 activities do not result in new surface disturbances.

EFFECTIVE DATE 6-1-2013	<b>Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property</b>	<b>VM-3</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 3

**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**

**a) Routine Patrols**

Routine patrols generally are conducted from a patrol vehicle traveling on existing access roads or trails. These activities typically involve using light vehicles to inspect for missing or damaged equipment. Patrol personnel visually inspect for broken or gunshot insulators, loose or damaged guy wires, or broken crossarms. Minor repairs, such as replacements for the above facilities, are identified during routine patrols, but usually are completed separate from the patrols. In addition to inspecting towers and poles, the surrounding area is checked for tree clearances, brush and other potential fire hazards, water or wind erosion, and slides or wind-caused dirt or sand piled over tower footings or above chemical treatment lines on poles. Access roads are also checked for water or wind erosion, rocks or slides that may block access, overhanging brush, trees that intrude into the roadway, and grass, weeds or other combustible materials that may cause a fire hazard. Generally, no surface disturbance or off-road activity occurs during routine patrols. During winter and spring months, patrol vehicles may drive through small stream crossings that contain flowing or ponded water. Routine patrols will not disturb meadows associated with stream banks, expose bare soil, or cut plant roots.

**b) Minor Repairs**


Repairs to insulators and other minor repairs are made by personnel physically climbing the pole or tower to make the repair.

**c) Insulator Washing**

In areas with relatively high levels of atmospheric moisture, condensation combining with dust on porcelain insulators can create an electrical discharge known as "arcing," which can result in circuit outages. In the Easement area, insulators may require periodic washing with water to prevent buildup of dust and reduce the possibility of arcing. Washing activities generally take place from a vehicle on an existing access road. For washing insulators on poles or transmission towers, a 6x6 truck, pumper tanker, or remote control washer is used. For any tower, water is discharged for a total of approximately one to five minutes, with the over-spray mostly confined to the area immediately around the tower.

**2. Class 2 – Repairs of Existing Facilities**

Class 2 activities include repairs to existing facilities, such as replacing existing poles and towers and pulling new line. Poles usually are about 200 feet apart, with poles more closely spaced in high wind areas. Towers are generally spaced about 800 to 1,000 feet apart. Road maintenance, tree trimming and brush and weed control are also included as Class 2 activities because there can be some limited disturbance of the ground surface and/or vegetation during these activities.

<b>VM-3</b>	<b>Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property</b>	EFFECTIVE DATE 6-1-2013
PAGE 4	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 



**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**

**a) Pole and Tower Repair and Replacement**

Repair activities are primarily conducted from existing access roads. For repair of crossarms or other pole or tower structures, the operator usually uses a vehicle that remains on the access road. Replacement of poles should not result in ground disturbance and is considered "routine" maintenance. Any non-emergency pole or tower replacements would require prior approval from the US Forest Service, unless previously identified at the annual meeting between SCE and the Forest Service as described in Section D below.


**b) Stringing Conductors and Pulling New Line**

Although stringing conductors or pulling new line typically is accomplished from trucks parked on existing access roads, some pulling site locations may be in previously undisturbed areas. Stringing conductors or pulling new line may result in ground disturbance and would not be considered "routine" maintenance. Any non-emergency stringing of conductors or pulling new line that would result in ground disturbance would require prior approval from the US Forest Service, unless previously identified at the annual meeting between SCE and the Forest Service as described in Section D below. Stringing conductors that would not result in ground disturbance would not require U.S Forest Service approval.

**c) Road Maintenance**

Routine access road maintenance is conducted on an as-needed basis. Road maintenance is accomplished using road graders, bulldozers, loaders and backhoes, and does not exceed the existing road width of 12 to 16 feet from berm to berm. Sloughing of berms may extend somewhat beyond 14 feet. Turning radii may exceed typical road widths. Road maintenance includes maintaining a vegetation-free corridor (to facilitate access and prevent fire) and blading to smooth over washouts, other eroded areas, and washboard surfaces as needed.

Flowing streams are not to be disturbed, but grading does occur within dry washes (with appropriate approvals). Road grading to include, where applicable, cleaning ditches, removing or establishing berms, clearing and making functional drain inlets to culverts and cleaning over-side drains, and in-sloping or out-sloping. Roads damaged by SCE use will be repaired to pre-use levels. Culverts may require inlet cleaning, with some disturbance of surrounding soils. Embankments on the uphill side of access roads generally are not maintained. Fill slopes must be restored and stabilized if washed out. Local material is preferred when available, but imported material is an acceptable alternative to avoid local disturbance of soil. Access road maintenance may include brushing (that is, trimming or removal of shrubs) approximately two feet beyond berms or road's edge when necessary to keep vegetation from intruding into the roadway.

EFFECTIVE DATE 6-1-2013	<b>Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property</b>	<b>VM-3</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 5

**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**


**d) Tree Trimming**

Regular tree trimming must be performed to be in compliance with existing State law and regulations and is crucial for maintaining reliable service, especially during severe weather or disasters. Tree limb and branch contact with charged lines is a potential cause of power outages and a possible ignition source for fires. Tree trimming standards for distances from overhead lines have been set by the CPUC (General Order- 95, Rule 35). For higher voltage lines, the CPUC guidelines are at least a 4-foot minimum radial distance around 66 kV lines, and a 10-foot minimum for 115 kV and 220 kV lines. The minimum distances are required at the time the vegetation is trimmed; that is, trimming must be done before limbs and branches grow to within these distances and will result in greater than the minimum distances to allow for new growth. In addition, the clearances between lines and vegetation must be visible from the ground sufficient for personnel working around lines to keep themselves and their tools away from danger. The CPUC monitors compliance with the clearance standards and takes prompt enforcement action when clearances are not maintained.

Tree trimming is done with power and hand tools, including chainsaws, pole pruners, and hand saws. Debris may be mulched onsite or removed to a permitted disposal location. All use of internal combustion engines will be operated in compliance with federal and state requirements.

**e) Brush and Weed Abatement**

In addition to maintaining vegetation-free access roads and clearances around electrical lines, clearance of brush and weeds around poles and transmission tower pads is necessary for fire protection. A 10-foot radial clearance around non-exempt poles and a 15-foot radial clearance around non-exempt towers are maintained. Brush and weeds typically are hand-cleared with power brush cutters (weed whackers). Herbicides are not used. Debris would be removed to a permitted disposal location or scattered as agreed upon with the Forest Service.

<b>VM-3</b>	<b>Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property</b>	EFFECTIVE DATE 6-1-2013
PAGE 6	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**

**3. Description of Other Routine Activities**

Table 1 below is a description of the Class 1 and 2 routine maintenance activities to be performed within the scope of the Easement area:

Table 1

Activity	Description	Equipment Used	Impact Prevention
Aerial Inspections	Transmission, telecommunications, and distribution line reconnaissance performed to assess the condition of facilities such as, structures, insulators, conductors, access roads and vegetation. These patrols are necessary to ensure continued public safety and system reliability.	Helicopters and fixed wing aircraft.	N/A
Ground Inspections	Ground patrols of transmission; telecommunications and distribution facilities are performed to obtain a close visual assessment of structures (including foundations), insulators, conductors, access roads and drainage systems, and vegetation for safety and reliability purposes. Qualified personnel conduct ground patrols.  Existing roads and trails are utilized for access to towers and poles.	Access to the facilities is accomplished by the use of cars, trucks or by foot.	N/A
Wood Pole Test and Treat	Wood pole testing and treating is a necessary maintenance activity conducted to evaluate the condition of wood structures both above and below ground level. Poles are visually inspected during the first 20 years of service. Poles exceeding 20 years of service are subjected to an intrusive inspection once every 15 years. As a result of these inspections the structure is condition rated and may receive additional maintenance, such as an application of a preservative wrap.  Intrusive inspections require the temporary removal of soil around the base of the pole, usually to a depth of 12 to 18 inches, to check for signs of deterioration  Existing roads and trails are utilized for access to poles.	Access to the facilities is accomplished by the use of cars, trucks or by foot. Tools used in the inspection process include shovels, picks, and hand tools such as augers, hammers hand picks, probes and tape measures.	All soil removed for intrusive inspections, will be reinstalled and compacted at the completion of the testing.
Insulator Washing or Replacement	Washing of dirty insulators. Replacement of defective or broken insulators as needed to maintain circuit reliability.  Existing roads and trails are utilized for access to towers and poles	Insulators are sprayed with water for cleaning off dirt, dust, and so forth. "Live line" tools, chain hoists, various roper and slings and ladders are used to replace insulators on towers and poles.  Tools and material transported to the work location by line truck, utility truck w/winch,	All defective or broken insulators will be removed and the area will be left clean and safe.

**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**

Activity	Description	Equipment Used	Impact Prevention
Crossarm Replacement	Replacement of defective or broken crossarms as needed to maintain circuit reliability.  Existing roads and trails are utilized for access to towers and poles	"Live line" tools, chain hoists, various hand tools, ropes and slings and ladders are used to replace crossarms on towers and poles. Tools and material transported to the work location by line truck, utility truck w/winch, and helicopter or by foot.	All defective or broken crossarms will be removed and the area will be left clean and safe.
Anchor/Guy and/or Incidental Pole or Tower Replacement	Routine anchor/guy and or incidental pole or tower replacements are necessary when the structure or hardware is determined to be incapable of providing the necessary strength requirements maintain public safety and reliability. Damage sufficient to cause replacement could be as a result of weather conditions, animals or birds or vandalism.  Existing roads and trails are utilized for access to pole, tower and anchor locations. Some locations may require the temporary reopening of spur roads to facilitate replacement of a structure	Access to the facilities is accomplished by the use of trucks, helicopter or by foot.	Temporary reopening of roads would be done after consultation with an agreement by the responsible forestry supervisor. All temporary roads would be returned to the original state upon completion of a pole or tower replacement. All pole or tower replacements will be done in accordance with Edison's Endangered Species Alert Program Manual.
Vegetation Management	Vegetation management consists of routine tree trimming to maintain the required clearance from power lines. Clearing (brushing) vegetation from around the base of structures in accordance with California PRC 4293 and the clearing of brush and trees adjacent to trails and access roads to permit adequate access to the facilities.	Boom trucks, chippers, various power and hand tools such as; chain saws, brush cutters and pruners.	Low impact tree trimming will be done in accordance with California PRC 4293 and local forestry requirements. Moderate tree trimming work, which would include large areas of tree trimming, requiring a substantial amount of trimming removal, would be done after consultation with an agreement by the responsible forestry supervisor. All tree trimming will be done in accordance with Edison's Endangered Species Alert Program Manual.
Road Maintenance	Road maintenance consists of those activities necessary to allow access to structures. These activities include grading, maintenance of drainage systems, bridges, culverts, fences, gates and signs. Qualified personnel perform Road maintenance.	Motor graders, bulldozers, backhoes, dump trucks and pickups are used to maintain access roads. Various hand and power tools are used as needed.	All roadwork will be done in accordance with Edison's Endangered Species Alert Program Manual. All road maintenance crews are equipped with fire suppression tools and extinguishers. Any moderate impacts, such as modifying an existing road, by realigning, extending, or increasing the width, would only be done after consultation with an agreement by the Forest.

**Attachment 1: Class 1 and Class 2 Routine Maintenance Activities (Continued)**

**4. Class 3 – Installation of New Facilities**

Installation of new facilities would not be considered “routine” maintenance. Any installation of new facilities in the Easement area would be considered a new project and would require prior approval from the US Forest Service.

**5. Class 4 – Emergency Repairs**


SCE conducts a wide variety of emergency repairs in response to emergency situations such as high winds, storms, wildfires, and other natural disasters (for example, slumps, slides, surface fault ruptures, erosion, major subsidence) and accidents. Such repairs may include replacement of downed poles, transmission towers, or lines or pulling new lines. While Class 1 and 2 activities can be scheduled reasonably well in advance of the activity, emergency repairs may be needed at any time. SCE will notify the Forest Service as soon as feasible of any emergency repairs. The notice will include a description of the work, location of the transmission facilities, and cause of the emergency, if known.

**C. Requirements for Particular Forest Service Land Areas**

The National Forest Supervisor for the Forest listed on the Easement may include additional operational and maintenance requirements or restrictions. Such restrictions or requirements, if any, will be attached to this document as Attachment A.

**D. Annual Meetings**

On an annual basis, SCE will contact the Forest Service to schedule a coordination meeting. The purpose of the annual meeting is for SCE to communicate to the Forest Service all planned and anticipated repair and maintenance work to be conducted within the Easement area within the following year. Discussion at the meeting shall include the implementation of a road use plan, including any Forest Service plans for opening or closing roads and installing gates on roads. Discussion at the annual meeting will also include any proposals by the Forest Service to allow other specialized land uses within the Easement area, provided that such specialized land use will not interfere with transmission facilities operation and maintenance.

EFFECTIVE DATE 6-1-2013	<b>Operation and Maintenance Plan for SCE Easement on USDA Forest Service Property</b>	<b>VM-3</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 9

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**VM-4: USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts**

**1.0 Purpose**

N/A

**2.0 Policy Statements**

N/A

**3.0 References**

N/A

**4.0 Operations**


N/A

**5.0 Maintenance**

N/A

**6.0 Attachments**

[Attachment 1: Vegetation Management Plan for Sierra National Forest \(Page 3\)](#)

EFFECTIVE DATE 6-1-2013	<b>USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts</b>	<b>VM-4</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ► SCE Internal ◀	PAGE 1

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**Attachment 1: Vegetation Management Plan for Sierra National Forest**

SOUTHERN CALIFORNIA EDISON  
OPERATIONS, MAINTENANCE, AND VEGETATION MANAGEMENT PLAN FOR  
DISTRIBUTION POWER LINES MAINTENANCE HIGH SIERRA RANGER DISTRICT  
AND  
BASS LAKE RANGER DISTRICT SIERRA NATIONAL FOREST

February 2006


The United States Department of Agriculture Forest Service (USFS) has issued Special Use Permit PIN3 (Permit) to the Southern California Edison Company (SCE) that authorizes the operation and maintenance of all distribution power lines and facilities on the Sierra National Forest. This Plan establishes procedures and clarifies vegetation management and pole line maintenance activities by SCE and the USFS for the distribution of electricity under 35,000 volts within the High Sierra (HSRD) and Bass Lake (BLRD) Ranger Districts on the Sierra National Forest. The Plan objectives are for the protection and enhancement of National Forest System lands while offering the reliable delivery of electricity to the public.

This Plan builds upon the Permit by providing a clear understanding and consistency in the administration of this right-of-way while promoting the best arboricultural and management practices; and eliminates duplication, conflicting, and unnecessary administration and work practices by all parties. Nothing contained in this Plan shall eliminate or materially alter the provisions and requirements of the Permit in effect.

Whenever SCE is referenced in this Plan it means SCE and/or its subcontractors. SCE is responsible for adherence to the provisions of this Plan, regardless of who implements its provisions.


**Operation and Maintenance**

1. United States Geological Survey (USGS) maps delineating distribution power lines have been provided to the USFS by SCE and shall be reviewed annually for any possible additions, deletions or corrections.
2. The USFS may indicate any known Resource Sensitive Area (RSA) on said maps to ensure such locations receive proper protection and treatment as required. RSA's may include but are not limited to: archaeological, historical, cultural, nest and denning sites, critical habitat areas, vegetation types, etc. SCE must adhere to any special conditions stipulated by the USFS for work within RSA's. Such areas may be identified with flagging in the field by the USFS. A review of RSA areas will be incorporated in an annual project meeting between SCE and USFS.
3. A meeting with SCE and USFS representatives will be held in January each year outlining proposed vegetation management and pole line maintenance work, to review the previous year's operations, and to notify SCE of new policies and/or regulations that may affect their vegetation management and pole line maintenance programs.
4. Regular patrolling, inspecting, and clearing of distribution lines is done concurrently by SCE to remain in compliance with the California Public Resource Code (CPRC). Trees and vegetation to be evaluated will include any that may affect the power lines as illustrated in the CPRC. A copy of the applicable section of the CPRC is attached to this Plan.
5. SCE shall provide 2 business days' notice to the USFS before commencing patrolling, inspecting and clearing. Notification shall be made to: HSRD, Annette Lambert, Assistant District Lands Officer, (559) 855-5355, ext. 3338, or by e-mail to [alambertals.fed.us](mailto:alambertals.fed.us) OR BLRD, Karen Nooney, Assistant District Lands Officer, (559) 877-2218, ext. 3197, or by e-mail to [lcnoonevefs.fed.us](mailto:lcnoonevefs.fed.us). Such notification will include the name of the circuit line(s) and locations to be inspected, along with an approximate time schedule for the work to be performed.

EFFECTIVE DATE 6-1-2013	<b>USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts</b>	<b>VM-4</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 3

**Attachment 1: Vegetation Management Plan for Sierra National Forest (Continued)**


6. Tree pruning methods will follow those standards adopted by the International Society of Arboriculture. At time of pruning, clearance distance from the conductors will be four feet plus an estimated three years growth with finish cuts made to eliminate stubs.
7. All trimmings from live trees and vegetation on cross country line sections will be scattered to a maximum height of 18 inches. No live tree under conductors over 10 inches diameter at ground level will be removed unless topping or crown reduction would seriously affect its future health. Trees 10 inches diameter and smaller will be thinned out when necessary or practical.
8. Brush (identified as any vegetation being less than four inches at DBH) and vegetation around working poles will be scattered or chipped in all areas so as to prevent it from being blown or relocated within the required clearing area. ELDERBERRY (*Sambucus* spp.) IS NOT CONSIDERED A BRUSH SPECIES under this provision. See Provision Number 15 in this Plan for the treatment of Elderberry bushes.
9. The identification of Hazard Trees will follow the guidelines provided by the CPUC attached to this Plan. Hazard trees include dead, decadent or rotten trees, forked trees, trees weakened by decay or disease, trees susceptible to wind-throw, and trees which are leaning toward the conductors or have large branches that may fall on the lines or facilities. Hazard trees will be felled and left as is, just as they would have been if nature had allowed them to fall. The maximum stump height of any tree felled shall be 12 inches measured from the uphill side of the stump. No removal of wood is authorized for any SCE or contractor employee for personal use or gain.
10. Within 100 feet of a campground or structures at Huntington Lake, Camp Sierra, and Dinkey Creek on the HSRD and all campgrounds and Forest Service Administrative Sites on the BLRD, a borax-based sporicide shall be applied within 2 hours of the tree removal of appropriate species. Such applications of any registered pesticides shall be performed in accordance with all applicable regulations, laws, standards and work procedures. Each vehicle applying such pesticide shall carry an MSDS sheet and employees shall be properly trained to abide by all appropriate requirements for handling the product. All applications will be reported to the appropriate Assistant District Lands Officer.
11. Tree pruning cuttings, brush and hazardous non-merchantable trees will normally be felled in place. All cut vegetation will be chipped whenever the right-of-way is within 100 feet of an access road or trail. SCE will pull slash to a chipper where terrain and access allow. No skidding equipment is authorized to pull slash. When trimming and tree removals are more than 100 feet from an access road, and fuel loadings allow, vegetation will be lopped to a maximum height of 18 inches with the branches scattered. To prevent the attraction of Ips spp. (bark borers) green pine limbs will be chipped whenever feasible.
12. Where brush and tree pruning waste (slash) would exceed the maximum fuel loading capacity of the area as determined by the USFS, this slash will normally require piling by SCE for burning. To prevent the attraction of Ips spp. (bark borers) green pine limbs WILL NOT be piled for burning until the limbs dry out.
13. Burning of SCE generated waste piles by USFS personnel may occur subject to additional agreements made between USFS and SCE.
14. To protect the habitat of the Peregrine Falcon, no operations will be allowed within 1/2 mile radius of Sunset Point on the HSRD annually beginning February 15 through August 31. To protect the Spotted Owl nest tree, no operations will be allowed within 1/2 mile radius of the Weissman Mine on the BLRD annually beginning March 1 through August 31.
15. To protect the habitat of the Valley Elderberry Longhorn Beetle (*Democerus californicus dimorphus*), a federally-listed Threatened species, no trimming or removal of Elderberry (*Sambucus* spp.) is authorized when: 1) the shrubs are located at or below 3000 feet elevation; and 2) the diameter of stems at ground level is 1 inch or greater. All proposed trimming of Elderberry shrubs must be presented to the respective District Assistant Lands Officer for consideration. Consultation with the U.S. Fish and Wildlife Service is required to determine whether the USFS can authorize the trimming and/or removal of Elderberry shrubs at or below

<b>VM-4</b>	<b>USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts</b>	EFFECTIVE DATE 6-1-2013
PAGE 4	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 

**Attachment 1: Vegetation Management Plan for Sierra National Forest (Continued)**

3000 feet elevation. Elderberry shrubs above 3000 feet of elevation are outside the range of the Valley Elderberry Longhorn Beetle and may be trimmed or removed under the conditions and procedures specified in this Plan.

16. Any tree that dies which has a powerline connection attached to it will be felled by SCE. A new pole will be set as opposed to reconnecting the line to another tree. All new pole placement actions may require resource specialist reports to be generated and an appropriate level of National Environmental Policy Act (NEPA) analysis.
17. All plans for the development, layout, or construction of additional improvements, as well as revisions of such plans, or reconstruction or alteration of existing improvements that will result in ground disturbance or disturbance to flora and fauna shall be approved in writing by the appropriate District Ranger before commencement of any such work. All hardware, wire and poles that are replaced will be removed from National Forest lands and disposed of properly.
18. Vehicle and equipment use will be limited to existing roads and trails. Removal of existing barriers (posts, rocks, logs, etc.) is prohibited. Wet weather use of unimproved dirt access roads and trails is discouraged. Route access shall be an item for review at the annual meeting.
19. To prevent the spread of Noxious Weeds on National Forest System (NFS) lands, SCE must ensure its vehicles and equipment are free of noxious weeds before entering onto the Forest.
20. When an emergency condition arises where an imminent danger to the power lines exists or has been created, any necessary vegetation management work or pole line work may commence with notification made to the appropriate Assistant District Lands Officer as soon as practical by SCE. In order to protect any unknown resources at emergency work sites, all vehicles are to utilize existing roads only. Driving off road may cause resource damages to protected wildlife, aquatic, or biological habitats or heritage resources; SCE would be held responsible for any such damages arising from emergency repair operations, as determined by the USFS.
21. For work restrictions and fire precautions, the Project Fire Plan For Southern California Edison Company's Field Operations on Sierra National Forest (September 2005 Revision) is incorporated by reference into this Vegetation Management Plan.
22. SCE contact for vegetation management: Mike Jones (559) 685-3282. SCE contact for pole line management: Dave Perkins (559) 841-3131

EFFECTIVE DATE 6-1-2013	<b>USFS/SCE Vegetation Management Maintenance Plan for High Sierra and Bass Lake Ranger Districts</b>	<b>VM-4</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 5


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## GL: Glossary

<b>ANSI A-300 Part 1</b>	ANSI standard regarding tree care operations: tree, shrub, and other woody plant management - standard practices (pruning).
<b>ANSI A-300 Part 7</b>	ANSI standard regarding tree care operations: tree, shrub, and other woody plant management - standard practices (integrated vegetation management - electrical utility rights-of-way).
<b>ANSI A-300 Part 9</b>	ANSI standard for Tree Risk Assessment: tree structure assessment
<b>ANSI Z133</b>	ANSI standard regarding arboriculture operations: safety requirements.
<b>ANSI</b>	American National Standards Institute
<b>CAISO</b>	California Independent System Operator
<b>CALFIRE</b>	California Department of Forestry and Fire Protection
<b>CCM</b>	Central Construction Management - The Central Construction Management group is responsible for project, contract and construction management in capital-system upgrades, expansions and facility additions; management and electrical improvements to the distribution system.
<b>CCR</b>	Code of Regulations (applied at a state, city, or local level)
<b>CDFG</b>	California Department of Fish and Game
<b>CEHS</b>	Corporate Environmental Health and Safety
<b>CERP</b>	Corporate Emergency Response Plan
<b>Compliance</b>	Meeting prescribed standards.
<b>Conformance</b>	Conforming to Regulatory Rules and Standards
<b>Conductor</b>	A wire, either aluminum or copper, used to supply electricity.
<b>Contract Daily Tree Log</b>	A document used to recap Vegetation Management tree work performed by contract tree crews.
<b>Contract Operations</b>	Responsible for performing tree maintenance and removal under a contract Master Services Agreement.
<b>Contract Purchase Order</b>	A document describing the terms and conditions for service performance.
<b>Contractors Incomplete Work Status Report</b>	An SCE document used by contract tree management operations to identify work that could not be completed at time of work to meet regulatory laws and regulations.
<b>Contractors Mid Cycle Exception Report</b>	An SCE document used by contract tree management operations to identify work completed during routine maintenance operations that may not retain conformance to governmental regulations throughout the established 12-month maintenance period.
<b>CPUC</b>	California Public Utilities Commission
<b>CWO</b>	Call Workflow Optimization
<b>Data Center Operations</b>	Responsible for collecting work logs, and for processing invoices for payment and records retention.
<b>Direct Contact</b>	When any part of the body touches or contacts an energized electrical conductor.
<b>Distribution Voltages</b>	Voltages ranging from 2.4 kV to 35 kV.
<b>DOC</b>	Distribution Operations Center


EFFECTIVE DATE 6-1-2013	<b>Glossary</b>	<b>GL</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 1

<b>Door Hanger</b>	A printed door hanger card left at a customer residence to request permission to perform vegetation maintenance, or to leave awareness information.
<b>Electrical Hazard</b>	An electrical hazard exists when a unqualified worker, tool, or any other conductive object is closer than 10 feet from an energized overhead electrical conductor.
<b>ESAP</b>	Endangered Species Alert Program
<b>FE</b>	Field Engineering
<b>GCC</b>	Grid Control Center
<b>General Order 95 (G.O. 95)</b>	A governmental document containing vegetation separation distance from power lines under CPUC G.O. 95, Rule 35& 37.
<b>Grid</b>	An area identified by North, South, East and West boundaries for the purpose of gathering and identifying data for Vegetation Management purposes.
<b>Imminent Threat</b>	Actual knowledge of a vegetation-related threat to power line operations.
<b>Insulated Cable</b>	Conductor with inner and outer layer insulation for use in tree density areas. Currently in evaluation status.
<b>Invoice</b>	A contractors document used to recap field work and validation for submitting a request for payment from completed contractual work.
<b>ISA</b>	International Society of Arboriculture
<b>IVM</b>	Integrated Vegetation Management. To promote sustainable plant communities that is compatible with the intended use of the site.
<b>LE-38</b>	An advisory that identifies non-compliant conditions. Also known as LE-38A and USFS 5100-209.
<b>Line Clearing Manual</b>	Former title of an internal SCE manual used to identify SCE operations and governmental policy and procedures for vegetation management operations. Now titled "Vegetation Management Operations Manual (VMOM)."
<b>NERC</b>	North American Electric Reliability Corporation
<b>N&amp;CR</b>	Natural & Cultural Resources
<b>O&amp;M</b>	Operation and Maintenance
<b>ODRM</b>	Outage Data Reliability Metrics
<b>PWRD</b>	Power Delivery- Power Delivery (PWRD) is responsible for the delivery of electrical energy through SCE's transmission, substation and distribution system.
<b>PRC</b>	Public Resources Code
<b>Primary Conductor</b>	Any conductor with a voltage above 750 volts.
<b>Qualified Utility Arborist</b>	An individual who, through related training and on-the-job experience, is familiar with the equipment and hazards in utility vegetation management and has demonstrated the ability to perform the special techniques involved.
<b>Refusal</b>	In vegetation management operations, term applied when a SCE request to trim/remove trees for governmental compliance is refused by the trees owner.

<b>GL</b>	<b>Glossary</b>	EFFECTIVE DATE 6-1-2013
PAGE 2	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	APPROVED 



<b>Reliability</b>	Term used in vegetation management operations to describe interruption of service from tree-caused circuit interruptions.
<b>Resistograph</b>	Instrument used to detect degree of decay in trees
<b>SCE</b>	Southern California Edison Company
<b>Summer Readiness</b>	Annual effort by TIP and FE to review status of the electric system prior to summer loading.
<b>T&amp;D</b>	Transmission and Distribution business line of Southern California Edison Company.
<b>TCCCI</b>	Tree crew-caused circuit interruption.
<b>TCCI</b>	Tree-caused circuit interruption
<b>TGR</b>	Tree Growth Regulator
<b>TIP</b>	Transmission Interconnection Planning
<b>TLC</b>	Tree Line Contact
<b>TMP</b>	Tree Maintenance Program
<b>TVMP</b>	Transmission Vegetation Management Program
<b>Transmission Voltages</b>	Voltages ranging from 50 kV to 500 kV.
<b>Tree Awareness</b>	Information that provide awareness for tree and power line safety
<b>Tree Species Growth Rate Characteristics List</b>	A list of average tree growth rates on the SCE system to be used as a reference for trees found in SCE's service territory.
<b>UAA</b>	Utility Arborist Association
<b>USFS</b>	United States Department of Agriculture Forest Service
<b>USFWS</b>	United States Fish and Wildlife Services
<b>VMOM</b>	Vegetation Management Operations Manual
<b>WECC</b>	Western Electricity Coordinating Council

EFFECTIVE DATE 6-1-2013	<b>Glossary</b>	<b>GL</b>
APPROVED 	<b>Vegetation Management Operations Manual</b> ▶ SCE Internal ◀	PAGE 3

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**APPENDIX H**  
**SCE VM-3 PROGRAM GUIDE WMP: VM-3 EXPANDED CLEARANCES FOR**  
**LEGACY FACILITIES**

# SCE VM-3 Program Guide

WMP: VM-3 Expanded Clearances  
for Legacy Facilities

April 2021



## Document Information

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## Table of Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background, Goals, and Objectives .....	1
<b>2.0</b>	<b>Roles and Responsibilities .....</b>	<b>2</b>
2.1	General Vegetation Management Team Structure .....	2
2.2	Overview of SCE Areas of Responsibility .....	4
2.3	Communication Protocols and Safety .....	4
2.3.1	Field Notification and/or Clearance Process to Visit an SCE Facility .....	4
2.3.2	Safety .....	4
<b>3.0</b>	<b>Methods .....</b>	<b>5</b>
3.1	Workflow .....	5
3.2	SCE Review and Approval (QA/QC Process) .....	7
3.3	Desktop Review .....	8
3.4	VM-3 Site Inspections .....	8
3.4.1	Field Equipment List .....	8
3.4.2	Standardized Guidelines for Wildfire Mitigation Expanded Clearances .....	9
3.4.3	Clearance Types by Facility Types .....	11
3.4.4	Balancing Resource Constraints .....	15
3.5	Field Implementation Support .....	18
3.5.1	Monitoring .....	18
3.5.2	Best Management Practices/Environmental Requirements .....	18
3.6	Post-Implementation Assessment .....	19
<b>4.0</b>	<b>Site Signoff and Transition Process to Long-Term O&amp;M .....</b>	<b>21</b>

## Figures

Figure 1	Organization Chart of 2021 VM-3 Program Team .....	3
Figure 2	VM-3 Program Workflow .....	7
Figure 3	Expanded Clearance Guidance - High Voltage .....	13
Figure 4	Expanded Clearance Guidance - Low Voltage .....	14
Figure 5	Vertical Clearance Targets .....	15
Figure 6	Horizontal Spacing Targets .....	16

## Tables

Table 1	Fuel Reduction Zone Targets .....	12
---------	-----------------------------------	----

## Appendices

Appendix A	AOR Location Maps .....	1
Appendix B	VM-3 Team Contact List .....	1
Appendix C	Field Notification and Safety Forms .....	1
Appendix D	VM-3 Desktop Review Instructions .....	1
Appendix E	ArcGIS Collector Guide Data Dictionary .....	1

## Document History

Version	Effective Date	Description of Revision	Prepared by Cardno	Reviewed by SCE
Draft 1.0	07/01/20	Initial draft for SCE approval during initial field inspections.	Keven Ann Colgate, Sarah Hoff-Phillips, Crystal West, Tamara Klug	Stephanie Fincher, Marcus Jones (07/17/20)
Draft 2.0	07/22/20	Initial draft with SCE comments and additions. Program overview comments/additions and formatting edits have been accepted.	KA. Colgate	Juli Stewart (7/26/20)
Draft 3.0	7/28/20	Review, address and incorporate all comments from SF, MJ and JS.	KA. Colgate	Stephanie Fincher (7/29/20)
Draft 4.0	7/30/20	Review and address comments from SF; Cardno senior review, tech editing.	KA. Colgate, Malini Roberts, S. Hoff-Phillips, T. Klug	Stephanie Fincher (7/31/20)
Approved	7/31/2020			
Draft 5.0	9/17/2020	Updated QC definitions.	KA. Colgate	Marcus Jones (12/11/2020)
Draft 6.0	12/11/2020	Updated section 3.4.2 Standardized Guidelines for Wildfire Mitigation Expanded Clearances and made minor formatting changes.	Marcus Jones, Stephanie Fincher	Mark Clayton (12/15/2020)
Draft 7.0	3/10/2021	Updated Client Contact; Organization Chart (Figure 1); Section 3.1 Workflow; Section 3.2 SCE Review and Approval (QA/QC Process); Section 3.4.2 Standardized Guidelines for Wildfire Mitigation Expanded Clearances Table 1; and Appendix B	Marcus Jones	Mark Clayton (3/16/2021)
Draft 8.0	4/15/2021	Minor edits throughout; Section 3.5.2 updates	KA. Colgate, Nancy Dorfman	Marcus Jones (4/15/2021)
1.0	4/15//2021	Approved	KA. Colgate, Nancy Dorfman	Marcus Jones (4/15/2021)

1.1	9/20/2021	Updated Figures	N/A	Mark Clayton, Marcus Jones (9/20/2021)
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## Acronyms and Definitions

Asset	SCE facilities and features (e.g., gage, powerhouse, switchyard)
AOR	Area of Responsibility
CalFire	California Department of Forestry and Fire Protection
CPUC	California Public Utilities Commission
Collector	ArcGIS Collector
Contractor VSP	Contractor Vegetation Specialist
ESD	Environmental Services Department
FR	Fire and Arc-Rated
HFRA	High Fire Risk Area
HFTD	High Fire Threat Districts
ISA	International Society of Arboriculture
O&M	Operations & maintenance
PAL	Project Activity Level
PPE	Personal protective equipment
Program Guide	VM-3 Program Guide
QA/QC	Quality assurance/quality control
SB901	Senate Bill 901
SCE	Southern California Edison
SCE T&D	SCE Transmission and Distribution
SCE Program Lead	SCE Vegetation Specialist/Generation Vegetation Manager
Technical Lead	Senior Technical Lead
VM-3 Program	VM-3 Vegetation Management Activity of the WMP: Expanded Clearances for Legacy Facilities
WMP	Wildfire Mitigation Plan

## 1.0 Introduction

The following VM-3 Program Guide (Program Guide) was developed by Southern California Edison (SCE) and their contractors to provide a summary of procedures and methods for the Wildfire Mitigation Plan's (WMP's) Activity VM-3 for completing expanded clearances for wildfire protection at SCE's Generation legacy facilities, generally hydroelectric facilities (hydro facilities, or "assets"). Gas and water utilities on Catalina Island are also included as legacy assets in this program.

This vegetation management program is also referred to as "Expanded Clearance" or "VM-3 Expanded Clearance," and is herein referred to as the VM-3 Vegetation Management Program (VM-3 Program).

In addition to discussing vegetation removal standards and requirements at the relevant assets, this Program Guide also covers communication protocols and roles and responsibilities of the support team, including: field notification/clearances, safety, and SCE review and approval (i.e., quality control/quality assurance [QA/QC]) procedures).

### 1.1 Background, Goals, and Objectives

The California Public Utilities Commission (CPUC) defined High Fire Threat Districts (HFTD) in 2017. HFTD Tier 1 was defined as High Hazard Zone, Tier 2 as Elevated Fire Risk, and Tier 3 as Extreme Fire Risk. These districts were further defined as "High-Fire Risk Areas" (HFRAs) by SCE, with Tier 2 being Elevated and Tier 3 Extreme.

Senate Bill 901 (SB901) requires electrical utilities to file a WMP documenting each utility's activities for inspection programs within HFTDs, wildfire mitigation efforts, including vegetation management activities, system hardening programs, and a variety of other activities as detailed in the regulation. SCE's 2019 WMP did not include a program focused on SCE's Generation organization. Targeted inspections in 2019 through the Enhanced Overhead Inspections effort identified several additional programs that required focused efforts to address some long-standing characteristics of "legacy" facilities, including but not limited to hydroelectric generating stations (powerhouses), substations and switching yards, and associated low-voltage powered assets that are ancillary assets needed to operate hydro facilities.

The VM-3 Program is the only component of the WMP that is discussed further in this document. VM-3 Expanded Clearance sites include Tier 2 and Tier 3 sites within "Elevated" and "Extreme" fire risk areas, respectively. The primary goals and objectives of the VM-3 Program include:

- > Reduce risk of wildfire ignition from SCE assets in HFRAs due to proximity of adjacent vegetation
- > Increase SCE asset resilience to wildfire by creating an appropriate clearance buffer
- > Implement specific fuel reduction treatments in accordance with defined zones and protection standards
- > Maintain and protect natural and cultural resources and SCE structures
- > Follow U.S. Forest Service guidance for fuels management and California Department of Forestry and Fire Protection (CalFire) recommendations for adequate defensible space clearance

Specific commitments made in the WMP for VM-3 include:

- > 2020 target: complete 100 percent of desktop reviews (158<sup>1</sup> sites); complete treatment on 30 percent of sites (48 sites)

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<sup>1</sup> Note, four sites were eliminated as they were found to be duplicates or erroneous after initial goals were quantified.

- > 2021 target: complete treatment on 40 percent of sites (63 sites) and monitor relevant 2020 sites to ensure treatment is effective; and
- > 2022 target: complete treatment on all remaining sites, projected to be 30 percent of sites (47 sites), and assess overall effectiveness of treatments.

The VM-3 Program expands clearances around assets while also balancing potential risks such as erosion, slope destabilization or other environmental concerns caused by vegetation removal. Clearances should also recommend treatments that will not require intensive vegetation management over the long-term. Furthermore, the VM-3 Program aims to establish defensible and resilient assets that can be shifted into routine operations and maintenance (O&M) programs that maintain wildfire preparedness and safety.

## 2.0 Roles and Responsibilities

### 2.1 General Vegetation Management Team Structure

**SCE Generation WMP PM (Generation WMP Lead).** Mark Clayton is the overall Project Manager overseeing all Generation-responsible WMP activities and lead for Generation wildfire inspection efforts.

**SCE Generation Program Manager (SCE Program Lead).** Generation Program Lead and Generation Vegetation Manager, Marcus Jones, will provide technical oversight, review, and approval of various phases of the VM-3 Program workflow, as defined in Section 3.1 (Workflow).

**Senior Technical Lead (Technical Lead).** The Senior Technical Lead, Julianne Stewart (Vermilion Resource Management [Vermilion]), will provide technical oversight, review, and approval of various phases of the VM-3 Program workflow, as defined in Section 3.1 (Workflow).

**Contractor Vegetation Specialist (Contractor VSP).** The Contractor VSPs (i.e., Cardno, Psomas, Vermilion) are hired by SCE to complete phases of the VM-3 Program workflow. Each Contractor VSP is geographically assigned to a specific area of responsibility (AOR). Roles include:

- > Complete desktop reviews
- > Complete VM-3 Program site inspections and enter data for treatment areas (e.g., “pre-treatment inspections”), constraints areas, and hazard trees in the ArcGIS Collector (Collector) application
- > Assist with pre/during/post-treatment support for execution
- > Support environmental review/agency review submittals (as needed)
- > Support reporting and other deliverables (as needed)
- > Serve as general eyes and ears in the field to support Generation Vegetation Management; and
- > Assist in annual O&M vegetation management support (as needed).

Figure 1 summarizes the basic roles and responsibilities for the 2020 VM-3 Program Team. Contact information, including name, title, email address, and phone number(s), are provided, by AOR, in Appendix B.

**Generation Area Manager (Area Manager).** Area Managers are assigned to each Hydro Generation AOR in SCE’s service area. Coordination with the Area Manager and their assigned O&M staff will be essential for access to the VM-3 Program sites and successful completion of each treatment. Work must be coordinated to ensure it does not conflict with other planned activities or operations and to arrange escorts or outages, where required, due to proximity of electrical equipment.

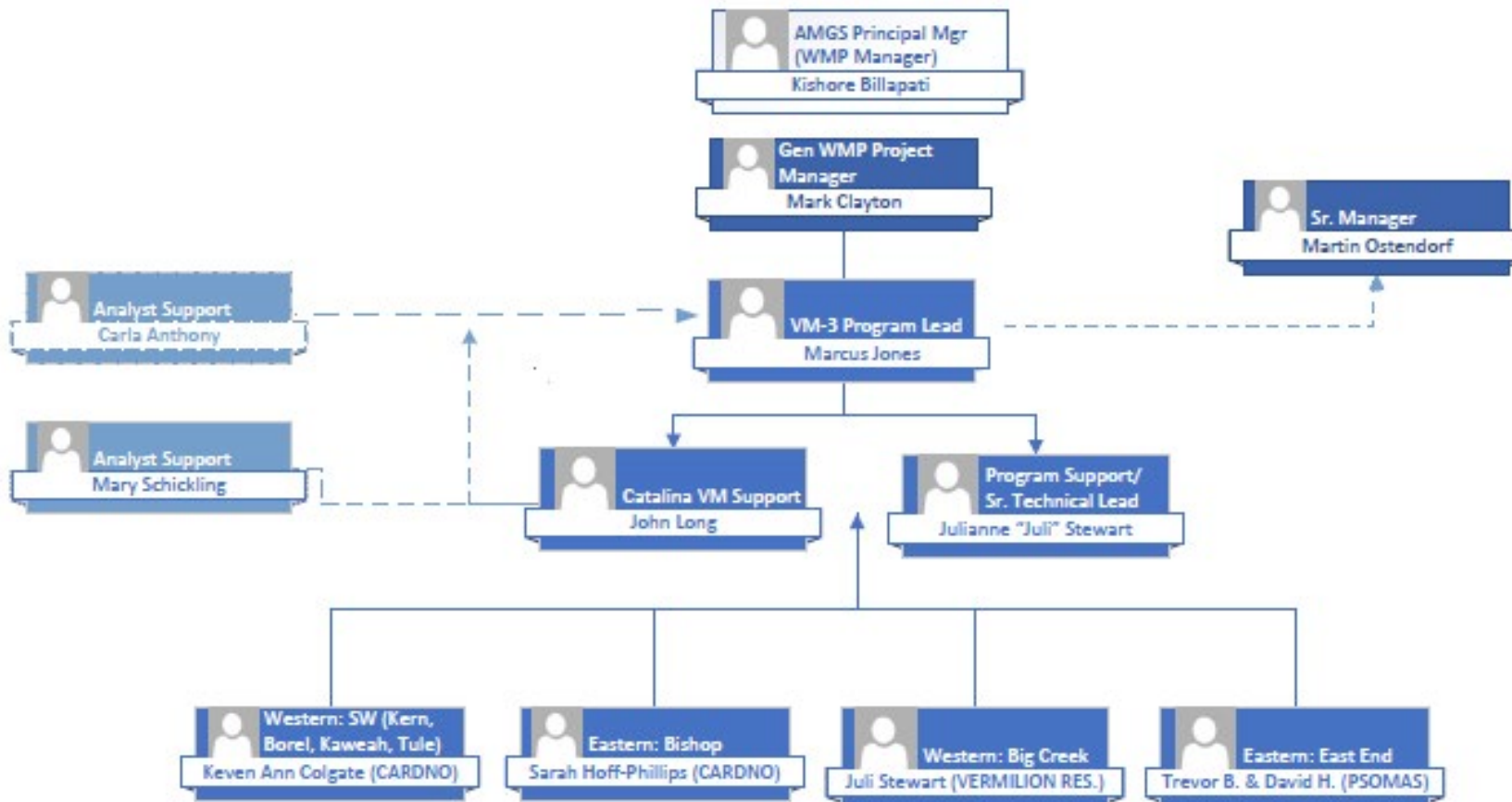


Figure 1 Organization Chart of 2021 VM-3 Program Team

## 2.2 Overview of SCE Areas of Responsibility

The VM-3 Program includes the following Generation AORs:

- > **Eastern Operations**
  - **Bishop/Mono Basin.** This includes Lundy, Lee Vining (Poole Powerhouse), Rush Creek, and Bishop Plant Nos. 1-6 (Appendix A1, Figures 1-4).
  - **East End Operations.** This includes San Geronio Nos. 1 and 2; Mill Creek Nos. 1-3; Santa Ana River Nos. 1 and 3; Fontana; Ontario Nos. 1 and 2; Lytle Creek; and Sierra Hydroelectric Projects (Appendix A2, Figure 1-2).
  - **Catalina Island.** This includes production wells, storage tanks, and pumping stations at Avalon, Toyon Canyon, Middle Ranch, Whites Landing, Blackjack, Cottonwood, Isthmus and Howlands Landing (Appendix A3, Figure 1).
- > **Western Operations**
  - **Southwestern Productions.** This includes Kern River No. 1, Kern River No. 3, Borel, Lower Tule, and Kaweah Nos. 1, 2, and 3 Hydroelectric Projects (Appendix A4, Figures 1-5).
  - **Big Creek.** This includes the Big Creek Hydroelectric System: Big Creek 1, 2, 3, 4, 8, Mammoth Pool, Portal, Vermilion Valley, and Eastwood Power Station (Appendix A5, Figure 1).

Note that other AORs and asset types (including solar, peaker plants, combined cycle plants, battery storage locations) do not occur within HFRA so they are not included as part of this program.

## 2.3 Communication Protocols and Safety

Following is a brief summary of the field notification process, specific procedures required for entering SCE facilities, and a general safety discussion.

### 2.3.1 Field Notification and/or Clearance Process to Visit an SCE Facility

Prior to field visits, the Contractor VSP will coordinate with the SCE Program Lead, along with the Area Manager for each specific AOR, to discuss field notification, access, and the potential need for an escort. Several safety forms (included in Appendix C) will facilitate the notification process including the Personnel Field Sheet, to be completed and sent to the Area Manager and SCE Program Lead.

The following COVID-19-related forms and support documentation should also be referenced and carried into the field, as appropriate:

- > Approved Contractor for Southern California Edison (letter)
- > Essential Travel Authorization Letter<sup>2</sup>
- > SCE Temporary Visitor Guidelines and SCE Visitor Screening Questionnaire<sup>3</sup> and
- > Other forms and materials that are required by internal contractor company policy.

### 2.3.2 Safety

Contractors are responsible for maintaining their own internal safety procedures while also adhering to SCE's external safety requirements. This includes the following:

- 
- 2 Forms provided in Appendix C are example authorization letters; each contractor is responsible for maintaining their own approved and up-to-date contractor/authorization to survey letters.
  - 3 Due to COVID-19, additional visitor screening is required for access/entry into any SCE facility. Remote field locations may not require the additional screening questionnaire.

- > **SCE Notification and Reporting Requirements (Near-misses and Incidents).** Contractors will review the **Environmental, Health and Safety Handbook for Contractors, Edison Safety Corporate Handbook** (version February 14, 2019) and incorporate necessary notification and reporting procedures into their internal health and safety programs. All contracts typically require a Contract Safety Plan and, as applicable, may require job- or project-specific Job Hazard Assessments or other specific safety plans to be reviewed by the contract-specific Safety Lead.
- > **Station Conditions.** Each AOR, and in some cases, specific stations, have unique safety protocols (i.e., Station Conditions); the contractor must contact the Area Manager to receive the proper training prior to visiting SCE facilities. Some facilities (e.g., powerhouses, substations, switchyards) will require full-time escorting when on premises.
- > **Personal Protective Equipment.** The contractor is responsible for providing appropriate personal protective equipment (PPE), in good working condition, as required for site conditions. Within high-voltage facilities, Fire and Arc-Rated (FR) clothing (tops and bottoms or coveralls) is always required.
- > **Fire Safety.** The vegetation contractor must ensure that fire restrictions (Project Activity Levels – PALs or Red Flag Warnings, etc.) are being followed during vegetation treatment execution. VSP contractors should report any concerns with compliance with these measures to the SCE Program Lead.
- > **Field Check-in/Check-out Safety Protocol.** The contractor will follow their internal, established check-in/check-out system or protocols; any concerns should be immediately escalated to SCE.
- > **Vegetation Management Operations.** Several of SCE’s most-recent fatalities as well as serious injury incidents have occurred during vegetation management operations, specifically hazard tree removals. When onsite during treatment activities, the VSP contractor will always maintain an active line-of-sight and be in direct communication with equipment operators and/or tree workers. All contractors will maintain safe distances and observe all site-specific safety requirements.
- > **STOP Work Authority.** Everyone has stop work authority. Anyone who sees something unsafe should stop work and alert others of the hazard(s). This should also be communicated to the contractor supervisor, along with the SCE Program Lead, immediately.

## 3.0 Methods

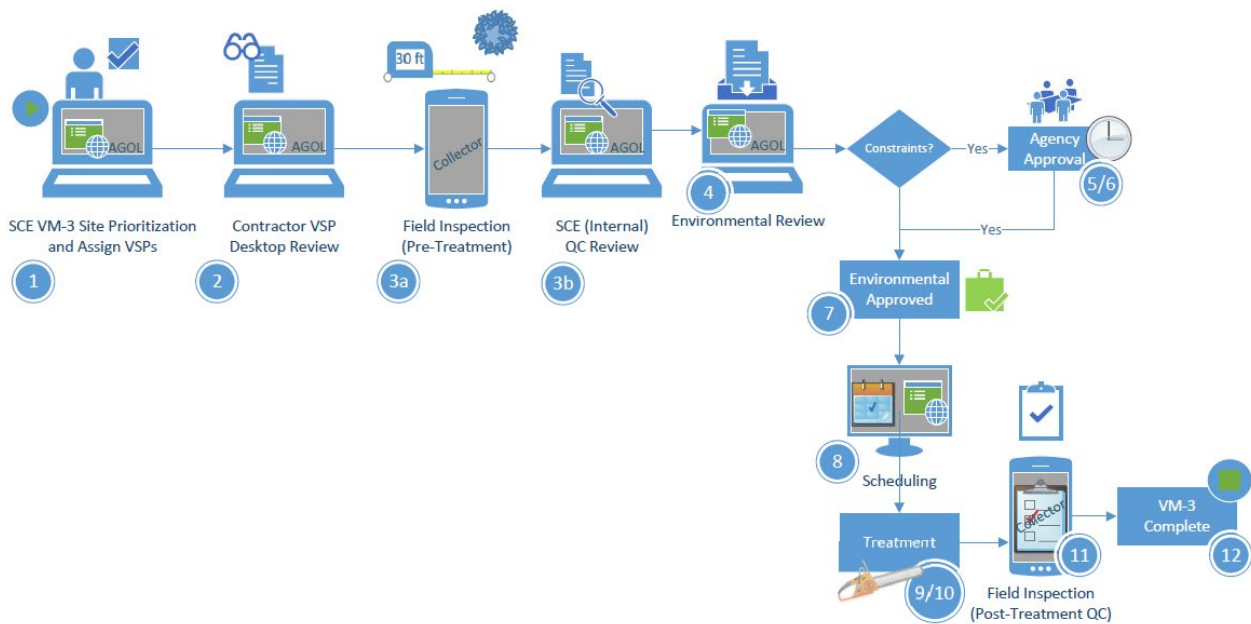
### 3.1 Workflow

The workflow steps outlined below will be tracked in Collector, the system of record for the VM-3 Program. Generally, desktop reviews will be conducted via computers using Collector and the ArcGIS Online (AGOL) system, site inspections (or pre-treatment inspections) will be conducted to determine actual treatment needs, proposed treatments will be submitted for SCE Environmental and resource agency review and approval, vegetation contractors will be assigned to conduct treatment, and a post-treatment inspection will be conducted to ensure work was completed in accordance with the proposed treatment recommendations, standards, and environmental constraints.

Workflow through the VM-3 Program for each site will be coordinated using the dataset/feature class “VM-3 Site Locations” within the “VM-3 Work Status” drop-down menu. Additionally, Contractor VSPs may keep a spreadsheet to document the dates of each status change for their AOR, if needed. The workflow descriptions below are described in linear order and correspond with Collector and/or the AGOL VM-3 Hub; additionally, responsibility at each workflow stage is assigned. A “workflow change” occurs when the “VM-3 Work Status” field is changed from one status to the subsequent status (e.g., Desktop Review Pending → Desktop Review Complete).

1. **Desktop Review Pending.** During this step, all VM-3 Program sites will be reviewed by the Contractor VSP for their respective AOR. Desktop reviews will follow SCE guidance provided in the document *VM-3 Desktop Review Instructions* (Appendix D).
2. **Desktop Review Complete.** This workflow change will be completed by the Contractor VSP once desktop review is complete. Field inspections can resume following this workflow step.
3. **Field Inspection Complete.** Field inspections will be completed by the Contractor VSP, and the workflow change will be completed by the Contractor VSP once edits are final and synced to Collector. Additionally, the Contractor VSP will email the SCE Program Lead and Technical Lead when sites have been set to “Field Inspection Complete.” See Section 3.2 (SCE Review and Approval [QA/QC Process]) for more detail on SCE review of field inspections.
4. **Environmental Review.** Review of the field inspection will be completed by the SCE Program Lead and/or Technical Lead. Approved inspections will receive workflow change to “Environmental Review” and will be submitted to the Environmental Services Department (ESD) – Generation team for review and approval.
5. **Agency Approval Required.** ESD will set the Work Status to “Agency Approval Required” if an agency approval or permit is required prior to work being released for treatment.
6. **Agency Package Prep.** ESD will use this work status during development and submittal of packages for permitting or agency approval. Contractor VSPs may be requested to support preparation of packages and other documentation needed to obtain agency approvals for each site.
7. **Environmental Approved.** Workflow change completed by ESD and/or the SCE Program Lead once areas have been released by ESD, including any permits and agency approvals identified as needed in the environmental review process.
8. **Treatment Scheduled.** Workflow change completed by the SCE Program Lead and/or Technical Lead once an SCE crew or a Vegetation Contractor has been selected and work is scheduled. The SCE Program Lead and/or Contractor VSP will coordinate for any required environmental monitors to be scheduled with treatment. Contractor VSP may facilitate schedule changes directly with Vegetation Contractor or SCE crews, reporting schedule changes to SCE Program Lead.
9. **Treatment In Process.** Workflow change completed by the Contractor VSP once work has started. Contractor VSP should be present on the first day of work to ensure that all flagging and site-specific treatment recommendations are understood by the Vegetation Contractor or SCE crews. The Contractor VSP may also identify or facilitate any additional environmental compliance requirements. SCE is responsible for overall environmental compliance oversight and guidance on implementation.
10. **Post QC Complete.** Following treatment by the Vegetation Contractor, a post-treatment QC inspection is completed by the Contractor VSP. When the inspection has been deemed complete, the VM-3 Work Status will be set to “Post QC Complete” and the VSP will email the SCE Program Lead and Technical Lead to notify them of the workflow status change. See Section 3.2 (SCE Review and Approval [QA/QC Process]) for more detail on review.
11. **Treatment Completed.** Once notified by the VSP that a Post QC Inspection has been completed the SCE Program Lead, and/or Technical Lead will review treatment and Post QC notes and move Work Status to Treatment Completed.
12. **VM-3 Complete.** Workflow change completed by the SCE Program Lead and/or the Technical Lead, or their designee, indicating that the expanded clearance is complete.

The workflow diagram in Figure 2, below, represents the high-level workflow as well as data collection vehicle or system used for each step.



**Figure 2 VM-3 Program Workflow**

### 3.2 SCE Review and Approval (QA/QC Process)

The following section provides an overview of the review and approval of the VM-3 Program “deliverables” associated with each step of the workflow process.

The Technical Lead will provide first-level technical review, while the SCE Program Lead will provide final QA/QC at the stages of the workflow defined below. Section 3.1, Workflow, details the two critical phases of oversight by the SCE Program Lead and Technical Lead; these are:

- > The Contractor VSP will complete the VM-3 site inspection, set the VM-3 Work Status to “Field Inspection Complete,” and then will email the SCE Program and Technical Leads to inform them that the site inspection is complete, information has been synced to Collector, and senior review is requested.
- > VM-3 Post Inspection QC Review (Gatekeeper Review) – The SCE Program Lead and/or Technical Lead will perform a brief QC review of the completed Field Inspection record prior to moving the VM-3 Work Status to “Environmental Review”. The review will focus on treatment/remediation notes and ensuring the accuracy of records. The reviewer may provide additional treatment recommendations or comments and/or edit treatment notes or treatment polygons. Any edits or recommendations by the SCE Program Lead and/or Technical Lead will be documented in the record and reviewed by the Contractor VSP during the treatment phase for each site. Gatekeeper Notes and Gatekeeper ID fields will be used for this effort.
- > Upon completion of the vegetation treatment, the Contractor VSP will complete the post-treatment inspection, set the VM-3 Work Status in Collector to “Post QC Complete,” and then email the SCE Program Lead and/or Technical Lead for final QA/QC of site completion; the SCE Program Lead will set the status to “Treatment Completed” if the site is approved, and also populate the “Program Lead Signoff Date” field.



- > Prior to moving the work status to “VM-3 Complete”, the SCE Program Lead and/or Technical Lead will review final site conditions and determine if the site will require long-term monitoring, any corrective actions, and/or how the site will be incorporated into routine O&M activities. The transition process of sites to long-term O&M is described further below in Section 4. The field “Migrated to O&M Program?” will be populated by the SCE Program Lead with a “yes” or “no” and any notes may be added for references to other systems of record used for routine O&M vegetation management, if appropriate.

### 3.3 Desktop Review

Desktop review methods are detailed in Appendix D, Desktop Review Guidance. In summary, the initial desktop review’s purpose is to assess access issues, existing conditions including density of vegetation and facility type/assets present and confirm target clearance guidance.

### 3.4 VM-3 Site Inspections

VM-3 inspections will be completed by the Contractor VSP for their assigned AORs. Inspections will require pre-field notification, implementation of safety procedures (outlined above), and coordination with the local Area Manager and/or designated escort/contact. Contractor VSPs will visit each VM-3 site and provide recommended treatments required for Expanded Clearances using the Collector application. Methods for implementing inspections are discussed below.

#### 3.4.1 Field Equipment List

**iPad or tablet.** Install Collector application and login using SCE credentials for access to VM-3 AGOL and Collector maps. See Appendix E for ArcGIS Collector Guide Data Dictionary (in prep.).<sup>4</sup>

**Flagging/pin flags.** Use flagging and/or pin flags to temporarily demarcate clearance buffers prior to treatment, fuel reduction zones, etc. Depending on the AOR location and proximity to public and/or prior experience with theft or vandalism, the timing of flagging installation could be delayed until closer to actual scheduled treatment to ensure it is not disturbed. Individual Contractor VSPs should work with the Area Manager and the vegetation management contractor and/or SCE civil crew to select colors/patterns that communicate clearly without conflicting with local forest marking practices. Some suggested color/pattern schemes include:

- > **Orange or pink flagging:** bright (unnatural) colors to mark vegetation to be removed.
- > **Blue or green flagging:** bright (natural) colors to mark vegetation to be retained.
- > **Blue/white striped flagging:** resource area to be avoided (e.g., cultural, biological, waters).
- > **Yellow/black striped flagging:** to mark hazards to be avoided.
- > **Pin flags (pink/orange):** temporary flags to mark buffers/zones.

**Safety equipment.** Refer to the internal health and safety plan for PPE required for each task (e.g., inspection, monitoring).

**Fire Protection Equipment.** Per Big Creek Station Conditions training, each car should carry an ax or Pulaski, shovel; and fire extinguisher.

**Measurement tools.** Various tools to measure tree diameter, height, distance, and so on include:

- > Diameter tape or Biltmore stick: to measure tree diameters

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4 An SCE-issued email and AGOL account is required to access this. The Program Lead manages access to the VM-3 maps and databases. Access through GIS Informatics group is required to access SCE data, including asset/facility information.

- > Laser Rangefinder/Hypsometer: to measure tree heights, horizontal distance, etc.

### 3.4.2 Standardized Guidelines for Wildfire Mitigation Expanded Clearances

When conducting the site inspection to determine treatment, the site will be evaluated by looking at treatment zones around the facility following CalFire recommended practices (Public Resources Code 4291), industry standard practices/specifications, other regulatory-driven compliance clearance distances, and/or best practices. Although there are exceptions based on voltage of the asset being assessed, the general recommended clearance distance is a target of 100 feet of defensible space around facilities.

Fuel reduction zones will generally be measured from the outer edge of the structure requiring clearance from the edge of the fence or barrier for that asset. For example, fuel reduction zones for a high-voltage switchyard should be measured from the edge of the fence. In the case of a facility having extensive hardscape around the building or asset with a fence around the perimeter, the fuel reduction zone may be measured from the building or high-voltage equipment of concern. All distances are measured as horizontal distance. Site-specific considerations should always be evaluated when making assessments (see Balancing Resource Constraints, below). Table 1 summarizes fuel reduction zone targets.

#### A. *General Clearance Area Guidelines*

The following general guidelines should be followed for the entire expanded clearance area:

- > **Hardscape.** When hardscape such as sidewalk, parking areas or paved roads are within the fuel reduction zones they should be considered part of existing clearance and the zones does not need to be pushed beyond these features. For example, if a paved area covers 50 feet beyond the fence/barrier then a treatment zone needs only to extend 50 feet beyond edge of pavement to meet the fuel reduction 100-foot zone requirements.
- > **Dead Wood/Fuel/Debris.** Throughout all zones, all dead and dying vegetation and/or debris should be removed, including dead and dying trees (see Hazard Trees, below), canopy deadwood, pre-existing slash piles, and downed wood.
- > **Measuring Fuel Reduction Zones.** Fuel reduction zones are measured from the outer edge of the structure (i.e., asset) requiring clearance. Zones for high-voltage facilities are measured from the edge of the fence/barrier.
- > **Powerlines.** All trees growing under powerlines within the target clearance area should be removed. For high-voltage lines, flag vegetation as needing review by SCE Transmission & Distribution (SCE T&D). Low-voltage and service lines and drops may be treated by SCE Generation or provided to SCE T&D. Discuss all circumstances with the SCE Program Lead for guidance.
- > **Overhanging Vegetation.** All vegetation (branches, vines, etc.) overhanging high-voltage or low-voltage assets, including transformer banks, and other electrified components of facilities should be removed.
- > **Hazard Trees.** All trees within the entire clearance area and vicinity (beyond Zone 2) should be assessed. "Hazard trees" are trees >10 inches (regardless of size, age, health, or condition) that pose a potential "hazard" to an asset. Hazard trees may include, but are not limited to, trees that are partially dead, damaged, diseased, or potentially unstable due to internal decay, structural issues, or other abnormalities (e.g., decaying heartwood, severe lean, dead top, soil conditions). Hazard trees within strike distance of assets should be assessed for possible removal. This may warrant review beyond the 100-foot clearance zone. In general, all dead/dying trees should be removed. One exception is large snags (left onsite for wildlife habitat), which can be reduced in height to eliminate strike hazards.

- > **Desirable/Undesirable Vegetation.** When possible, less desirable vegetation should be selected for removal (e.g., suppressed, diseased, highly flammable, invasive) while retaining healthy, native trees and low-growing vegetation.
- > **Pruning and Thinning Guidance.** Pruning, thinning, and other crown reduction activities should be done under the guidance of a California Registered Professional Forester or an International Society of Arboriculture (ISA)–approved arborist and should follow current industry standards including the ISA-approved *American National Standard (ANSI) A300 – Tree Shrub, and Other Woody Plant Management Practices (Pruning)* and other best management practices for pruning.
- > Exceptions to the clearance guidelines may be considered in these situations:
  - Consider the location/presence of fuel breaks (e.g., roads, parking lots, waterbodies) that provide existing asset protection.
  - Clearance will be more aggressive/conservative adjacent to electrified portions of an asset, while more relaxed clearance measures can be implemented on the non-electrified or “hardened” portions of the asset.
  - Retain large-diameter “heritage trees,” (i.e., trees > 25-inches diameter at breast height), as appropriate. The Contractor VSP will work with the Technical Lead or SCE Program Lead on a case-by-case basis for concurrence with retaining heritage trees that do not present a hazard.
  - Retain irrigated, well-maintained landscaping, as appropriate.
  - Refer to Balancing Resource Constraints (below) for additional considerations regarding sensitive resources and other resource constraints.

#### **B. Fuel Reduction Zone 1a (0–10 feet) – Maintained Clean Buffer**

Zone should be Hardscaped (rock, cement etc.) or vegetation should be cut to the bare soil with little to no new growth since last treatment. For manicured and irrigated sites this can be healthy managed landscaping. (For HV assets zone should be hardscaped or chemically treated to reduce vegetation.) Large, healthy trees that do not pose obvious hazards may be retained as long as all portions of the tree are at least 10 feet from high-voltage features or any sources of ignition (e.g., chimney, powerline), and ladder fuels have been eliminated (see Figure 2). Landscaping features or large trees selected to remain within or immediately adjacent to Zone 1 shall be pruned and trimmed to ensure that they are not touching or overhanging the asset.

#### **C. Fuel Reduction Zone 1b (10–30 feet) – Lean, Clean, and Green**

- > Zone should have aggressively thinned vegetation including reduced brush and tree branches 10-12ft off the ground with dead fuels being kept to a minimum. **Grasses and herbaceous plants (Surface Fuels):** Using either chemical<sup>5</sup> or mechanical controls (or a combination of both), plants should be kept to under 4 inches in height. Use of chemical means is subject to Public Lands approval, FERC License Vegetation Management Plan requirements, and/or other applicable regulations and requirements.
- > **Shrubs (Surface and Ladder Fuels):** Thin plants to achieve adequate spacing, which will vary depending on slope and plant size (see Figure 3). When possible, large shrubs that are retained should be trimmed and pruned to reduce contact with surface fuels. Shrubs that are potential fuel ladders into adjacent trees should be removed (see Figure 2).
- > **Trees (Ladder and Canopy Fuels):** Thin trees to achieve adequate spacing, which will vary depending on slope and crown size (see Figure 3). Conifers under 20 feet tall should be pruned so that the height to the base of the live crown is equal to half of the total tree height. Conifers over 20

<sup>5</sup> This is typically completed post-treatment rather than broadcast spraying pre-emergent.

feet tall should be pruned to a minimum of height of 10 feet above the ground. Hardwood trees should be pruned in order to lift the height of the canopy 4 to 6 feet above the height of any surface fuels. All dead and dying trees and trees growing under powerlines within the target clearance (i.e., 30 or 100 feet) should be removed.

#### **D. Fuel Reduction Zone 2 (30–100 feet) – Shaded Fuel Break**

Develop a Shaded Fuel Break; create a mosaic of horizontal and vertical spacing of vegetation, while maintaining enough canopy (shade) to minimize the recruitment of additional brush species into the Fuel Reduction Zone.

This zone can be more densely vegetated than Zone 1B. Eliminate fuel ladders (vertical spacing) and create spaces and gaps between individual plants and groups of plants to break up surface fuels (horizontal spacing). Implementation will vary by site conditions (e.g., terrain, slope, constraints) and vegetation type.

- > **Shrubs:** Create spaces and gaps between individual plants and groups of plants to break up surface fuels. All fuel ladders should be eliminated. Horizontal spacing is summarized below and depicted in Figure 3.
  - On a flat slope (<20 percent): shrubs will be horizontally spaced at twice the average shrub height.
  - On mild to moderate slopes (20–40 percent): shrubs will be horizontally spaced at four times the average shrub height.
  - On moderate to steep slopes (> 40 percent): shrubs will be horizontally spaced at six times the average shrub height.
- > **Trees:** Retain individual trees and/or groups of trees while creating strategic canopy gaps. Consideration should be given to the species diversity and health of the retained trees. Trees under 20 feet tall should be pruned so that the height to the base of the live crown is equal to half of the total tree height. Conifers over 20 feet tall should be pruned to a minimum of height of 10 feet above the ground. Hardwood trees should be pruned to lift the height of the canopy 4 to 6 feet above the height of any surface fuels. Where there is a need for a visual screen, vegetation can be retained in a mosaic that breaks up fuel continuity with appropriate spacing while leaving patches of unlimbed or reduced limbing of trees. Horizontal spacing is summarized below and depicted in Figure 3.
  - On a flat slope (<20 percent): 10 feet horizontal spacing between trees with no ladder fuels.
  - On mild to moderate slopes (20–40 percent): 20 feet horizontal spacing between trees with no ladder fuels.
  - On moderate to steep slopes (> 40 percent): 30 feet horizontal spacing between trees with no ladder fuels.

#### **3.4.3 Clearance Types by Facility Types**

**Inhabitable Facilities and High-Voltage Facilities:** Including, but not limited to, powerhouses, offices, housing, shops, substations, switchyards, and transformer platforms.

- > Zone 1a (0–10 feet)
- > Zone 1b (10–30 feet)
- > Zone 2 (30–100 feet)

**Uninhabited Outbuildings or Facilities:** Including, but not limited to, valve houses, gaging stations (not stand-alone; see Low-Voltage Assets description below), gate houses, water tanks, and vents.

- > Zone 1a (0–10 feet)

- > Zone 1b (10–30 feet)

**Low-Voltage Assets (stand-alone):** Including, but not limited to pulling/splice boxes, gaging stations (stand-alone and not within a building structure<sup>6</sup>), and associated buildings (e.g., gate house).

- > Zone 1a (0–10 feet)

**Surface Conduits:** Vegetation will be trimmed back 4 feet to either side of feature to maintain visibility during inspection and clearance from ignition. Vegetation that poses a strike hazard should be removed.

**Hazard Trees:** See General Clearance Guidelines, above.

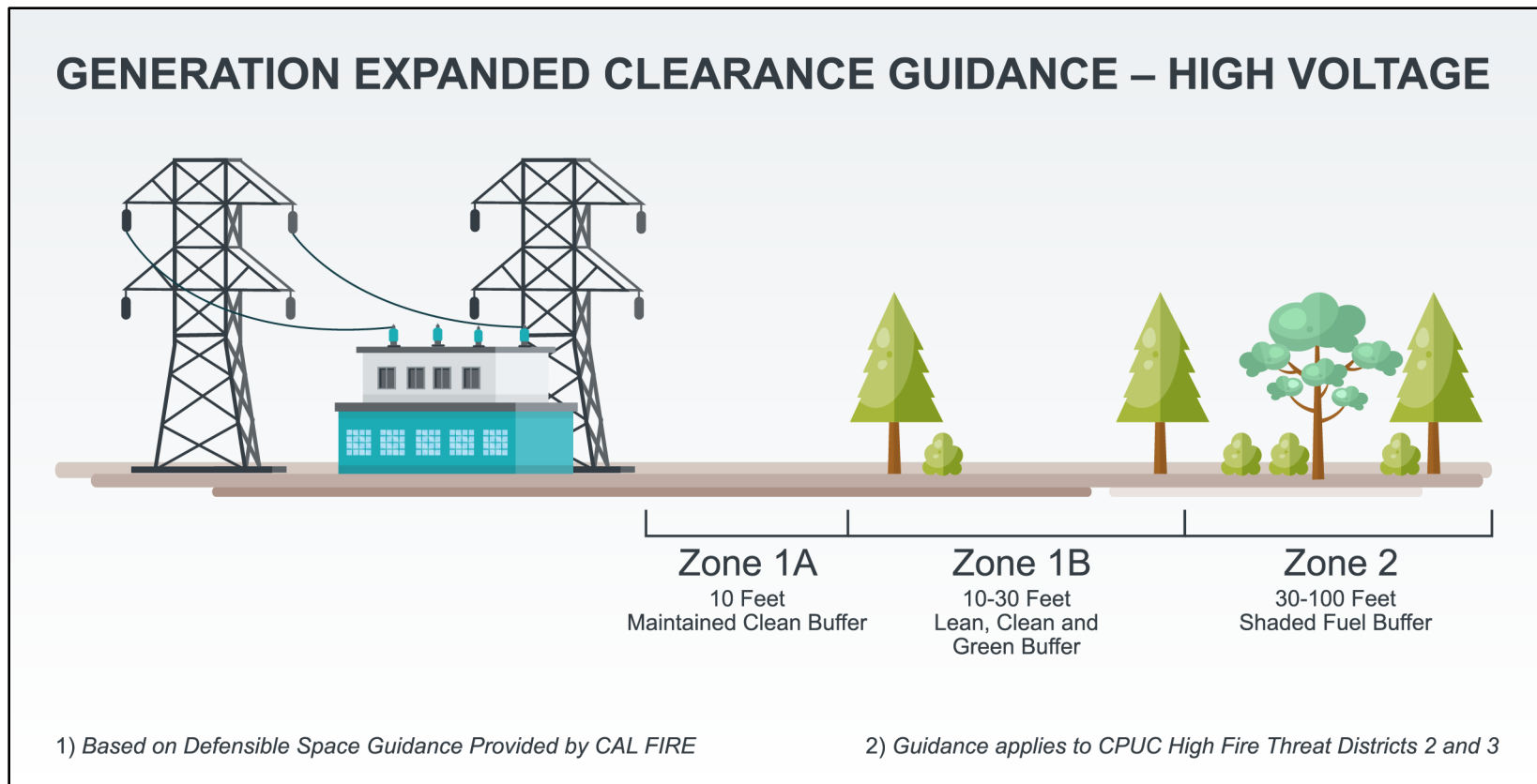
**Table 1 Fuel Reduction Zone Targets**

Asset Type	Zone 1A	Zone 1B	Zone 2	Hazard Trees
	0–10 feet <sup>1</sup> Maintained Clean Buffer	10–30 feet Aggressively Thinned	30–100 feet Shaded Fuel Break/Reduced Fuel	Within Strike Distance
HV & Inhabitable Facilities	X	X	X	X
LV (Outbuilding)	X	X		X
LV (Stand-alone)	X			X
LV Conduit	X (4-feet cleared for visibility)			X

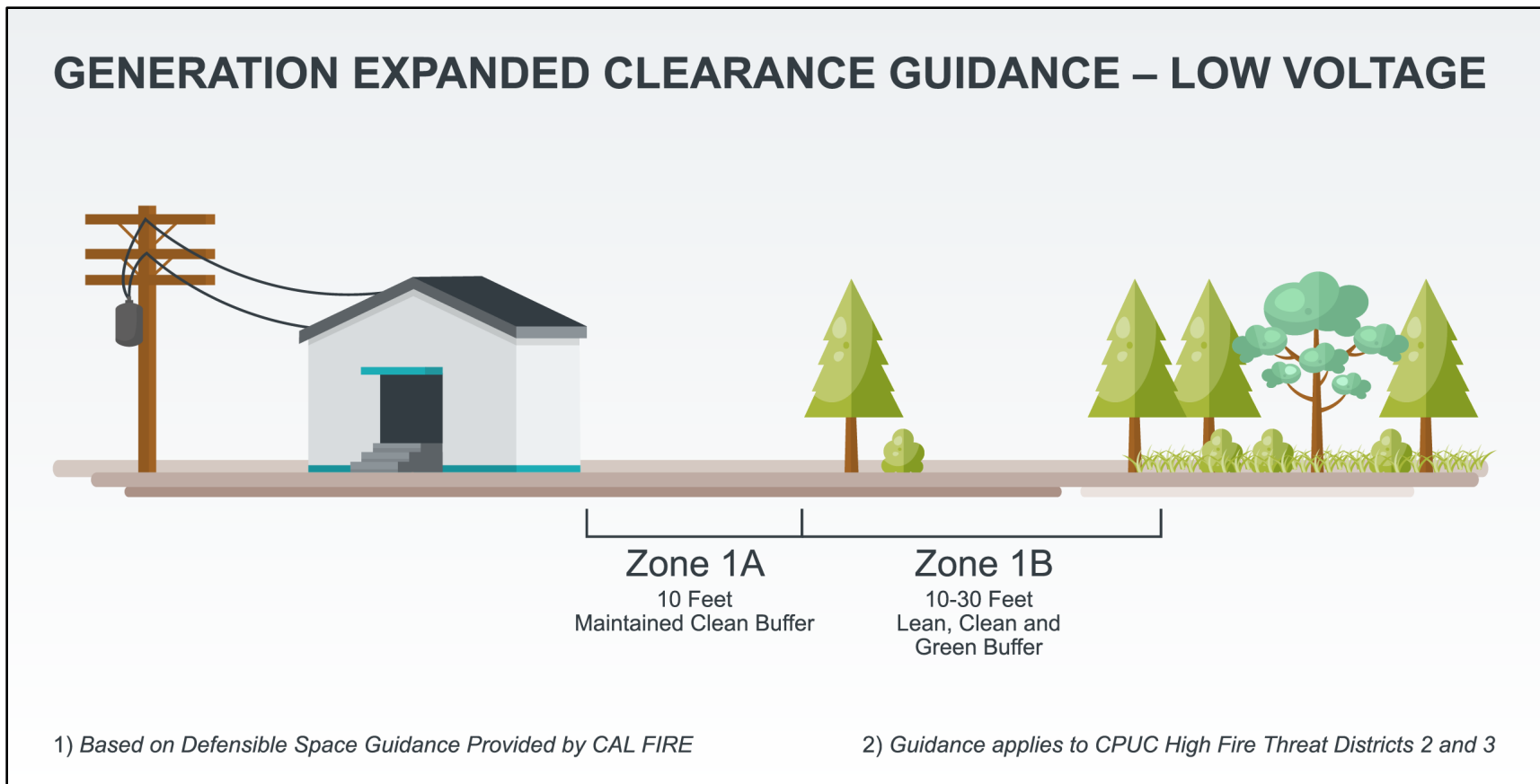
<sup>1</sup> Horizontal distance

HV – high voltage; LV – low voltage

6 Structures associated with gaging stations associated with low-voltage assets should be treated as outbuildings and expanded to the 30-foot clearance specified above, while non-electrified (inert) portions of these facilities (e.g., a metal post cableway) can proceed with only 10-foot clearance.

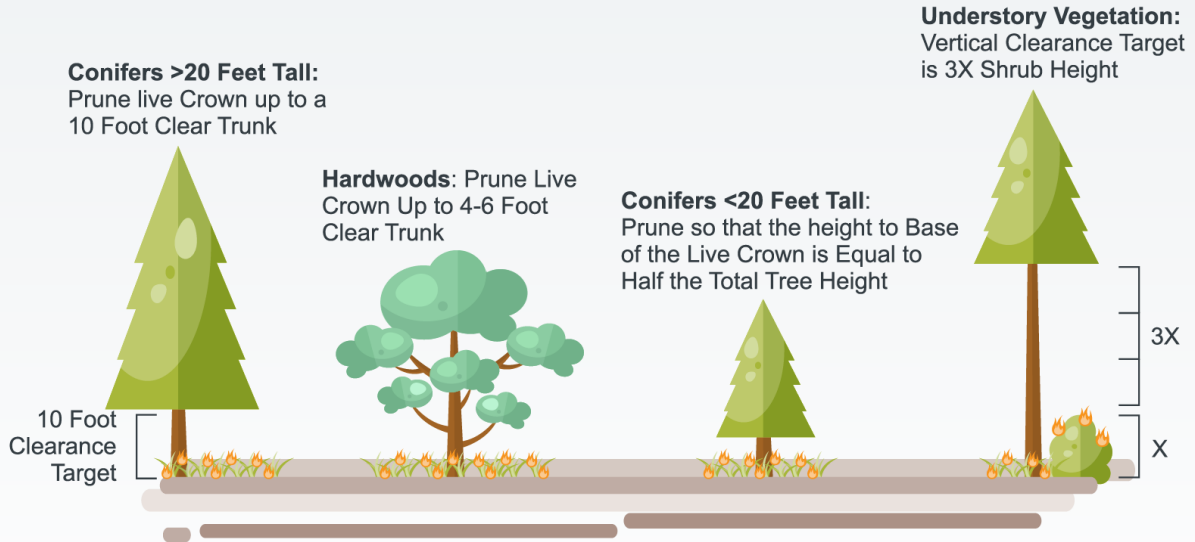


**Figure 3** Expanded Clearance Guidance - High Voltage



**Figure 4** Expanded Clearance Guidance - Low Voltage

## VERTICAL CLEARANCE TARGETS



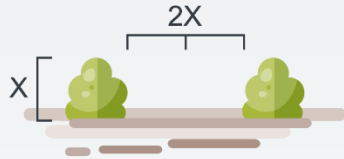
1) Based on Minimum Vertical Clearance Guidelines Provided by CAL FIRE  
 2) Guidance applies to CPUC High Fire Threat Districts 2 and 3

**Figure 5** Vertical Clearance Targets



# HORIZONTAL SPACING TARGETS

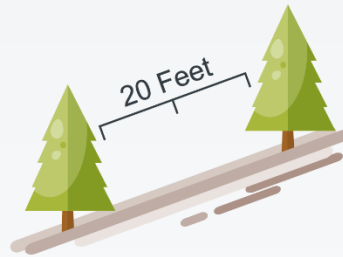
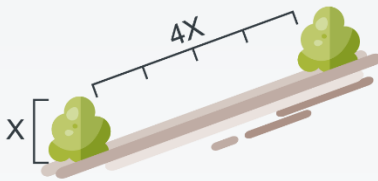
## SHRUBS



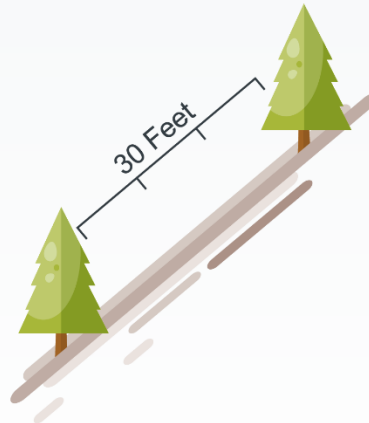
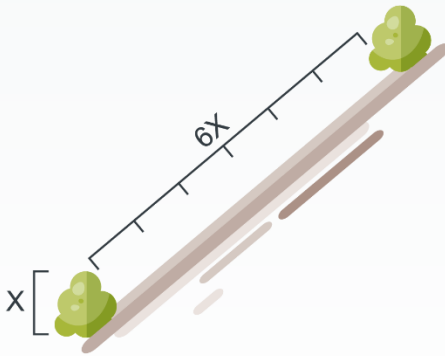
## TREES



Flat to Mild Slope (less than 20%)



Mild to Moderate Slope (20-40%)



Moderate to Steep Slope (greater than 40%)

1) Based on *Defensible Space Guidance* provided by CAL FIRE  
 2) Guidance applies to CPUC High Fire Threat Districts 2 and 3

 \*For Vertical Spacing, see Vertical Clearance Targets

**Figure 6** Horizontal Spacing Targets

### 3.4.4 **Balancing Resource Constraints**

During treatment design and layout, site-specific features must be evaluated and accounted for. If sensitive resource areas are encountered during field inspections, the Contractor VSPs will delineate these areas with a “Constraint Areas” polygon in Collector.

In most cases, mitigation can be developed that will still allow for effective implementation of the VM-3 Program goals. In some cases, resource constraints may exist in portions of the clearance area that prevent conventional treatment or inhibit its effectiveness. Contractor VSPs will document constraints and contact the SCE Program Lead and Technical Lead for further review and approval. Examples of such constraints include (but are not limited to) the following:

- > **Unstable Slopes:** Vegetation should be retained to the extent possible and just trimmed back to preserve as much of the active root system as is feasible. The Contractor VSP will add treatment notes for these sites regarding the potential for annual maintenance requirements moving forward. Steep slopes with high erosion potential should be added to the Constraint Areas polygon in Collector.
- > **Riparian Areas:** In many cases, less intensive treatment may be prescribed in riparian areas since high fuel moisture can effectively slow a fire’s rate of spread. As a possible mitigation, more intense fuel reduction might be applied to adjacent areas in the treatment footprint to balance the overall fuel reduction goal. Potential trimming or removal of riparian vegetation should be added to the Constraint Areas polygon in Collector during VM-3 Site Inspection.
- > **Wetlands/Waters of the United States:** All aquatic areas including wetlands/waters of the United States (waters) should be avoided. Chips, lop and scatter, etc. should not be deposited or stored in aquatic areas. Crossing of water features should be avoided or mitigated, as appropriate.
- > **Biological Resources:** If sensitive species are identified in the treatment area, protective measures should be developed that still allow for implementation of the project as a whole. Mitigation may include physical avoidance, timing of operations, pre-construction surveys, crew checks, etc. Any biological concerns and recommendations should be communicated to the SCE Program Lead and Technical Lead, who will work with the SCE Environmental division to approve recommendations and further work.
- > **Cultural Resources:** Historic and/or prehistoric features may be present in the treatment area. These resources will be identified and flagged for avoidance with an appropriate buffer and/ or additional protection measures recommended by a qualified cultural resource specialist prior to treatment to avoid adverse effects to the resource.
- > **Long-Term O&M Notes:** Species selection should consider future O&M requirements. The primary goal is to encourage native non-woody and/or low-growing species, and to maintain vegetative cover where feasible and appropriate for stability and erosion control. Future operations and management activities will work toward conversion to low-growing, perennial, non-woody species to reduce fuel loading while also maintaining soil stabilization and aesthetic values. The Contractor VSP will add treatment notes for these sites regarding the potential for annual maintenance requirements moving forward.

In the event that resource constraints are so burdensome that they overwhelm the effectiveness of the VM-3 inspection, these constraints should be well documented and the site can be referred to the SCE Program Lead and/or Technical Lead for further review.

### 3.5 Field Implementation Support

Implementation support during treatment operations will vary depending on the site complexity, location, assigned crew, etc. A brief description is provided below for each of these activities.

#### 3.5.1 Monitoring

The Contractor VSP should be present on the first day of planned treatment activities to ensure that all treatment prescriptions and flagging direction are clear to the Crew or Vegetation Contractor. In addition, Contractor VSP should ensure that environmental monitoring, if required, has been arranged and that there are no additional constraints to proposed treatment activities. Environmental monitoring may be scheduled by any of the Program team supports including SCE Program Lead, Technical Lead, or Contractor VSP. The Contractor VSP should be aware of any site constraints, environmental requirements, or agency-specific requirements for the site, cover these requirements during the initial day of work (if an environmental monitor is not present to conduct the training), and correct any potential non-compliances or concerns with the contractor executing the treatment.

In lieu of continuous monitoring, spot checks may be conducted at intervals by the Contractor VSP or once certain milestones are achieved for the site.

#### 3.5.2 Best Management Practices/Environmental Requirements

Site-specific environmental requirements will be provided by the SCE Environmental Services Department (ESD) following the environmental review process. Typically, environmental requirements will be assigned for each area, or AOR, and are based on resource issues relevant for that AOR. Individual environmental requirements such as the need for a waters monitor, or a nesting bird survey would be assigned for each VM-3 site, based on environmental conditions/constraints. These individual requirements (per VM-3 site) will be completed and documented in Collector prior to and/or during the Treatment process. If there is a concern regarding a restrictive measure, contact the **SCE Program Lead (Marcus Jones; Marcus.D.Jones@sce.com; 559-368-8872)** to discuss potential alternatives.

The following sections provide an example of some standard environmental requirements. For a complete list of potential environmental requirements, see the SCE document *Guidance on Standard Clearance Measures*.

##### **Standard Bio Measures**

**Work Areas:** Vehicles and equipment must remain on the existing access routes and immediate vicinity of towers/roads/work areas identified in the project scope. If any work needs to be conducted outside these access routes or work areas, please contact the SCE Program Lead at the email or phone number above.

**Crew Check:** Prior to starting work, crews will check the workspace for bird nests (e.g., pole cavities, vegetation to be removed). Contact the biological monitor or call the number above prior to work within 200 feet of an active nest.

**Injured/Trapped Wildlife:** Prior to the start of work, crews will inspect their workspace for any injured or dead wildlife. In addition, look in holes and trenches, construction material, and equipment for any trapped wildlife. Contact the SCE Program Lead (email and phone number listed above) if you observed dead, injured, or trapped wildlife.

**Weed Maintenance and Prevention:** Use certified weed-free materials (e.g., gravel, straw, and fill) to the extent practicable. Maintain facilities and infrastructure to limit the introduction and spread of weeds.

**Spill Release/Prevention:** Vehicles/equipment must be inspected for leaks (e.g., fuel, oil, hydraulic fluids, etc.) and repaired prior to work. Fueling should not be conducted near a drainage feature. Spill kits/absorbent clean-up materials shall be available on-site and if used, disposed of properly. Contact 1-

800-GOT-SPILL for any potential hazardous material or spills that cannot be cleaned up by spill kits alone.

### **Standard Wetlands Measures**

**Avoid Drainages:** All debris (i.e., spoils), vehicles and equipment, and construction materials must be kept from entering drainage features.

**Materials Management:** Storage of equipment or stockpiling of fuels, lubricants, cement or other materials is not authorized inside or in close proximity to, where a spill could likely enter an adjacent wash, wetland, waterway, or any other drainage features.

**Dry Conditions:** The operation of equipment in water features or riparian areas will be conducted during dry conditions only. No standing or flowing water may be present in construction work areas or overland travel access routes unless specifically authorized.

**No unauthorized materials in drainages:** Debris, vegetation cuttings/wood chippings, and/or construction materials shall not be stored or disposed of within any drainage, wetland, other water feature, or slopes above and adjacent to these features.

**Site Re-contouring:** Upon project completion, all disturbed areas will be returned to meet pre-existing contours (i.e., original line and grade).

**Hand Removal:** Any wood debris that falls into the drainage must be removed by hand.

**Roots:** Leave all root systems in-tact.

**Foot Access:** Foot access only is authorized, but crews should enter and exit the project site via the same trail. No vegetation may be trimmed without the guidance of a monitor.

### **Additional Measures**

**Nest Survey:** A nesting bird survey is required for activities scheduled between February 1 and August 31.

**Pre-Construction Biological Survey:** A biological survey is required prior to the start of work.

**Biological Monitor:** A biological monitor is required to survey the workspace and be present as needed. In addition, tailboard with the biological monitor is required prior to ground or vegetation disturbing activities.

**Waters Monitor:** A waters monitor shall be onsite during construction activities. Riparian vegetation must not be impacted unless approved by a waters monitor. Contact the SCE Program Lead (email or phone number above) at least 2 weeks prior to ground or vegetation disturbing activities to arrange for a monitor.

**Incidental Riparian Vegetation/Tree Trimming:** Trimming cannot exceed an estimated 20 percent of the tree canopy (tree leaves/branches/stems) OR affect branches larger than 2-inches diameter.

**No Riparian Vegetation/Tree Trimming:** Riparian vegetation must not be impacted. If trimming or removal of riparian vegetation is unavoidable, please contact the email or number above for assistance prior to conducting any work.

## **3.6 Post-Implementation Assessment**

Upon completion of the vegetation treatment, the Contractor VSP will complete the Post-Treatment QC Inspection (QC Inspection). Required fields to be completed are at the end of the data field and should be available in the QC version of the Collector application.

Follow the questions outlined below for the QC Inspection of the site.

QC Data Field	Notes on Requirements
QC VSP Post-Treat Insp Date	Date of post-treatment VSP field inspection.
QC Inspector	AGOL ID of Inspector
QC_Treatment comp	1. Are all prescribed treatments completed? Note any work areas not complete or work not completed per recommendations (not previously approved/discussed).
QC_Mitigation/Restrictions followed	2. Have all restrictions and mitigation measures been followed? Document any apparent non-compliance or possible resource issues or other concerns and notify Program or Technical Lead(s).
QC_Corrective actions required	3. Are there any issues that require a corrective action to address? This can be an additional treatment, cleanup, resource constraint, or any other corrective action(s) required.
QC_Comments/Issues	4. Populate any additional comments or notes associated with deficiencies in the fields above here. Note any other site-specific issues.
QC_Correction Priority	5. Identify level of priority to the issue. Drop-down list: P1 - Immediate/Emergent, P2 - High Priority (next 3-4 months), P3 - Add to next year's O&M plan, N/A - none.
QC_Monitoring Req'd	6. Is long-term monitoring recommended for the site? Drop-down list: Yes, No
QC_Monitor Note	7. Identify any specific issue(s) that require(s) long-term monitoring (e.g., erosion, destabilization, weeds, regrowth) or follow-up.
To be completed by SCE Program Lead(s)	
Program Lead Signoff Date	8. Populate date of final review of site and confirmation of transition to O&M program.
Migrated to O&M Program?	9. Populate a "Yes" or "No" and any relevant notes or references to O&M system of record or tracking.

The Contractor VSP will document the QC Inspection with photos; ensure adequate representative photos to show condition of site following treatment. Collect a photo of all issues identified as either a Corrective Action or possible non-conformance to mitigations, constraints, or restrictions. Notify SCE Program Lead immediately for any possible non-compliance issues or high-risk corrections, especially anything that may pose a risk to the site.

Photos will need to be edited after collecting to change the name. The Contractor VSP will revise names of the photos to include "QC" *in front* of the system-generated photo number. Photos will be lined up if possible, with pre-treatment perspectives and locations and use the same numbering—for instance, Photo 1 and QC\_Photo 1. This will allow for an easy "before and after" treatment comparison.

Post treatment, the Contractor VSP will complete the QC Inspection, set the VM-3 Work Status in Collector to "Post QC Complete", and email the SCE Program Lead and Technical Lead for final QA/QC of site completion; the latter will then set the status to "Treatment Completed" and populate the "Program Lead Signoff Date."

## 4.0 Site Signoff and Transition Process to Long-Term O&M

The VM-3 Program is a short-term program meant to establish adequate clearance buffers around facilities and then transition sites back to a normal long-term O&M program. Prior to considering sites to complete in the VM-3 Program, each site will need to be reviewed or assessed by the responsible routine O&M responsible party or Vegetation Manager for each AOR. Each expanded clearance site will be evaluated with an emphasis on future long-term O&M, as well as the immediate clearance needs.

Many of the expanded clearance sites already undergo routine maintenance within Zone 1. Sites where the new clearance and vegetation-free buffer will expand routine treatment areas will need to be reviewed by their respective AOR or Vegetation Manager to ensure long-term treatment needs are understood and can be met. Any expanded areas in Zone 1 will be incorporated into routine annual maintenance programs. For some sites, this may result in no additional annual effort; for others, this could mean a significant increase in the annual routine effort to maintain expanded clearances (i.e., additional acreage requiring weed whipping or fuels management).

Effectively established treatments within Zone 2 should become shaded fuel breaks and/or reduced fuel zones that will require irregular/infrequent spot treatments to control regrowth of ladder fuels and noxious weeds. Monitoring efforts the first year following treatment will determine the intensity of continued treatments within Zone 2 and return interval for vegetation in those areas. All additional efforts within Zones 1 and 2 will be evaluated at the end of this program and reevaluated annually during routine maintenance activities. Each respective AOR and/or Vegetation Manager will be required to manage and update site records and treatment or management plans accordingly.

Should original treatment prove to be ineffective or not feasible for the routine O&M program, suggested improvements from the AOR-specific Vegetation Manager or delegate will be incorporated into the program to obtain site signoff. The SCE Program Lead will populate the "Program Lead Signoff Date" as well as the "Migrated to O&M Program?" data fields to reflect these final steps.

## Appendix A AOR Location Maps

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### **A.1 Eastern Operations**

Appendix A1, Figures 1 through 4: Bishop/Mono Basin

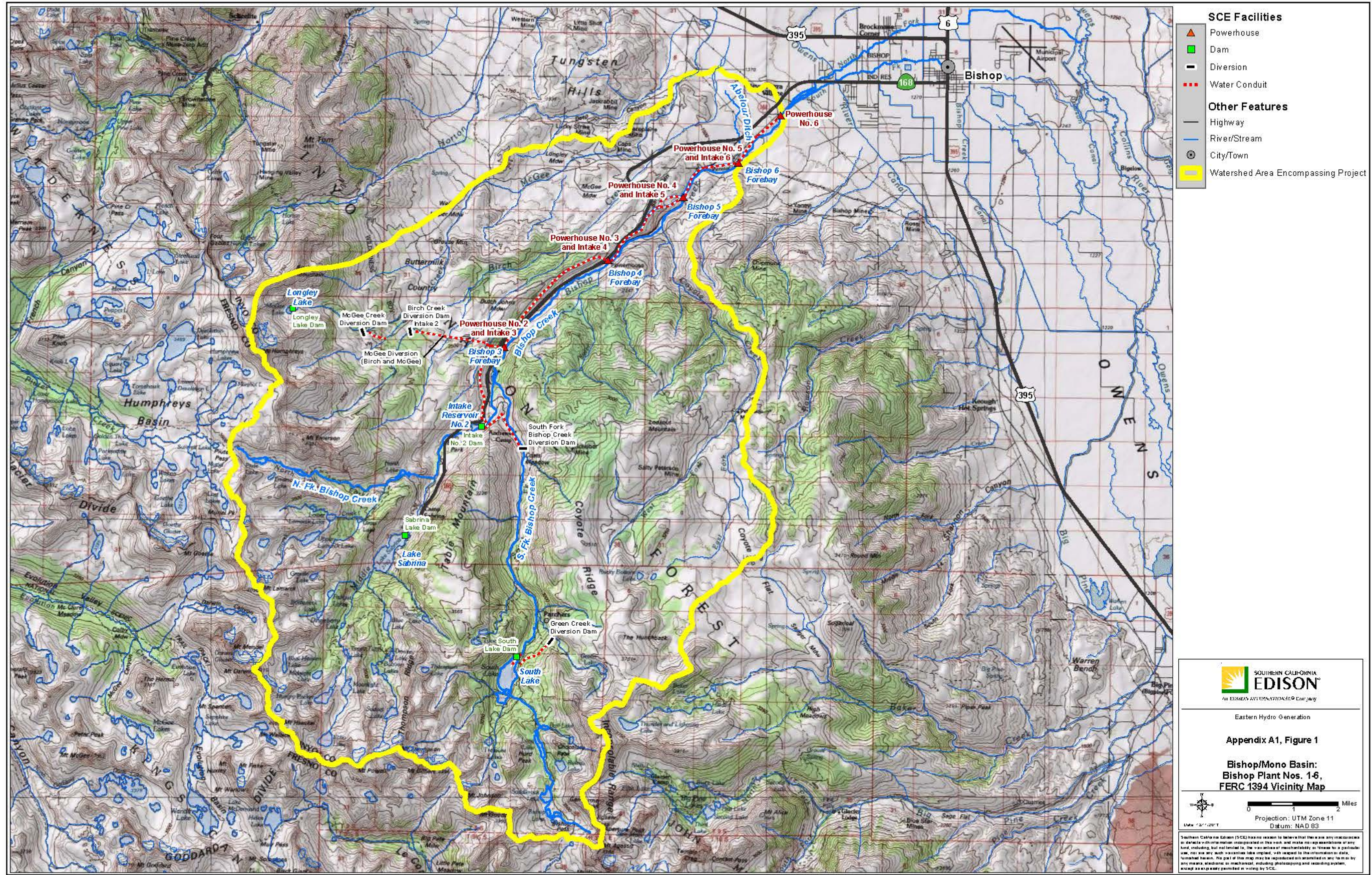
Appendix A2, Figures 1 and 2: East End Operations.

Appendix A3, Figure 1: Catalina Island.

### **A.2 Western Operations**

Appendix A4, Figures 1 through 5: Southwestern Productions

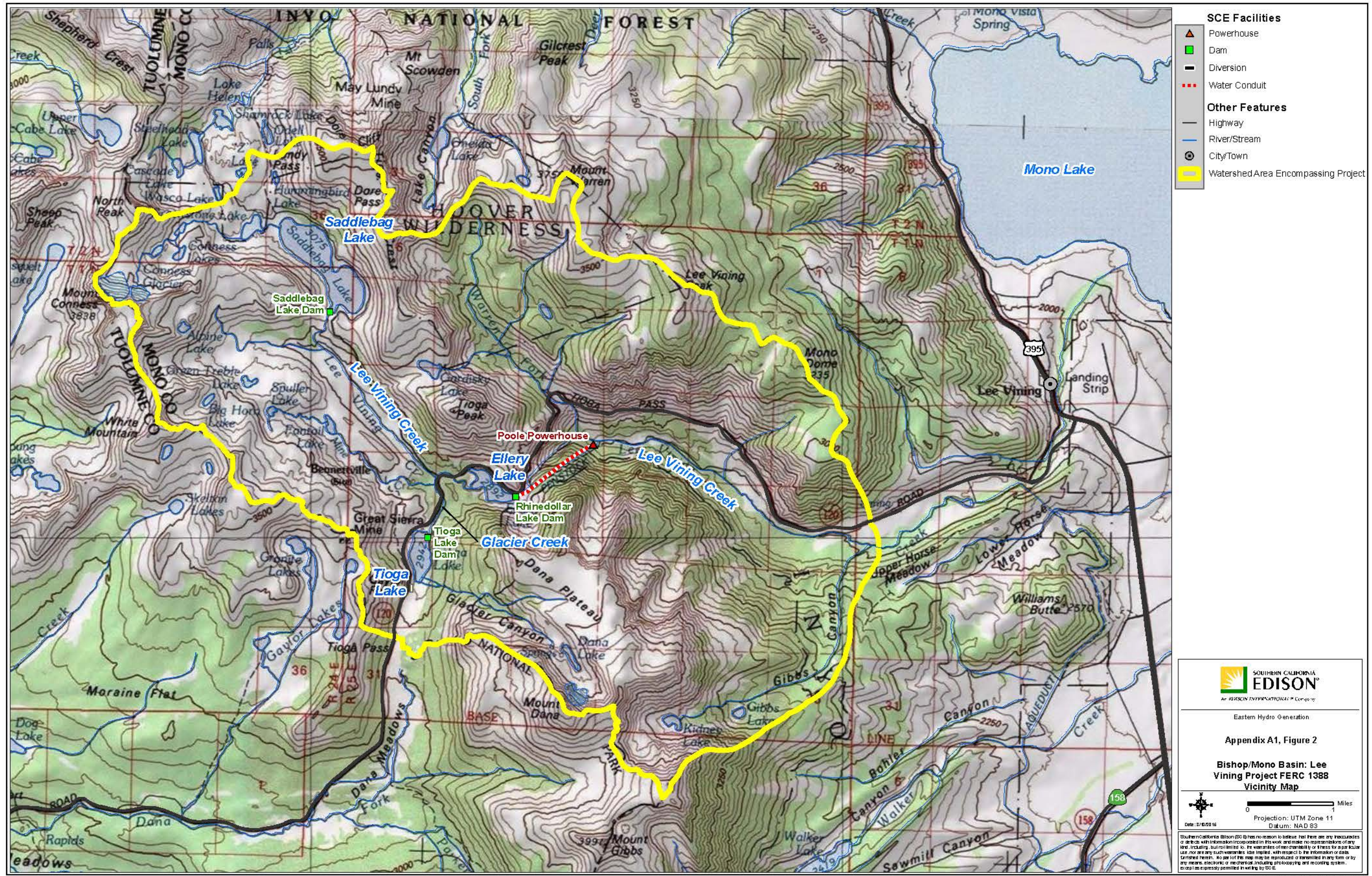
Appendix A5, Figure 1: Big Creek Hydroelectric System



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- SCE Facilities**
- ▲ Powerhouse
  - Dam
  - Diversion
  - - - Water Conduit
- Other Features**
- Highway
  - River/Stream
  - City/Town
  - Watershed Area Encompassing Project

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Appendix A1, Figure 2

**Bishop/Mono Basin: Lee Vining Project FERC 1388**  
Vicinity Map

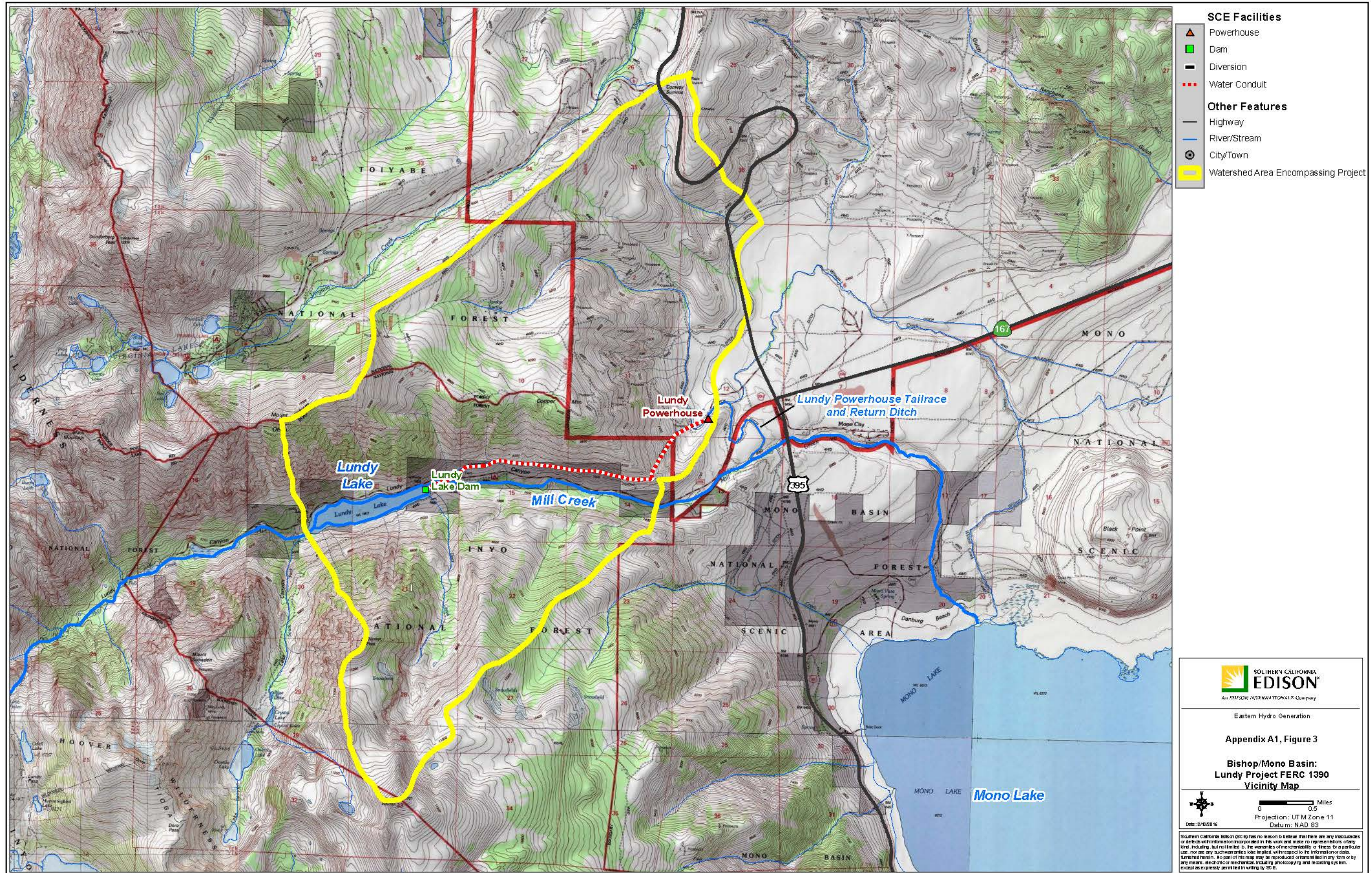
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Projection: UTM Zone 11  
Datum: NAD 83

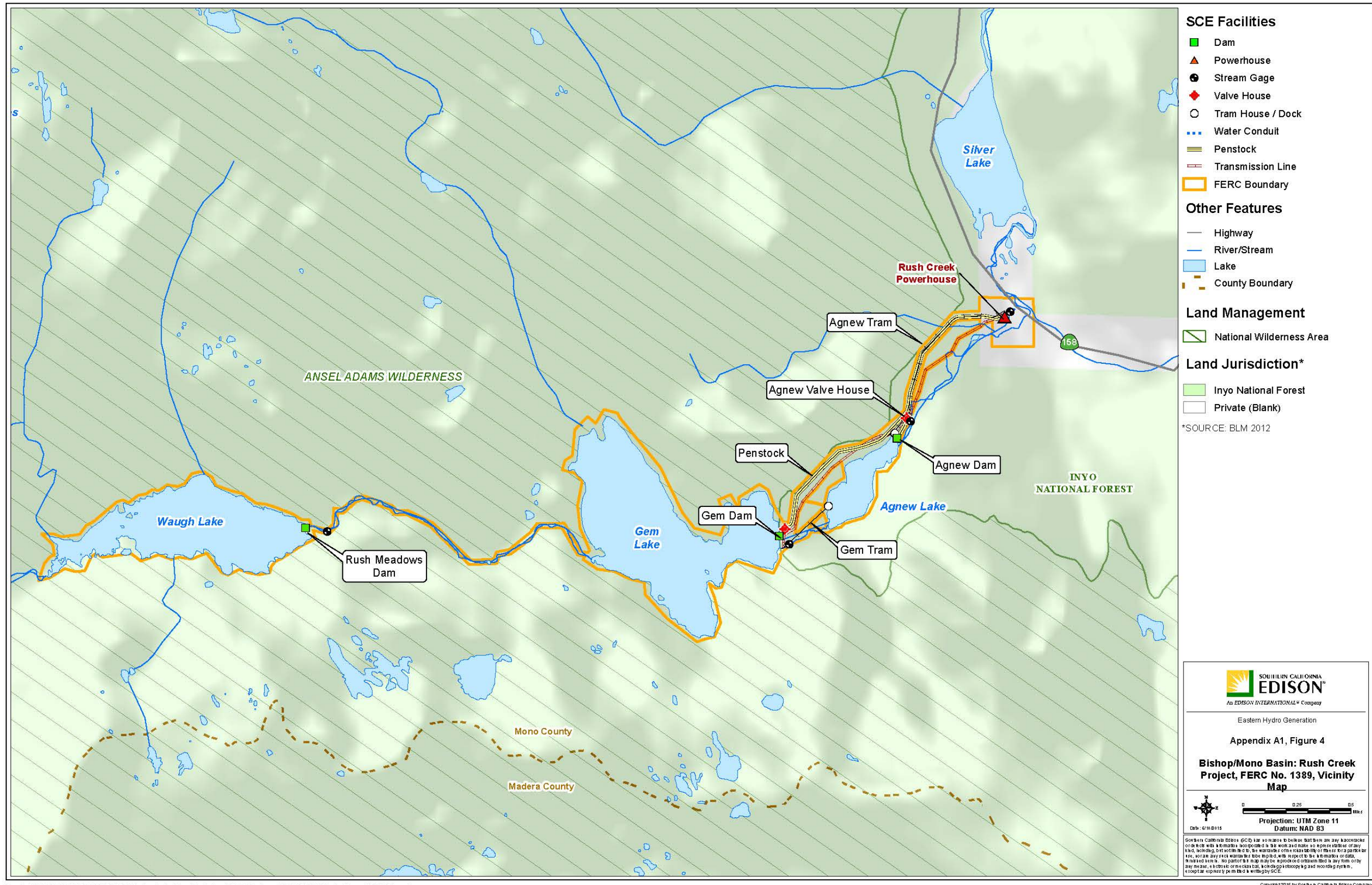
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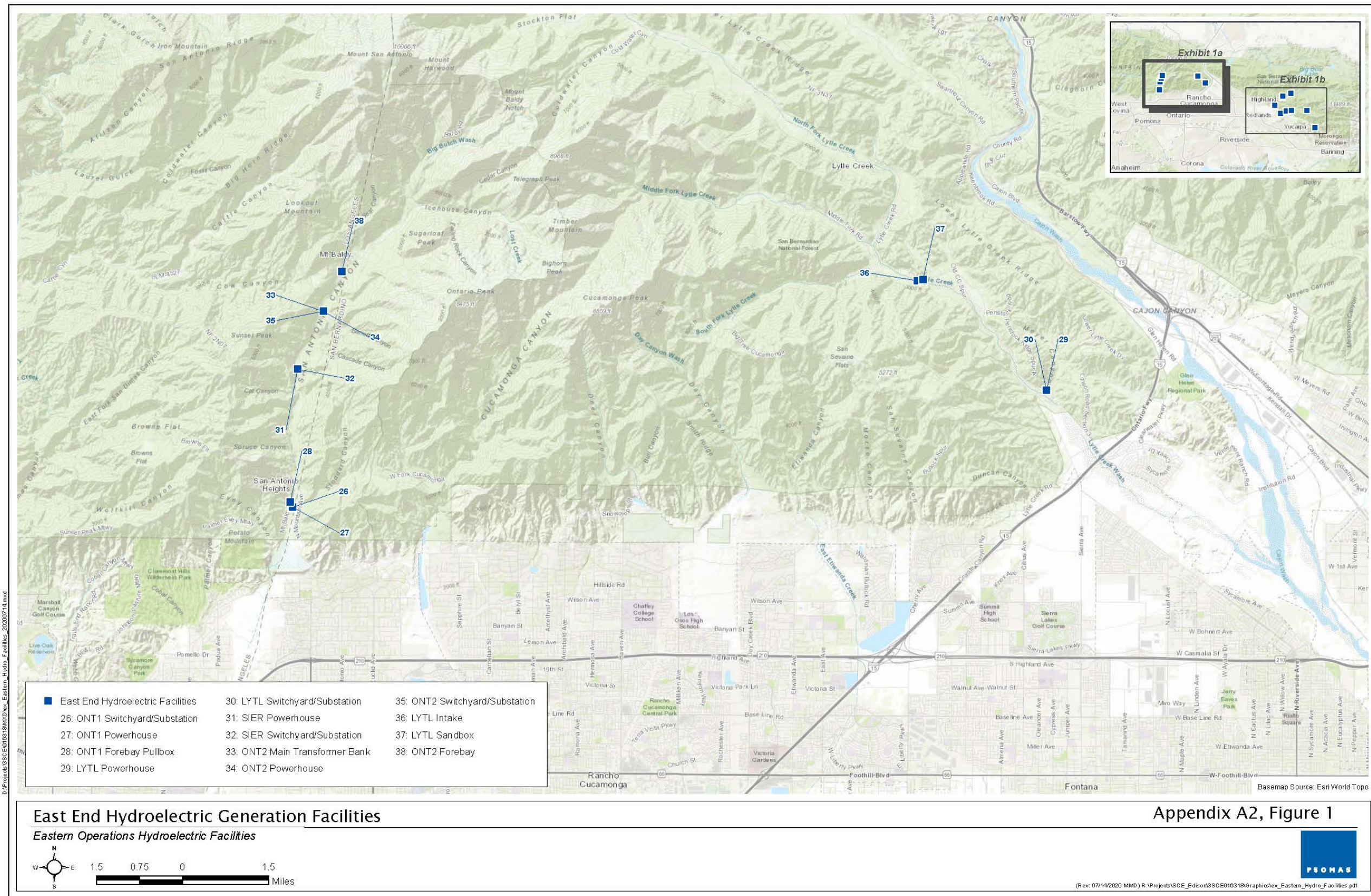
Appendix A1, Figure 4

**Bishop/Mono Basin: Rush Creek Project, FERC No. 1389, Vicinity Map**

Date: 02/19/2015

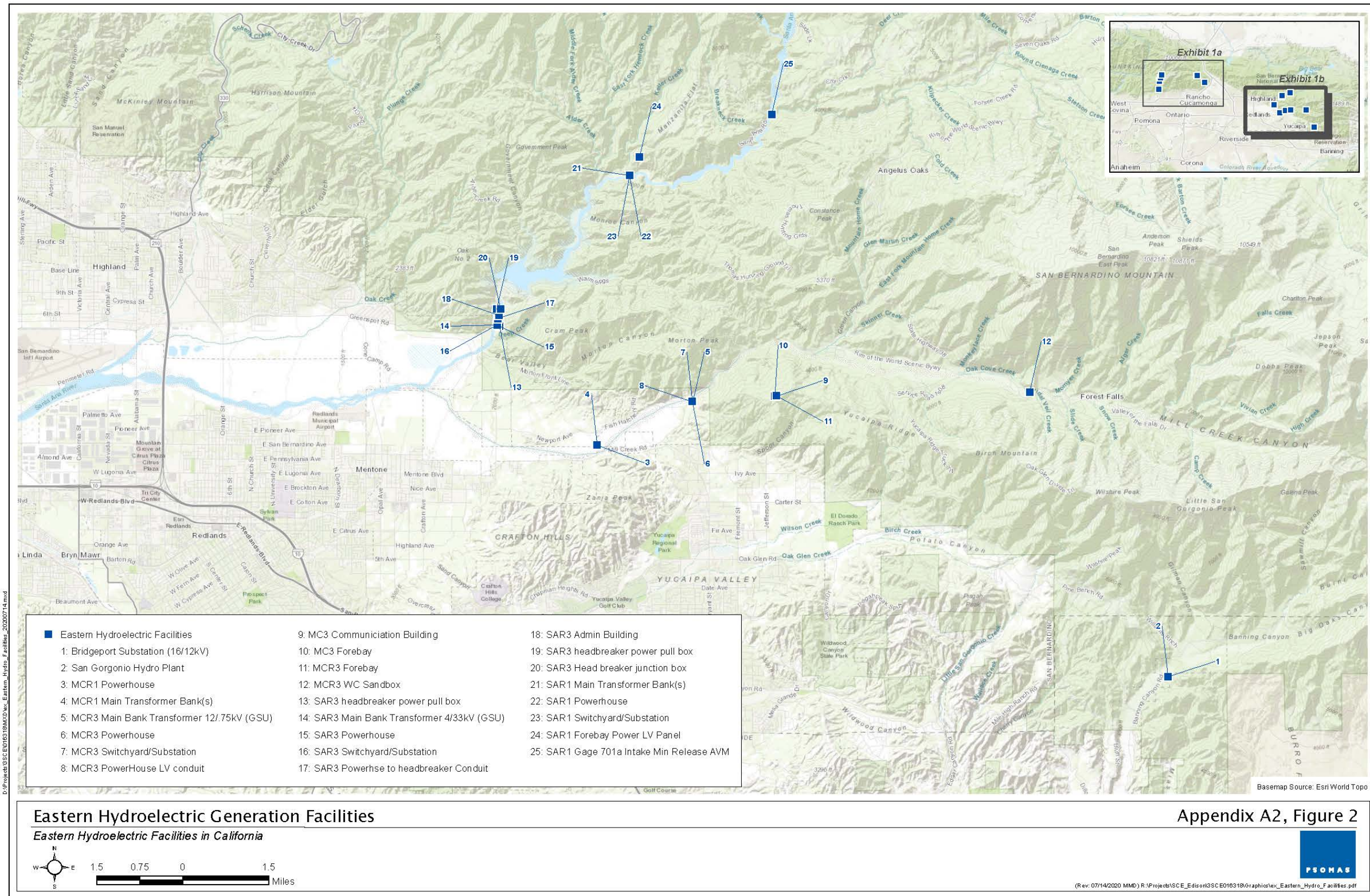
Projection: UTM Zone 11  
Datum: NAD 83

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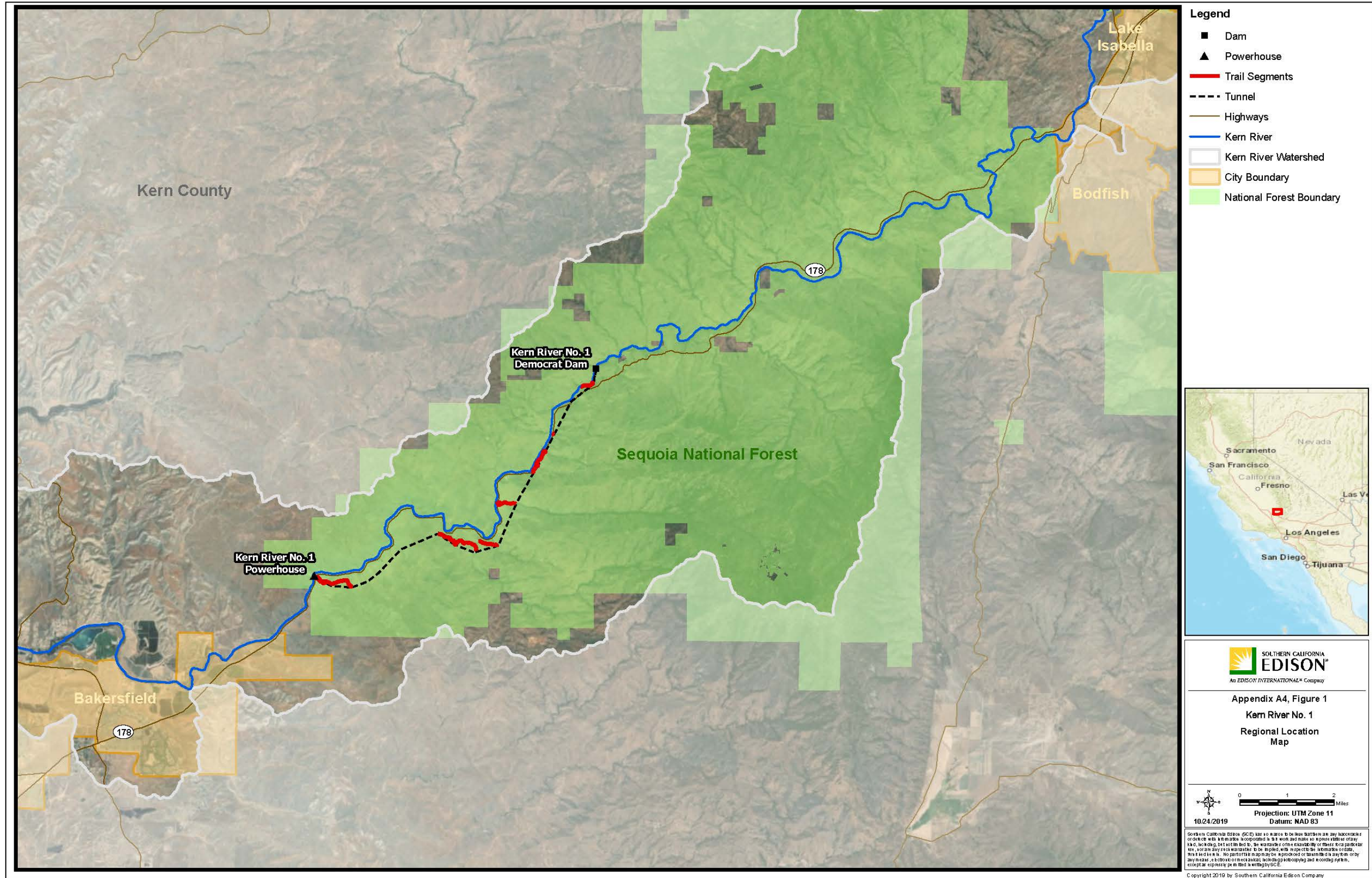


Appendix A2, Figure 1



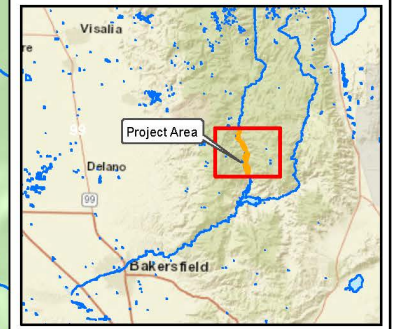
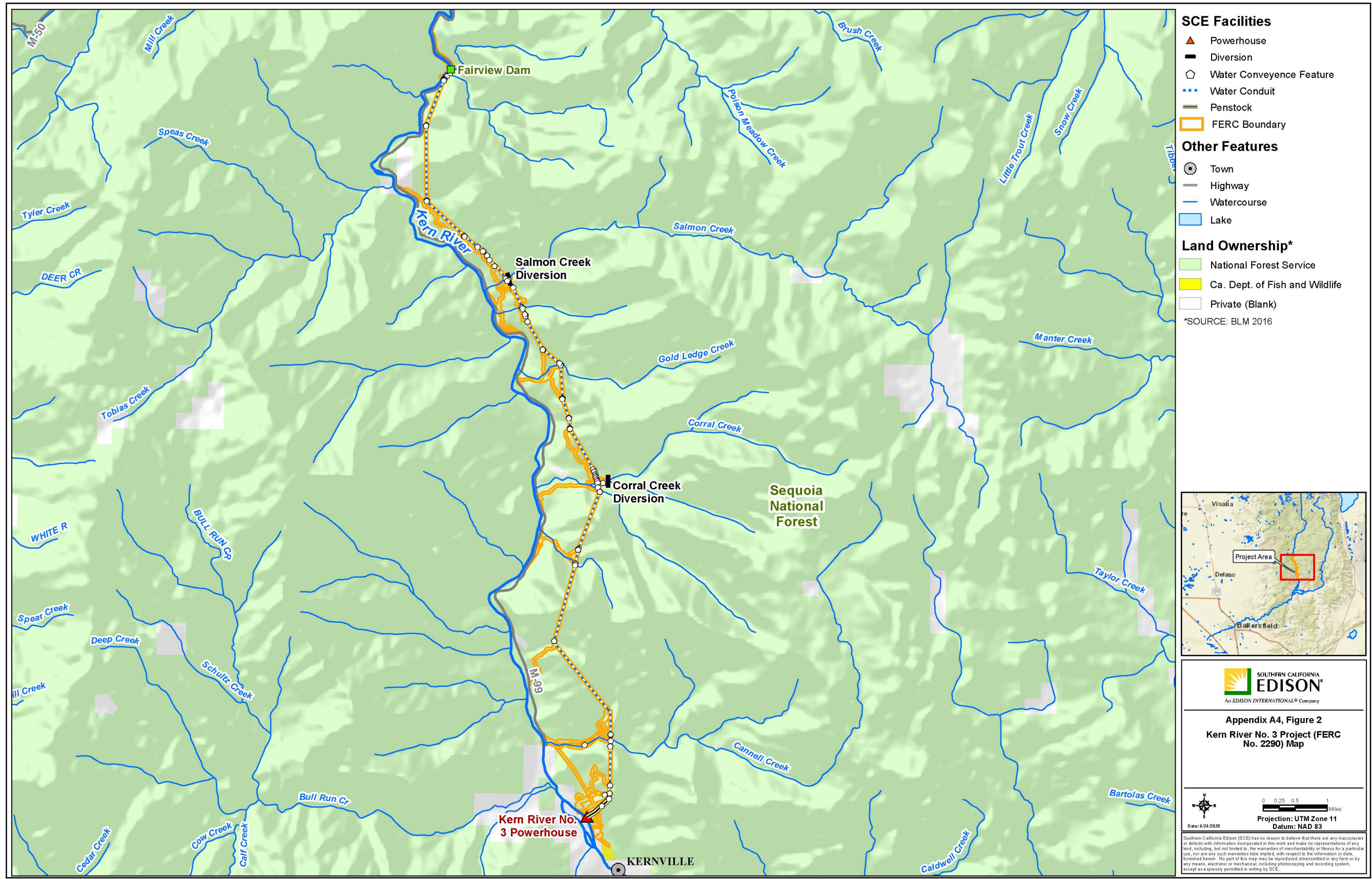






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10/24/2019  
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**Appendix A4, Figure 2**  
**Kern River No. 3 Project (FERC No. 2290) Map**

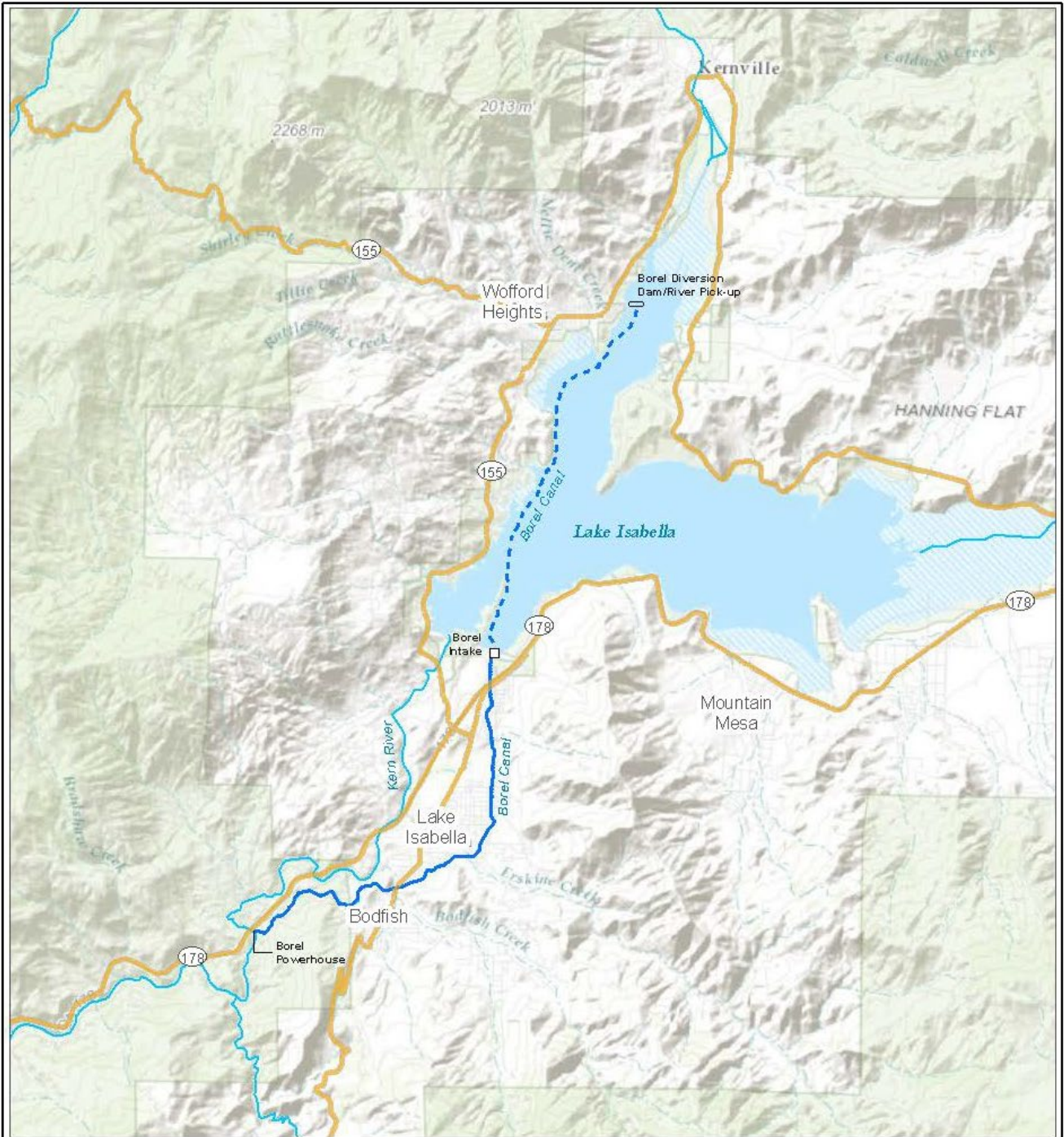
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Date: 6/24/2020  
Projection: UTM Zone 11  
Datum: NAD 83

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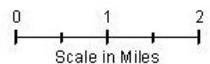




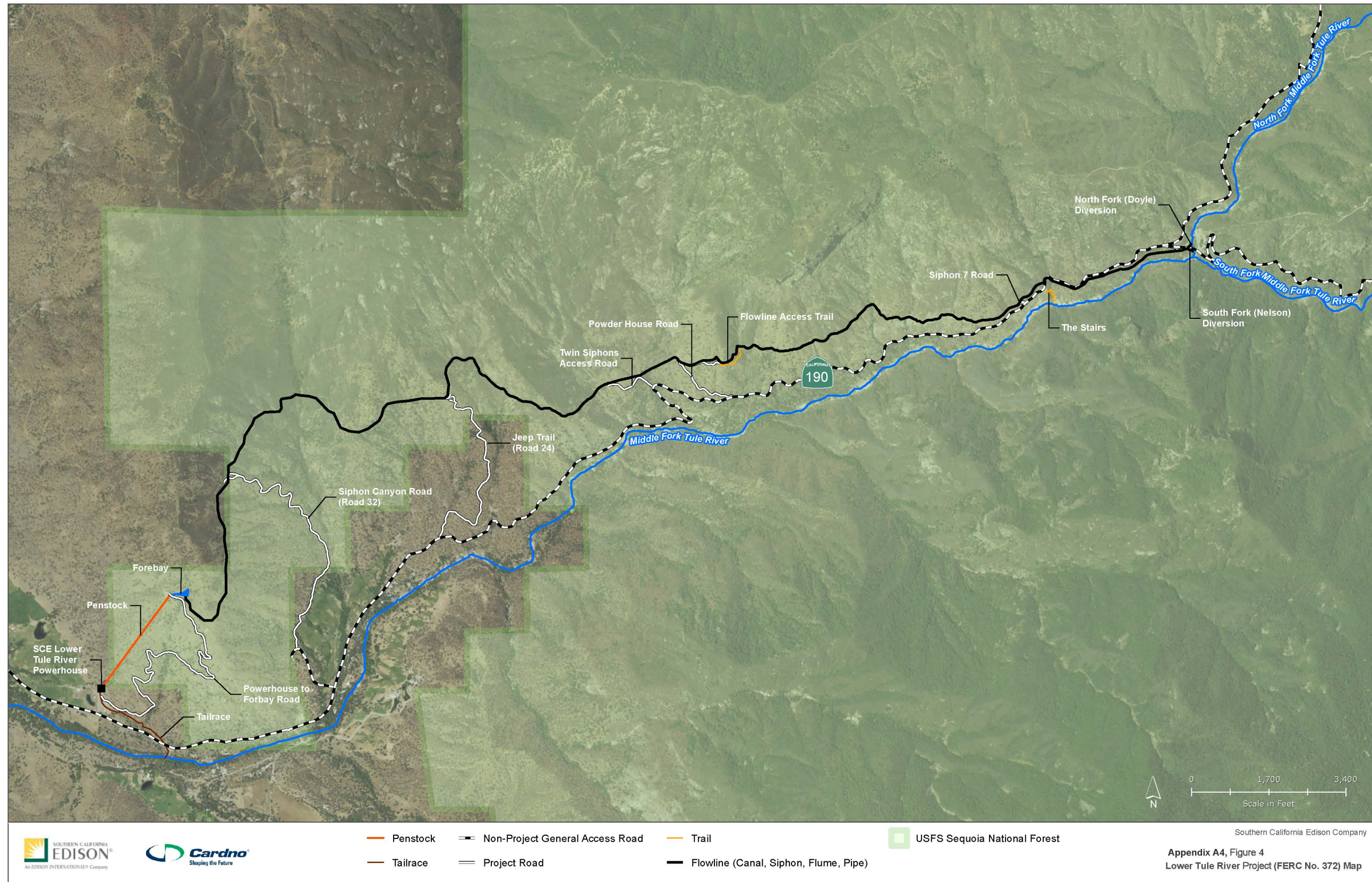
- Legend**
- Borel Flowline outside the Lake
  - - - Borel Flowline within the Lake

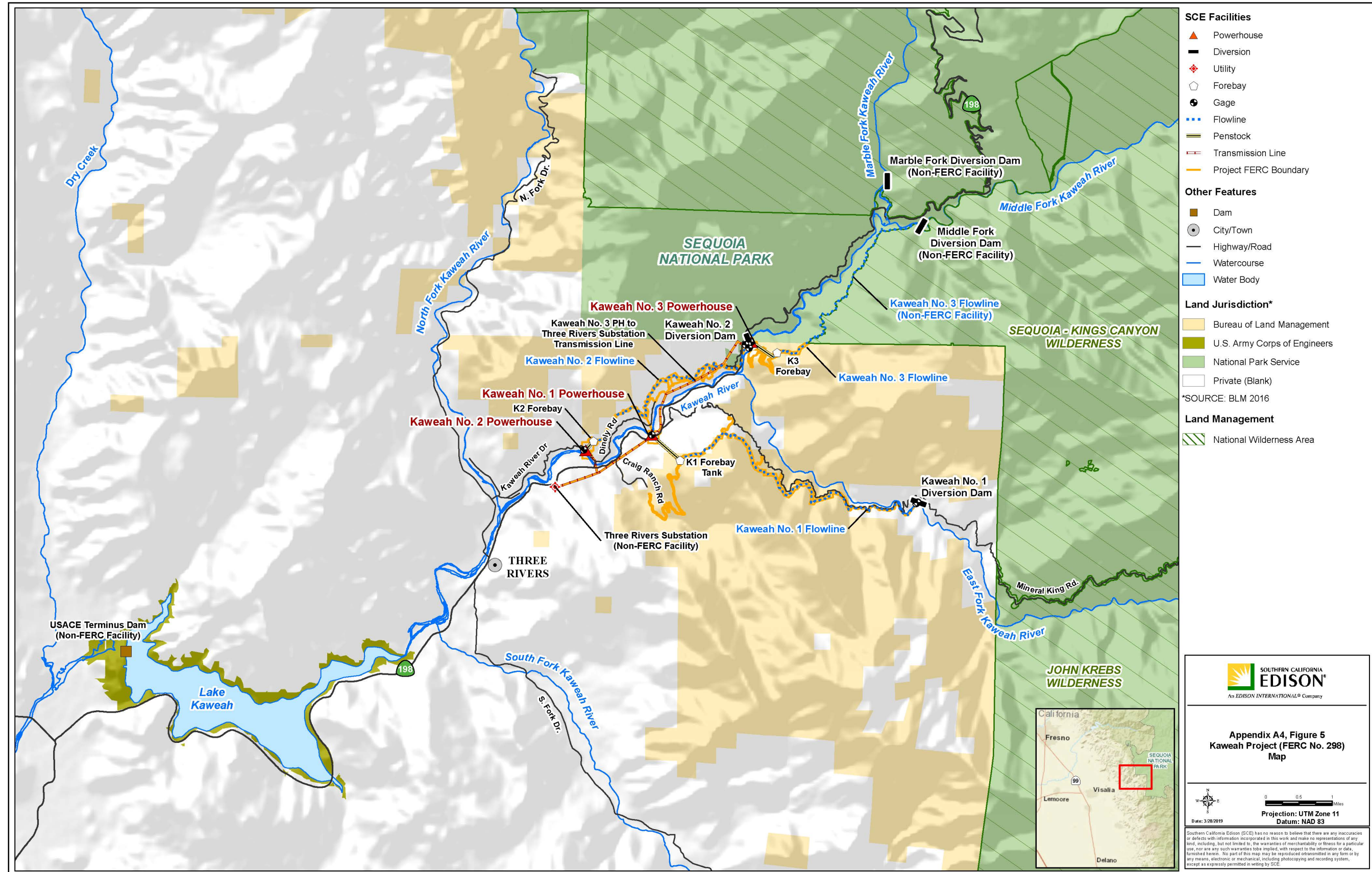


  
**Appendix A4, Figure 3**  
**Borel Hydroelectric Project (FERC No. 382)**  
**Regional Area**



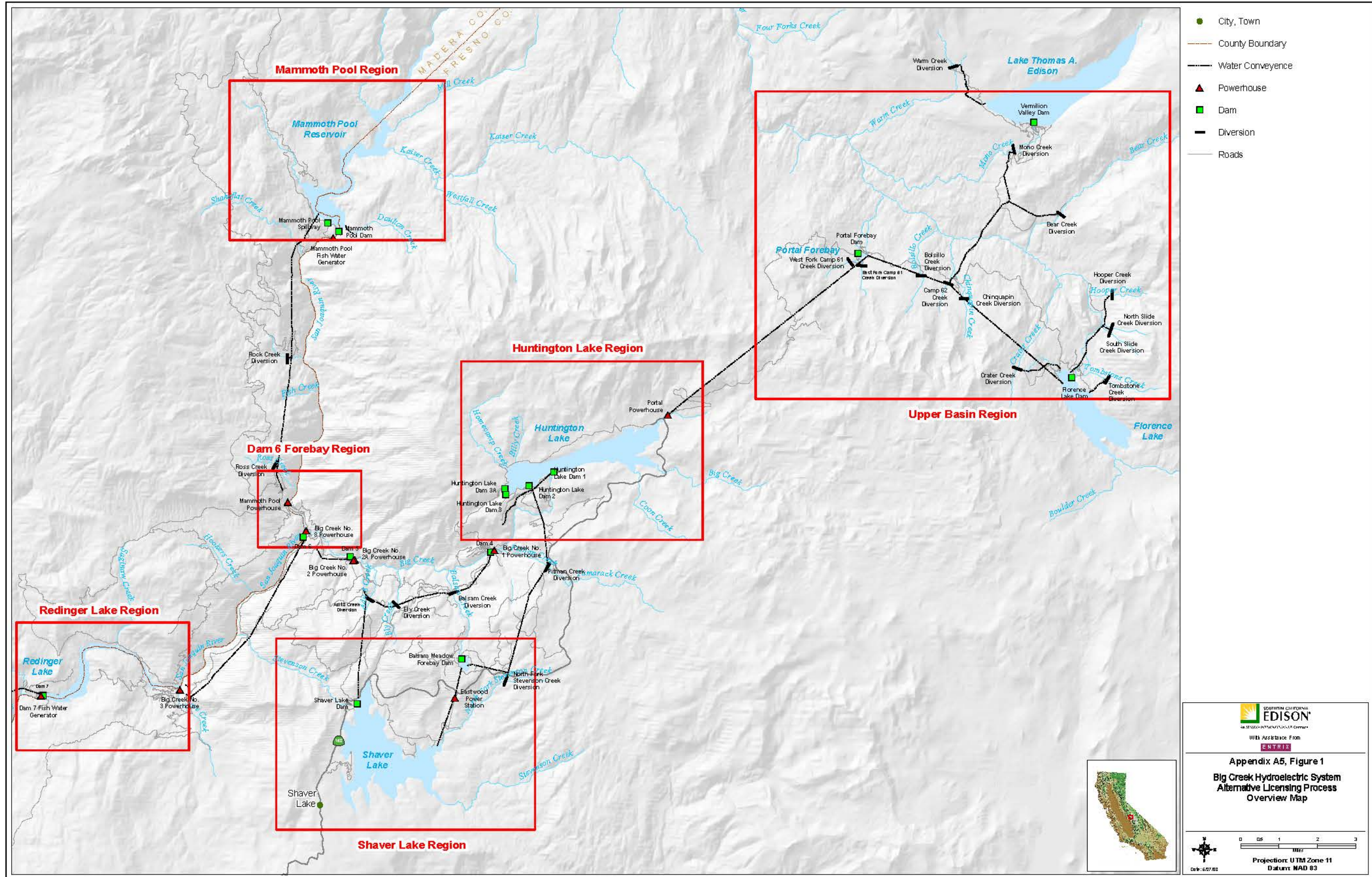
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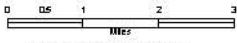
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100% Customer Focus
  
100% Commitment

**Appendix A5, Figure 1**
  
**Big Creek Hydroelectric System**
  
**Alternative Licensing Process**
  
**Overview Map**


  
 Projection: UTM Zone 11
   
 Datum: NAD 83
   
 Date: 6/27/08

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## Appendix B VM-3 Team Contact List

### B.1 SCE License Compliance

Name	Title	Email	Cell Phone
<b>SCE Generation: WMP Team</b>			
<b>Kishore Billapati</b>	<b>Principal Manager, AMGS</b>	<b>Kishore.Billapati@sce.com</b>	<b>(909) 243-9483</b>
Mark Clayton	Generation WMP Program Manager	Mark.Clayton@sce.com	(626) 425-2247
Marcus "Marc" Jones	WMP VM-3 Program Lead	Marcus.D.Jones@sce.com	(559) 368-8872
Marcus "Marc" Jones	Generation Vegetation Manager	Marcus.D.Jones@sce.com	(559) 368-8872
<b>SCE Generation: Regulatory Support Services</b>			
Martin Ostendorf	Sr. Mgr., Hydro Licensing & Implementation	Martin.Ostendorf@sce.com	(916) 798-4535
Stephanie Fincher	Hydro Licensing Compliance Manager (BC)	Stephanie.Fincher@sce.com	(626) 800-9152
David Moore	Hydro Licensing Compliance Manager (SW)	David.Moore@sce.com	(626) 999-6101
Mary "Meg" Richardson	Hydro Licensing Compliance Manager (BC)	Mary.M.Richardson@sce.com	(626) 238-2902
Matthew Woodhall	Hydro Licensing Compliance Manager	Matthew.Woodhall@sce.com	(909) 362-1764
<b>SCE Generation: Western Operations</b>			
<b>Southwest Productions (Kern, Borel, Kaweah and Lower Tule)</b>			
Dan Keverline	SW Operations AOR Manager	Daniel.Keverline@sce.com	(760) 379-7978
<b>Kern River/Borel</b>			
Brian Lee	AOR Manager	Brian.Lee@sce.com	(760) 377-7048
Ramon Anzaldo "El Jefe"	AOR Ops Chief	Ramon.Anzaldo@sce.com	(760) 223-1965
Justin Humphers	AOR Civil Foreman (Veg.)	Justin.L.Humphers@sce.com	(760) 464-8827 (760) 223-1468
<b>Kaweah/Tule</b>			

<b>Name</b>	<b>Title</b>	<b>Email</b>	<b>Cell Phone</b>
Brian Lee	AOR Manager	Brian.Lee@sce.com	(760) 377-7978
Gaspar Lopez	AOR Civil Foreman (Veg.)	Gaspar.Lopez@sce.com	(559) 280-2701
<b>Big Creek</b>			
Jay Kimbler	Operations Manager	Jay.Kimbler@sce.com	(559) 999-9630
Brian Ward	Maint. (Elect.) Manager	Brian.Ward@sce.com	(559) 331-0752
Marcus "Marc" Jones	Vegetation Manager	Marcus.D.Jones@sce.com	(209) 828-1235
<i>Upper Canyon:</i>			
Cyruss Lamarsna	AOR Ops Chief	cyruss.b.lamarsna@sce.com	(559) 513-3058
George Munguia	AOR Manager (ICE Techs)	George.Munguia@sce.com	(559) 246-9791
<i>Mid Canyon:</i>			
Shawn Thomure	AOR Ops Chief	Shawn.Thomure@sce.com	(559) 974-8669
James Stowe	AOR Manager (ICE Techs)	James.Stowe@sce.com	(714) 401-4265
<i>Lower Canyon:</i>			
Jonathan Heirendt	AOR Ops Chief	Jonathan.Heirendt@sce.com	(559) 960-2778
Marco "Vince" Morales	AOR Manager (ICE Techs)	Marco.Morales@sce.com	(559) 568-8828
<i>Planners:</i>			
David McFadden	Planner	David.Mcfadden@sce.com	(559) 676-8033
John Kuhner	Planner	John.Kuhner@sce.com	(559) 353-0777
<b>SCE Generation: Eastern Operations</b>			
<b>Bishop</b>			
Charles "Alan" Partridge	AOR Manager (ICE Techs)	Charles.Partridge@sce.com	(760) 937-6225
James Wagoner	AOR Civil Foreman (Veg.)	James.Wagoner@sce.com	(760) 937-3057
Seth Carr	ICE Tech	Seth.Carr@sce.com	(760) 937-1451
Paul Schmidt	Hydro Operator Mech	Paul.Schmidt@sce.com	(760) 937-4885
Travis Dagenhart	Planner (Bishop)	Travis.Dagenhart@sce.com	(760) 937-0915

Name	Title	Email	Cell Phone
<b>East End</b>			
Dean Caskey	Mech/Civil Sup	Dean.Caskey@sce.com	(909) 557-7424
Paul Atamian	ICE/Test Sup	Paul.Atamian@sce.com	(909) 307-6811
<b>Catalina</b>			
John Long	Local Catalina Veg Support/lots of other things	John.Long@sce.com	(310) 702-5304
David Grey	Planner	David.Grey@sce.com	(310) 510-4352 (office)
John "Jay" Martin	Production Sup (ICE Techs)	John.Martin@sce.com	(928) 503-3902 (office)
Eduardo "Eddie" Morones	ICE Tech	Eduardo.Morones@sce.com	(310) 510-4379 (office)
Frank Beach	Water and Gas Prod. Sup (O&M Veg. Crew via "Water crew")	Frank.D.Beach@sce.com	(310) 510-4360 (office)

## B.2 Subcontractors and Vegetation Specialist Contractors

Name	Title	Email	Cell Phone
<b>Vermilion Resource Management</b>			
Julianne Stewart	Senior Technical Lead VM-3	Stewart.juli@gmail.com	(559) 500-9727
Meghan Breniman	Registered Professional Forester	Meghan.breniman@gmail.com	(831) 682-1039
<b>Cardno</b>			
Crystal West	Senior Consultant/Project Manager	Crystal.west@cardno.com	(760) 920-1464
Tamara Klug	Principal Botanist	Tamara.klug@cardno.com	(805) 689-5986
Keven Ann Colgate	Senior Project Scientist/Arborist	Kevenann.colgate@cardno.com	(805) 444-1063
Sarah Hoff-Phillips	Environmental Scientist	Sarah.hoff-phillips@cardno.com	(206) 650-4633
<b>Psomas</b>			
Brad Blood	Senior Biologist/Associate/PM	bblood@psomas.com	(714) 514-7338
Trevor Bristle	Biologist/Arborist	trevor.bristle@psomas.com	(630) 235-2113
David T. Hughes	Senior Project Manager/Arborist	david.t.hughes@psomas.com	(626) 354-0556

## Appendix C Field Notification and Safety Forms

### SCE HYDRO FERC LICENSE AND COMPLIANCE PERSONNEL FIELD SHEET (PFS)

		DATE	MM/DD/YY
EMPLOYER	Cardno	WORK SUPERVISOR	
<input type="checkbox"/> NHR REP/ <input checked="" type="checkbox"/> SCE REP		PHONE	
BACK UP <input type="checkbox"/> NHR/ <input checked="" type="checkbox"/> SCE REP		PHONE	
AREA MANAGER CONTACT		PHONE	
WORK SITE	Location: City, Nearest Hwy, Hydro Facility feature (i.e., Mill Creek powerhouse #1), etc.		
WORK TO BE PERFORMED	Provide a description of work tasks and approximate locations, attach map(s) if necessary.		
DATES: FROM	MM/DD/YY	WORK HOURS: FROM	7:00 a.m. (approx.)
TO	MM/DD/YY	TO	5:00 p.m. (approx.)
NUMBER OF CREW MEMBERS			
NUMBER OF VEHICLES ON SCE COMPANY PROPERTY	Enter #		
MARKING ON VEHICLES	Make, model, color, vehicle magnet or dashboard sign?		
VEHICLE LICENSE NUMBERS	license plate # (if known)		
HOW TO REACH IN CASE OF EMERGENCY (2 CONTACTS)			
Name:		Name:	
Phone #:		Phone #:	
Relationship:		Relationship:	
SPECIAL INSTRUCTIONS	Access needed? Keys? Escort? Describe daily safety check-in/out procedure.		
cc:			
SCE REPRESENTATIVE		Signature	Date





# TEMPORARY Visitor Guidelines

COVID-19

## GUIDELINES FOR HOSTING VISITORS AT EDISON FACILITIES

To reduce the risk of exposure to COVID-19, a more restrictive visitor protocol is being implemented. If you are an employee who has job duties that require you to be physically on-site, effective immediately, **all in-person meetings with external visitors that are not business-critical must be conducted telephonically or virtually. If in-person meetings must occur, use these enhanced guidelines.**

### Examples of essential visitors or in-person business meetings include:

- Any in-person interaction that is essential for the company to function or would have a significant negative impact to the company if we did not host it. This includes meetings with key stakeholders (e.g., senior government or emergency management officials).
- A meeting that cannot be conducted virtually and will significantly impact the business if it is not conducted (e.g., certain critical job interviews). Delays in performing this work would impact system reliability or critical care customers.
- Critical deliveries.
- Hosting any in-person meeting required by law, court order or a regulatory agency where postponement or teleconference is not available.

Please be aware that a COVID-19 advisory asking visitors to advise their host if they or someone they have been in close contact with is experiencing symptoms of COVID-19 will be posted at all visitor entry points. COVID-19 symptoms include fever, cough and shortness of breath.

**IF YOU ARE HOSTING A VISITOR, PLEASE REINFORCE THIS MESSAGE:  
NO VISITOR WILL BE ALLOWED ON-SITE IF THEY OR SOMEONE THEY HAVE  
BEEN IN CLOSE CONTACT WITH ARE COVID-19 SYMPTOMATIC.**

### When hosting visitors, use the following guidelines:

Prior to their arrival, email your visitors the [visitor screening questionnaire](#) and have them send it back to you. Then forward the completed questionnaire to [Visitor.Clearance@sce.com](mailto:Visitor.Clearance@sce.com). The questionnaire captures visitor's information and asks several COVID-19 related questions.

**If your visitors answer yes to any of the questions, cancel or postpone your meeting. Consider what part of your interaction with the visitor could still be done telephonically/virtually.**



## TEMPORARY Visitor Guidelines

COVID-19

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### Once your visitors arrive on-site, follow these guidelines:

- Confirm the responses to the visitor screening questionnaire remain accurate. If your visitors answer yes to any of the questions, they must leave the facility.
- Replace handshakes with a friendly elbow bump or verbal greeting.
- Practice social distancing, which means that you maintain a distance of 3 to 6 feet from others as much as possible.
- Limit your visitors to one location while on-site and limit your visitors' interactions with other employees to only employees who must attend the scheduled meeting. Escort your visitors at all times while practicing social distancing.
- Shared meals should be avoided. If your meeting requires catering, please request meals be delivered in individually packaged containers.
- As an Edison representative, you are responsible for your visitors. Please ensure that you and your visitors follow section 2.1.3 of the [Physical Security and Cybersecurity policy](#).

If you have any questions, please contact the EIC Hotline at 1-800-500-4723. Visit the COVID-19 [Portal page](#) (Company > Key Initiatives > Coronavirus) for updated information as it becomes available.



**SCE VISITOR SCREENING QUESTIONNAIRE**

Name of Visitor  
Phone Number of Visitor  
Email Address of Visitor  
Date of Visit  
Name of Employee You Are Visiting  
Email of Employee You Are Visiting  
Location of Visit  
Reason for Visit

Are you or anyone you are in close contact with experiencing the following symptoms: **Fever, Cough, Shortness of Breath?**

Yes

Have you or a member of your immediate household tested positive for COVID-19, are exhibiting symptoms of COVID-19 or been exposed to a person exhibiting the symptoms of COVID-19, or to a person that developed the symptoms of COVID-19 within 14 days of your exposure to that person, or did you or any member of your immediate household travel on a cruise, or through any international or high-risk domestic location?

Yes

Have you been exposed to anyone who has a confirmed case of COVID-19 or is suspected of having COVID-19?

Yes

Name Date

By providing my name on the line above, I certify that the above information is true and correct





July 17, 2020  
TO WHOM IT MAY CONCERN

**SUBJECT:** Travel Access for Critical Work - Electrical Services and Materials Support

This confirms the individual identified below and bearing this memorandum is the employee, contractor or subcontractor of the company named below (Contractor). Contractor supports Southern California Edison Company's (SCE) essential electrical services or materials supply efforts required to maintain the essential service of electrical power and is authorized by SCE to travel for purposes of conducting their work.

Type of essential electrical services performed is described as follows:

Environmental remediation/monitoring technicians

**Duration:** Effective July 17<sup>th</sup>, 2020 through December 31<sup>st</sup>, 2020

**Name of Contractor:** CARDNO, INC.

**Name of Contractor Employee/Contractor/Subcontractor:** \_\_\_\_\_

We appreciate your assistance in allowing this individual to travel to and from their work destination. If you have questions regarding this memorandum, please contact the SCE Supply Management contact for this work:

Mariann Lin, who may be reached at Mariann.Lin@sce.com or by phone: 6264764123

Thank you for your assistance with Southern California Edison's efforts to maintain electric services safely and efficiently.

Sincerely,

\_\_\_\_\_  
Kenneth Landrith  
Director, Supply Chain Management

Southern California Edison  
2244 Walnut Grove Ave – 1st Floor  
Rosemead, CA 91770

Letter to Supplier 13004634



## APPROVED CONTRACTOR FOR SOUTHERN CALIFORNIA EDISON Protecting the Environment

Southern California Edison (SCE) is **required** by federal and state environmental laws protecting environmental resources to ensure electrical work activities avoid harm or damage to the environment while providing safe and reliable electricity to customers.

Environmental inspections are performed as part of SCE's Environmental Compliance Program to avoid and protect environmental resources like nesting birds, other protected wildlife, and archaeological artifacts when performing maintenance activities on electrical equipment located **on/near** customer property.

**Approved SCE Environmental Contractors** perform environmental inspections (i.e. nesting bird surveys, archaeological surveys) along electrical lines and poles/towers **prior** to start work of electrical maintenance activities (e.g. pole replacement, tree trimming, tree removal). Approved SCE Environmental Contractors may need to access private or public paved/unpaved roads or trails in addition to customer property to perform environmental inspections.

Approved SCE Environmental Contractors will carry a form of company identification (e.g. business card) and appropriate field attire (e.g. high visible construction vest). Approved SCE Environmental Contractors do not need to go into buildings or residential homes to complete environmental inspections.

### Approved SCE Environmental Contractors

- Cardno, Inc.
- Applied Earthworks
- Bargas Consulting
- Blair, Church & Flynn
- Bloom Biological
- Blue Rock Services
- BRC
- Cogstone
- Cornerstone Development Company
- Forde Biological
- Janelle Nolan & Associated (JNA)
- Livewire Ecological Consulting
- Material Culture Consulting, Inc.
- McCormick Biological
- PAX
- Paleo Solutions, Inc.
- SummitWest Environmental, Inc.

If you have any questions or concerns, please contact me at 626-222-4254 or SCE Customer Service at 800-990-7788.

**This letter valid through December 31, 2021.**

Thank you,

Jennifer Leung  
Environmental Clearance  
Manager, Environmental Services Department  
Southern California Edison  
626.222.4254

## Appendix D VM-3 Desktop Review Instructions

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### D.1 VM-3 Expanded Clearances

#### Desktop Review Instructions

1. Evaluate the site using aerial/Google Earth imagery, photographs, or any other available sources
  - a. For those with SCE AGOL access:
    - <https://sce2.maps.arcgis.com/apps/webappviewer/index.html?id=99d8b89ae06e400d8ae13e7feaf2974>
2. Determine if there may be a need for an Operations Escort to the facility
  - a. Populate Escort Required? field
    - i. If site is near HV electrical yards (substations, switchyards, transformer banks, etc.) at minimum a Notification will be required. If site does not require entry into gate or PH itself, a Notification may be sufficient, select “Notify”
    - ii. If site requires entry into locked gates of a HV compound (above) or PH, then an escort is required, select “Yes”
    - iii. If there does not appear to be any restricted/HV areas around the facility, select “No”
  - b. Take notes on how site(s) can be accessed to plan for Field Inspection
    - i. Some questions: Are keys needed to open gates? Site near paved road? Or miles along dirt access road? Any major water feature crossings?-If so, may want to ask Operations about condition of road (is it passable).
3. Review Clearance Target field and confirm it appears to match guidance based on asset type
  - a. Contact Technical/SCE Program Lead if there appears to be an issue/error with the target distance
4. Based on Clearance Target and site conditions from Aerial imagery/desktop methods, populate notes about the Remediation Treatment needed
  - a. Remediation Notes – populate with any estimates of extent of type of clearing work needed for the site/facility. Can also populate with the anticipated Vegetation community/fuel density present. Anticipated level of effort (low, med, high) can also be populated here.
  - b. Risk Priority –default = populate the field according to the HFRA Tier area (Extreme or Elevated) and whether HV or LV. However, this is meant to be a subjective/risk-based priority determined from all available inputs; with 4 being the lowest risk. Some LV sites may warrant a higher classification based on concerns with current vegetation encroachment/density and some HV sites may be lower risk if there is already a good amount of clearance around the facility (or non-vegetated surfaces such as concrete or asphalt).
    - i. If field is populated with text (low, med, high), convert to the risk numbering system.
  - c. Notes/Questions – a free-text field that can be utilized for any questions that may not fit into one of the above categories.
    - i. Can also use to schedule proposed Field visit dates, as needed
5. Once complete with the Desktop Review,
  - a. Change VM-3 Work Status to “Desktop Review Complete”

- b. Change EC Desktop Review Complete field to “Yes”.

**Main Data Fields to Populate During Desktop Review**

Editable	Escort Required?	Notify Yes – Escort No TBD	Helps for planning Field inspection and whether operations escort is needed.
Editable	Remediation Notes	255 char	Notes field for Remediation comments. May be completed in Desktop review or in Field
Editable	Risk Priority	1-4	Default guidance: 1-Extreme & HV, 2- Extreme & LV, 3- Elevated/HV, 4- Elevated/LV However, risk can be increased for sites as warranted.  Look in the site’s fields below as inputs for populating risk: Inspection Type LV SCE Designation EXTREME
Editable	VM-3 Work Status	Drop down	Overall treatment status for each site and tracks workflow through various stages of Program
Editable	EC Desktop Review Complete	Drop down: Yes Need	Populate “Yes” when complete.
Editable	Est Veg Effort/hrs	est # hours required to mitigate	Used to calculate overall level of effort (to drive scope/budget, scheduling) and determine appropriate crew for treatment
Editable	Notes/Questions	255 char	Notes field for other comments. May be completed in Desktop review or in Field

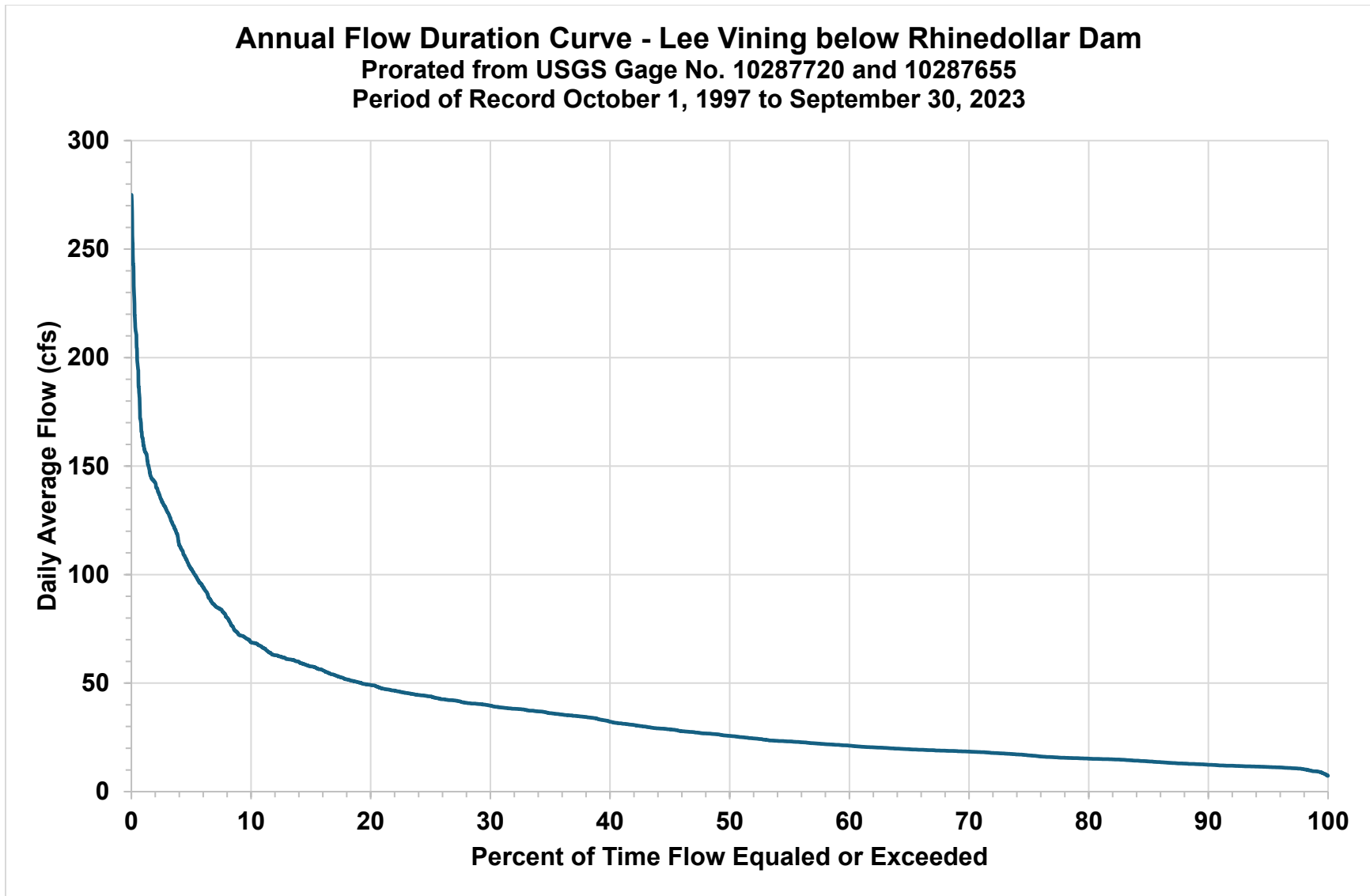
## Appendix E ArcGIS Collector Guide Data Dictionary

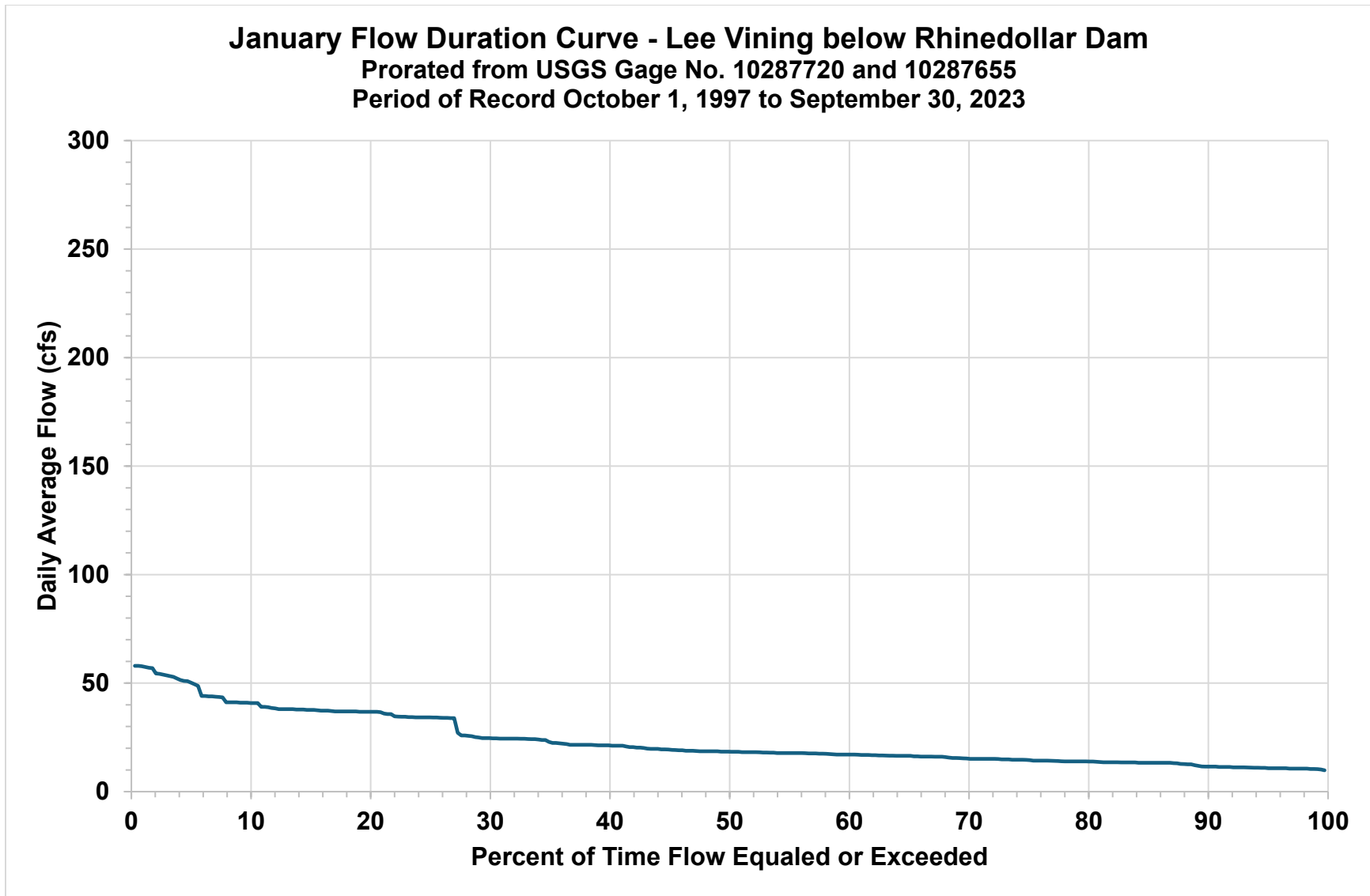
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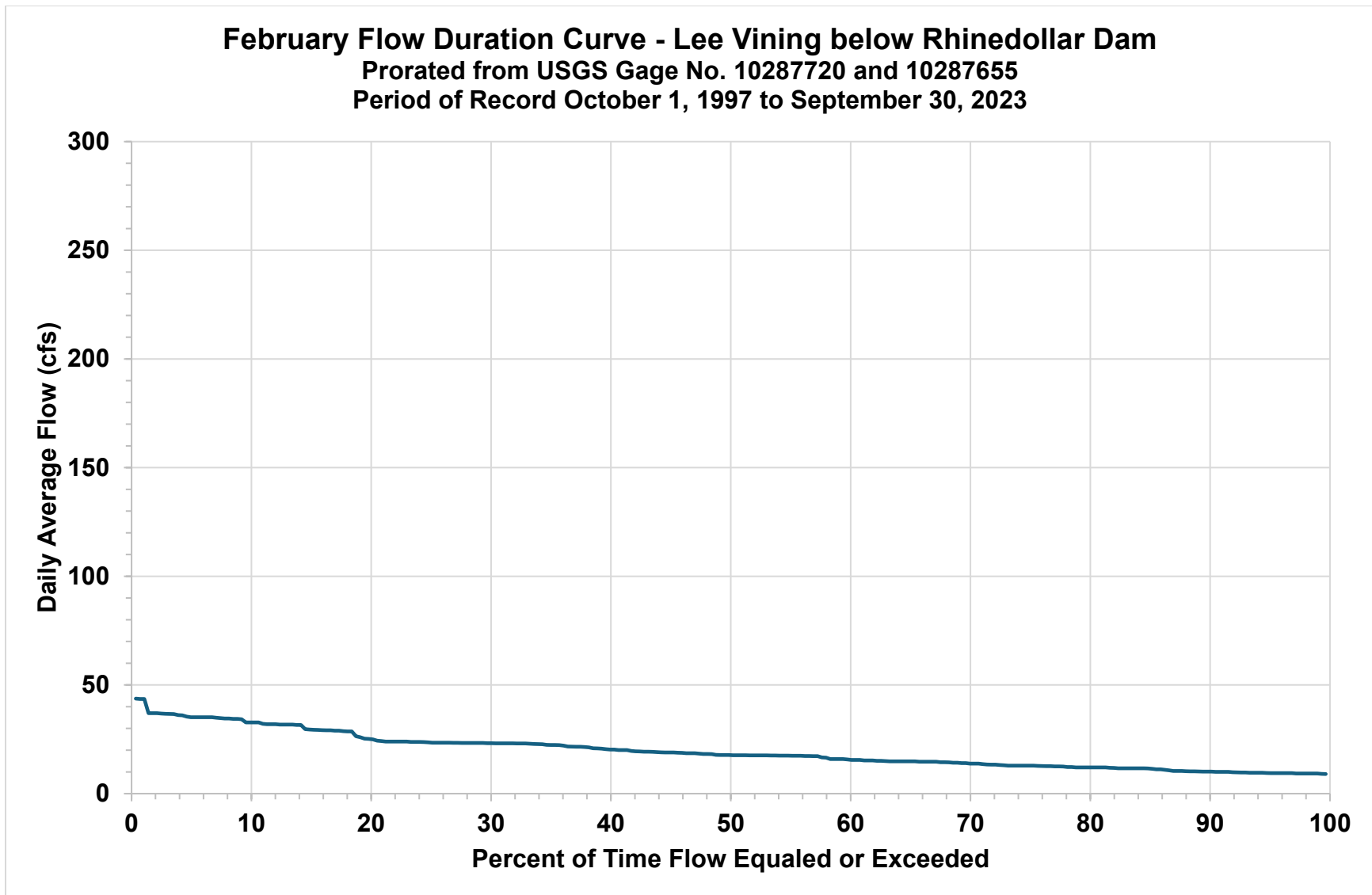
*An SCE-issued email and AGOL account is required to access this. The Program Lead manages access to the VM-3 maps and databases. Access through GIS Informatics group is required to access SCE data, including asset/facility information.*

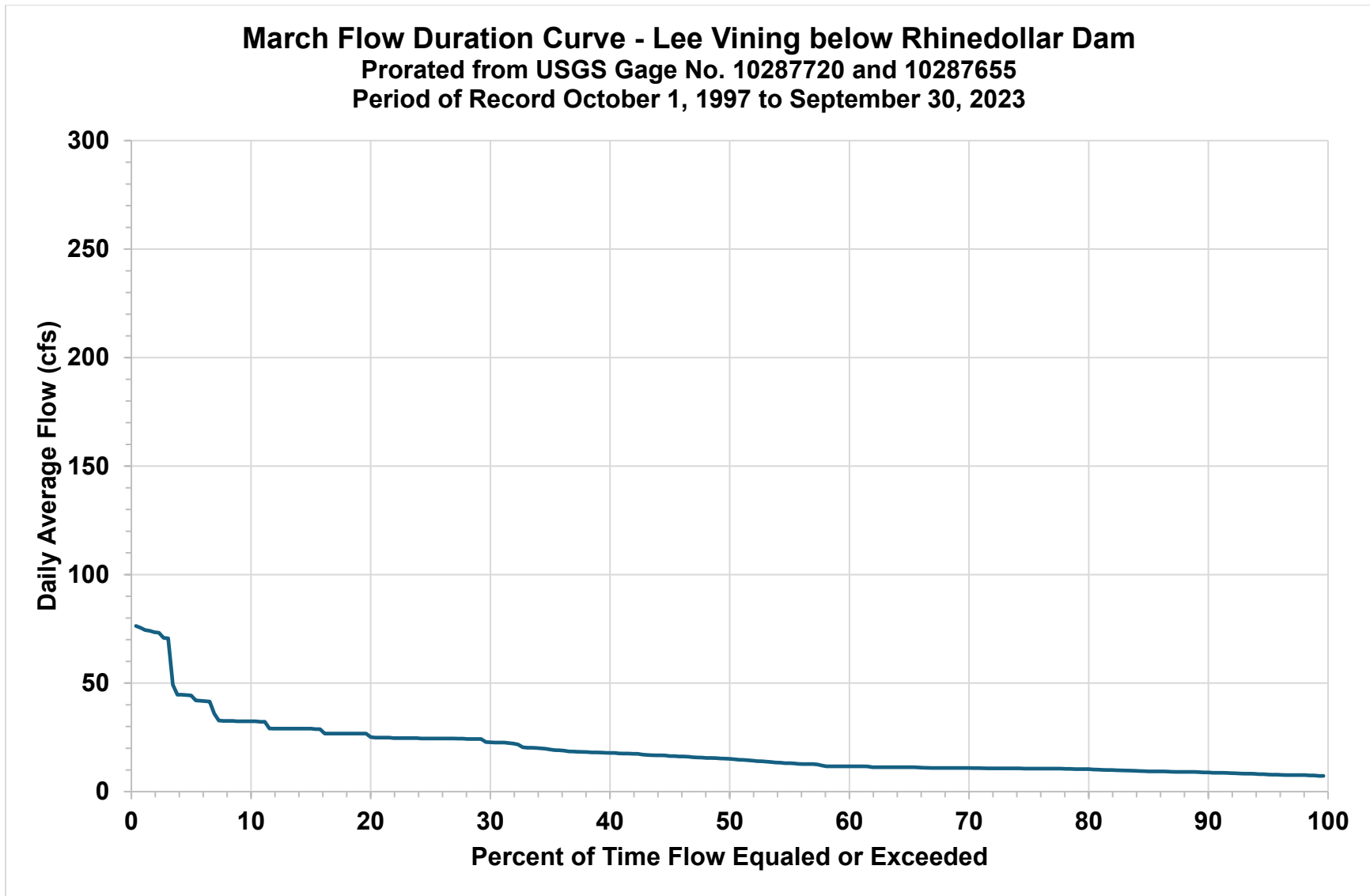


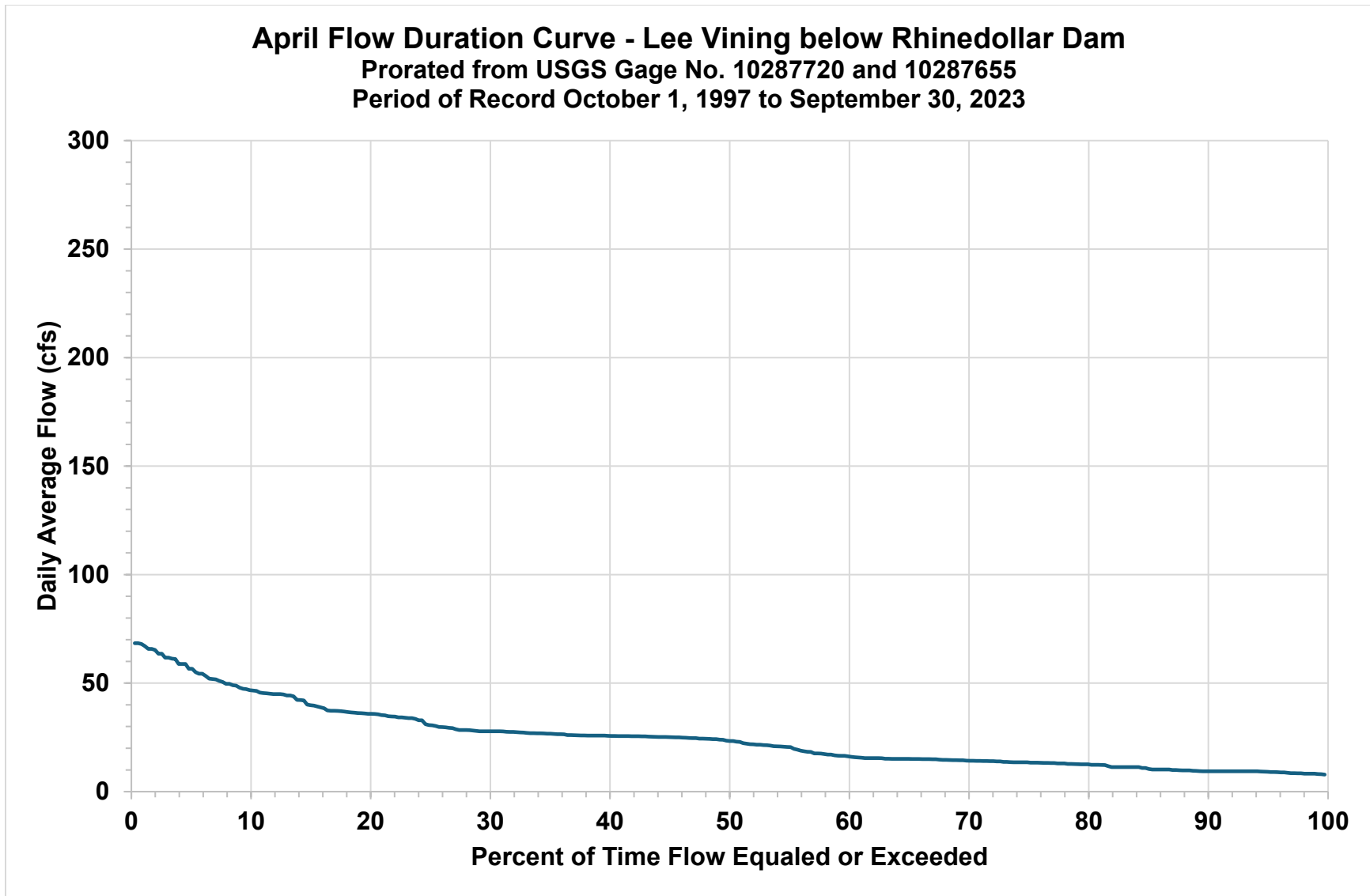
**APPENDIX E.2  
FLOW DURATION CURVES**

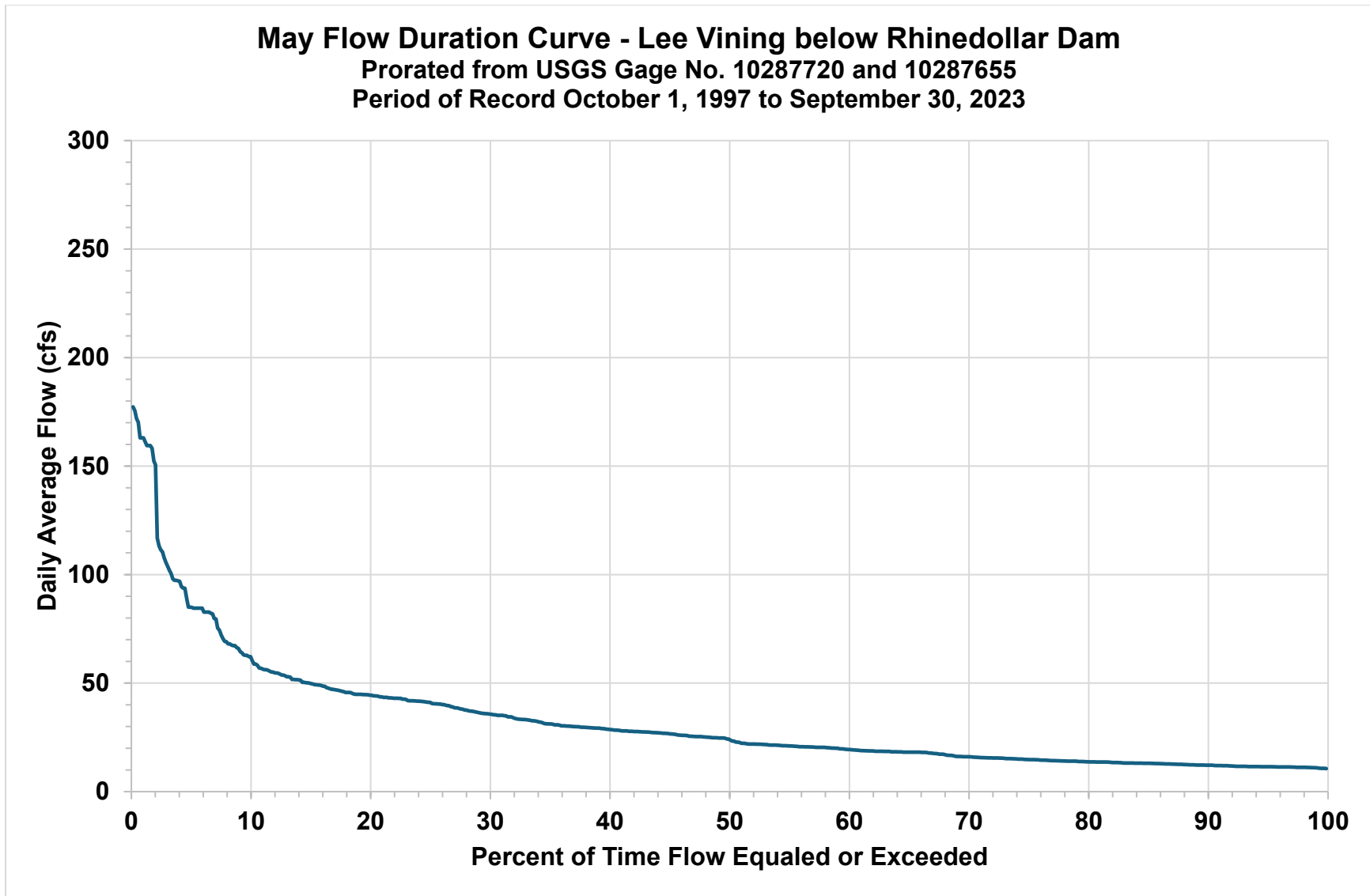


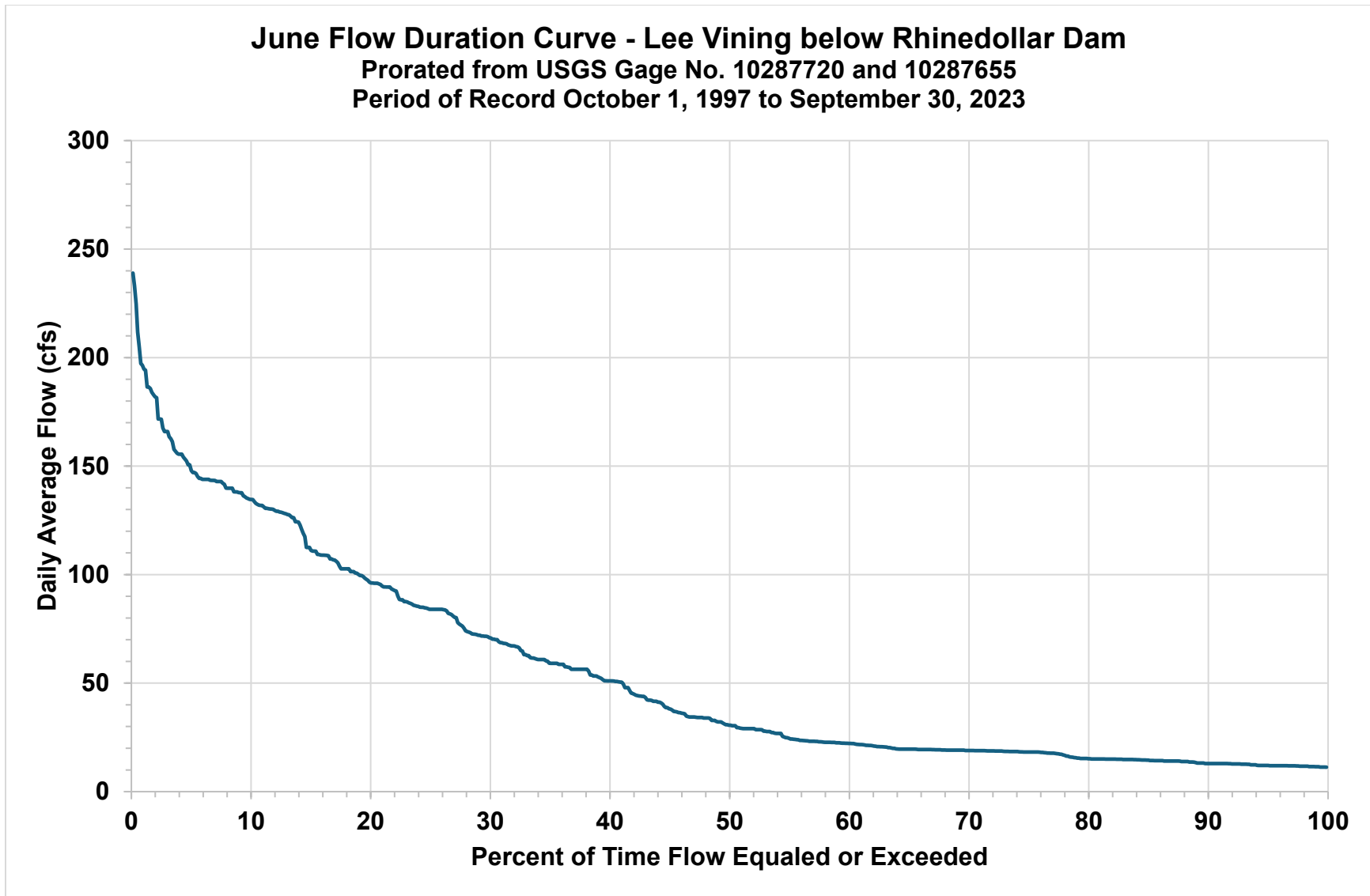




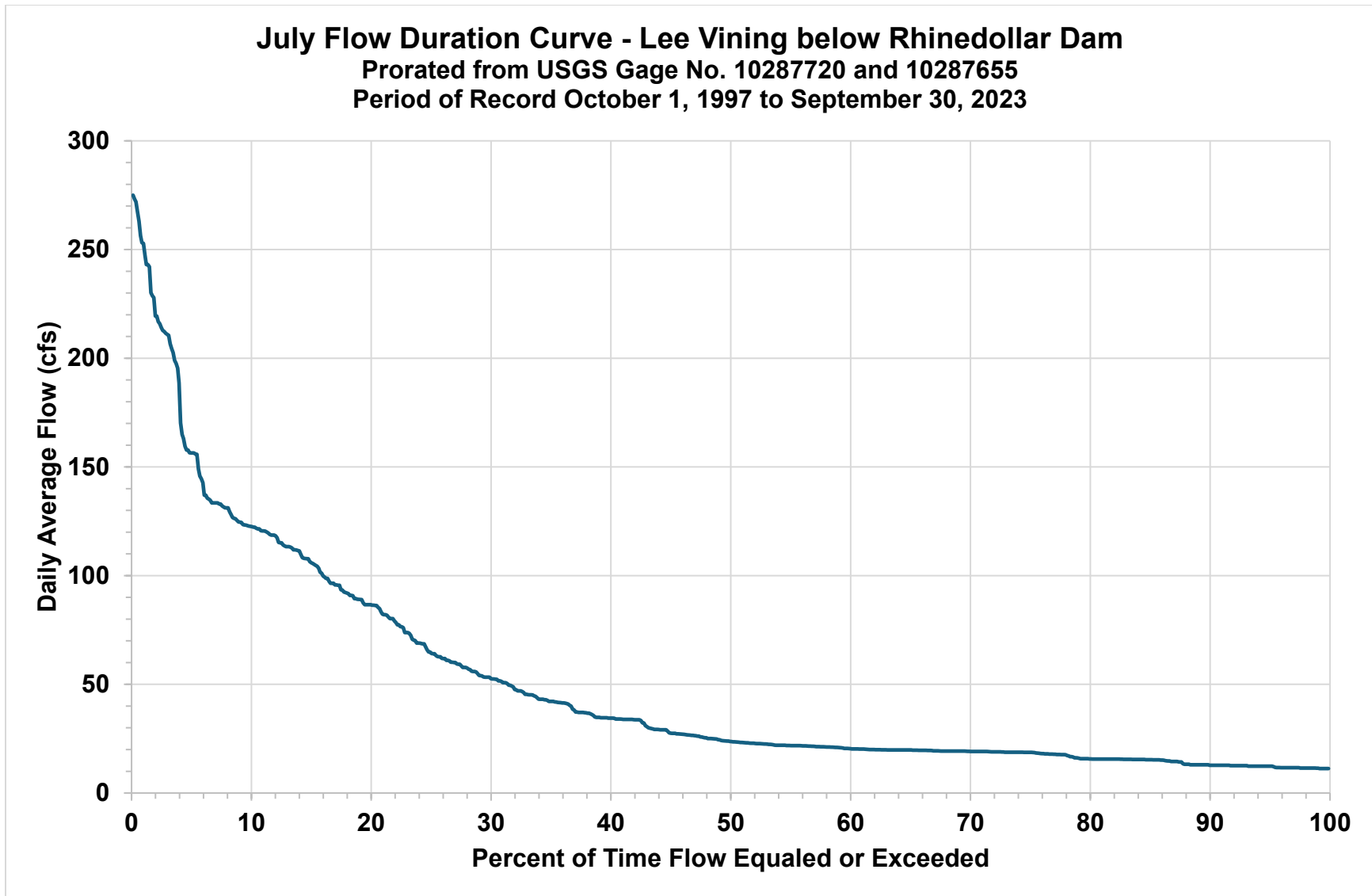


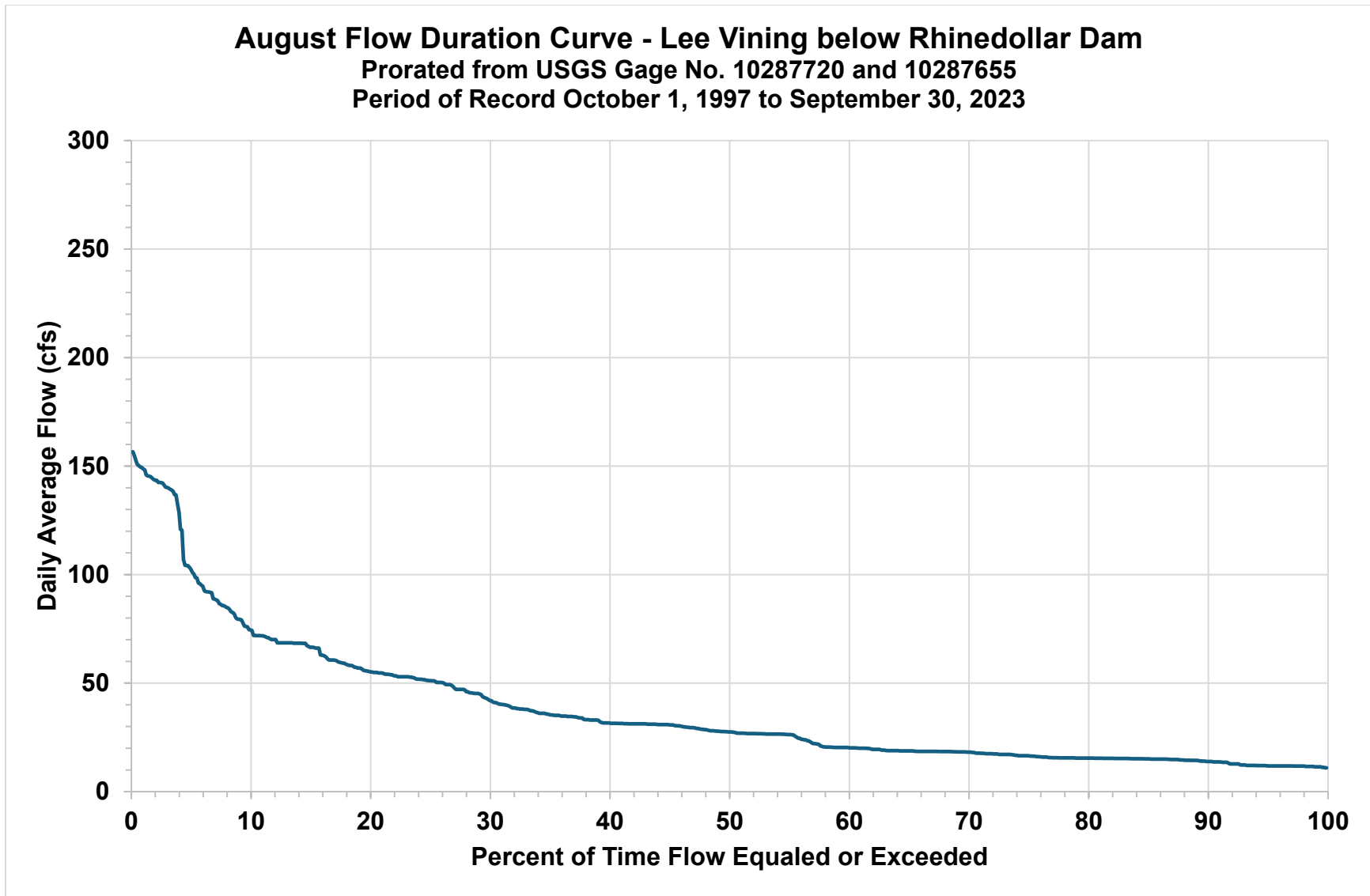


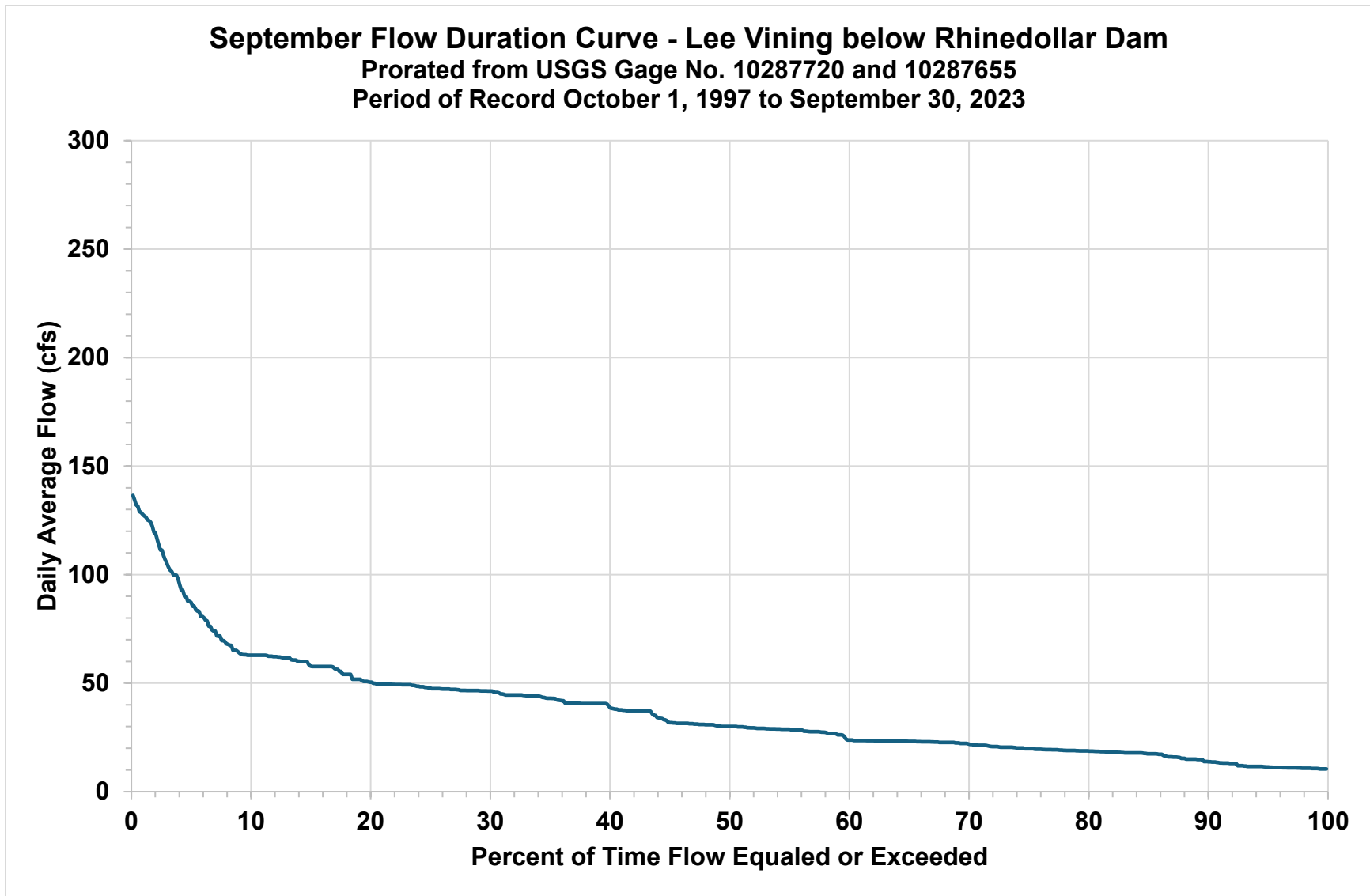


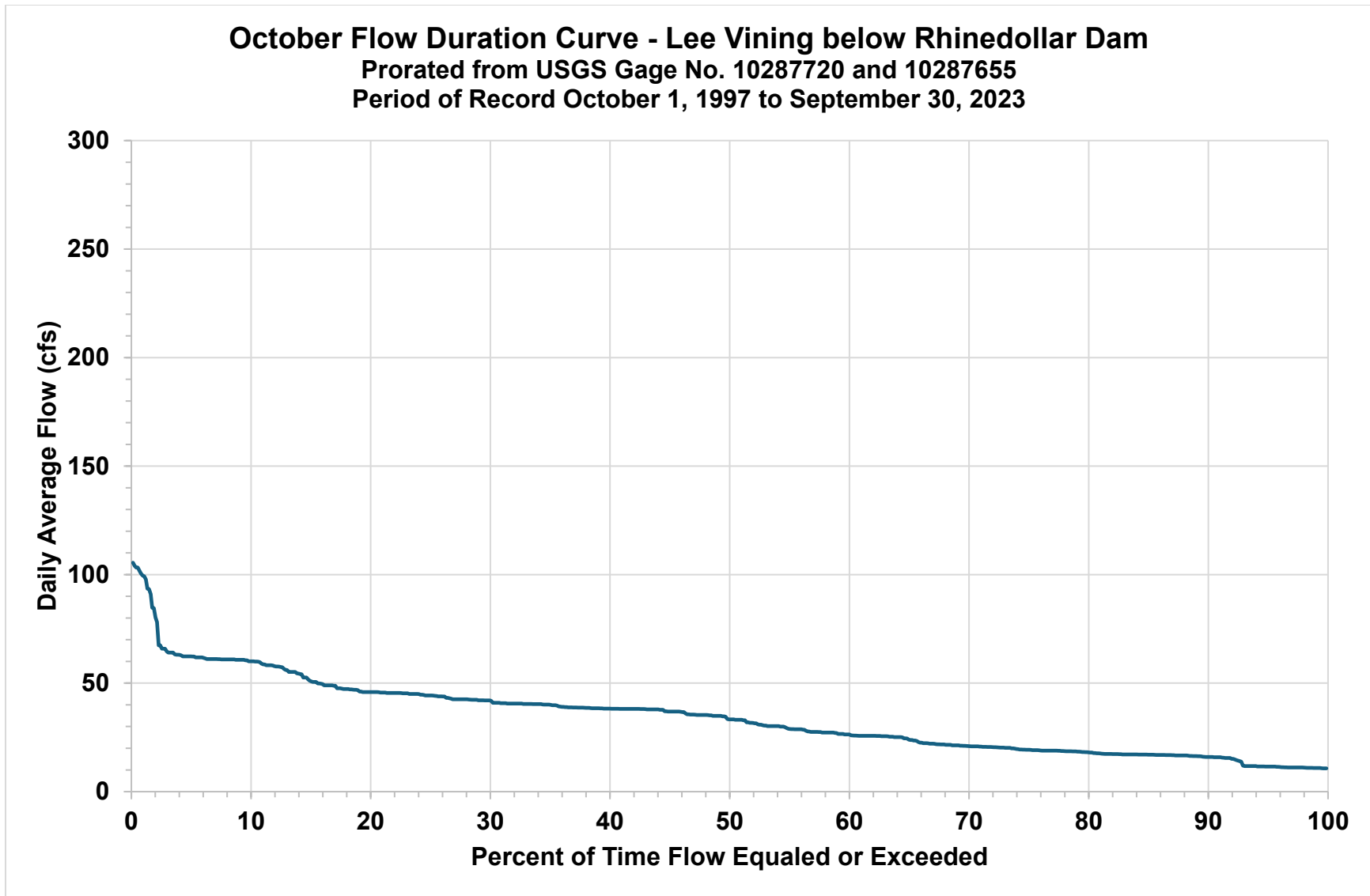


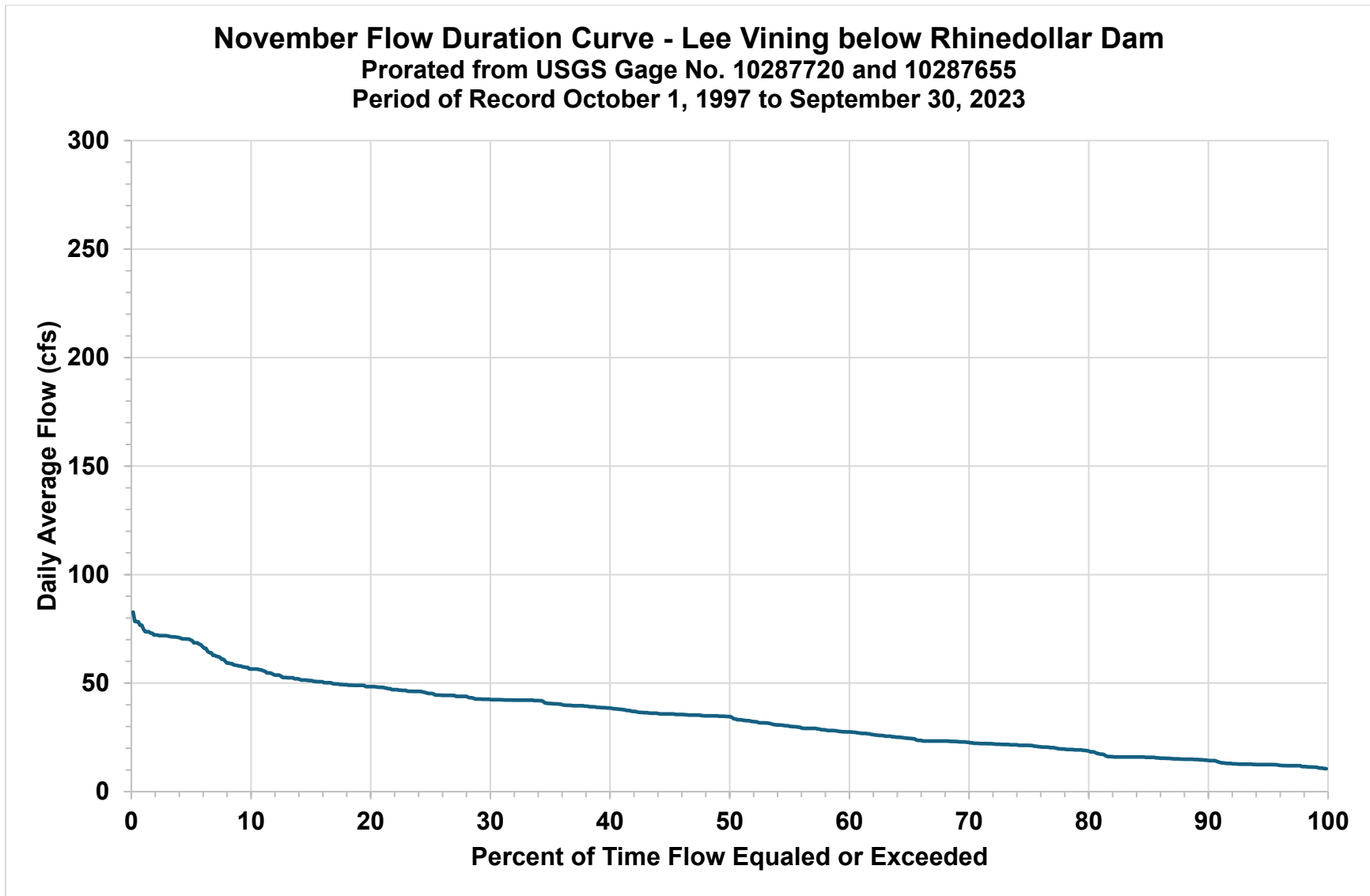


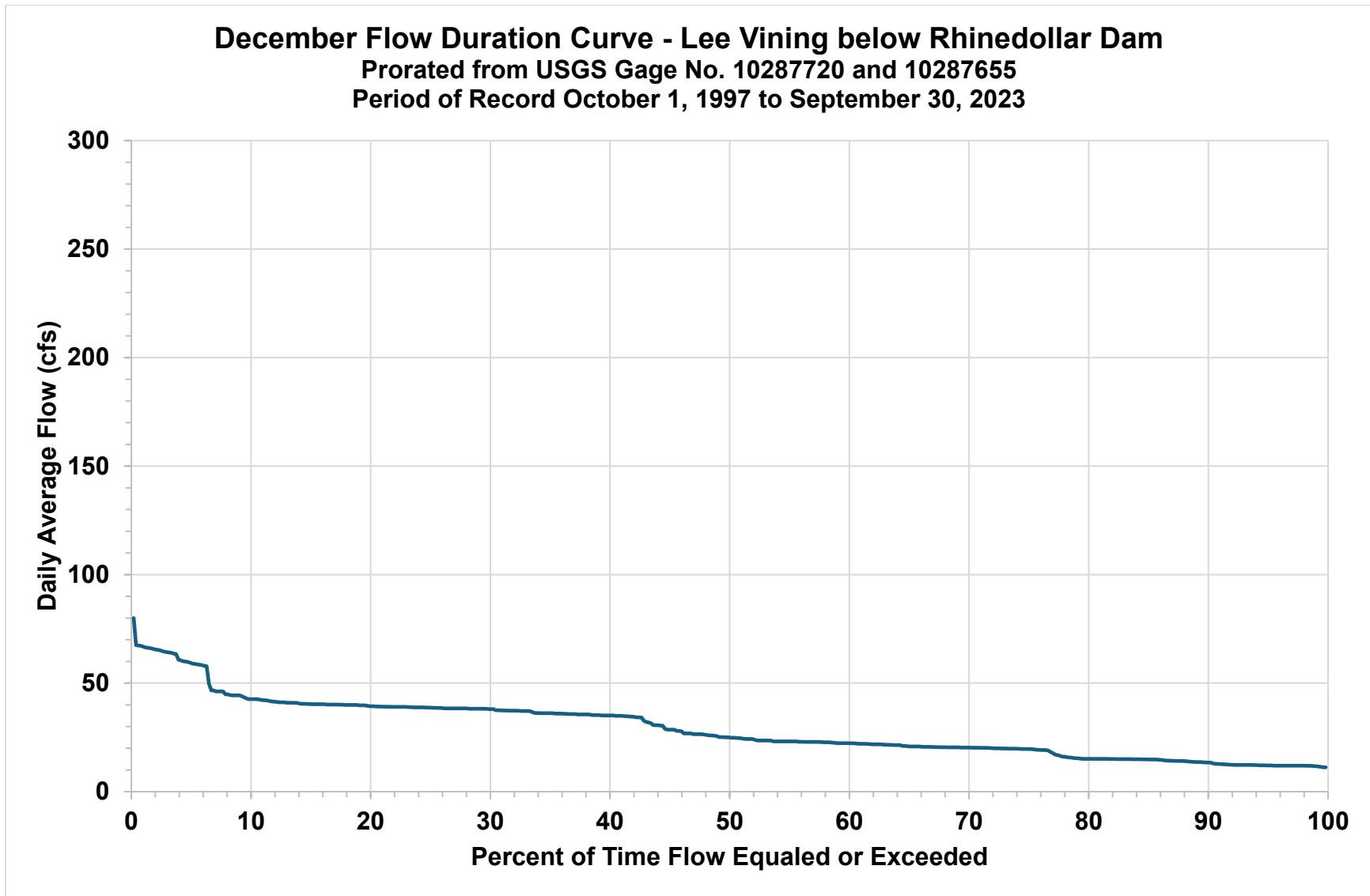












**APPENDIX E.3  
HABITAT-FLOW ANALYSIS**

# **SOUTHERN CALIFORNIA EDISON**

## **LEE VINING HYDROELECTRIC PROJECT**

**(FERC PROJECT No. 1388)**



## **HABITAT-FLOW ANALYSIS**



September 2024



# SOUTHERN CALIFORNIA EDISON

## LEE VINING HYDROELECTRIC PROJECT (FERC PROJECT NO. 1388)

### HABITAT-FLOW ANALYSIS

Southern California Edison  
2244 Walnut Grove Ave  
Rosemead, CA 91770

September 2024

*Support from:*

***Kleinschmidt***

**TABLE OF CONTENTS**

	Page
1.0 Habitat-Flow Analysis for Lee Vining Creek .....	1
1.1. Weighted Usable Area .....	1
1.2. Habitat Time Series Assessment .....	5
2.0 References .....	22

**LIST OF FIGURES**

Figure 1-1. Percent of WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek. ....	2
Figure 1-2. Percent of Maximum WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek. 3	3
Figure 1-3. Percent of Maximum WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake. . 4	4
Figure 1-4. Percent of WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam. ....	5
Figure 1-5. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek. ....	7
Figure 1-6. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek. ....	8
Figure 1-7. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek. ....	9
Figure 1-8. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.....	9
Figure 1-9. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.....	10
Figure 1-10. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.....	10
Figure 1-11. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake.....	11

Figure 1-12. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake. 12

Figure 1-13. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake. .... 13

Figure 1-14. Monthly Percent Maximum WUA During Wet Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam. .... 14

Figure 1-15. Monthly Percent Maximum WUA During Normal Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam. .... 15

Figure 1-16. Monthly Percent Maximum WUA During Dry Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam. .... 16

**LIST OF TABLES**

Table 1-1. Reach and Gaging Information for Lee Vining Creek..... 5

Table 1-2. Water Year Type and Associated Year for Lee Vining Creek..... 6

Table 1-3. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek ..... 16

Table 1-4. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek..... 18

Table 1-5. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake..... 19

Table 1-6. Minimum, Maximum, and Average Percent Maximum WUA for Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam ..... 20

**LIST OF ACRONYMS AND ABBREVIATIONS**

FERC	Federal Energy Regulatory Commission
LADWP	Los Angeles Department of Water and Power
Project	Lee Vining Hydroelectric Project (FERC Project No. 1388)
SCE	Southern California Edison [Company]
SI	Suitability Index
WUA	weighted usable area

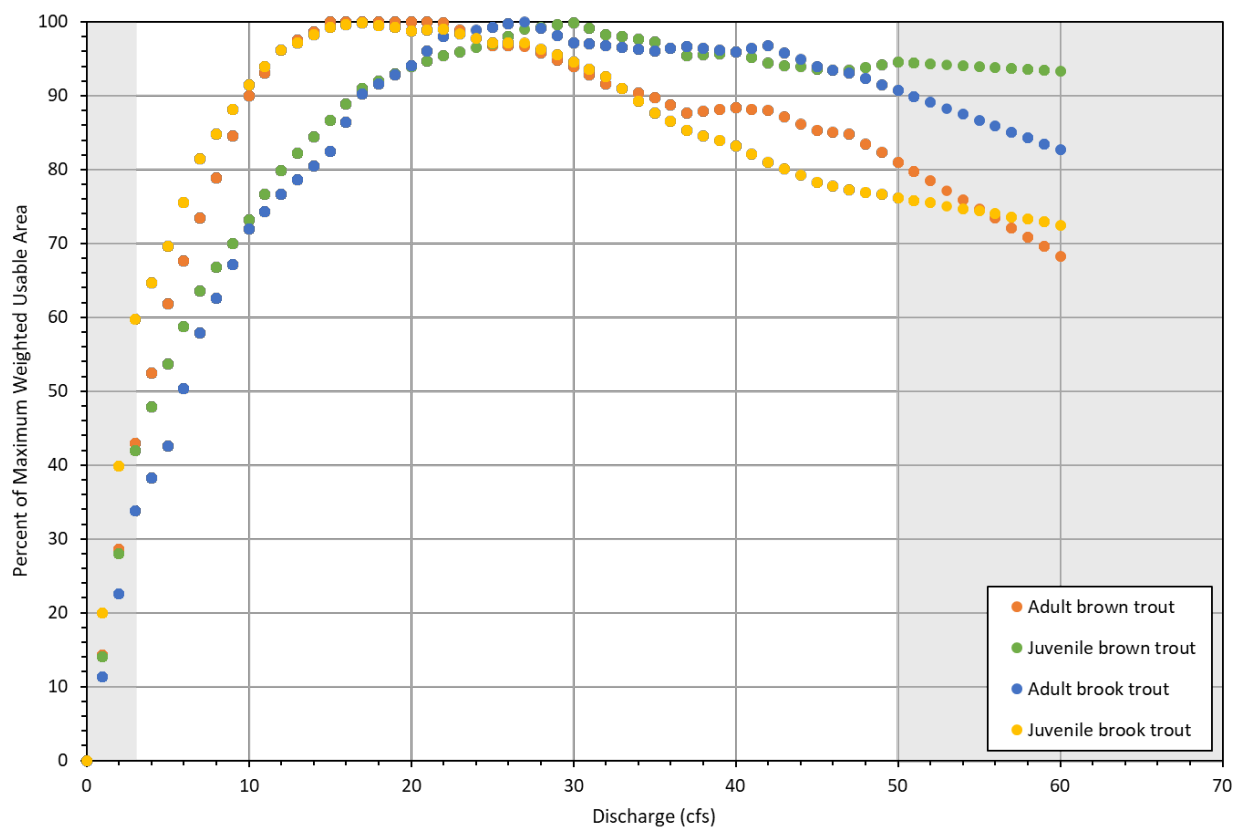
## 1.0 HABITAT-FLOW ANALYSIS FOR LEE VINING CREEK

The Lee Vining Hydroelectric Project (Project; Federal Energy Regulatory Commission [FERC] Project No. 1388) includes four Project-affected stream reaches that support coldwater game fish species: upper Lee Vining Creek between Saddlebag Dam and the confluence of Slate Creek, upper Lee Vining Creek between the confluence of Slate Creek and Ellery Lake, lower Lee Vining Creek between Poole Powerhouse and the Los Angeles Department of Water and Power's (LADWP) Lee Vining Creek Diversion Dam, and Glacier Creek between Tioga Dam and its confluence with Lee Vining Creek. Project-affected stream reaches support coldwater nonnative trout species, including self-sustaining populations of brook trout (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*), and sterile, nonreproducing rainbow trout (*Oncorhynchus mykiss*) stocked by the California Department of Fish and Wildlife. Project operations have the potential to affect the quantity of aquatic habitat related to streamflow. The following methods were used to estimate habitat in Project-affected stream reaches.

### 1.1. WEIGHTED USABLE AREA

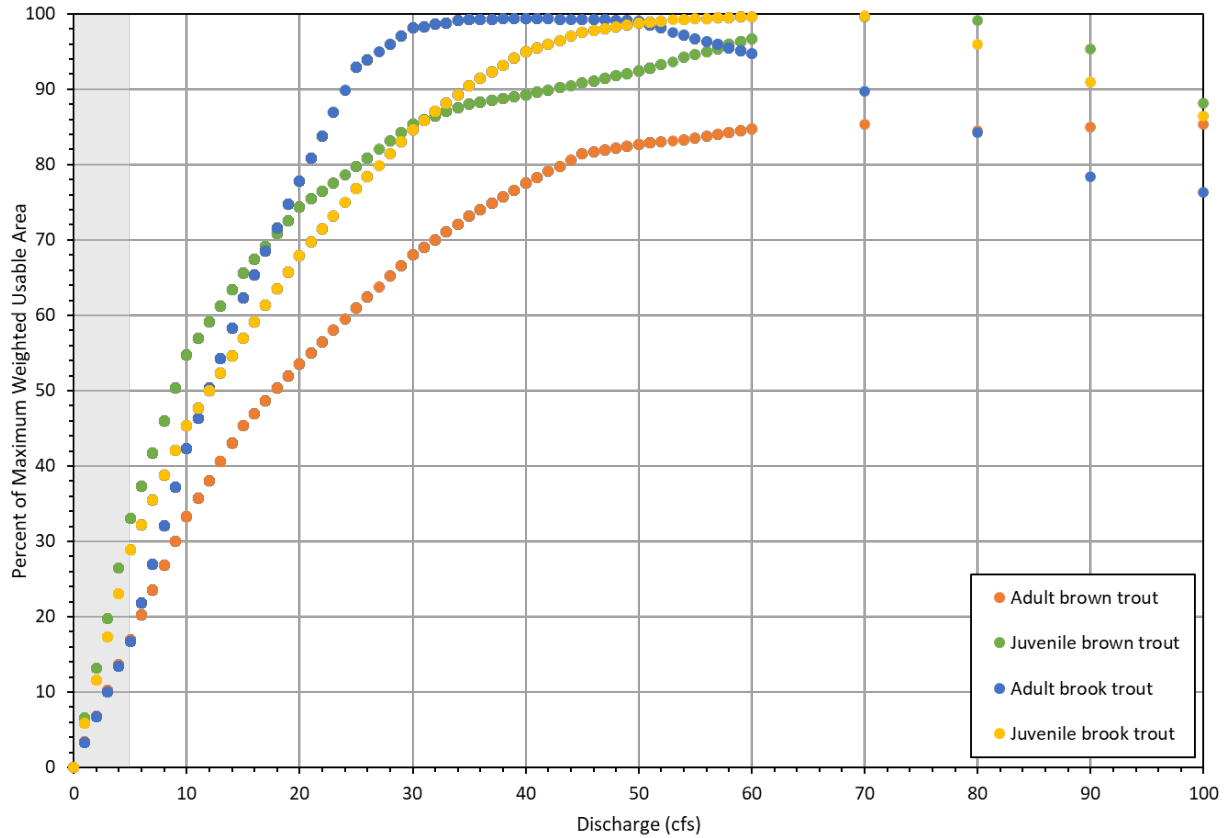
Southern California Edison (SCE) implemented an instream flow study in 1986 characterizing aquatic habitat in three distinct reaches of upper Lee Vining Creek: (1) Lee Vining Creek between Saddlebag Dam and the confluence of Slate Creek (Reach 1), (2) Lee Vining Creek between the confluence of Slate Creek and Glacier Creek (Reach 2), and (3) Lee Vining Creek between the confluence of Glacier Creek and Ellery Lake (Reach 3; EA, 1986). IFG-4 hydraulic simulation was used to evaluate the amount of trout habitat available at specific flows (EA, 1986). Calibration flows included between 3 and 50 cubic feet per second in Reach 1 and between 3 and 280 in Reaches 2 and 3. Suitability Index (SI) curves for brown, brook, and rainbow trout were provided by the U.S. Fish and Wildlife Service specifically for use in the Instream Flow and Fisheries Study (EA, 1986). SI curves were corrected to reflect relative abundance of habitat available; different SI curves were provided for locations without cover, object cover, overhead cover, and both object and overhead cover (EA, 1986). Habitat-flow relationships for brown and brook trout are also available for lower Lee Vining Creek between Poole Powerhouse and the LADWP Diversion Dam (Reach 4; Groves Energy Company, 1984). This appendix contains the percent maximum weighted usable area (WUA) curves for reaches within the Lee Vining Creek watershed developed from original curves cited in the final Environmental Assessment for the Project (EA, 1986; FERC, 1992).

WUA curves from the original report were digitized using the automeris.io package in GitHub—a computer tool used to extract numerical data from images. The package takes plotted images and returns tabular data. The data were then graphed in Microsoft Excel to create digitized WUA curves. WUA was extrapolated to the full range of annual flows in each reach or interpolated between published values by either fitting linear or decay function to the existing data (Figures 1-1 through 1-4). All extrapolated WUA values were held to a minimum of 10 percent of maximum WUA, and the start of extrapolation is noted on each of the additional curves. WUA was interpolated between published values using the FORECAST function in Microsoft Excel, which predicts a value based on known data using a linear regression.



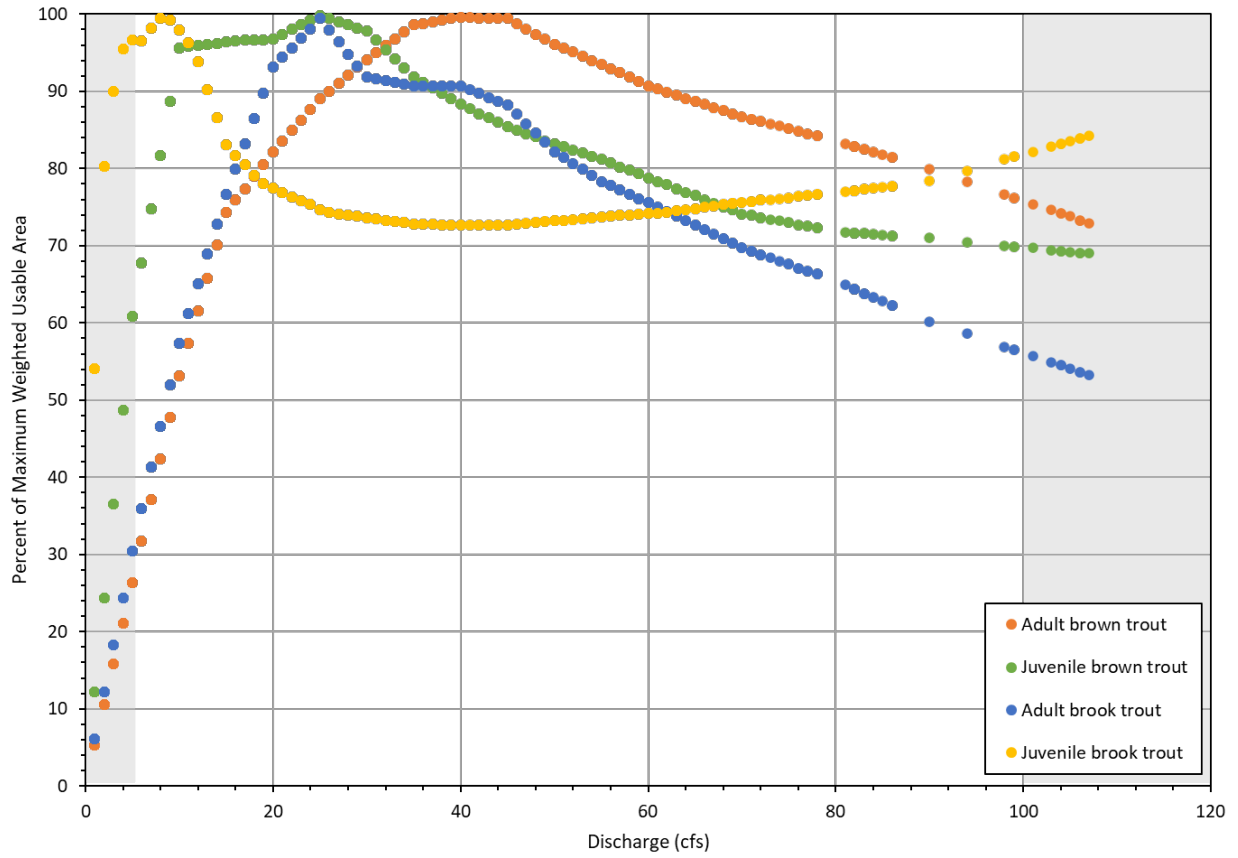
Note: Grey shading denotes regions of extrapolation beyond the range of the original 1992 WUA curves.

**Figure 1-1. Percent of WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek.**



Note: Grey shading denotes regions of extrapolation beyond the range of the original 1992 WUA curves.

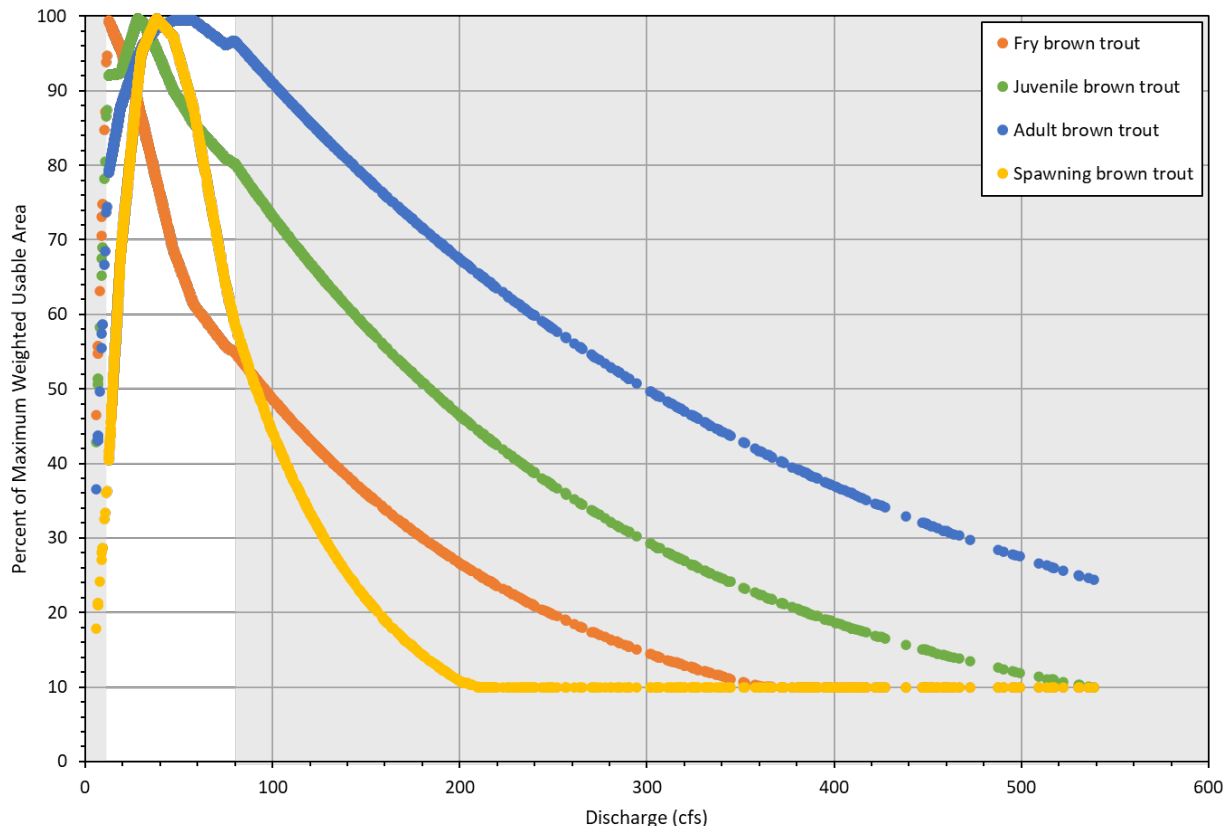
**Figure 1-2. Percent of Maximum WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.**



Note: Grey shading denotes regions of extrapolation beyond the range of the original 1992 WUA curves.

**Figure 1-3. Percent of Maximum WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake.**





Note: Grey shading denotes regions of extrapolation beyond the range of the original 1992 WUA curves.

**Figure 1-4. Percent of WUA Versus Discharge (cubic feet per second) in Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam.**

## 1.2. HABITAT TIME SERIES ASSESSMENT

A time series analysis of WUA as a function of streamflow was conducted for all reaches in Lee Vining Creek where habitat-flow relationships were calculated (Table 1-1). Three of the four reaches (Reaches 1, 2, and 4) are dominated by bedrock, boulder, and cobble morphology and are characterized by moderate- to high-gradient canyon sections (Study AQ-3 *Aquatic Habitat Mapping and Sediment Characterization*), which tend to prevent any significant change in habitat-flow relationships over time because of stable channel morphology. Reach 4, between the confluence with Slate Creek and the confluence with Glacier Creek, is composed of two low-gradient meadows separated by brief high-gradient canyon sections.

**Table 1-1. Reach and Gaging Information for Lee Vining Creek**

Reach Number	Reach Name	Gage Number	Period of Record
1	Lee Vining Creek between Saddlebag Dam and the confluence of Slate Creek	SCE Gage 354 (USGS Gage 10287655)	October 1, 2009– July 31, 2023

Reach Number	Reach Name	Gage Number	Period of Record
2	Lee Vining Creek between the confluence of Slate Creek and Glacier Creek	SCE Gage 354 (USGS Gage 10287655)	October 1, 2009–July 31, 2023
3	Lee Vining Creek between the confluence of Glacier Creek and Ellery Lake	Combined total flow for SCE Gage 354 (USGS Gage 10287655) and SCE Gage 368 (USGS Gage 10287720)	October 1, 2009–July 31, 2023
4	Lee Vining Creek between Poole Powerhouse and the LADWP Diversion Dam	LADWP Diversion Dam gage	October 10, 2013–July 31, 2023

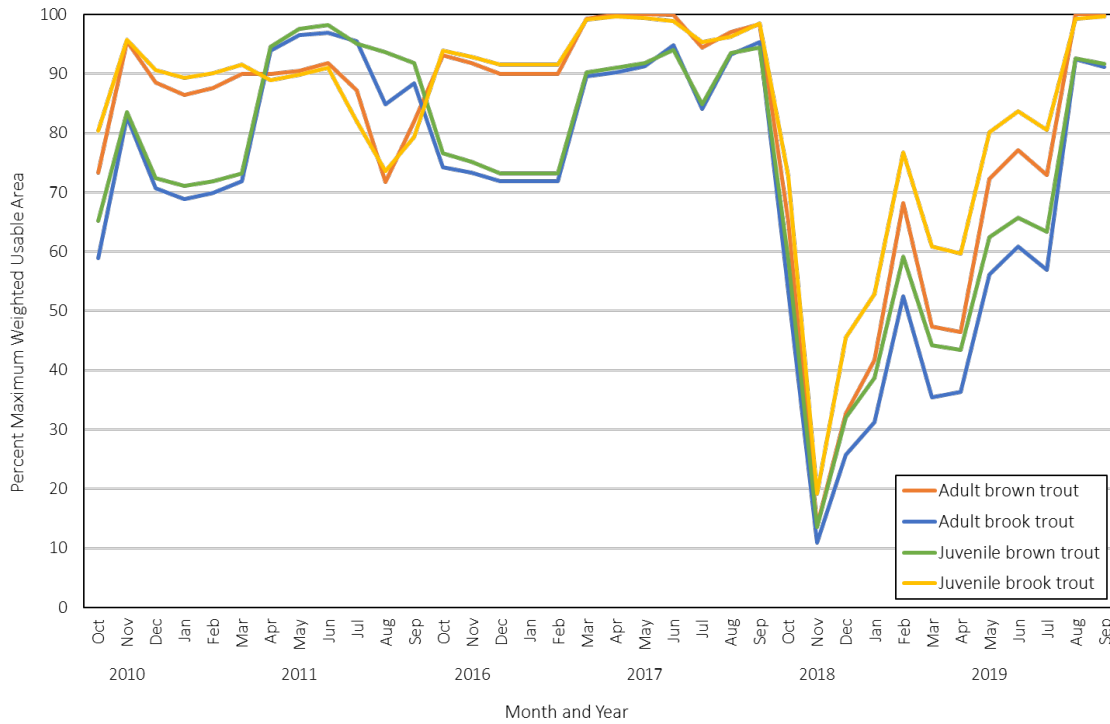
LADWP = Los Angeles Department of Water and Power; SCE = Southern California Edison; USGS = U.S. Geological Survey

WUA as a function of streamflow over time was evaluated by water year type. Water year types are summarized by year in Table 1-2 and described in the *Operations Model (AQ-5) Final Technical Report* (included in Volume III of this Draft License Application). Because the hydrologic water year begins in October, water year types were assigned from October the year prior to September of the designated water year.

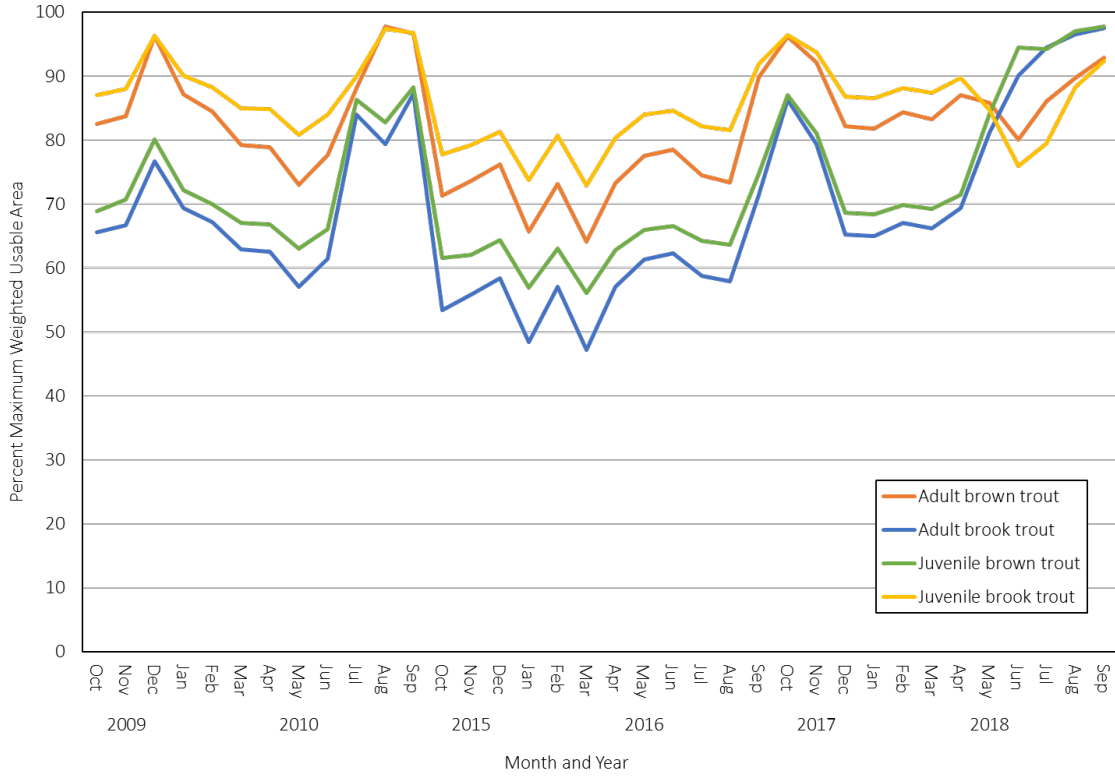
**Table 1-2. Water Year Type and Associated Year for Lee Vining Creek**

Water Year Type	Year
Wet	2011
	2017
	2019
	2023
Normal	2009
	2010
	2016
	2018
Dry	2012
	2013
	2014
	2015
	2020
	2021
	2022

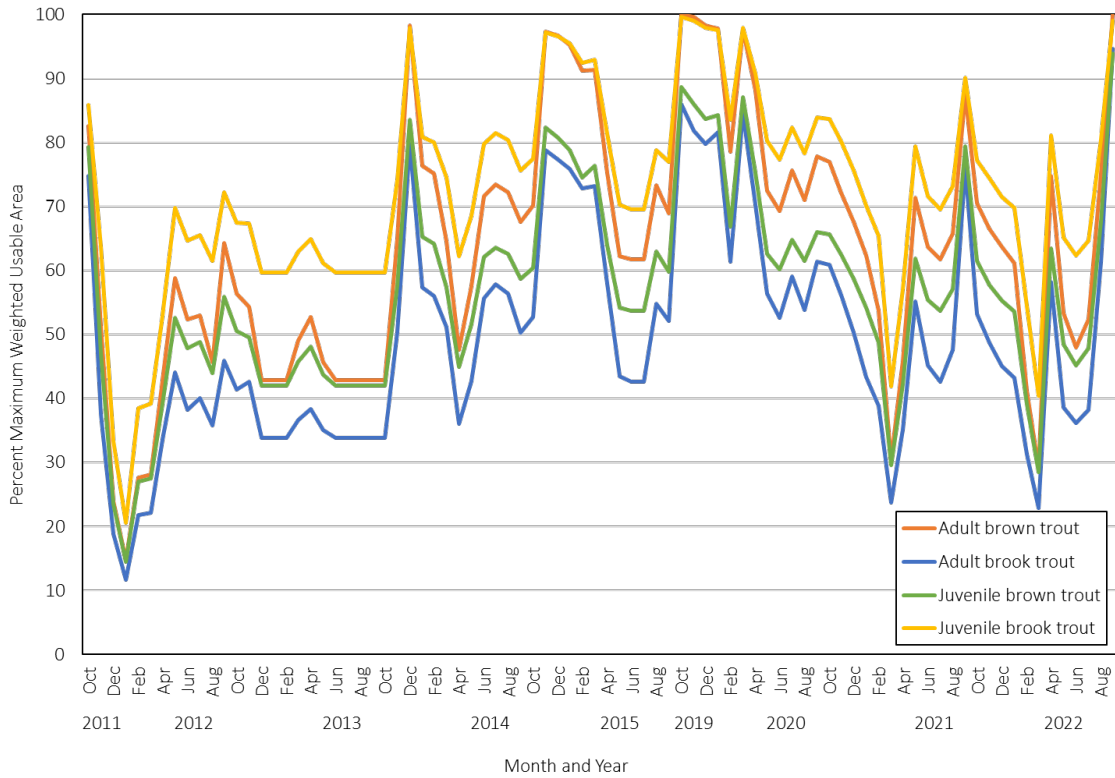
Monthly percent maximum WUA as a function of streamflow was calculated from the historical flow-habitat relationships presented above and summarized by water year type on Figures 1-5 through 1-16. The range (average, minimum, and maximum) of percent maximum WUA calculated by water year type and month is shown in Table 1-3 through Table 1-6.



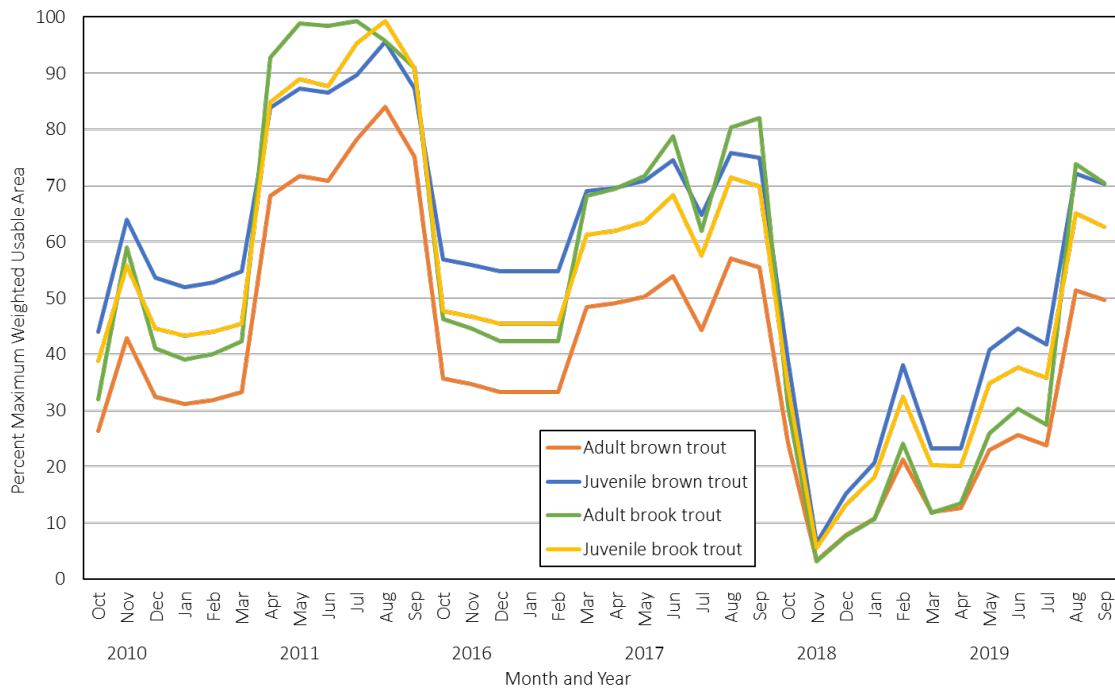
**Figure 1-5. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek.**



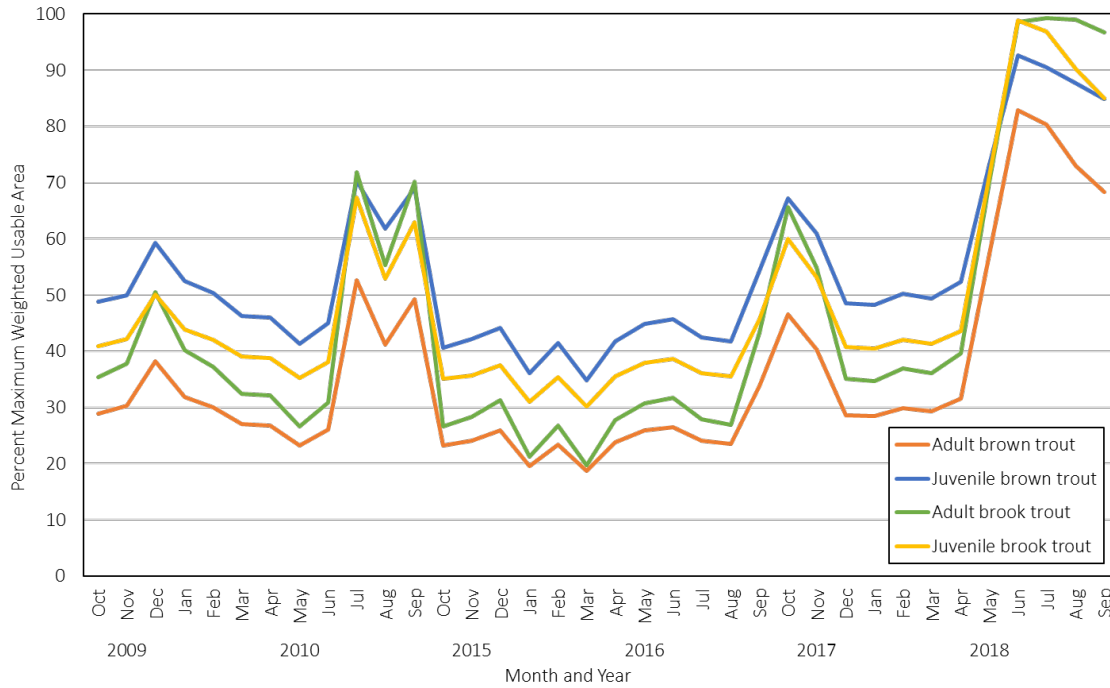
**Figure 1-6. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek.**



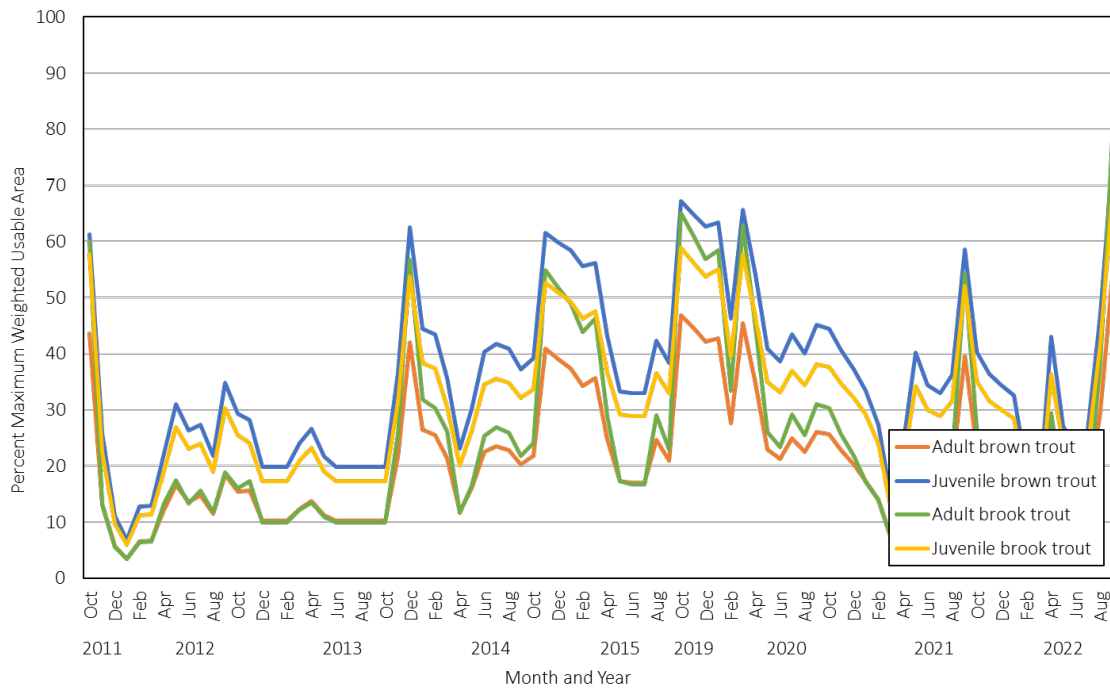
**Figure 1-7. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek.**



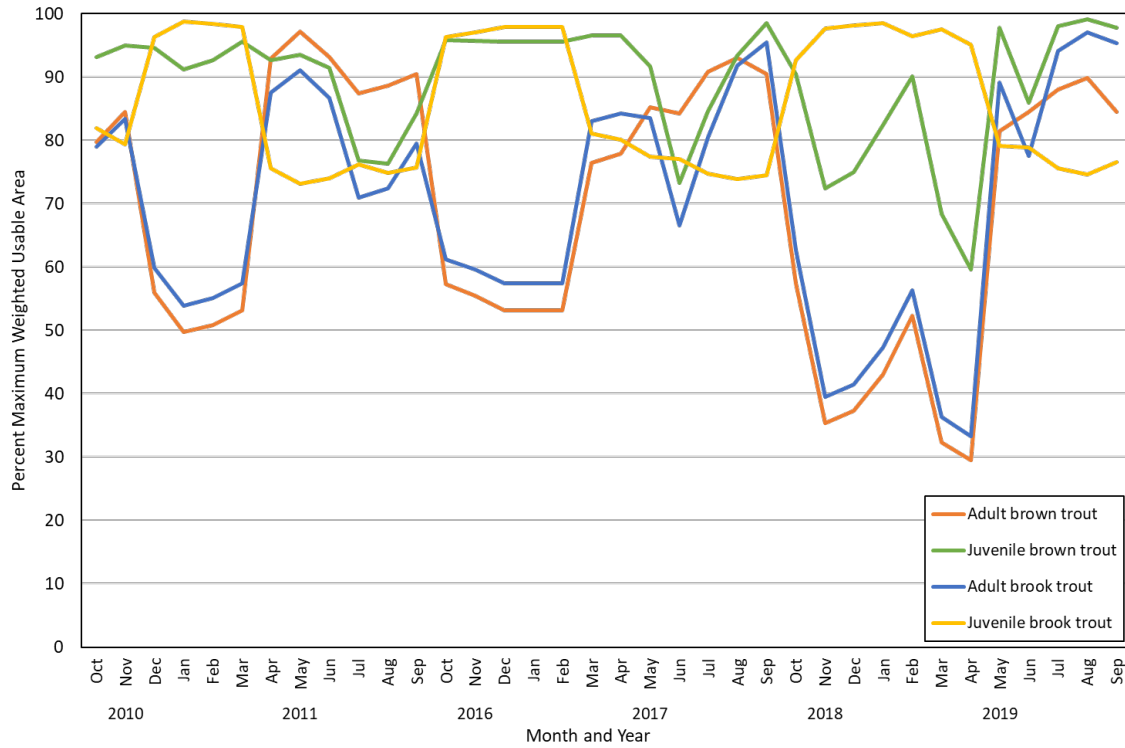
**Figure 1-8. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.**



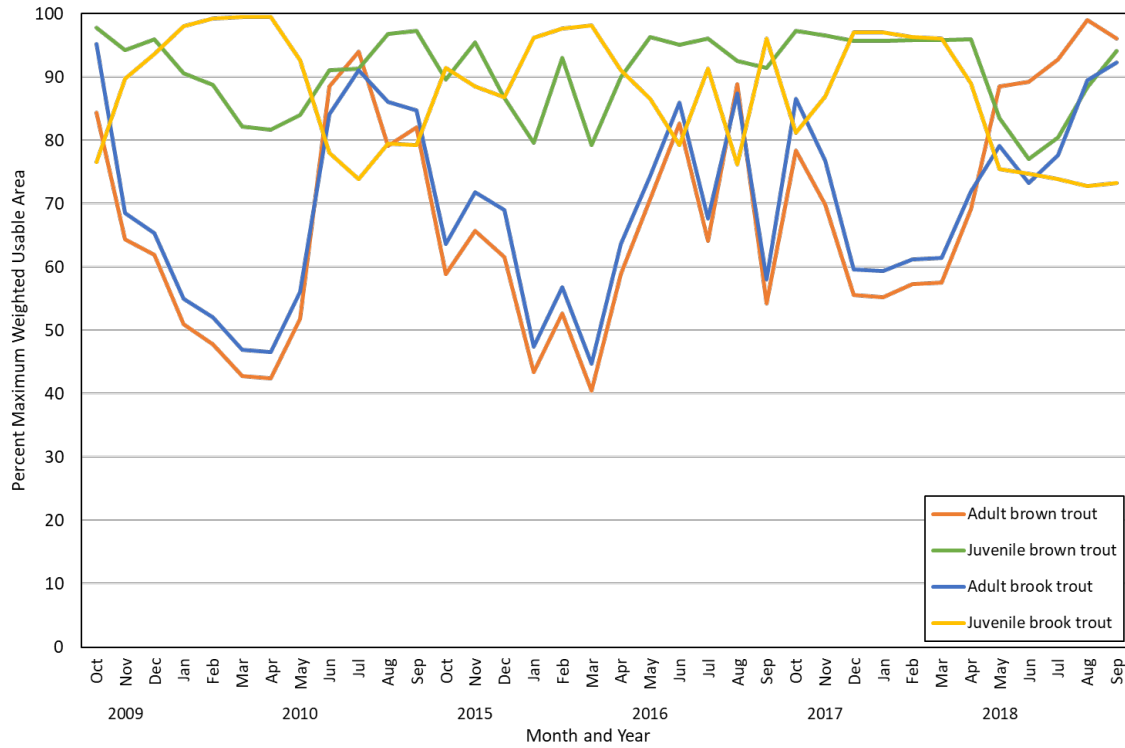
**Figure 1-9. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.**



**Figure 1-10. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek.**

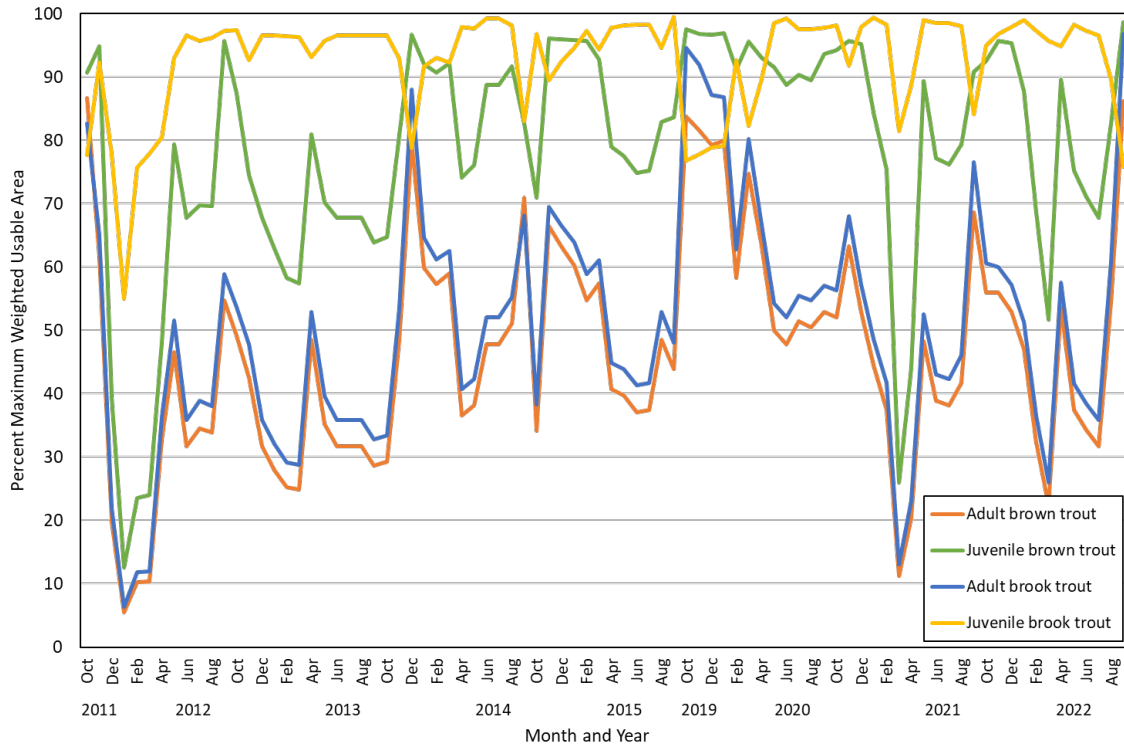


**Figure 1-11. Monthly Percent Maximum WUA During Wet Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake.**

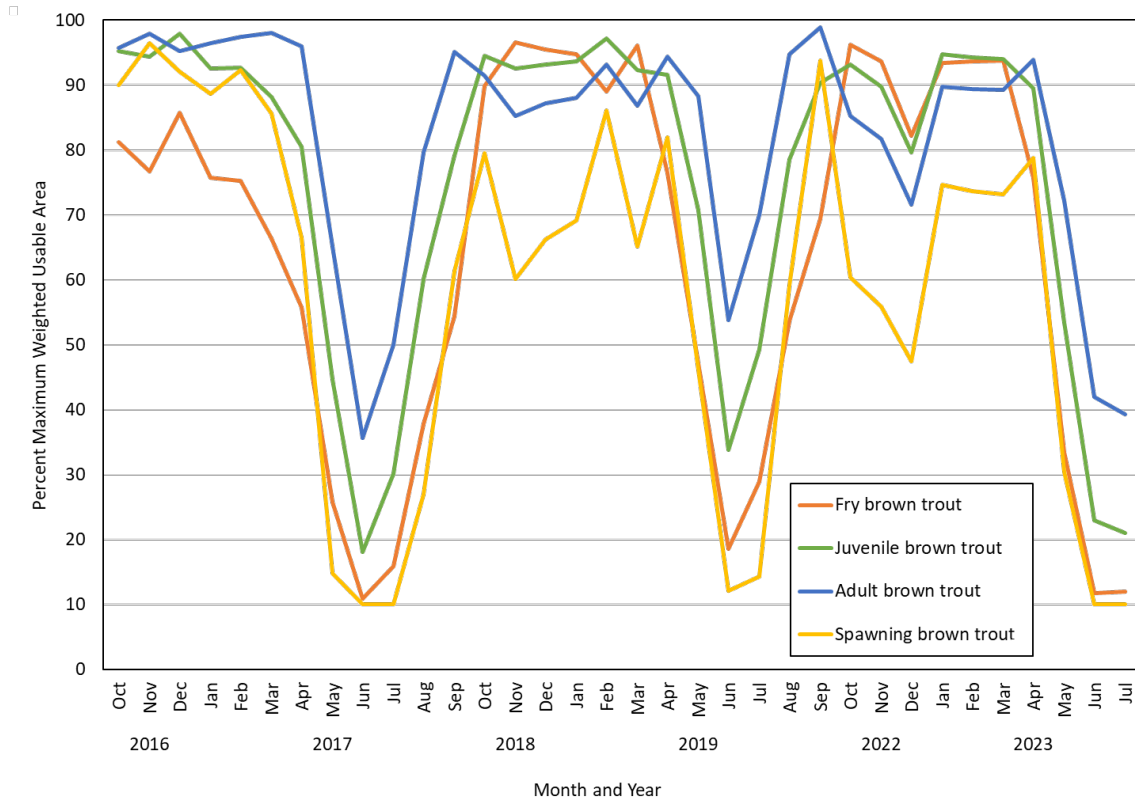


**Figure 1-12. Monthly Percent Maximum WUA During Normal Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake.**

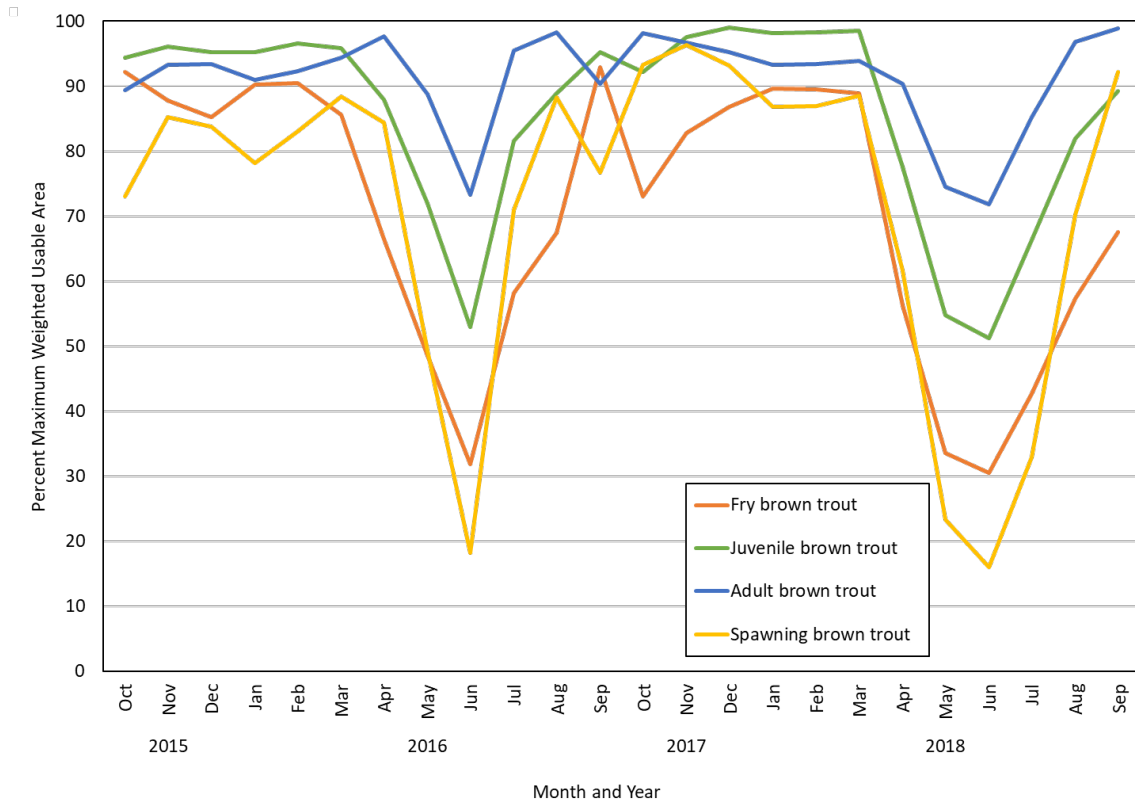




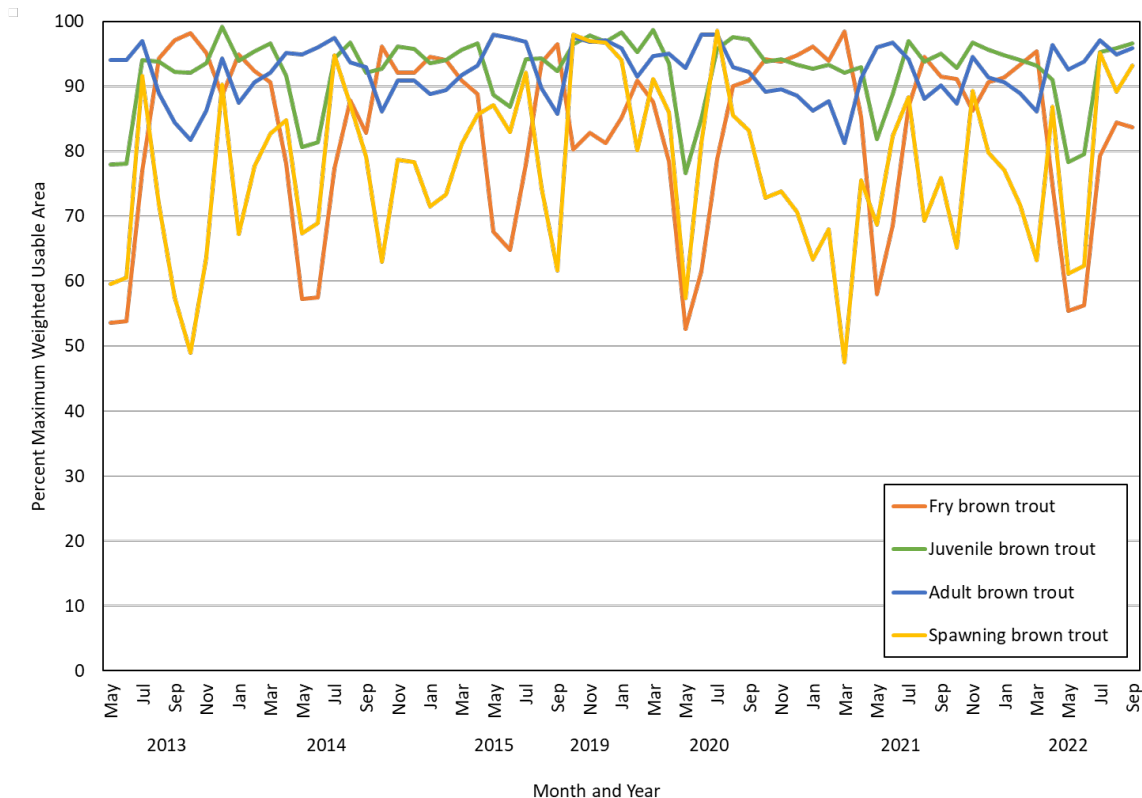
**Figure 1-13. Monthly Percent Maximum WUA During Dry Water Years in Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake.**



**Figure 1-14. Monthly Percent Maximum WUA During Wet Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam.**



**Figure 1-15. Monthly Percent Maximum WUA During Normal Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam.**



**Figure 1-16. Monthly Percent Maximum WUA During Dry Water Years in Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam.**

**Table 1-3. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between Saddlebag Dam and the Confluence of Slate Creek**

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout ( <i>Salvelinus fontinalis</i> ; Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
<i>Wet Water Year Types</i>				
Jan	73 (14–90)	61 (14–73)	57 (11–72)	78 (20–92)
Feb	82 (43–90)	68 (42–73)	65 (34–72)	86 (60–92)
Mar	79 (29–100)	69 (28–93)	66 (23–93)	84 (40–100)
Apr	79 (29–100)	76 (28–98)	73 (23–98)	83 (40–100)
May	88 (68–100)	84 (59–99)	81 (50–97)	90 (76–100)
Jun	90 (68–100)	86 (59–100)	84 (50–99)	91 (76–99)
Jul	85 (68–100)	81 (59–96)	79 (50–98)	86 (76–100)
Aug	90 (68–100)	93 (77–100)	90 (74–99)	90 (73–100)
Sep	93 (72–100)	93 (67–98)	92 (63–100)	92 (74–100)
Oct	77 (14–100)	67 (14–98)	62 (11–100)	82 (20–100)

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout ( <i>Salvelinus fontinalis</i> ; Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
Nov	67 (0–100)	57 (0–93)	56 (0–93)	69 (0–100)
Dec	70 (29–90)	59 (28–73)	56 (23–72)	76 (40–92)
<i>Normal Water Year Types</i>				
Jan	78 (52–96)	66 (48–80)	61 (38–77)	83 (65–96)
Feb	81 (68–85)	68 (59–70)	64 (50–67)	86 (76–88)
Mar	76 (52–85)	64 (48–70)	59 (38–67)	82 (65–88)
Apr	80 (52–90)	67 (48–73)	63 (38–72)	85 (65–92)
May	79 (68–93)	71 (59–98)	67 (50–96)	83 (76–94)
Jun	79 (73–85)	76 (64–95)	71 (58–92)	82 (76–88)
Jul	83 (73–100)	82 (64–100)	79 (58–100)	84 (77–100)
Aug	87 (73–100)	81 (64–99)	78 (58–97)	89 (82–100)
Sep	93 (73–100)	87 (64–100)	85 (58–100)	94 (82–100)
Oct	83 (62–100)	73 (54–97)	68 (43–99)	87 (70–100)
Nov	83 (52–100)	71 (48–94)	67 (38–94)	87 (65–100)
Dec	85 (52–98)	71 (48–82)	67 (38–79)	88 (65–97)
<i>Dry Water Year Types</i>				
Jan	64 (14–100)	56 (14–95)	50 (11–98)	71 (20–100)
Feb	59 (14–100)	52 (14–89)	45 (11–86)	68 (20–100)
Mar	56 (14–100)	50 (14–92)	45 (11–92)	64 (20–100)
Apr	61 (29–99)	54 (28–84)	47 (23–81)	70 (40–98)
May	60 (43–79)	54 (42–67)	45 (34–63)	71 (60–85)
Jun	59 (43–73)	52 (42–64)	43 (34–58)	69 (60–82)
Jul	60 (43–100)	54 (42–94)	45 (34–94)	70 (60–99)
Aug	64 (43–100)	57 (42–95)	49 (34–96)	73 (60–100)
Sep	73 (43–100)	65 (42–95)	59 (34–98)	80 (60–100)
Oct	71 (43–100)	64 (42–100)	58 (34–100)	79 (60–100)
Nov	72 (29–100)	63 (28–87)	57 (23–83)	79 (40–99)
Dec	70 (14–99)	61 (14–84)	55 (11–81)	76 (20–98)

WUA = weighted usable area

**Table 1-4. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between the Confluence of Slate Creek and Glacier Creek**

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout (Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
<i>Wet Water Year Types</i>				
Jan	25 (3–33)	42 (7–55)	31 (3–42)	36 (6–45)
Feb	29 (10–33)	49 (20–55)	35 (10–42)	41 (17–45)
Mar	31 (7–52)	49 (13–73)	41 (7–75)	42 (12–66)
Apr	43 (7–76)	59 (13–89)	59 (7–99)	56 (12–93)
May	48 (20–76)	66 (37–89)	66 (22–99)	62 (32–93)
Jun	50 (20–80)	69 (37–90)	69 (22–99)	65 (32–97)
Jul	49 (20–82)	65 (37–92)	63 (22–99)	63 (32–99)
Aug	64 (36–85)	81 (57–97)	83 (46–99)	79 (48–100)
Sep	60 (27–84)	77 (46–95)	81 (32–99)	74 (39–100)
Oct	29 (3–62)	47 (7–81)	36 (3–94)	40 (6–78)
Nov	27 (0–52)	42 (0–73)	36 (0–75)	36 (0–66)
Dec	25 (7–33)	41 (13–55)	30 (7–42)	34 (12–45)
<i>Normal Water Year Types</i>				
Jan	27 (14–38)	46 (26–59)	32 (13–50)	38 (23–50)
Feb	28 (20–30)	47 (37–50)	34 (22–37)	40 (32–42)
Mar	25 (14–30)	43 (26–50)	29 (13–37)	37 (23–42)
Apr	27 (14–33)	47 (26–55)	33 (13–42)	39 (23–45)
May	36 (20–83)	53 (37–93)	42 (22–99)	48 (32–99)
Jun	45 (24–83)	61 (42–93)	54 (27–99)	58 (36–99)
Jul	52 (24–82)	68 (42–92)	66 (27–99)	67 (36–99)
Aug	46 (24–77)	64 (42–89)	60 (27–99)	60 (36–94)
Sep	50 (24–76)	69 (42–89)	70 (27–99)	65 (36–93)
Oct	33 (17–61)	52 (33–80)	43 (17–93)	45 (29–77)
Nov	32 (14–54)	51 (26–74)	40 (13–78)	44 (23–68)
Dec	31 (14–41)	51 (26–61)	39 (13–54)	43 (23–52)
<i>Dry Water Year Types</i>				
Jan	22 (3–57)	37 (7–77)	27 (3–84)	32 (6–72)
Feb	18 (3–47)	32 (7–67)	21 (3–65)	28 (6–59)
Mar	19 (3–50)	32 (7–71)	24 (3–72)	27 (6–64)
Apr	19 (7–43)	34 (13–63)	22 (7–58)	29 (12–55)
May	17 (10–27)	32 (20–46)	18 (10–32)	28 (17–39)
Jun	16 (10–24)	31 (20–42)	17 (10–27)	27 (17–36)

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout (Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
Jul	17 (10–54)	32 (20–74)	18 (10–78)	28 (17–68)
Aug	20 (10–55)	35 (20–76)	23 (10–81)	31 (17–70)
Sep	27 (10–57)	44 (20–77)	34 (10–84)	39 (17–72)
Oct	27 (10–71)	43 (20–87)	33 (10–99)	38 (17–88)
Nov	25 (7–45)	42 (13–66)	31 (7–62)	36 (12–57)
Dec	25 (3–43)	41 (7–63)	32 (3–58)	35 (6–55)

WUA = weighted usable area

**Table 1-5. Minimum, Maximum, and Average Percent Maximum WUA for Lee Vining Creek Between the Confluence of Glacier Creek and Ellery Lake**

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout ( <i>Salvelinus fontinalis</i> ; Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
<i>Wet Water Year Types</i>				
Jan	49 (32–57)	53 (36–61)	90 (68–96)	98 (96–100)
Feb	52 (37–70)	56 (41–73)	93 (75–96)	98 (87–100)
Mar	54 (21–81)	59 (24–90)	87 (49–97)	92 (78–100)
Apr	67 (21–99)	68 (24–96)	83 (49–98)	84 (73–100)
May	88 (62–100)	88 (65–99)	94 (79–100)	77 (73–94)
Jun	87 (48–100)	77 (52–98)	84 (69–99)	77 (73–99)
Jul	89 (48–99)	82 (52–99)	86 (69–100)	76 (73–99)
Aug	90 (86–100)	87 (69–99)	90 (74–100)	74 (73–76)
Sep	88 (57–100)	90 (61–98)	94 (78–99)	76 (73–96)
Oct	65 (37–99)	68 (41–99)	93 (75–100)	90 (73–100)
Nov	58 (32–99)	61 (36–99)	88 (68–100)	91 (73–100)
Dec	49 (32–66)	53 (36–69)	88 (68–96)	97 (90–100)
<i>Normal Water Year Types</i>				
Jan	50 (32–62)	54 (36–65)	89 (68–96)	97 (94–99)
Feb	53 (42–62)	57 (47–65)	93 (82–96)	98 (94–100)
Mar	47 (32–62)	51 (36–65)	86 (68–96)	98 (94–100)
Apr	57 (32–99)	61 (36–99)	89 (68–100)	93 (73–100)
May	70 (32–100)	70 (36–99)	88 (68–100)	85 (73–100)
Jun	87 (53–100)	81 (57–98)	88 (73–99)	77 (73–98)
Jul	84 (57–100)	79 (61–99)	89 (77–100)	80 (73–96)

Month	Percent Maximum WUA			
	Adult Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brook Trout ( <i>Salvelinus fontinalis</i> ; Average [Minimum to Maximum])	Juvenile Brook Trout (Average [Minimum to Maximum])
Aug	89 (37–100)	88 (41–99)	93 (75–100)	76 (73–98)
Sep	77 (37–100)	78 (41–98)	94 (75–99)	83 (73–99)
Oct	74 (42–92)	82 (47–99)	95 (82–100)	83 (74–100)
Nov	67 (42–85)	72 (47–96)	95 (82–98)	88 (76–100)
Dec	60 (32–86)	65 (36–97)	93 (68–99)	92 (76–98)
<i>Dry Water Year Types</i>				
Jan	46 (5–91)	51 (6–98)	76 (12–99)	88 (54–100)
Feb	39 (5–82)	43 (6–93)	72 (12–97)	93 (54–100)
Mar	37 (5–82)	40 (6–93)	63 (12–97)	89 (54–100)
Apr	42 (11–91)	46 (12–98)	73 (24–99)	92 (74–100)
May	42 (26–88)	47 (31–98)	80 (61–99)	97 (75–100)
Jun	38 (32–48)	43 (36–52)	77 (68–89)	98 (97–100)
Jul	39 (32–86)	43 (36–97)	77 (68–99)	97 (76–100)
Aug	45 (26–88)	49 (31–98)	80 (61–99)	96 (75–100)
Sep	58 (26–100)	63 (31–99)	87 (61–100)	91 (73–100)
Oct	56 (26–100)	60 (31–96)	85 (61–98)	91 (73–100)
Nov	60 (32–91)	65 (36–98)	91 (68–99)	91 (74–100)
Dec	54 (5–82)	59 (6–93)	84 (12–97)	89 (54–100)

WUA = weighted usable area

**Table 1-6. Minimum, Maximum, and Average Percent Maximum WUA for Lower Lee Vining Creek Between Poole Powerhouse and the LADWP Diversion Dam**

Month	Percent Maximum WUA			
	Fry Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brown Trout (Average [Minimum to Maximum])	Spawning Brown Trout (Average [Minimum to Maximum])
<i>Wet Water Year Types</i>				
Jan	88 (47–98)	94 (71–100)	91 (84–99)	77 (40–99)
Feb	86 (55–98)	95 (80–100)	93 (83–99)	84 (54–100)
Mar	85 (55–99)	92 (81–99)	91 (80–99)	75 (44–99)
Apr	69 (37–96)	87 (59–100)	95 (79–99)	76 (23–99)
May	35 (10–64)	56 (20–87)	75 (39–99)	30 (10–90)
Jun	14 (10–42)	25 (10–66)	44 (24–85)	11 (10–32)
Jul	19 (10–43)	33 (11–66)	53 (26–85)	11 (10–32)
Aug	46 (21–59)	69 (39–84)	87 (60–98)	43 (10–78)



Month	Percent Maximum WUA			
	Fry Brown Trout ( <i>Salmo trutta</i> ; Average [Minimum to Maximum])	Juvenile Brown Trout (Average [Minimum to Maximum])	Adult Brown Trout (Average [Minimum to Maximum])	Spawning Brown Trout (Average [Minimum to Maximum])
Sep	62 (40–87)	85 (64–99)	97 (83–99)	78 (29–99)
Oct	89 (50–99)	94 (75–100)	91 (81–99)	77 (47–100)
Nov	89 (58–99)	92 (58–100)	88 (50–99)	71 (24–100)
Dec	88 (47–99)	90 (43–100)	85 (37–99)	69 (18–100)
<i>Normal Water Year Types</i>				
Jan	90 (70–98)	97 (91–100)	92 (82–99)	82 (50–99)
Feb	90 (83–96)	97 (92–99)	93 (87–97)	85 (64–97)
Mar	87 (64–96)	97 (87–100)	94 (88–99)	89 (67–100)
Apr	61 (20–87)	83 (37–99)	94 (58–99)	73 (10–100)
May	41 (21–71)	63 (39–92)	82 (60–99)	36 (10–98)
Jun	31 (19–44)	52 (36–68)	73 (57–87)	17 (10–35)
Jul	50 (34–79)	74 (55–96)	90 (76–99)	52 (19–99)
Aug	62 (49–88)	85 (74–100)	98 (92–99)	79 (45–99)
Sep	80 (59–96)	92 (84–98)	95 (86–99)	84 (63–100)
Oct	83 (59–99)	93 (84–100)	94 (80–99)	83 (43–100)
Nov	85 (66–94)	97 (88–99)	95 (90–99)	91 (75–100)
Dec	86 (49–98)	97 (74–100)	94 (82–99)	89 (45–99)
<i>Dry Water Year Types</i>				
Jan	92 (64–98)	95 (87–100)	90 (83–99)	75 (52–100)
Feb	93 (79–98)	94 (92–100)	90 (83–98)	74 (54–99)
Mar	93 (80–99)	95 (92–100)	89 (79–98)	73 (40–99)
Apr	81 (41–99)	93 (64–100)	94 (80–99)	84 (29–100)
May	57 (37–89)	81 (60–99)	95 (80–99)	67 (24–100)
Jun	60 (42–88)	83 (65–100)	96 (84–99)	73 (31–100)
Jul	80 (53–93)	95 (78–100)	97 (91–99)	93 (54–100)
Aug	91 (62–97)	95 (86–100)	91 (85–99)	80 (59–100)
Sep	90 (59–98)	94 (84–100)	90 (82–99)	75 (50–100)
Oct	92 (49–99)	94 (74–100)	88 (80–99)	70 (43–100)
Nov	90 (72–99)	96 (92–100)	92 (81–99)	81 (47–100)
Dec	89 (66–97)	96 (89–100)	92 (84–99)	83 (56–100)

WUA = weighted usable area

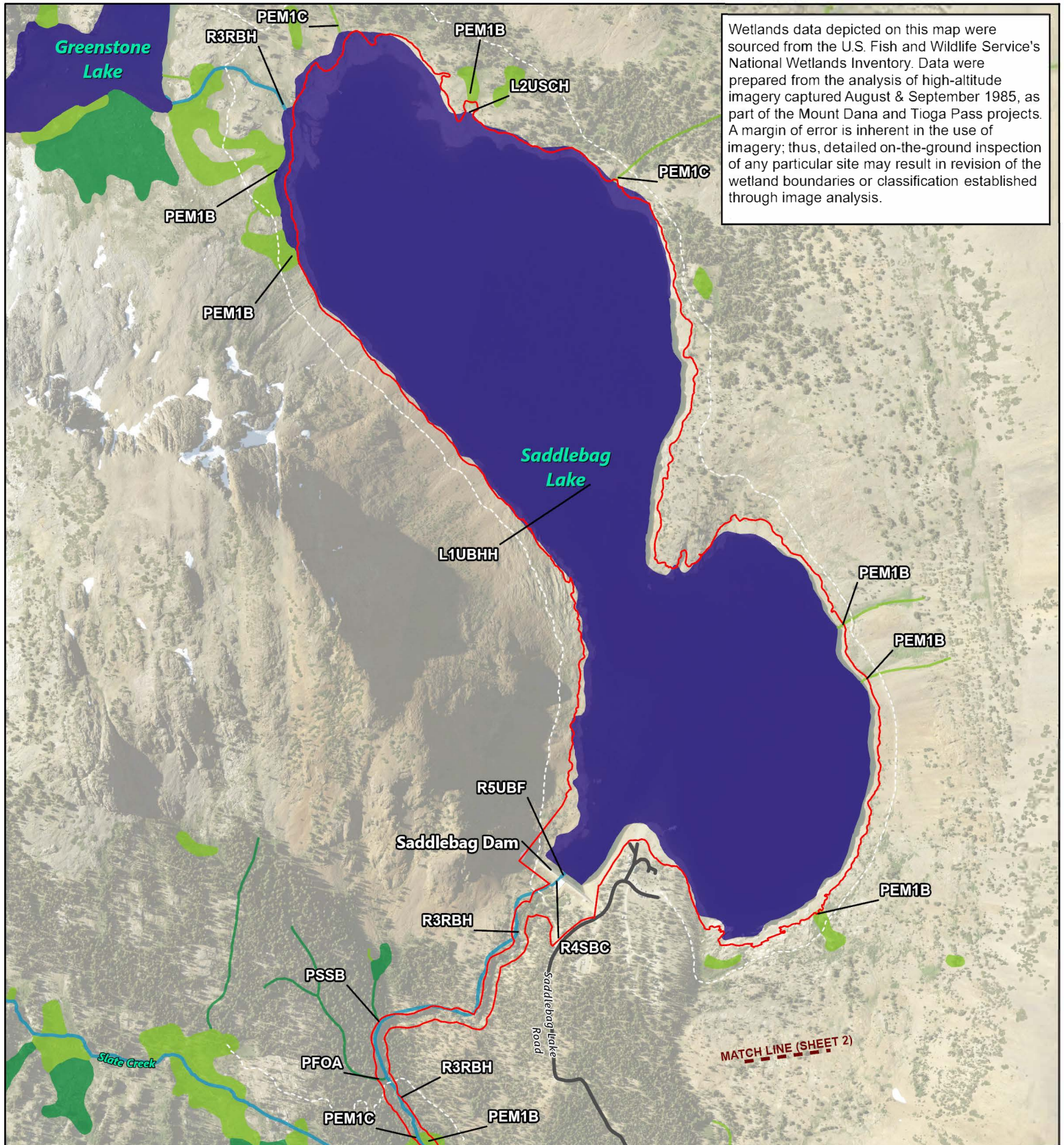
## 2.0 REFERENCES

EA (EA Engineering, Science, & Technology, Inc). 1986. *Instream Flow and Fisheries Studies for the Upper Lee Vining Creek Hydroelectric Project*. Prepared for Southern California Edison Company. June 1986.

FERC (Federal Energy Regulatory Commission). 1992. *Final Environmental Assessment for Hydropower License*. Lee Vining FERC Project No. 1388-001. California. Federal Energy Regulatory Commission, Office of Hydropower Licensing, Washington, D.C. December 30.

Groves Energy Company. 1984. *Supplemental information, Keating Leggett Project No. 3272-002-California*. Sacramento, California, January 31, 1984.




**APPENDIX E.4**  
**NATIONAL WETLANDS INVENTORY MAPBOOK**



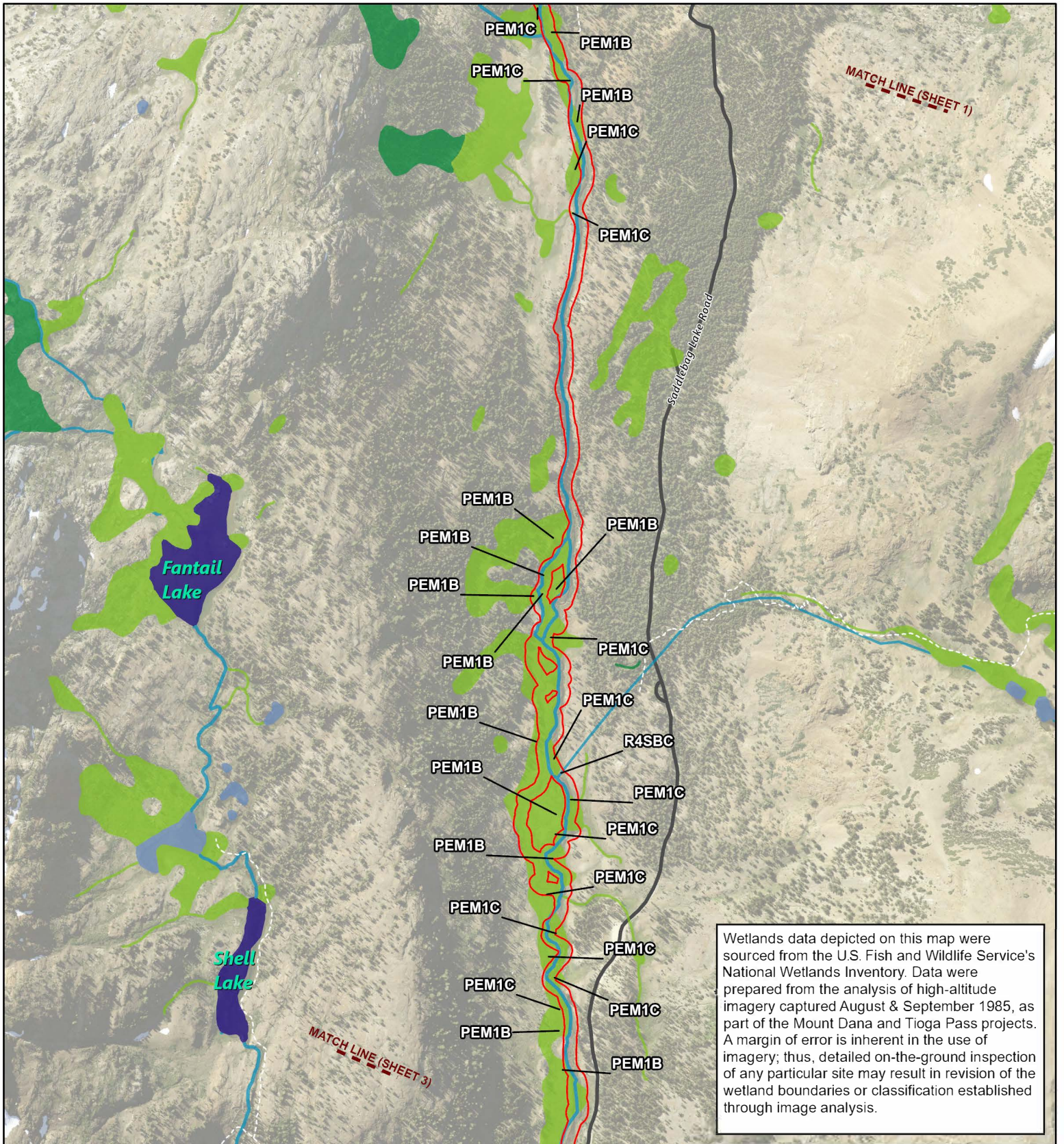
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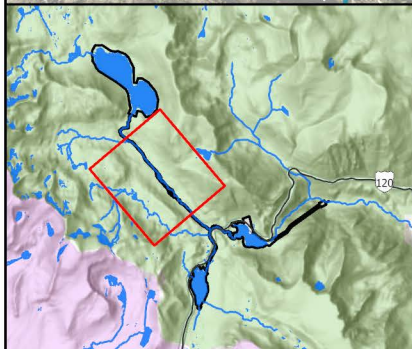
FERC Project Boundary (P-1388)  
 NWI Wetland Type  
 Freshwater Emergent Wetland  
 Freshwater Forested/Shrub Wetland  
 Lake  
 Riverine



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Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet  
 Projection: Lambert Conformal Conic  
 Datum: North American 1983  


**National Wetlands Inventory Mapbook**  
 Sheet 1 of 4  
**LEE VINING**  
**HYDROELECTRIC PROJECT**  
**FERC PROJECT NO. 1388**







Wetlands data depicted on this map were sourced from the U.S. Fish and Wildlife Service's National Wetlands Inventory. Data were prepared from the analysis of high-altitude imagery captured August & September 1985, as part of the Mount Dana and Tioga Pass projects. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.




 FERC Project Boundary (P-1388)

NWI Wetland Type

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

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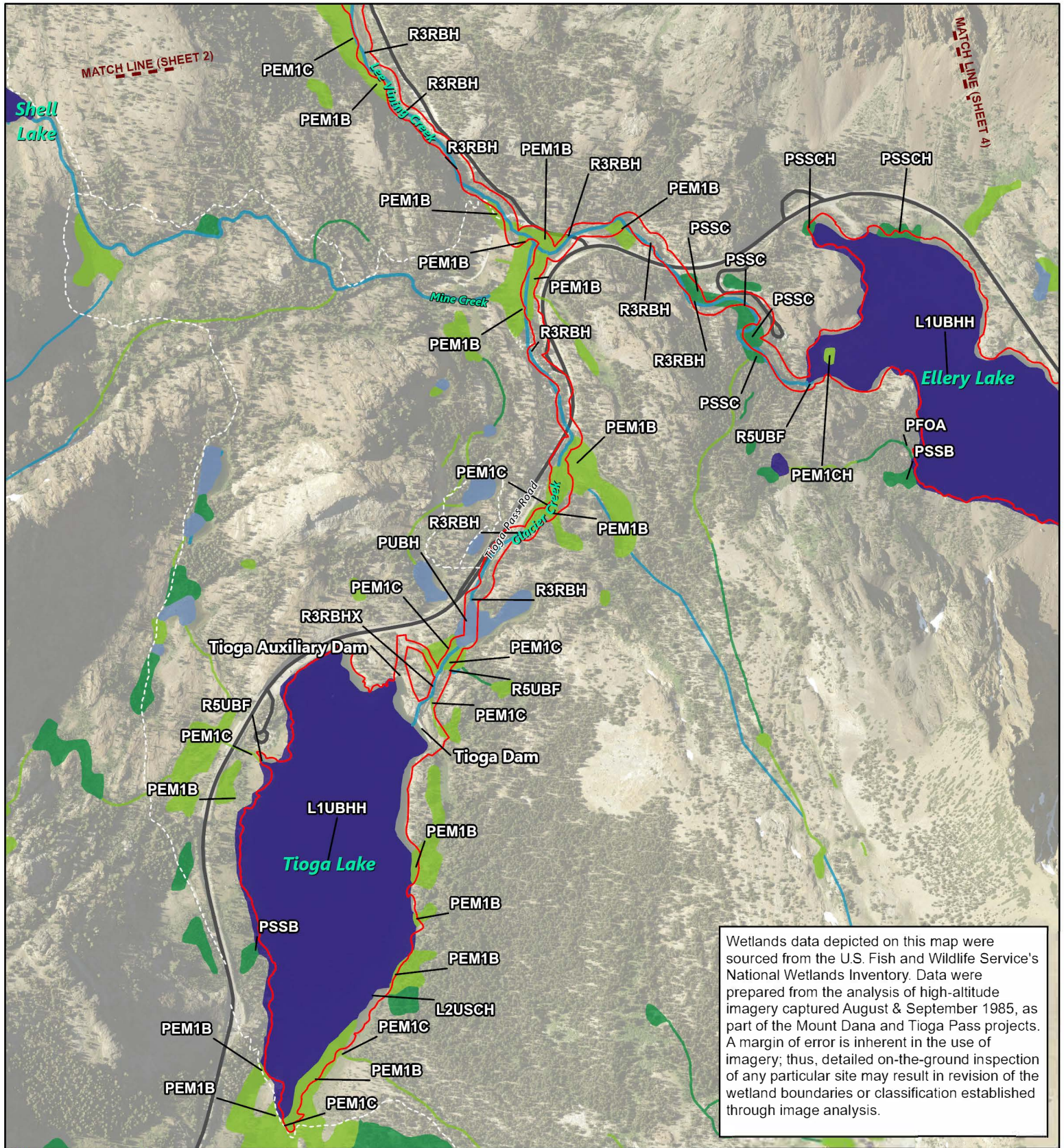
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Datum: North American 1983

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Feet

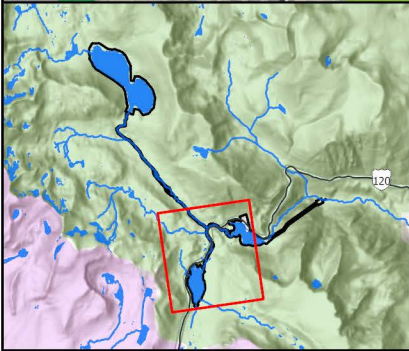
**National Wetlands Inventory Mapbook**

Sheet 2 of 4

**LEE VINING  
HYDROELECTRIC PROJECT  
FERC PROJECT NO. 1388**



Wetlands data depicted on this map were sourced from the U.S. Fish and Wildlife Service's National Wetlands Inventory. Data were prepared from the analysis of high-altitude imagery captured August & September 1985, as part of the Mount Dana and Tioga Pass projects. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.



**FERC Project Boundary (P-1388)**

**NWI Wetland Type**

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

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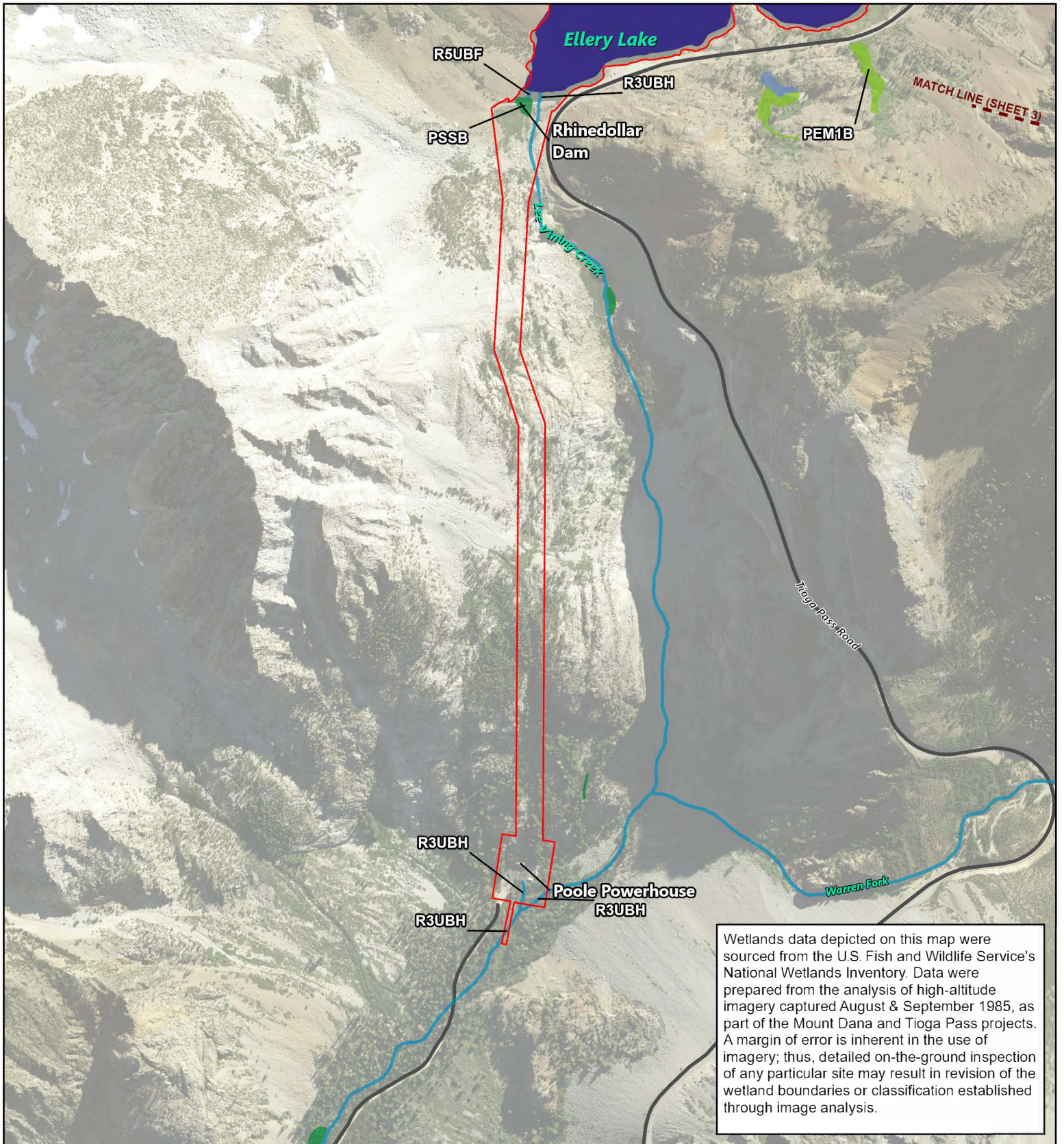
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0 500 1,000 Feet

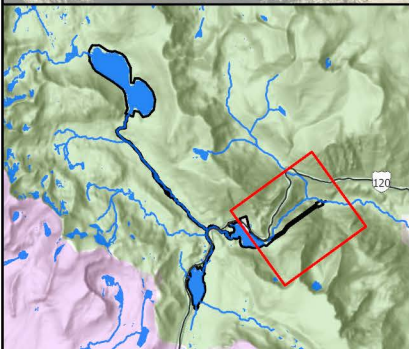
**National Wetlands Inventory Mapbook**

Sheet 3 of 4

**LEE VINING HYDROELECTRIC PROJECT**  
**FERC PROJECT NO. 1388**



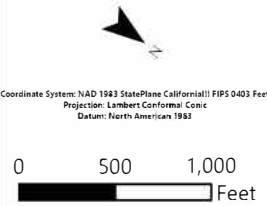
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- FERC Project Boundary (P-1388)
- NWI Wetland Type
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine



**National Wetlands Inventory Mapbook**  
Sheet 4 of 4



**LEE VINING HYDROELECTRIC PROJECT**  
**FERC PROJECT NO. 1388**

## CONSULTATION LOG



Date	Stakeholder Group	Correspondence/Consultation Event Description
<b>Post-PAD, not Study Plan-related, 2021–2022</b>		
8/13/2021	Relicensing Team, Interested Parties	Notification of PAD Filing
8/13/2021	CDFW	Response to PAD Filing, Confirming Receipt of 06/21/21 Letter
8/25/2021	Relicensing Team, Interested Parties	Site Visit Coordination and Planning
9/13/2021	CDFW	TLP Comment Letter
11/16/2021	Relicensing Team	Joint Agency Meeting and Materials (Agenda, Attendance List, Presentation)
12/8/2021	Relicensing Team	FERC Filing of JAM and Virtual Site Tour Summary
12/9/2021	North Fork Rancheria of Mono Indians of CA	Tribal Consultation Request from North Fork Rancheria of Mono Indians of CA
1/11/2022	Relicensing Team	SHPO Consultation Letter, Proposed APE
3/23/2022	SHPO	SHPO Receipt of Consultation Letter
5/11/2022	California Coastal Commission	Coastal Zone Consistency Determination
<b>Study Plan Development and Implementation Consultation 2022–2024</b>		
1/19/2022	Relicensing Team	Revised Study Plan Meeting Information
2/18/2022	Relicensing Team	Revised Technical Study Plans Filed with FERC <sup>a</sup>
3/4/2022	Relicensing Team, USFS, Ron Goode	Comments on Revised Study Plan
3/17/2022	Relicensing Team	Revised Technical Study Plan Meeting Agenda
3/20/2022	Relicensing Team	Wildlife Study Plan Meeting Summary 1
3/25/2022	Relicensing Team, CDFW	Wildlife Study Plan Meeting with CDFW Summary 1
3/28/2022	Relicensing Team, Interested Parties	Revised Technical Study Plan Meeting and Summary
3/30/2022	CDFW	Wildlife Study Plan Meeting with CDFW Summary
3/30/2022	Relicensing Team, CDFW	Wildlife Study Plan Meeting Summary
4/25/2022	Relicensing Team	Final Technical Study Plans Filed with FERC
5/6/2022	Relicensing Team	Notification of Availability of Final Technical Study Plans

<b>Date</b>	<b>Stakeholder Group</b>	<b>Correspondence/Consultation Event Description</b>
1/10/2023	Relicensing Team	Agenda for Yosemite Toad call with CDFW and USFS
2/2/2023	Relicensing Team, TWGs	Progress Report Meeting
2/9/2023	Relicensing Team, USFS	Yosemite Toad Study Plan Meeting with Inyo National Forest Wildlife Biologist Summary
3/1/2023	Recreation and Land Use TWG	Recreation and Land Use TWG Meeting
3/1/2023	Relicensing Team	Recreation and Land Use TWG Meeting Summary 1
3/15/2023	Relicensing Team	Recreation and Land Use TWG Meeting Summary 2
4/19/2023	Relicensing Team	Recreation and Land Use TWG Meeting Summary 3
4/19/2023	Bridgeport Indian Colony	Bridgeport Indian Colony Defers Negotiations and Decision Making
4/19/2023	Cultural and Tribal TWG	Cultural and Tribal TWG Meeting and Summary
5/18/2023	Relicensing Team	Aquatics and Hydrology TWG Meeting and Materials (Presentation and Summary)
6/19/2023	Mono Lake Kootzaduka's Tribe of CA and NV	Tribal Consultation Request
9/13/2023	Relicensing Team	Request for Stakeholder Reviews of Three 2022 Draft Technical Reports
2/22/2024	Relicensing Team	Recreation and Land Use TWG Meeting Agenda
2/28/2024	Recreation and Land Use TWG	Recreation and Land Use TWG Meeting
<b>Draft Technical Report Consultation</b>		
11/13/2023	SWRCB	SWRCB Comments to Technical Reports
11/22/2023	CDFW	CDFW Comments to Technical Reports
11/27/2023	CDFW	CDFW Comments to Technical Reports
12/27/2023	FERC	FERC Comments to Technical Reports
4/16/2024	Relicensing Team	Request for Stakeholder Review of 2023 Draft Technical Reports
4/19/2024	Relicensing Team	Technical Report Meeting – Save the Date
4/27/2024	MLC	MLC Comments on Technical Reports
5/9/2024	Relicensing Team	Technical Report Review Meeting Agenda

<b>Date</b>	<b>Stakeholder Group</b>	<b>Correspondence/Consultation Event Description</b>
5/14/2024	Relicensing Team, TWGs	Technical Report Review Meeting
5/17/2024	Relicensing Team	Technical Report Review Meeting Summary
5/28/2024	CDFW	CDFW Comments to TERR-2 Technical Report
6/7/2024	Relicensing Team	Operations Model Distributed to Stakeholders for Review
6/11/2024	MLC	MLC Comments on Technical Reports
6/11/2024	USFWS	USFWS Comments to TERR-2 Technical Report
6/11/2024	SWRCB	SWRCB Comments to Technical Reports
6/12/2024	USFS	USFS Comments to Technical Reports
<b>PME Development and Consultation</b>		
6/11/2024	Relicensing Team, TWGs	PME Meeting #1
6/20/2024	Relicensing Team, CDFW	Provide HEC-RAS Intraday Operations Hydrology Model to CDFW
7/5/2024	Relicensing Team, MLC	Provide HEC-RAS Intraday Operations Hydrology Model to MLC
7/16/2024	Relicensing Team, TWGs	PME Meeting #2
7/31/2024	Relicensing Team	PME Meeting #3 Materials (Agenda and Schedule)
8/1/2024	Relicensing Team, TWGs	PME Meeting #3
8/13/2024	Relicensing Team, LADWP	SCE and LADWP Meeting
8/15/2024	Relicensing Team, TWGs	PME Meeting #4
8/22/2024	Aquatics and Hydrology TWG	Aquatics and Hydrology TWG Proposed Flow Workshop and PME Meeting #4.5

APE = Area of Potential Effects; CA = California; CDFW = California Department of Fish and Wildlife; FERC = Federal Energy Regulatory Commission; HEC = Hydrologic Engineering Center; JAM = Joint Agency Meeting; LADWP = Los Angeles Department of Water and Power; MLC = Mono Lake Committee; NV = Nevada; PAD = Pre-Application Document; PME = protection, mitigation, and enhancement; RAS = River Analysis System [software]; SCE = Southern California Edison; SHPO = State Historic Preservation Office; SWRCB = State Water Resources Control Board; TWG = Technical Working Group; USFS = U.S. Forest Service; USFWS = U.S. Fish and Wildlife Service

<sup>a</sup> FERC Accession Number: 20220218-5250. Not included in this filing as they are already on file with FERC.

<sup>b</sup> FERC Accession Number: 20220426-5071. Not included in this filing as they are already on file with FERC.

## Carissa Shoemaker

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**From:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**Sent:** Friday, August 13, 2021 3:44 PM  
**Subject:** RE: (External):RE: PAD Filing for Lee Vining (FERC P-1388) Relicensing

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Patricia –

SCE did receive your comment letter and appreciate CDFW's position. SCE continues to believe the TLP process is appropriate for this project and has addressed your agency's specific concerns in our request to FERC ([linked here](#)). Ultimately, it will be FERC's decision and we are prepared to work collaboratively with stakeholders regardless of the process. We encourage participants who wish to comment on the process to do so via the FERC's website at <http://www.ferc.gov>.

Matthew C. Woodhall  
Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office

.....



**From:** Moyer, Patricia (Trisha)@Wildlife <Patricia.Moyer@Wildlife.ca.gov>  
**Sent:** Friday, August 13, 2021 11:39 AM  
**To:** Matthew Woodhall <Matthew.Woodhall@sce.com>; culture@bridgeportindiancolony.com; events@mammothmuseum.org; frontierpacktrain@gmail.com; FERC Case Admin <FERCCaseAdmin@sce.com>; FOMLR@bodiefoundation.org; info@friendsoftheinyo.org; comdev@mono.ca.gov; info@monolake.org; saddlebaglake@gmail.com; chair@toyabe.sierraclub.org; calweb@tnc.org; tiogalodge@gmail.com; tiogapassresortllc@gmail.com; jonathan.aguayo@psomas.com; victor.aguirreorozco@usda.gov; Wayne Allen <Wayne.Allen@sce.com>; Oroville@DWR <talpaugh@kearnswest.com>; holly@inyo-monowater.org; dawn.alvarez@usda.gov; Philipana@aol.com; Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; nayanake@comcast.net; kutzanuumu@yahoo.com; markbagley02@gmail.com; kathybncrft@yahoo.com; Banks, Rose@Wildlife <Rose.Banks@wildlife.ca.gov>; adam.barnett@usda.gov; justin\_barrett@fws.gov; Heather\_Beeler@fws.gov; president@esaudubon.org; Jacqueline.beidl@usda.gov; bbell@co.tuolumne.ca.us; ethan@stillwatersci.com; hydroesq@schat.net; monty.bengochia@bishoppaiute.org; lbergeron@pcta.org; paiute11@aol.com; Brad Blood <bblood@psomas.com>; ashley.blythehaverstock@usda.gov; stephen\_bowes@nps.gov; t.braithwaite@bentonpaiuterreservation.org; nativearchdoc@yahoo.com; Buckmaster, Nick@Wildlife <Nick.Buckmaster@wildlife.ca.gov>; sb@snowhydrology.com; burger@stillwatersci.com; bburman@usbr.gov; Seth Carr <Seth.Carr@sce.com>; ssmiwuknation@gmail.com; sandra47roy@gmail.com; acohen@stillwatersci.com; apcohen@umail.ucsb.edu; rcollins@caltrout.org; lcompas@hrassoc.com; darrel.cruz@washoetribe.us; lisa@monolake.org; businesscommittee@fortindependence.com; cdaly@mackaysposito.com; shellydk@frontiernet.net; tilford.denver@bishoppaiute.org; Robert Di Paolo <robbie@monolake.org>; Driscoll, Matt@SNC <Matt.Driscoll@sierranevada.ca.gov>; durhamdhvly@aol.com; hpo@timbisha.com; Lauren@stillwatersci.com; gardenofegan@suddenlink.net; todd.ellsworth@usda.gov; blake.engelhardt@usda.gov; Erdman, James@Wildlife <James.Erdman@wildlife.ca.gov>; Stephanie Fincher <Stephanie.Fincher@sce.com>; efink@nfr-nsn.gov; jora@friendsoftheinyo.org; secretary@southernsierramiwuknation.org; fuller@mewuk.com; nora.gamino@usda.gov; nordich2o@gmail.com; george@timbisha.com; chair@bridgeportindiancolony.com; Rwgode911@hotmail.com; katie@accessfund.org; nate@esavalanche.org; office@esavalanche.org; nicole.greenberg@erm.com; pgunsolley@gmail.com; d.gutierrez@bigpinepaiute.org; env@bridgeportindiancolony.com; Hancock, Ed@Waterboards

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**Subject:** (External):RE: PAD Filing for Lee Vining (FERC P-1388) Relicensing

**\*\*\* EXTERNAL EMAIL - Use caution when opening links or attachments \*\*\***

Greetings Matt,

I'm checking in with you to make sure you received CDFW's comment letter. As stated in our attached letter dated June 21, 2021, CDFW does not support the TLP process.

Best regards,

Trisha

Trisha A. Moyer

CDFW- Desert Inland Region 6

Habitat Conservation Program Supervisor

787 North Main Street Suite 220

Bishop, CA 93514

(760) 835-4304



**From:** Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>

**Sent:** Friday, August 13, 2021 10:28 AM

**To:** [culture@bridgeportindiancolony.com](mailto:culture@bridgeportindiancolony.com); [events@mammothmuseum.org](mailto:events@mammothmuseum.org); [frontierpacktrain@gmail.com](mailto:frontierpacktrain@gmail.com); FERC Case Admin <[FERCCaseAdmin@sce.com](mailto:FERCCaseAdmin@sce.com)>; [FOMLR@bodiefoundation.org](mailto:FOMLR@bodiefoundation.org); [info@friendsoftheinyo.org](mailto:info@friendsoftheinyo.org); [comdev@mono.ca.gov](mailto:comdev@mono.ca.gov); [info@monolake.org](mailto:info@monolake.org); [saddlebaglake@gmail.com](mailto:saddlebaglake@gmail.com); [chair@toiyabe.sierraclub.org](mailto:chair@toiyabe.sierraclub.org); [calweb@tnc.org](mailto:calweb@tnc.org); [tiogalodge@gmail.com](mailto:tiogalodge@gmail.com); [tiogapassresortllc@gmail.com](mailto:tiogapassresortllc@gmail.com); [jonathan.aguayo@psomas.com](mailto:jonathan.aguayo@psomas.com); [victor.aguirreorozco@usda.gov](mailto:victor.aguirreorozco@usda.gov); Wayne Allen <[Wayne.Allen@sce.com](mailto:Wayne.Allen@sce.com)>; 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<[Brandy.Wood@Wildlife.ca.gov](mailto:Brandy.Wood@Wildlife.ca.gov)>; [daniel.yarborough@usda.gov](mailto:daniel.yarborough@usda.gov); [Andrew.Yoder@kleinschmidtgroup.com](mailto:Andrew.Yoder@kleinschmidtgroup.com)  
**Subject:** PAD Filing for Lee Vining (FERC P-1388) Relicensing

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Dear Lee Vining Relicensing Project Interested Party:

Southern California Edison's (SCE) has filed a Preliminary Application Document (PAD) with FERC as part of the relicensing of the Lee Vining Hydroelectric Project (FERC Project No. 1388). This filing includes a request to FERC to use the Traditional Licensing Process (TLP). The filing may be accessed on FERC's public website under docket P-1388 at [www.ferc.gov](http://www.ferc.gov) or via the direct link below:

[https://elibrary.ferc.gov/eLibrary/filelist?accession\\_num=20210812-5130](https://elibrary.ferc.gov/eLibrary/filelist?accession_num=20210812-5130)

You are invited to provide comments on the SCE's request to use the TLP. Pursuant to 18 CFR § 5.3(d)(1), comments must be filed with FERC within 30 days of the filing date of this request, which is Monday, September 13, 2021.

Comments on the request should address, as appropriate:

- Likelihood of timely license issuance;
- Complexity of the resource issues;
- Level of anticipated controversy;
- Relative cost of the traditional process compared to the integrated process; and
- The amount of available information and potential for significant disputes over studies; and
- Other factors believed by the commenter to be pertinent.

As a general reminder, all stakeholders have the option to register and subscribe on FERC's public website to receive communication directly from FERC throughout the upcoming relicensing process. This will ensure timely receipt of all filings made by FERC, SCE, and stakeholders. Future communications related to this relicensing will arrive primarily via FERC communications, therefore, it is important that interested parties register on FERC's website

<https://www.ferc.gov/docs-filing/esubscription.asp>.

Thank you in advance for your assistance in SCE's relicensing process for the Lee Vining Project. Please contact me at (626) 302-9596 or [matthew.woodhall@sce.com](mailto:matthew.woodhall@sce.com) if you have any questions about the process or need assistance on registering on FERC's website.

Matthew C. Woodhall

Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office

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**From:** [Carissa Shoemaker](#)  
**To:** [Carissa Shoemaker](#)  
**Subject:** FW: PAD Filing for Lee Vining (FERC P-1388) Relicensing  
**Date:** Friday, July 8, 2022 3:19:00 PM  
**Attachments:** [image001.png](#)

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**From:** Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>

**Sent:** Friday, August 13, 2021 10:28 AM

**To:** [culture@bridgeportindiancolony.com](mailto:culture@bridgeportindiancolony.com); [events@mammothmuseum.org](mailto:events@mammothmuseum.org); [frontierpacktrain@gmail.com](mailto:frontierpacktrain@gmail.com); FERC Case Admin <[FERCCaseAdmin@sce.com](mailto:FERCCaseAdmin@sce.com)>; [FOMLR@bodiefoundation.org](mailto:FOMLR@bodiefoundation.org); [info@friendsoftheinyo.org](mailto:info@friendsoftheinyo.org); [comdev@mono.ca.gov](mailto:comdev@mono.ca.gov); [info@monolake.org](mailto:info@monolake.org); [saddlebaglake@gmail.com](mailto:saddlebaglake@gmail.com); [chair@toyabe.sierraclub.org](mailto:chair@toyabe.sierraclub.org); [calweb@tnc.org](mailto:calweb@tnc.org); [tiogalodge@gmail.com](mailto:tiogalodge@gmail.com); [tiogapassresortllc@gmail.com](mailto:tiogapassresortllc@gmail.com); [jonathan.aguayo@psomas.com](mailto:jonathan.aguayo@psomas.com); [victor.aguirreorozco@usda.gov](mailto:victor.aguirreorozco@usda.gov); Wayne Allen <[Wayne.Allen@sce.com](mailto:Wayne.Allen@sce.com)>; 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**Subject:** PAD Filing for Lee Vining (FERC P-1388) Relicensing

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Lee Vining Relicensing Project Interested Party:

Southern California Edison's (SCE) has filed a Preliminary Application Document (PAD) with FERC as part of the relicensing of the Lee Vining Hydroelectric Project (FERC Project No. 1388). This filing includes a request to FERC to use the Traditional Licensing Process (TLP). The filing may be accessed

on FERC's public website under docket P-1388 at [www.ferc.gov](http://www.ferc.gov) or via the direct link below:  
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- The amount of available information and potential for significant disputes over studies; and
- Other factors believed by the commenter to be pertinent.

As a general reminder, all stakeholders have the option to register and subscribe on FERC's public website to receive communication directly from FERC throughout the upcoming relicensing process. This will ensure timely receipt of all filings made by FERC, SCE, and stakeholders. Future communications related to this relicensing will arrive primarily via FERC communications, therefore, it is important that interested parties register on FERC's website <https://www.ferc.gov/docs-filing/esubscription.asp>.

Thank you in advance for your assistance in SCE's relicensing process for the Lee Vining Project. Please contact me at (626) 302-9596 or [matthew.woodhall@sce.com](mailto:matthew.woodhall@sce.com) if you have any questions about the process or need assistance on registering on FERC's website.

Matthew C. Woodhall  
Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office



**From:** [Carissa Shoemaker](#)  
**To:** [jstarost@blm.gov](mailto:jstarost@blm.gov)  
**Subject:** FW: IMPORTANT: Bishop Creek and Lee Vining Hydro Projects Relicensing UPDATES  
**Date:** Wednesday, August 25, 2021 3:04:00 PM  
**Attachments:** [image001.png](#)  
**Importance:** High

---

**From:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**Sent:** Monday, August 23, 2021 4:03 PM  
**Subject:** IMPORTANT: Bishop Creek and Lee Vining Hydro Projects Relicensing UPDATES  
**Importance:** High

**WARNING:** The sender of this email could not be validated and may not match the person in the "From" field.

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Stakeholders for the Bishop Creek and Lee Vining Hydro Relicensing Projects:

I am writing with an update on upcoming meetings for both projects.

The COVID-19 pandemic continues to keep us on our toes and require flexibility as the situation remains in flux. SCE takes the health and safety of our stakeholders, staff, and meeting participants very seriously. We believe that the Lee Vining Site Visit can be safely carried out as planned because it is outside and physically distancing along with other safeguards can be implemented. On the other hand, the Bishop Creek Effects Meeting, originally planned inside in much closer quarters would be best to move to a virtual platform. More information can be found about each meeting below:

-

#### **Lee Vining Hydro Project site Visit**

At this time, because this site visit is primarily outside, SCE believes that this in-person meeting can move forward as planned on September 28, 2021. We will follow Centers for Disease Control (CDC) guidance, including masks and social distancing at each stop. Attendees are expected to provide their own transportation and we will caravan to each project feature. We will meet at Gus Hess Community Park at 9am. Please dress for the weather, bring a lunch, water and a mask. SCE will provide handouts at the park, including maps, project description and you can download them in advance from the project licensing website: [www.sce.com/leevining](http://www.sce.com/leevining). Please RSVP to the meeting, either by replying to this email or accepting the calendar invite that has been sent to you, we would like to have a head count in advance to help plan for the day. Should conditions or policies change, SCE reserves the option to host the site visit virtually and will communicate appropriately if that time comes. Likewise, if your work-place policies or situation changes, please let us know and we can plan accordingly.

-

#### **Bishop Hydro Project**

Due to rising concerns surrounding COVID and indoor-meetings setting, the Effects Meeting that was scheduled for September 30<sup>th</sup> inside a meeting room at the Bishop County Fairgrounds is being moved to a virtual forum to be held later in October. SCE believes that this is not only the safest

option at this time but we are also confident we can accomplish meaningful discussions in an online platform as we have been doing. The goal of this meeting is to inform stakeholders of the progress made on the study plans to date and begin to discuss potential project effects in preparation for the Draft License Application, which will be filed in early 2022. The meeting is being planned for two 4-hour time slots (9am-1pm or 1pm-5pm PST) , spread over two days in October. Please provide your availability for this meeting at [THIS LINK](#) by no later than Monday, August 30<sup>th</sup> so we can send out a revised invite to participants. An agenda, the Bishop Creek Potential Effects Report and other meeting materials will be sent prior to the meeting.

Thank you for your flexibility on this matter and continued support of the SCE relicensing efforts. Please do not hesitate to contact me with any questions.

Sincerely,

Matthew C. Woodhall  
Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office





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

*GAVIN NEWSOM, Governor*  
*CHARLTON H. BONHAM, Director*



***Via e-mail***

September 13, 2021

Kimberly D. Bose, Secretary  
Nathaniel J. Davis, Sr., Deputy Secretary  
Federal Energy Regulatory Commission  
825 First Street, NE  
Washington, DC 20426

**Subject: Comments on the Lee Vining Hydroelectric Project FERC Relicensing Process (FERC Project # 1388)**

Dear Secretary Bose,

Thank you for giving the California Department of Fish and Wildlife (CDFW) the opportunity to comment on Southern California Edison's (SCE) proposal to use the Traditional Licensing Process (TLP) for the Lee Vining Hydroelectric Federal Energy Regulatory Commission (FERC) Relicensing Project (FERC Project No. 1388) (Project). CDFW submitted a letter to FERC's e-Library repository and to the Licensing party members on July 21, 2021, regarding SCE's intent to use the TLP process and a request for comments and questions. CDFW is providing this subsequent letter to provide specific examples of CDFW's rationale for supporting the Integrated Licensing Process (ILP) over the TLP.

**AUTHORITIES**

CDFW is the relevant State fish and wildlife agency for resource consultation pursuant to the Federal Power Act Section 10(j) (16U.S.C. section 803(j)). The fish and wildlife resources of the State of California are held in trust for the people of the State by and through CDFW (Fish and G. Code § 711.7). CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (Fish and G. Code § 1802). The mission of CDFW is to manage California's diverse fish, wildlife, and plant resources, and the habitats on which they depend, for their ecological values and for their use and enjoyment by the public.

**COMMENTS AND RECOMMENDATIONS**

CDFW believes the ILP will be a more effective process for the Lee Vining Hydroelectric FERC Relicensing for the following reasons:

- **Complexity of the resource issues and level of anticipated controversy:** CDFW drafted and submitted to SCE several Study Plans relating to reservoir

*Conserving California's Wildlife Since 1870*

and stream fish populations and wildlife resources in the Project area that may be impacted by the proposed Project operations. CDFW proposed Study Plans to assess potential impacts from Project operations on two state listed endangered species, the Yosemite toad (*Anaxyrus canorus*) and the willow flycatcher (*Empidonax traillii*). The ILP provides the appropriate platform for CDFW to provide SCE with species specific feedback and expertise on what studies may be required and how such studies should be implemented. Specifically, through the ILP, CDFW can ensure that studies are gathering the needed information and that data gathered is analyzed in a way that informs next steps.

In addition, the level of public, agency, stake holder and tribal controversy in the Mono Basin is high. CDFW anticipates a high level of public, agency, stake holder and tribal participation in the Lee Vining FERC relicensing process that would be best served by the ILP. Complex water rights issues and Settlement Agreements have been trying to direct activities in the Mono Basin for over 30 years, some of which require restoration of Mono Basin streams and restoration of Mono Lake levels. Several legal decisions and agreements have been issued for the Mono Basin since the issuance of the original FERC license in 1939:

- 1994 State Water Resources Control Board (SWRCB) decision 1631 included flows for channel maintenance.
- 1997 Settlement Agreement presented to SWRCB. The Settlement Agreement specifically called out the need for the City of Los Angeles, Department of Water and Power (LADWP) to coordinate with SCE to maximize the legally required 'Channel Maintenance Flows': *'DWP will in all years attempt to maximize Channel Maintenance Flows (CMFs) through coordination with Southern California Edison ("SCE"), and may include encouraging SCE to coordinate their spills and releases at the same time Grant Lake is spilling; granting SCE waivers, as appropriate, from the 5 % storage rule; developing annual operating plans only after consultation with SCE; encouraging SCE to spill Tioga at the same time that Lee Vining Creek flows are peaking.'*
- 1998 SWRCB ordered the implementation of stream and waterfowl habitat restoration measures in the Mono Basin (Orders 98-05 and 98-07).

These complex challenges unique to the Mono Basin need to be considered when evaluating Project operations and resulting impacts. The availability of sufficient water for restorative flows required by the Settlement Agreement may be affected by SCE's Project operations upstream. These complex issues need to be studied and evaluated to ensure collaboration of all involved parties and achieving the goal of restoring and maintaining the Mono Basin streams, Mono Lake and associated aquatic and wildlife habitats and ecosystems.

- **The amount of available information and potential for significant disputes:** During the Pre-Application Document (PAD) consultation, local, state, and federal agencies, interested stakeholders and local tribes identified additional information that may be needed on the existing environment in the Project area. CDFW believes there are several unresolved topics, including the extent of the FERC Project boundary, sharing, and accessing information between all parties and accessing the SCE Operations model, that would be more appropriately addressed in the ILP.
- **Likelihood of timely license issuance:** The more structured and predictable ILP, with clearly specified timelines over the course of the licensing process, will provide CDFW with a better platform to manage and prioritize its workload and complete reviews and comments letters in a timely manner.
- **Other factors believed by the applicant to be pertinent:** CDFW participated in and supported the development and adoption of the ILP and believes the ILP provides for more effective and efficient collaboration between stakeholders, and thus ultimately results in better protection of CDFW trust resources.

## CONCLUSION

The purpose of the ILP is to provide an efficient and timely licensing process that ensures appropriate resource protections through better coordination with interested federal and state agencies and tribes. 18 CFR, Ch 1B, §5.1(f) provides that the ILP is the default process unless the applicant receives authorization to use the traditional process.

Due to the presence of state listed species in the Project area, the high level of public, agency, stakeholder, and tribal controversy in the Mono Basin and due to the need to integrate complex water rights and Settlement Agreements into the relicensing process, CDFW believes the default ILP process is better designed to achieve the stated goals of better coordination of agencies and tribes, while also providing an efficient and timely licensing process.

CDFW looks forward to further discussion and coordination with the Lee Vining FERC Relicensing Technical Working Group members.



Kimberly D. Bose, Secretary  
FERC  
September 13, 2021  
Page 4

If you have any question pertaining to this letter, please contact Alyssa Marquez, at (760) 567-0332 or [Alyssa.Marquez@Wildlife.ca.gov](mailto:Alyssa.Marquez@Wildlife.ca.gov)

Sincerely,

DocuSigned by:  
*Alisa Ellsworth*  
84FBB8273E4C480...

Alisa Ellsworth  
Environmental Program Manager

ec: California Department of Fish and Wildlife  
Patricia Moyer, [Patricia.Moyer@Wildlife.ca.gov](mailto:Patricia.Moyer@Wildlife.ca.gov)  
Alyssa Marquez, [Alyssa.Marquez@Wildlife.ca.gov](mailto:Alyssa.Marquez@Wildlife.ca.gov)  
Nick Buckmaster, [Nick.Buckmaster@Wildlife.ca.gov](mailto:Nick.Buckmaster@Wildlife.ca.gov)

California Sportfishing Protection Alliance  
Chris Shutes, [blancapaloma@msn.com](mailto:blancapaloma@msn.com)

United States Department of Agriculture, Forest Service  
Sheila Irons, [Sheila.irons@usda.gov](mailto:Sheila.irons@usda.gov)

United States Fish and Wildlife Service  
Chad Mellison, [Chad\\_Mellison@fws.gov](mailto:Chad_Mellison@fws.gov)

Mono Lake Committee  
Bartshe Miller, [bartshe@monolake.org](mailto:bartshe@monolake.org)

State Water Resources Control Board  
Chase Hildeburn, [chase.hildeburn@waterboards.ca.gov](mailto:chase.hildeburn@waterboards.ca.gov)

Southern California Edison  
Matthew Woodhall, [Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)

Los Angeles Department of Water and Power  
Jorat Saeed, [Saeed.Jorat@ladwp.com](mailto:Saeed.Jorat@ladwp.com)

Lahontan Regional Water Quality Control Board  
Ed Hancock, [Ed.hancock@waterboards.ca.gov](mailto:Ed.hancock@waterboards.ca.gov)



# Lee Vining Hydroelectric System Relicensing

## Joint Agency Meeting (JAM) and Virtual Site Tour

November 16, 2021, 8:00 AM – 1:00 PM PDT via Microsoft Teams

### Objectives

- Provide a Project overview
- Discuss FERC relicensing process
  - o Traditional Licensing Process (TLP)
- Provide overview of existing information
  - o Preliminary Application Document (PAD)
- Discuss potential environmental effects
- Discuss proposed studies to fill information gaps

Time	Agenda Topic/Subtopic	Lead
8:00	<b>Virtual Site Tour</b> <i>(Optional - provided especially for those who missed the in-person site visit)</i>	
	<ul style="list-style-type: none"><li>- Safety moment</li><li>- Introductions</li><li>- Review of Site Visit Agenda and Booklet</li><li>- Watch drone footage</li></ul>	Matthew Woodhall
8:55	<b>5-minute break</b>	
9:00	<b>JAM Welcome &amp; Introductions</b>	
	<ul style="list-style-type: none"><li>- Safety moment</li><li>- Introductions</li></ul>	Matthew Woodhall
9:20	<b>SCE and FERC Relicensing Process Overview</b>	
	<ul style="list-style-type: none"><li>- SCE relicensing objectives</li><li>- FERC relicensing</li><li>- Study questions and criteria</li><li>- TLP Schedule</li></ul>	Finlay Anderson
9:45	<b>Project Overview</b>	
	<ul style="list-style-type: none"><li>- Summary of Project facilities and operations</li></ul>	Seth Carr and Lyle Laven
9:55	<b>5-minute break</b>	
10:00	<b>Overview of Existing Information</b>	
	<ul style="list-style-type: none"><li>- PAD summary of findings, per resource area</li><li>- Potential effects, per resource area</li><li>- Resource Management Plans identified</li><li>- Proposed Study Plans</li></ul>	Finlay Anderson and Resource Leads

- Fish and Aquatics
  - Reservoir Fish Populations
  - Stream Fish Populations
  - Aquatic Habitat Mapping and Sediment Characterization
  - Aquatic Invasive Plants and Algae
  - Operations Model
  - Lower Lee Vining Creek Channel Morphology
  - Stream and Reservoir Water Quality Assessment
- Terrestrial and Botanical
  - General Wildlife and Rare, Threatened, and Endangered Species
  - Botanical (RTE, invasive, and riparian)
- Cultural and Tribal
  - Cultural
  - Tribal
- Recreation and Land Use
  - Recreation Use Assessment
  - Recreation Facilities Condition
  - Project Boundary and Roads
- Visual Quality Assessment

**12:20 Schedule, next steps, action items**

- Upcoming important dates and events Finlay Anderson
- Other action items

**12:40 Final Q&A**

**12:55 Adjourn**

**Materials Available on [Relicensing Website](#)**

- Preliminary Application Document, filed August 12, 2021
  - Includes Draft Study Plans
- Site Visit materials
  - Project overview maps
  - Site Visit Booklet
  - Agenda
  - Site Visit Photos
- Process Plan and Schedule
- USFWS IPaC Report (April 2020)
- Project Flyover Video
- FERC Environmental Assessment
- Current FERC License (1997)
- Select Orders Amending the 1997 License

- Technical Working Group (TWG) materials
  - Meeting Agenda
  - Meeting Summaries
  - PowerPoint Presentations
  - TWG Charter Document
- October 2020 Public Meeting materials



**ATTENDANCE LIST**

**LEE VINING, FERC PROJECT NO. 1388**

**IN-PERSON SITE VISIT – SEPTEMBER 28, 2021, 9:00AM - 3:00PM**

**VIRTUAL SITE VISIT - NOVEMBER 16, 2021, 8:00AM - 9:00AM**

**JOINT AGENCY MEETING (JAM) - NOVEMBER 16, 2021, 9:00AM - 12:00PM**

	In-Person Site Visit	Virtual Site Visit	Joint Agency Meeting
<b>Relicensing and Facilitation Team Members</b>			
Adam Cohen, Stillwater	X		X
Allison Rudalevige, Psomas	X	X	X
Audry Williams, SCE	X		X
Brad Blood, Psomas	X	X	X
Brandon Kulik, Kleinschmidt	X		X
Bret Hoffman, Kleinschmidt		X	X
Carissa Shoemaker, ERM	X	X	X
Edith Read, E. Read and Associates, Inc.	X		X
Finlay Anderson, Kleinschmidt	X	X	X
Heather Bowen Neff, Stillwater Sciences	X	X	X
Joshua Fritz, ERM		X	X
Kelly Larimer, Kleinschmidt	X		
Lindsay Tryba, KW		X	X
Lynn Compas, Historical Research Associates, Inc.			X
Martin Ostendorf, SCE			X
Matthew Harper, Kleinschmidt	X	X	X
Matthew Woodhall, SCE	X	X	X
Seth Carr, SCE	X		X
Shannon Luoma, Kleinschmidt	X	X	X
Shelly Davis-King, Davis-King and Associates	X		
Steve Norton, Psomas	X	X	X
Terra Alpaugh, KW		X	X
Vince White, SCE			X
<b>Technical Working Group Members and Interested Parties</b>			
Phone number (760) 784-4085			X
Adam Barnett, USFS	X		

Alyssa Marquez, CDFW	X		X
Ashley Blythe Haverstock, USFS			X
Bartshe Miller, MLC	X		X
Brandy Wood, CDFW			X
Chad Mellison, USFWS			X
Chris Shutes, CSPA			X
Claire Landowski, MLC	X		
Erin Moore, USFS	X		
Geoff McQuilkin, MLC	X		
Greg Reis, MLC	X		X
Jacqueline Beidl, USFS	X		
Jameisha Washington, USFS			X
James Erdman, CDFW	X	X	X
Jill North, Waterboards		X	X
Kary Schlick, USFS	X		
Lawrence Primosch, BLM			X
Lilian Jonas, NPS contractor	X		
Michael Wiese, USFS	X		X
Monique Sanchez, USFS			X
Naomi Jensen, CDFW			X
Nathan Sill, USFS	X		X
Parker Thaler, Waterboards			X
Patricia Moyer, CDFW			X
Paul Pau, LADWP			X
Paul Rose, Unaffiliated	X		
Raymond Andrews, Bishop Paiute Tribe		X	X
Richard McNeill, USFS	X	X	X
Samuel Rapp, USFS	X		
Sheila Irons, USFS	X		
Stephanie Heller, USFS	X		
Sue Burak, Consulting hydrologist	X		
Thomas Torres, USFS			X

# Lee Vining Hydroelectric Project

## FERC No. 1388

*Note that this meeting will be recorded*

Welcome!

**The meeting will begin at 9:05**

Using the chat, please write your name, organization, and your favorite holiday side dish

# Joint Agency & Public Meeting

November 16, 2021

# Welcome and Land Acknowledgment

SCE would like to take a moment and recognize that the Lee Vining Project is located on the Mono Lake Kutzadikaa Tribes' traditional lands which they have stewarded for generations.



# Safety Moment



# Welcome and Introductions: Lee Vining Relicensing Team

## SCE Team

**Matthew Woodhall**  
Project Manager

**Martin Ostendorf**  
Senior Manager

**Audry Williams**  
Cultural Resources  
Manager

**Seth Carr**  
Operations Manager

**Lyle Laven**  
Production Manager

## Consultant Team

**Finlay Anderson**  
Project Manager

**Shannon Luoma**  
Deputy PM

**Kelly Larimer**  
Project Director

**Carissa Shoemaker**  
TWG Coordinator

**Heather Neff**  
Aquatics Lead

**Allison Rudalevige**  
and **Steve Norton**  
Terrestrial and  
Botanical Leads

**Shelly Davis-King**  
Tribal Lead

**Lynn Compas**  
Cultural Lead

**Matt Harper**  
Recreation and Land  
Use Lead

# JAM Agenda

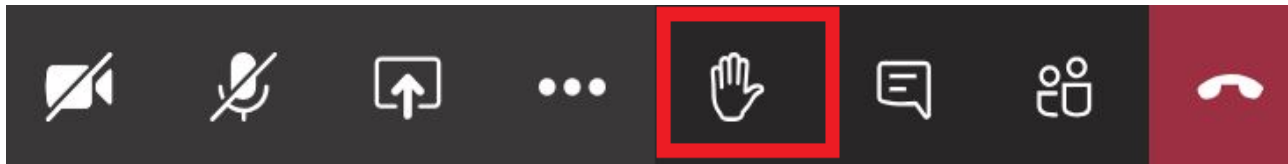
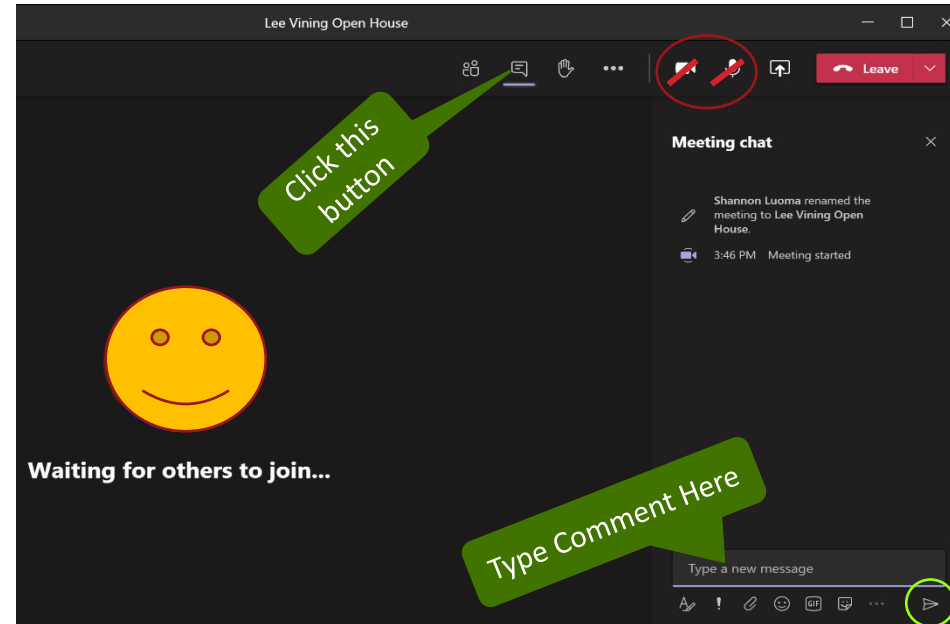
- Safety moment
- Welcome and Introductions
- Meeting objectives
- SCE and FERC relicensing process overviews
- Project overview
- Overview of existing information
  - Preliminary Application Document (PAD) summary of findings
- Proposed study plans
- Schedule, next steps, action items
- Final questions

# Meeting Objectives

- Provide a Project overview
- Discuss FERC relicensing process
  - Traditional Licensing Process (TLP)
- Provide overview of existing information
  - Preliminary Application Document (PAD)
- Discuss potential environmental effects
- Discuss proposed studies to fill information gaps

# Meeting Tips and Guidelines

- *Note that this meeting is being recorded*
- Please wait to be called on and then unmute your line
  - Introduce yourself (name and affiliation) prior to speaking
- Listen and respect each other
- Stay on topic
- Ask a question by typing it into the chat box during the presentation or by using the raise your hand feature



# Relicensing Materials Available on Website

Website: [www.sce.com/leevining](http://www.sce.com/leevining)

- Preliminary Application Document, filed August 12, 2021
  - Including Draft Study Plans
- Site Visit materials
  - Project overview maps
  - Site Visit Booklet
  - Agenda
  - Site Visit Photos
- Process Plan and Schedule
- USFWS IPaC Report (April 2020)
- Project Flyover Video
- FERC Environmental Assessment
- Current FERC License (1997)
- Select Orders Amending the 1997 License
- Technical Working Group (TWG) materials
  - Meeting Agenda
  - Meeting Summaries
  - PowerPoint Presentations
  - TWG Charter Document
- October 2020 Public Meeting materials

# 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)
- Define and describe current operations, 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

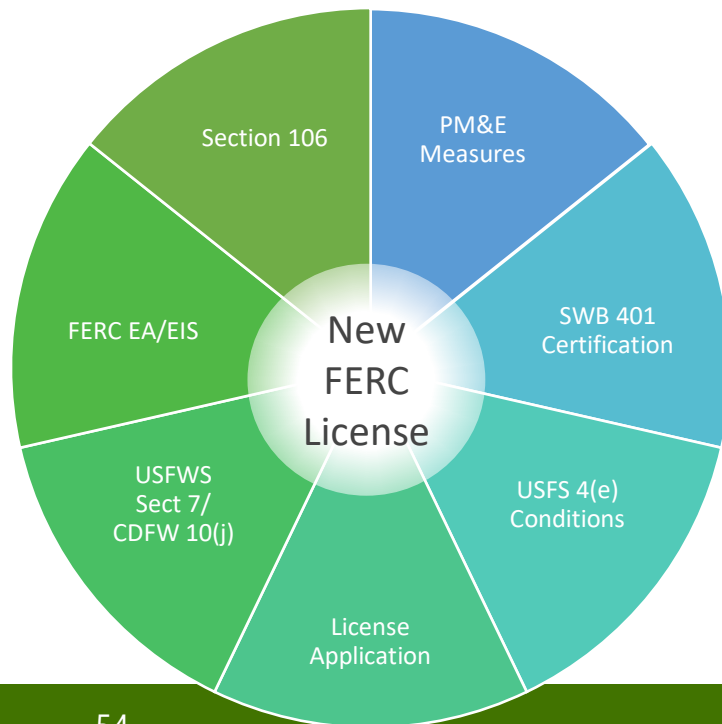
- **Step 1: Describe Project and file Notice of Intent (NOI)**
- Preliminary Application Document (PAD) summarizes existing Project-related information, potential future operations, and identifies potential resource issues
- Identify Key Questions
  - Stakeholders ask questions and request studies for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



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

*Federal Energy Regulatory Commission  
Office of Energy Projects*

March 2012



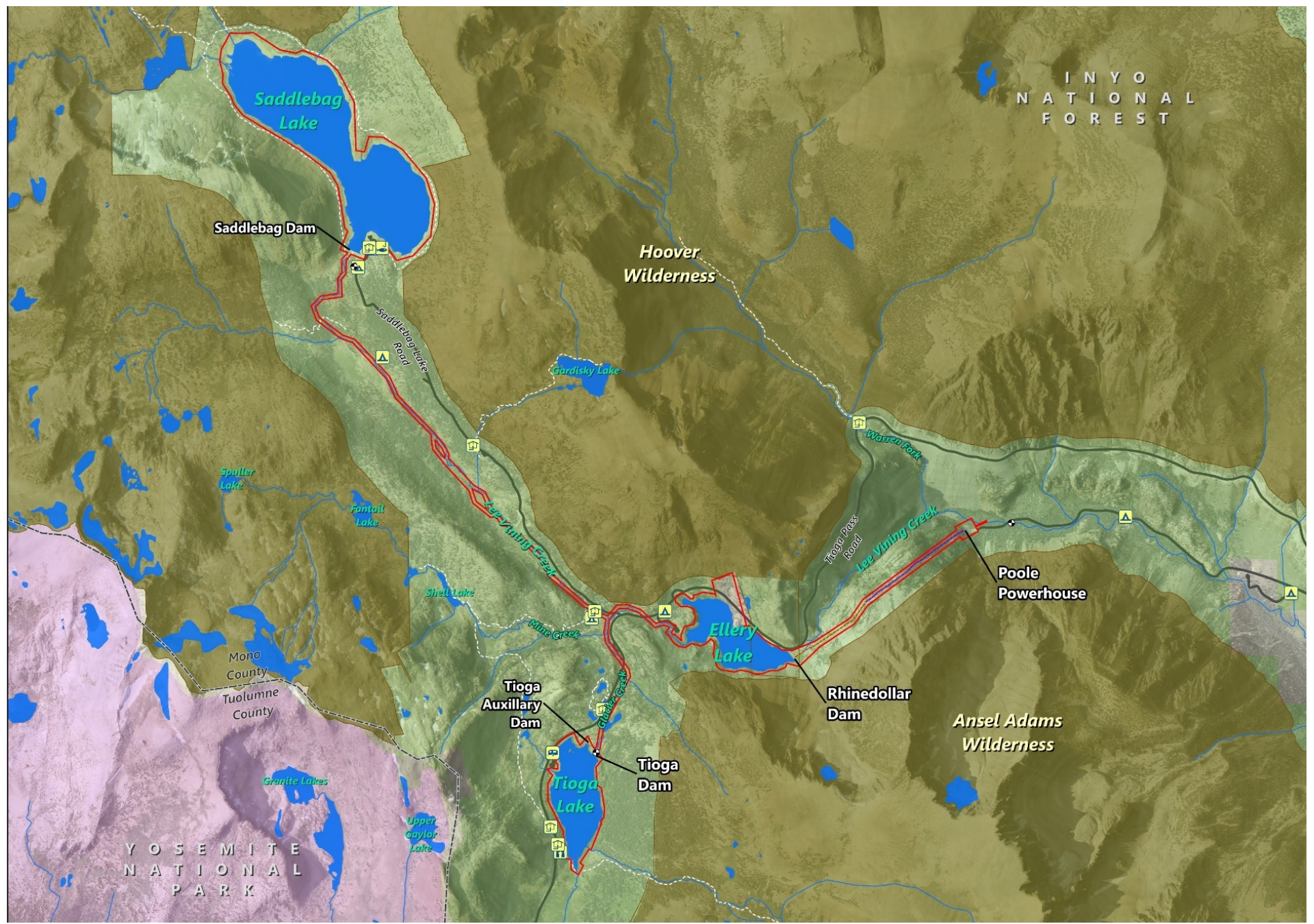
# Traditional Licensing Process Stage 1 Schedule

Action	Date	Timeline
Filed Notice of Intent (NOI) and Preliminary Application Document (PAD)	8/12/2021	
FERC Approved Traditional Licensing Process (TLP)	10/8/2021	
Joint Agency Meeting (JAM)	11/16/2021	
Comments due to FERC on PAD and Study Plans	1/17/2022	within 60 days of JAM
<i>SCE provide Study Plans to stakeholders and TWGs</i>	<i>2/14/2022</i>	<i>30 days after comments are due</i>
<i>Comments due to SCE on Study Plans</i>	<i>3/16/2022</i>	<i>30 days after receiving study plans</i>
<i>Study Plan Meetings with TWGs</i>	<i>March/April 2022</i>	
<i>Final Study Plans to TWGs</i>	<i>4/15/2022</i>	

# Questions?



# LEE VINING HYDROELECTRIC PROJECT OVERVIEW



# 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



Aerial Overview of Lee Vining Project Area

# Project Facilities

- Saddlebag Dam and Lake
  - Headwaters of Lee Vining Creek
  - 297-acre reservoir
- Tioga Dams and Lake
  - Headwaters of Glacier Canyon
  - 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



# Water Management

## Water Management

- Minimum flows below each reservoir depend on type of hydrologic year (wet, dry, normal)
- Historic contract (sales agreement) dictates annual storage and release – 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 (beginning at LADWP diversion ~5 mi downstream of Poole Powerhouse)





# Project Operations

## 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

# Project Operations (continued)

- Poole Powerhouse is used to respond to California Public Utility Commission (CPUC) and CAL ISO demands for power:
  - Demands can be market driven (i.e., energy and renewable load)
  - Can also be response to need for grid and electrical stability to Mono Basin when the source transmission line is de-energized (38 times in 2021 to date)
- When this happens, additional flows are released into Lee Vining Creek to respond to generation requirements

# Project Operations (continued)

- Data is not available to easily describe the frequency and magnitude of these
  - They generally last less than 8 hours.
  - Using available data from the downstream LADWP diversion, SCE has estimated that these events are influenced by time of year with higher frequency of events occurring in the winter and spring.
- SCE is proposing to continue Hydro-Resource Optimization in the new license term, and will be characterizing the frequency, magnitude, and duration of these events for the new license along with reviewing potential Project effects.

# Questions?



# 10-minute Break



Overview of Existing  
Information  
(PAD findings), Potential  
Environmental Effects, and  
Study Plans

# Resource Sections (PAD section 5.1-5.13)

Geology and Soils,  
Water, &  
Fish and Aquatics

Recreation,  
Land Use, &  
Aesthetics

Botanical,  
Upland Wildlife and  
Habitat,  
Floodplains and  
Wetlands, &  
Rare, Threatened, and  
Endangered (RTE) Species

Cultural & Tribal

# PAD Section 6 Overview

Section 6 of the PAD includes:

- A table that describes potential issues and how they may be addressed
- A list of all proposed studies
- A table that describes potential issues that SCE doesn't think warrant a study, rationale as to why, and how some of these questions could be addressed
- References to Appendix that has the draft studies



# Geology and Soils Summary

- 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.
- 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 limited
- Erosion Control Plan in place for ground-disturbing activities



# 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 nutrient concentrations typically very low
- Ammonium and orthophosphate occasionally elevated in and 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 were low, elevated upstream of LADWP diversion
- Dreissenid mussels not expected to invade due to low calcium concentrations and circumneutral pH



Tioga Lake

# Fish and Aquatics Summary

## 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



Rainbow trout

# Fish and Aquatics Summary (continued)



Lee Vining Creek below Saddlebag Dam

## Fish Population Monitoring

- Multiple years of surveys conducted between Saddlebag Dam and Ellery Lake:
  - 1984, 1986, 1999, 2000, 2001, 2006, 2011, and 2016
  - No native species documented
  - Biomass highest below Saddlebag Dam ( $8.3 \text{ g/m}^2$ ) and upstream of Ellery Lake ( $7.2 \text{ g/m}^2$ )
  - 2016 data indicate typical length-frequency and age-class distributions for brown and brook trout
  - Fish in good condition
- Trout biomass downstream of Poole Powerhouse ( $6.7 \text{ g/m}^2$ ) documented in the 1980s
- Surveys not known to have occurred in Lee Vining Creek between Ellery Lake and Poole Powerhouse, Glacier Creek below Tioga Dam, or in Project Reservoirs.

# Fish and Aquatics Summary (continued)

## Aquatic Habitat Monitoring



Lee Vining Creek Below Poole Powerhouse

- Instream flow study (1992) found trout habitat is maximized:
  - Saddlebag Dam to Slate Ck.: 15-25 cfs
  - Slate Ck. to Ellery Lake: 20-40 cfs
  - Below Poole PH: 30-40 cfs
- Aquatic habitat monitoring conducted between Saddlebag Dam and Slate Creek
  - Surveyed in 1999, 2000, 2001, 2006, 2011, and 2016
  - Recorded abundant spawning gravels, loosely compacted sediments in low gradient areas, occasional LWD
- Habitat mapping between Saddlebag Dam and Ellery Lake, conducted 1984 – 86, to be included in FLA
  - Begins as moderate-gradient riffle, transitions to low-gradient braided channel, then broad riffle/run
- Monitoring not known in Lee Vining Creek downstream of Rhinedollar Dam or in Glacier Creek below Tioga Dam.

# Fish and Aquatics Summary (continued)

## Benthic Macroinvertebrates

- Data available in Lee Vining Creek
  - Below Saddlebag and Ellery lakes
  - Leakage zone below Saddlebag Dam
  - Downstream of Poole PH
- Data available in Glacier Creek below Tioga Dam
- California Stream Condition Index (CSCI) Data
  - 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, Soils, Water, Fish, and Aquatics – Potential Effects

- Potential to alter water quality in reservoirs and Project streams
- Potential to affect condition of recreational fisheries within Project reservoirs and streams
- Potential to affect quantity and quality of aquatic habitat for fish populations within Project streams
- Colonization of stream reaches by invasive aquatic species including Didymo have the potential to modify aquatic habitat
- Potential to affect fluvial processes and channel morphology downstream of Poole Powerhouse to the LADWP Diversion
- Potential to affect stream hydrology and resource conditions downstream of Poole Powerhouse

# Geology, Soils, Water, Fish, and Aquatics - Proposed Studies

Aquatic TWG met four times and the following studies were developed to address the potential Project effects:

- Stream and Reservoir Water Quality
- Reservoir Fish Populations
- Stream Fish Populations
- Aquatic Habitat Mapping and Sediment Characterization
- Aquatic Invasive Plants
- Lower Lee Vining Creek Channel Morphology
- Operations Model



# Questions?



# Terrestrial and Botanical Resources

## Existing Data



Belding's Ground Squirrel at Saddlebag Lake, 2018

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

# Terrestrial and Botanical Resources

## Existing Environment

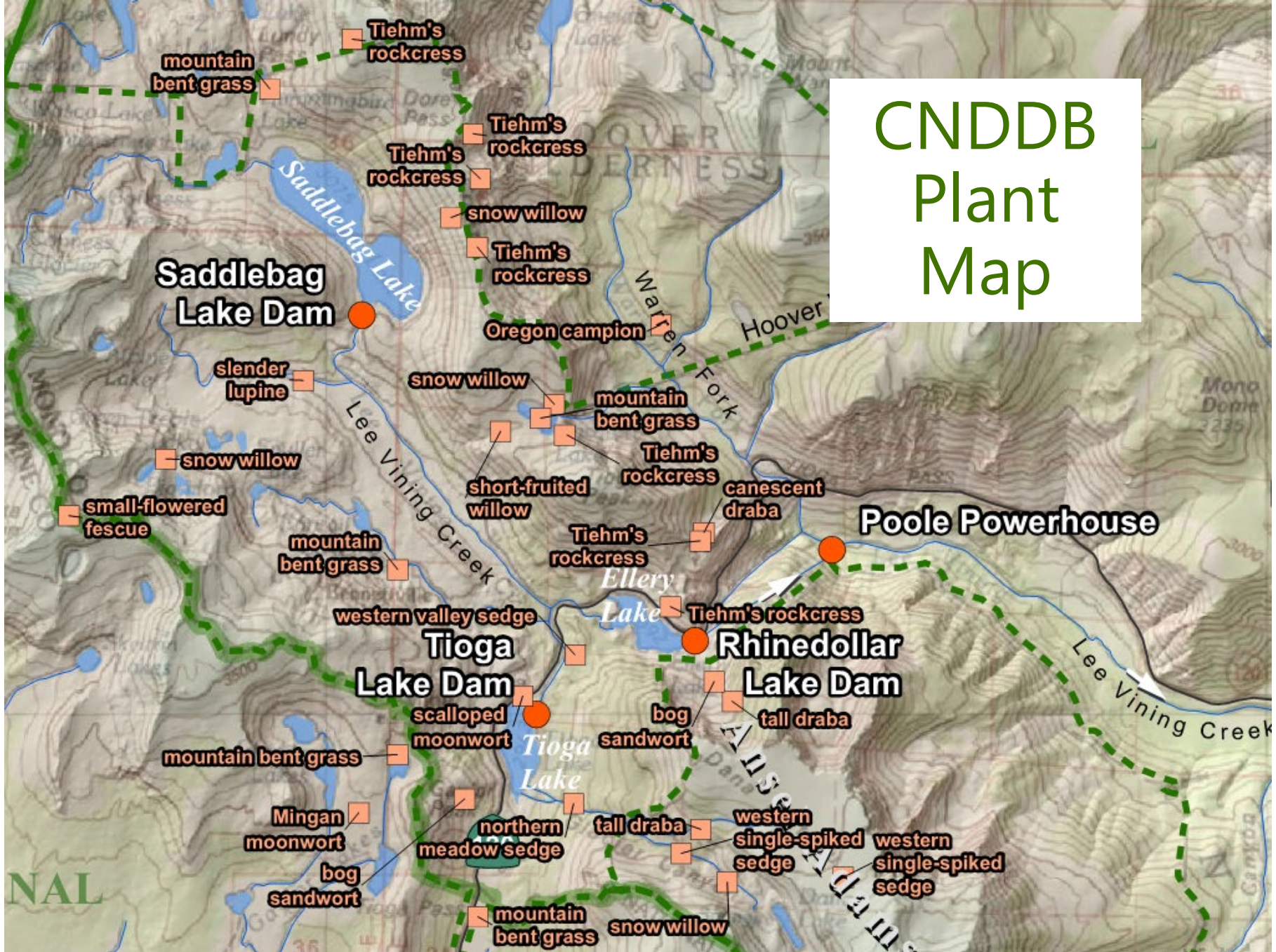


Yosemite Toad at Saddlebag  
Lake, 2020

- 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

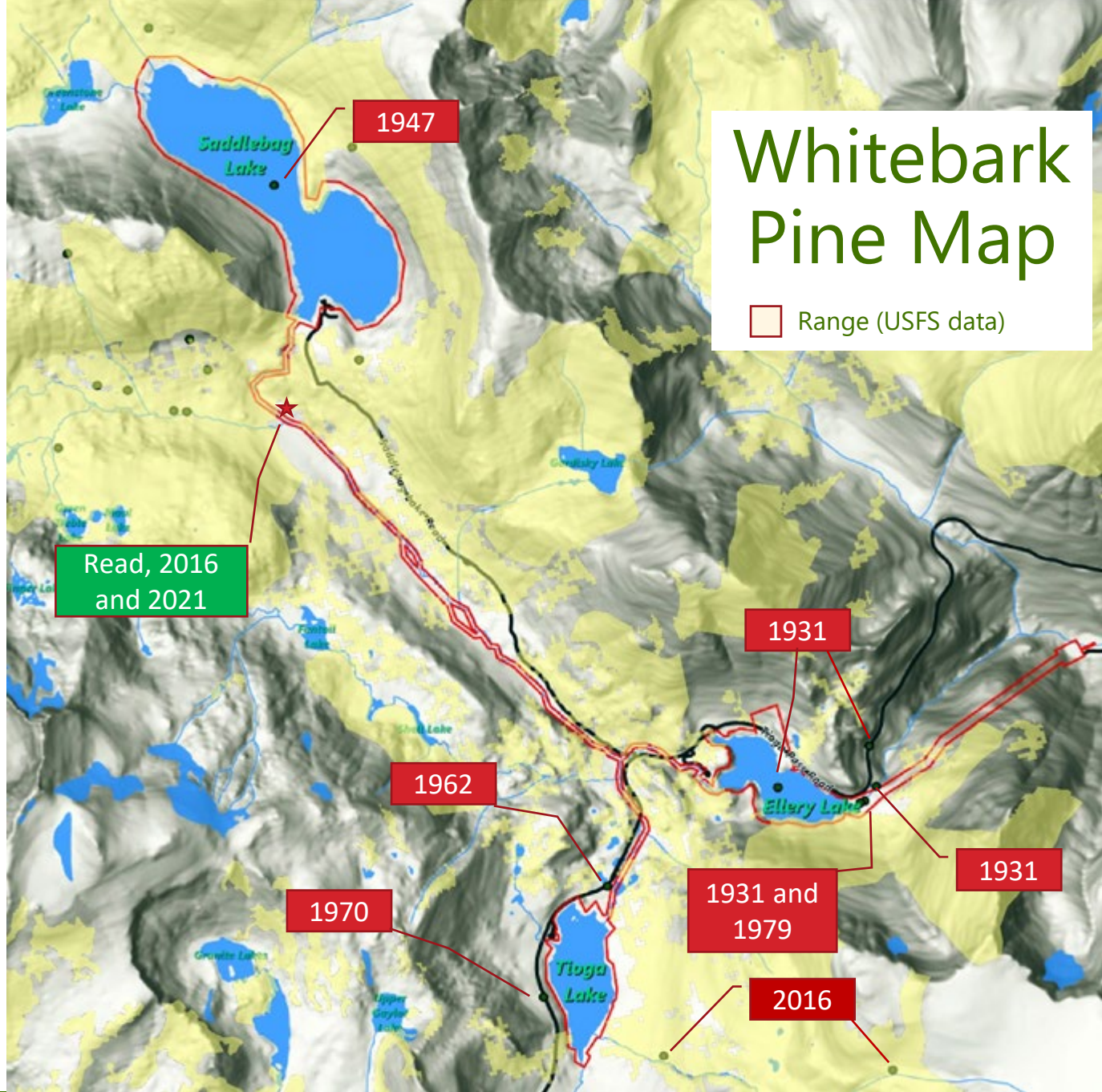


# CNDDDB Plant Map



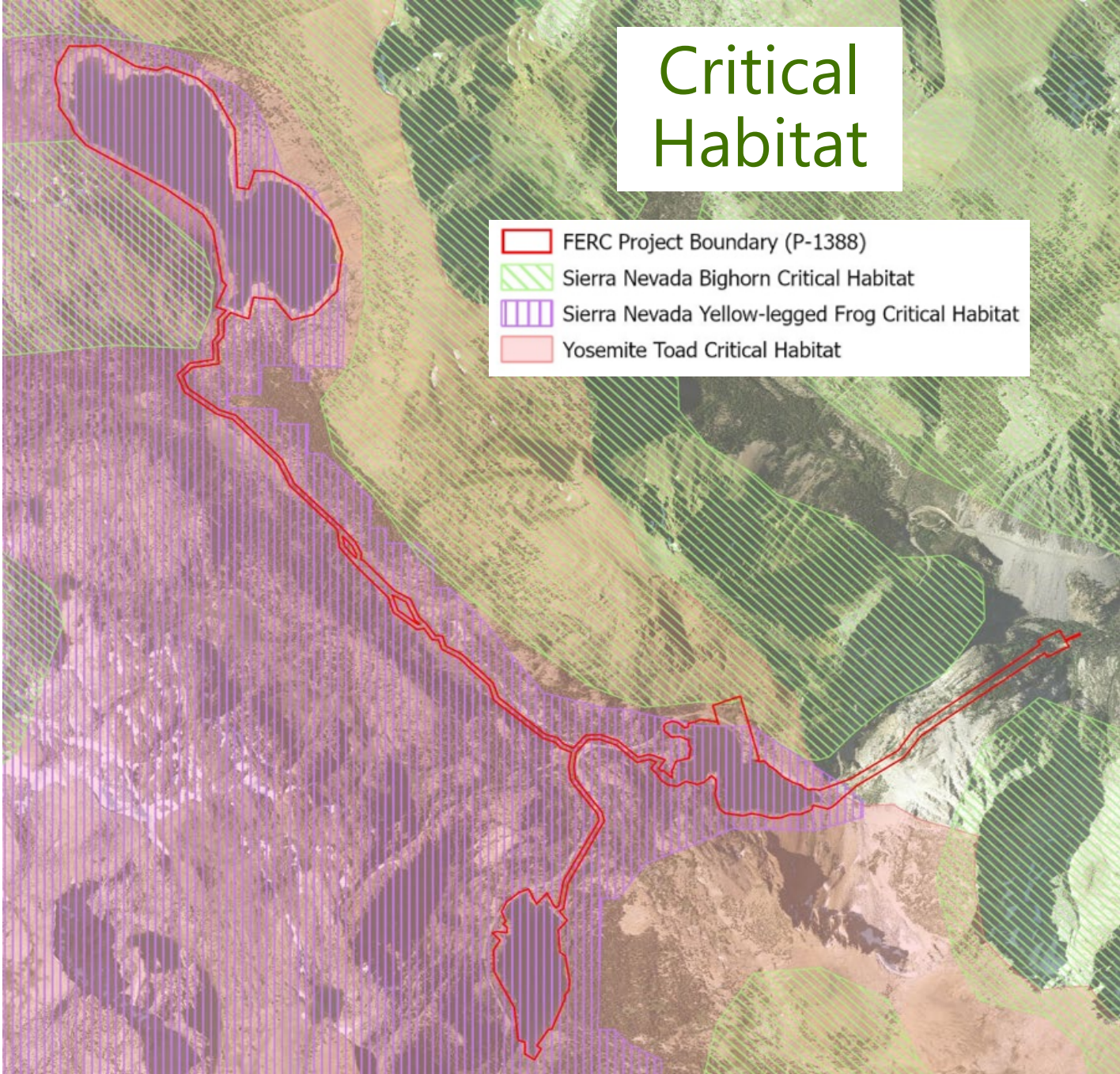
# Whitebark Pine Map

Range (USFS data)



# Critical Habitat

- FERC Project Boundary (P-1388)
- Sierra Nevada Bighorn Critical Habitat
- Sierra Nevada Yellow-legged Frog Critical Habitat
- Yosemite Toad Critical Habitat



# Terrestrial, Botanical, Wetlands, and RTE Species – Potential Effects

- Project operation and maintenance activities could result in direct and/or indirect effects on sensitive natural communities (including riparian areas), listed plant or wildlife species, or other special status plant or wildlife species.
- Project operation and maintenance activities could result in the spread or introduction of invasive plants.



# Terrestrial, Botanical, Wetlands, and RTE Species - Proposed Studies

- Botanical Surveys at Project Facilities
  - RTE species surveys
  - Non-listed special status plant species
  - Invasive species surveys
  - Ground-truth existing USFS vegetation map
- Wildlife
  - General wildlife surveys
  - Yosemite toad surveys
  - Willow flycatcher habitat assessment

# Questions?

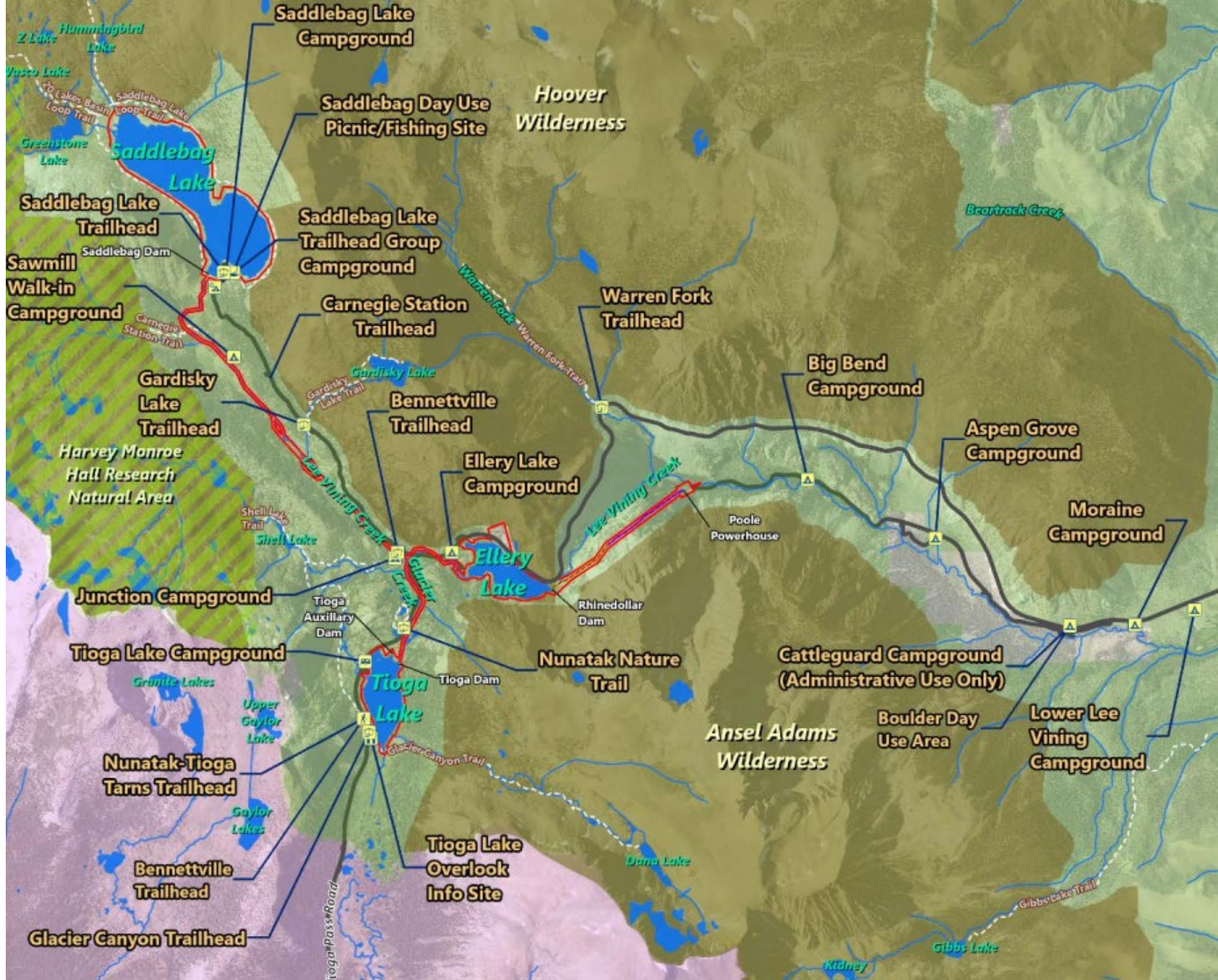


# Recreational Resources

## Existing Environment

- No recreation sites or management plan included in current license.
- Indirect improvements in current license
  - Minimum instream flows (USFS 4e Condition No. 4; Articles 404 and 405)
  - Stable lake levels (USFS 4e Condition No. 6)
  - Annual funding for CDFW’s fish stocking program at Ellery (Article 406)

Location	Recreation Site/Use	
Project Reservoirs (Saddlebag, Ellery, Tioga)	<ul style="list-style-type: none"> <li>• Saddlebag Lake DUA, Campground, Trailhead</li> <li>• Tioga Lake Overlook Info Site, Tioga Lake Campground, Glacier Canyon Trailhead</li> <li>• Ellery Lake Campground</li> <li>• Informal use around reservoirs (camping, pull-outs, user trails)</li> </ul>	
Facilities/Use along Lee Vining and Glacier Creeks; Saddlebag Lake and Poole Powerhouse Roads; and Highway 120	<ul style="list-style-type: none"> <li>• Sawmill Walk-In Campground</li> <li>• Carnegie Station Trailhead</li> <li>• Junction Campground</li> <li>• Bennettville Trailhead</li> <li>• Gardisky Lake Trailhead</li> <li>• Nunatak-Tioga Tarns Trailhead</li> <li>• Nunatak Nature Trail</li> <li>• Warren Fork Trailhead</li> </ul>	<ul style="list-style-type: none"> <li>• Big Bend Campground</li> <li>• Aspen Grove Campground</li> <li>• Boulder Campground</li> <li>• Moraine Campground</li> <li>• Lower Lee Vining Campground</li> <li>• Cattleguard Campground</li> <li>• Informal use around creeks and other USFS facilities</li> </ul>



# Recreation – Potential Effects

- Existing Project facilities and operations have the potential to promote incremental recreation use.
- Inyo National Forest owns and operates all recreation facilities in the upper Lee Vining Canyon
- Nexus to Project facilities will be assessed as part of proposed studies.



# Recreation Proposed Studies

- Recreation Use and Needs Assessment
- Recreation Facilities Condition Assessment



# 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 & Aesthetics – Potential Effects

- FERC Project Boundary must encompass all lands, roads, and trails necessary for Project purposes, including the O&M of the Project over the term of the FERC license.
- Examples of Project land uses include:
  - Roads/trails providing exclusive access to Project facilities
  - Staging areas





# Land Use & Aesthetics Resources: Potential Studies

- Project Boundary, Lands, and Roads
- Visual Quality Assessment



# Questions?

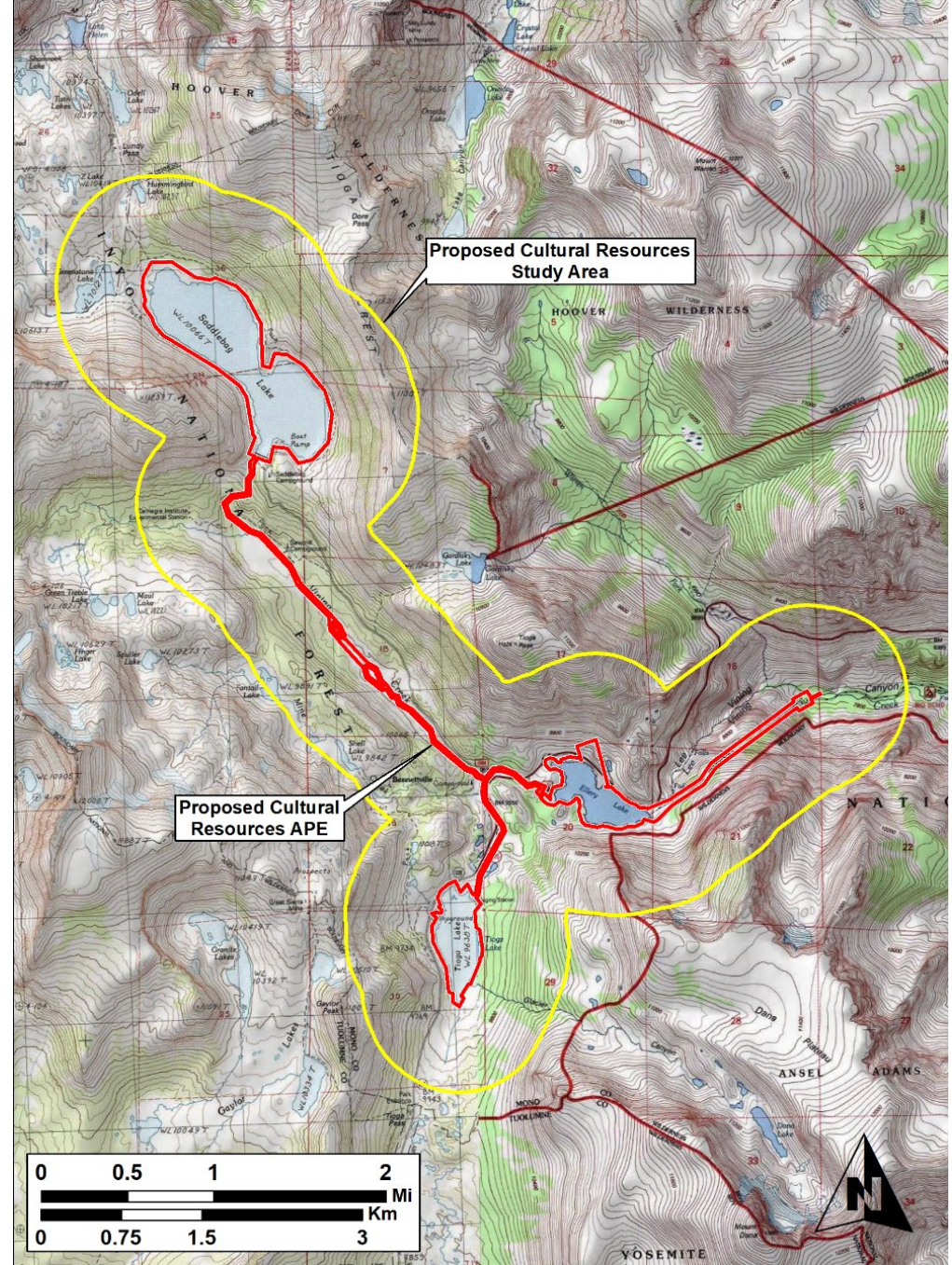


# Cultural and Tribal Resources

- 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 cultural resources, economic interests, water interests, recreation interests, and may also include plants, animals, geological/geographic features, and more

# Cultural Resources

- Proposed Area of Potential Effects (APE) is the FERC Boundary
- Study Area is a 0.5-mile buffer around APE





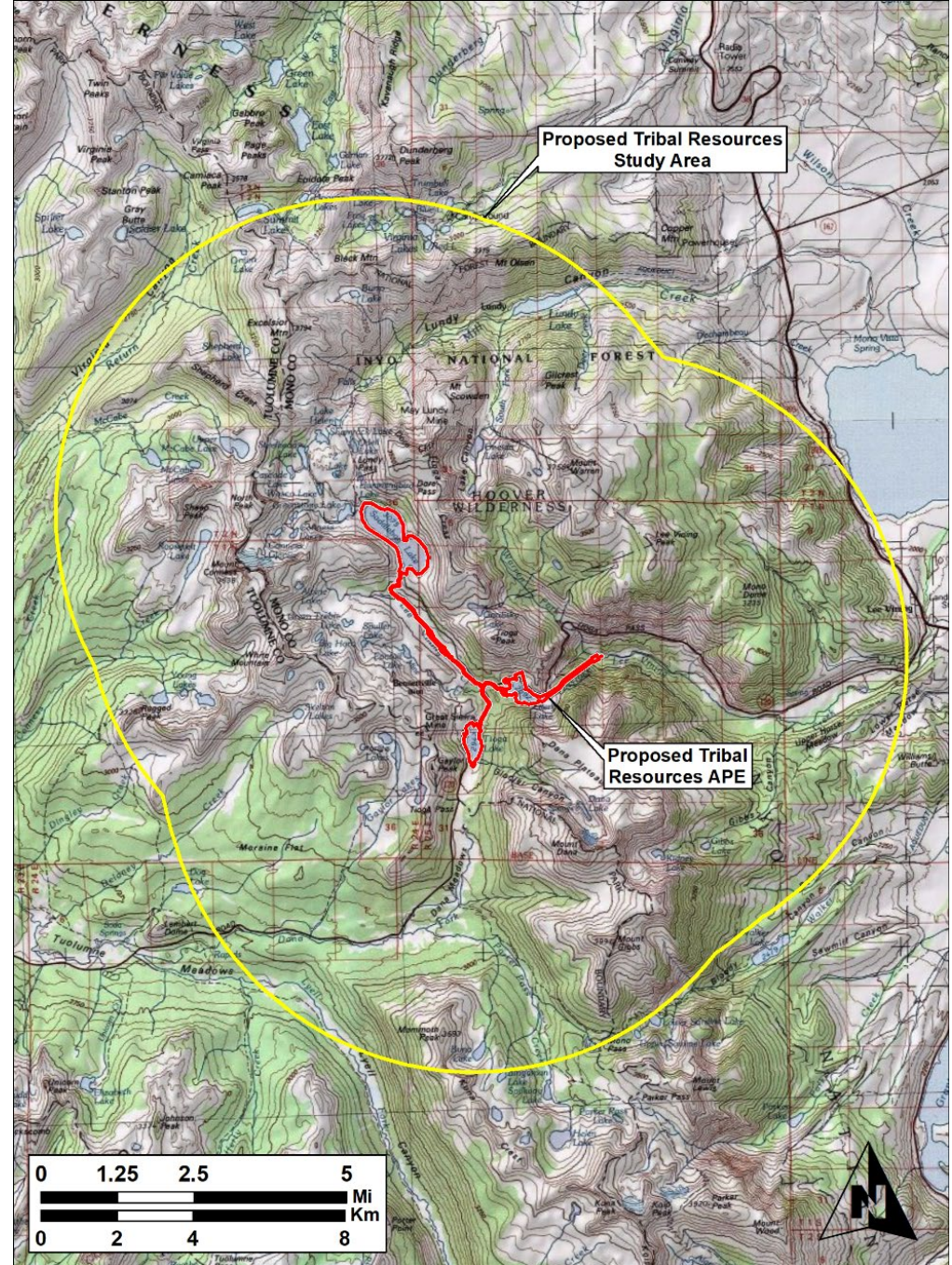
## Cultural Resources

### Existing Environment

- Data Sources - California Historical Resources Information Center, USFS, 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

- Proposed Area of Potential Effects (APE) is the FERC Boundary
- Study Area is a 5-mi buffer around APE



# Tribal Resources



## Existing Environment

- Multiple Native American Groups have an interest in the Project Area
  - Northern Paiute, Owens Valley Paiute, Western Shoshone, Southern Miwok, Central Me-Wuk, Hungalelti Washo, Western Mono
- Mono Lake Kutzadikaa Tribe are the principal tribal group
- Data Sources-accessible libraries, online resources, Native American Heritage Commission.
- No federal trust tribal lands in Project

# Tribal Resources

## Existing Environment

- Important Trans-Sierran Corridor, connecting multiple tribal groups
- Numerous trails identified in proposed Study Area
- Gathering locale especially important from May-October
- Excellent 20<sup>th</sup>-century information on Native Americans due to interviews in the 1920s, detailed history in the 1960s, and proximity to Yosemite Valley and its 150-year documentation of Native peoples.



# Cultural and Tribal Resources

## Known Data Gaps

- No recent archaeological survey of most of the Project area.
- No ethnographic study of the Project vicinity.
- No interviews to date with Tribal representatives.
- No study of how Project has affected tribal resources of interest.

# Cultural and Tribal – Potential Effects

- Project operation and maintenance activities could result in direct and/or indirect effects on:
  - NRHP eligible built-environment, archaeological resources, and tribal resources
  - Other Tribal resources (not historic properties)
- Recreational activities could result in direct and/or indirect effects on:
  - NRHP eligible resources or other tribal resources

# Cultural and Tribal - Proposed Studies

- Cultural Resources Study
  - Background Research
  - Pedestrian Survey
  - Archaeological Site Recordation and Evaluations
  - Built Environment Recordation and Evaluations
- Tribal Resources study
  - Background Research
  - Field Investigation with Tribal representatives
  - Interviews with Tribal representatives
  - Documentation and evaluation of Tribal resources

# Questions?



# RELICENSING SCHEDULE OVERVIEW

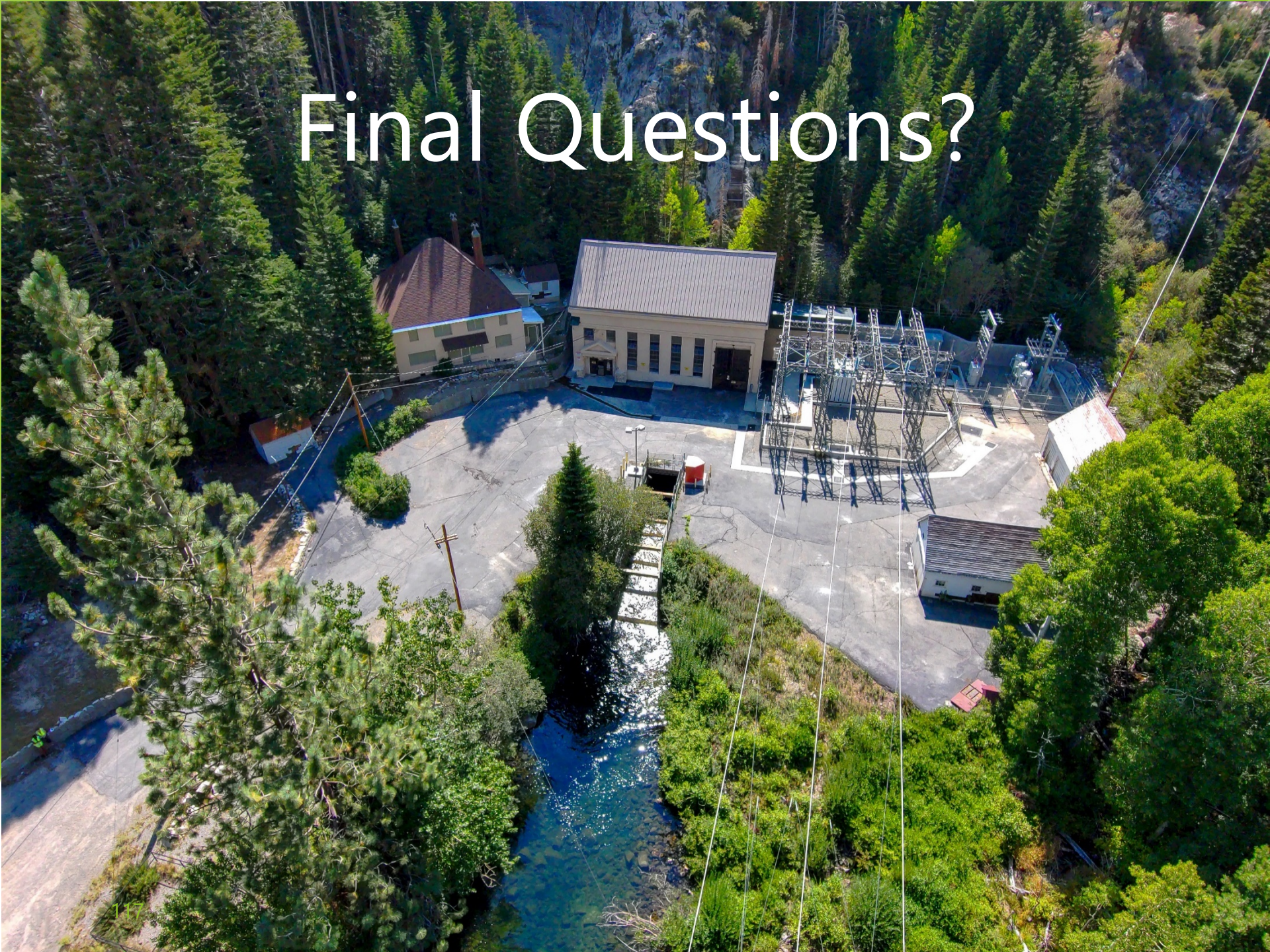
# Relicensing Process Schedule

Date	Activity
August 12, 2021	SCE Filed Notice of Intent/Pre-Application Document (NOI/PAD)
September 2021	FERC initiates Tribal consultation
October 8, 2021	FERC approved use of TLP
<b>November 16, 2021</b>	<b>Joint Agency Meeting to discuss PAD, Study Plans and Process</b>
January 17, 2022	Comments due to FERC on PAD and Study Plans
<i>February 14, 2022</i>	<i>SCE provide Updated Study Plans to stakeholders and TWGs</i>
<i>March 16, 2022</i>	<i>Comments due to SCE on Study Plans</i>
<i>March/April 2022</i>	<i>Study Plan Meetings with TWGs</i>
<i>April 15, 2022</i>	<i>Final Study Plans to TWGs</i>
Spring/Summer 2022-2023	Conduct field studies
<i>January 2023</i>	<i>Interim Study Report meeting</i>
September 3, 2024	SCE Files Draft License Application
January 31, 2025	SCE Files Final License Application

# How to Stay Involved

- Check the Project website for updates/news at [www.sce.com/leevining](http://www.sce.com/leevining)
- You can view other SCE relicensing Projects at [www.sce.com/regulatory/hydro-licensing](http://www.sce.com/regulatory/hydro-licensing)
- Sign-up to receive Project-related emails through the Contact Registration Form/Project Questionnaire on the Project website
- Sign up for FERC's for e-subscription (docket number "P-1388") at [www.ferc.gov](http://www.ferc.gov)
- Email Carissa Shoemaker with questions [carissa.shoemaker@erm.com](mailto:carissa.shoemaker@erm.com)

# Final Questions?





Thank you!



Wayne P. Allen  
Principal Manager  
Regulatory Support Services

*Filed Electronically*

December 8, 2021

Kimberly D. Bose, Secretary  
Nathaniel J. Davis, Sr., Deputy Secretary  
Federal Energy Regulatory Commission  
825 First Street, NE  
Washington, DC 20426

**Subject: Lee Vining Hydroelectric Project, FERC Project No. 1388 Joint Agency and Public Meeting Summary**

Dear Secretary Bose,

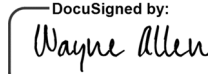
Pursuant to 18 CFR 16.8(b)(3)(i)(A) and 18 CFR 16.8(b)(3)(ii) of the rules and regulations of the Federal Energy Regulatory Commission (FERC or Commission), Southern California Edison Company (SCE), licensee of the Lee Vining Hydroelectric Project, FERC Project No. 1388 (Project), held a Joint Agency and Public Meeting (JAM) virtually on November 16, 2021.

As noted in the Pre-Application Document (PAD) filed with FERC on August 12, 2021, due to the possibility of weather-related concerns, SCE opted to hold an in-person site visit on September 28, 2021 and hold the JAM virtually on November 16, 2021. Public notice of the JAM was published on November 4 and 11, 2021 in the *Mammoth Times*, a local Mono County publication. Proof of publication is included in this filing as Attachment A. A virtual site visit was also held immediately prior to the JAM, for any stakeholders interested in attending.

Pursuant to 18 CFR 16.8(b)(4), a recording and transcript of the JAM are available upon Request. Included with this filing is a final meeting agenda, attendance list, copies of comments provided following the site visit, and a copy of the PowerPoint presentation (Attachment B). Materials are also available at [www.sce.com/leevining](http://www.sce.com/leevining).

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

Sincerely,

DocuSigned by:  
  
106CF18A73D445F...  
Wayne P. Allen  
Principal Manager

Enclosures: Attachment A: Proof of publication  
Attachment B: JAM and Site Visit Material

1515 Walnut Grove Avenue  
Rosemead, CA 91770  
626.302.9741  
[wayne.allen@sce.com](mailto:wayne.allen@sce.com)



## NORTH FORK RANCHERIA OF MONO INDIANS OF CALIFORNIA

TRIBAL GOVERNMENT OFFICE  
P.O. Box 929  
North Fork, CA 93643-0929  
(559) 877-2461  
FAX (559) 877-2467

December 9, 2021

Federal Energy Regulatory Commission  
Kimberly D. Bose, Secretary  
888 First Street NE, Room 1A  
Washington, DC 20426

RE: Docket No. P-1388-081-California; Lee Vining Hydroelectric Project, Southern California Edison

Secretary Bose:

The North Fork Rancheria of Mono Indians of California, a federally recognized tribal government, has reviewed the letter regarding project consultation with our tribe regarding the Lee Vining Hydroelectric Project re-licensing.

The tribe is seeking consultation for this re-license project in order to ensure that our concerns are addressed in the Traditional Licensing Process. We would like to meet with commission staff to initiate consultation and this can be coordinated with our Tribal Council. The meeting can be in person or virtual whichever is preferred.

We look forward to the consultation process.

Respectfully,

Fred L. Beihn  
Tribal Chairman  
[fbeihn@nfr-nsn.gov](mailto:fbeihn@nfr-nsn.gov)

Document Content(s)

Document\_2021-12-13\_162706.pdf .....1



Wayne P. Allen  
Principal Manager  
Regulatory Support Services

*Electronically Filed*

January 11, 2022

Julianne Polanco  
State Historic Preservation Officer  
California Office of Historic Preservation  
1725 23rd Street  
Sacramento, CA 95816

**Subject: Section 106 Consultation: Proposed Area of Potential Affect for Southern California Edison Lee Vining Creek Hydroelectric Project Relicensing FERC Project No. 1388, Inyo County, California**

Dear Ms. Polanco,

Southern California Edison Company (SCE), as delegated under 36 Code of Federal Regulation (CFR) Part 800.2 (c)(4) by the Federal Energy Regulatory Commission (FERC) on October 8, 2021 Notice of Commencement (enclosed) is initiating Section 106 of the National Historic Preservation Act (NHPA) consultation with your office in support of the relicensing process for the Lee Vining Creek Project (Project). The Project is licensed under FERC Project Number 1388.

The Project is located on the eastern slope of the Sierra Nevada along the eastern boundary of Yosemite National Park, and approximately 9 miles upstream from Mono Lake and the town of Lee Vining in Mono County, California. The Project is situated on Lee Vining Creek, largely within the Inyo National Forest managed by the U.S. Forest Service; the remaining Project lands are privately owned.

SCE currently operates the Project under a 30-year license issued by FERC on February 4, 1997. The license will expire January 31, 2027. SCE is seeking a license renewal to continue operation and maintenance (O&M) of the Project.

#### Lee Vining Creek Facilities

The Project consists of three dams and reservoirs, an auxiliary dam, a flowline consisting of a pipeline and penstock, and a powerhouse with a generating capacity of 11.25 megawatt (mw). The key Project facilities include Saddlebag Dam and Lake, Tioga Dam and Lake, the Rhinedollar Dam, Ellery Lake, a flowline consisting of pipeline and penstock, and the Poole Powerhouse. Releases and spill from both Saddlebag Lake and Tioga Lake flow into Ellery Lake, which is the intake and regulating reservoir for Poole Powerhouse. The two lakes have historically been drawn down in the winter to provide storage capacity for spring runoff. Ellery Lake is the forebay for the powerhouse, and its storage level is not as varied as the two upper reservoirs. Water is conveyed from Ellery Lake to the powerhouse via the flowline and penstock. Minimum flows are provided into Lee Vining Creek below Poole Powerhouse.

#### Relicensing Efforts

On October 6, 2020 SCE held a public meeting to introduce the Project to stakeholders and the public, as well as invite participation in Technical Working Groups (TWG). The TWG process is

Ms. Polanco  
Page 2 of 2  
January 11, 2022

open to all interested parties including public agencies, Native American tribes, and not-for-profit organizations, as well as individuals. The intent of the TWG meetings it to gather information on resources to help inform the Notice of Intent (NOI) and Preliminary Application Document (PAD). Based on this known information, SCE worked with stakeholders to identify gaps in our knowledge and key questions that should be addressed as part of the process. SCE developed study plans to address resources in the Project Area, including cultural resources under the CUL-1 Study Plan, which addresses prehistoric and historic period archaeological resources and historic period built environment resources, and CUL-2 ethnographic/tribal resources. SCE held Cultural and Tribal TWG meetings on January 27, February 24, March 31 and May 26, 2021.

The purpose of this letter is to consult with your office regarding the adequacy of the Proposed Area of Potential Effects (APE) for cultural and tribal resources under the CUL-1 and 2 Study Plans. This consultation is intended to build upon the consultation efforts undertaken to date, including the TWGs meetings which included discussion with your Office, Tribes and federal agencies regarding the study implementation and APE development.

### Proposed APE Description

The Proposed APE for the Project CUL-1 and Cul-2 Studies includes all FERC Project facilities where Project Operations and Maintenance (O&M) have the potential to cause direct or indirect adverse effects to historic properties. Specifically, the Proposed APE includes all Project facilities and O&M areas located within the existing FERC Project Boundary and any other facilities outside of the FERC Boundary where Project O&M activities are conducted including areas where SCE proposes to expand the FERC Boundary (see Figures 1 and 2). Under the study, all lands in the APE will be subject to intensive inventory for precontact and historic period archaeological resources, historic period built environment resources, and tribal resources in order to identify any historic properties under Section 106 that may be affected by FERC Project operations. The Proposed APE is buffered by a 1-mile study radius for the CUL-1 and 5-mile study radius for the CUL-2 that is intended to aid in study development and contextual research. While this study area will be used for contextual development, it will not be subject to cultural resources inventory.

SCE requests your comments on the appropriateness of this Proposed APE for the CUL-1 and CUL-2 Studies pursuant to 36 CFR Part 800.4 [a][1]. SCE respectfully requests a 30-day review. Please direct any questions regarding this report to Audry Williams at (626) 302-5104 or by e-mail at [audry.williams@SCE.com](mailto:audry.williams@SCE.com).

Sincerely,

DocuSigned by:  
  
106CF18A73D445F...

Wayne Allen  
Principal Manger

Enclosures:

FERC Notice of Commencement  
Figures 1 and 2: APE Maps

1515 Walnut Grove Avenue  
Rosemead, CA 91770  
626.302.9741  
[wayne.allen@sce.com](mailto:wayne.allen@sce.com)

**DEPARTMENT OF PARKS AND RECREATION  
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov [www.ohp.parks.ca.gov](http://www.ohp.parks.ca.gov)

March 23, 2022

In reply refer to: FERC831003C

Mr. Wayne Allen  
Principal Manager  
Regulatory Support Services  
Southern California Edison  
1515 Walnut Grove Avenue  
Rosemead, CA 91770

VIA EMAIL/FERC E-File

RE: Section 106 Consultation for the Relicensing of the Southern California Edison Lee Vining Hydroelectric Project (FERC No. 1388-081) Inyo County, California

Dear Mr. Allen,

The State Historic Preservation Officer (SHPO) received your consultation letter dated January 11, 2022, pursuant to Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300101), as amended, and its implementing regulation found at 36 CFR 800. In the Notice of Intent to File License Application dated October 8, 2021, the Southern California Edison Company (SCE) was designated as the non-federal representative for Section 106 consultation for the Federal Energy Regulatory Commission (FERC) and consults on their behalf pursuant to 36 CFR § 800.2(c)(4).

SCE, on behalf of the FERC is requesting SHPO comments on the Area of Potential Effects (APE) it proposed for the above referenced undertaking. SCE is seeking a license renewal to continue operation and maintenance for FERC Project No. 1388; the current license expires January 31, 2027. The Project consists of three dams and reservoirs, an auxiliary dam, a flowline consisting of a pipeline and penstock, and a powerhouse with a generating capacity of 11.25 megawatts. Key Project facilities include Saddlebag Dam and Lake, Tioga Dam and Lake, the Rhinedollar Dam, Ellery Lake, and the Poole Powerhouse. SCE has been consulting with Project stakeholders in public meetings and Technical Working Groups since October 6, 2020.

SCE propose the APE to include all FERC Project facilities where Project Operations and Maintenance (O&M) have the potential to cause direct or indirect effects to historic properties. The proposed APE was depicted on maps submitted with the letter and includes all Project facilities and O&M areas located within the existing FERC Project Boundary and any other facilities outside of the FERC Boundary where Project O&M activities are conducted including areas where SCE proposed to expand the FERC boundary.

Mr. Wayne Allen  
March 23, 2022  
Page 2 of 2

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Following review of the proposed APE, I offer the following comments:

- Pursuant to 36 CFR § 800.4(a)(1), I find the APE as defined to be sufficient for the undertaking.

If you have any questions or concerns, please contact Brendon Greenaway at (916) 445-7036 or [Brendon.Greenaway@parks.ca.gov](mailto:Brendon.Greenaway@parks.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julianne Polanco', with a long horizontal line extending to the right.

Julianne Polanco  
State Historic Preservation Officer



Document Content(s)

CA SHPO FERC 1388.pdf.....1

**From:** [Carissa Shoemaker](#)  
**To:** [Carissa Shoemaker](#)  
**Subject:** FW: Consistency Determination  
**Date:** Friday, February 10, 2023 4:06:26 PM

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**From:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>  
**Sent:** Wednesday, May 11, 2022 9:02 AM  
**To:** Shannon Luoma <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>; Finlay Anderson <[finlay.anderson@kleinschmidtgroup.com](mailto:finlay.anderson@kleinschmidtgroup.com)>  
**Subject:** FW: Consistency Determination

FYI

Emily Waters  
Licensing & Regulatory Coordinator  
  
971-236-5853  
[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)  
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**From:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Sent:** Wednesday, May 11, 2022 8:58 AM  
**To:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>  
**Subject:** RE: Consistency Determination

Hi Emily -

The Commission staff agrees that the Southern California Edison (SCE) relicensing of the Lee Vining Hydroelectric Project (FERC Project No. P-1388) is not located within the California coastal zone and that its operation does not affect coastal resources. By this email the Commission staff determines that SCE has met its federal Coastal Zone Management Act responsibilities.

Regards,  
Cassidy

*Cassidy Teufel*  
*Manager*  
*Energy, Ocean Resources*  
*and Federal Consistency*  
*California Coastal Commission*  
*455 Market Street, Suite 228*  
*San Francisco, CA 94105-2219*  
*(805) 585-1825*  
*<http://www.coastal.ca.gov/>*

---


**From:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>

**Sent:** Wednesday, May 11, 2022 7:45 AM  
**To:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Subject:** FW: Consistency Determination

Hi Cassidy,

Following up to see if you were able to look into a consistency determination for our Lee Vining project, described in my email below. Thanks!

Sincerely,

Emily Waters  
Licensing & Regulatory Coordinator  
  
971-236-5853  
[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)  
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**From:** Emily Waters  
**Sent:** Tuesday, April 26, 2022 7:10 AM  
**To:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Subject:** RE: Consistency Determination

Thank you, Cassidy!

While I'm at it, would it be possible for you to give me a similar determination for another project we are working on right now for SCE? This one is the Lee Vining Hydroelectric Project (FERC Project No. P-1388) – information about the project can be found here: <https://www.sce.com/regulatory/hydro-licensing/leevining>. This Project is located on the eastern boundary of Yosemite National Park, ~9 miles upstream from Mono Lake and the town of Lee Vining, California.

Sincerely,

Emily Waters  
Licensing & Regulatory Coordinator  
  
971-236-5853  
[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)  
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**From:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Sent:** Monday, April 25, 2022 3:25 PM  
**To:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>  
**Subject:** RE: Consistency Determination

Hi Emily -

The Commission staff agrees that the Southern California Edison (SCE) relicensing of the Bishop Hydroelectric Project (FERC Project No. P-1394) is not located within the California coastal zone and that its operation does not affect coastal resources. By this email the Commission staff determines that SCE has met its federal Coastal Zone Management Act responsibilities. Please contact me should you have any questions regarding this matter.

Regards,  
Cassidy

*Cassidy Teufel*  
*Manager*  
*Energy, Ocean Resources*  
*and Federal Consistency*  
*California Coastal Commission*  
*455 Market Street, Suite 228*  
*San Francisco, CA 94105-2219*  
*(805) 585-1825*  
<http://www.coastal.ca.gov/>

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**From:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>  
**Sent:** Monday, April 25, 2022 9:44 AM  
**To:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Subject:** RE: Consistency Determination

Hi Cassidy,

Thanks for the response! We wondered if offices were still closed or not. The project being relicensed is the Bishop Hydroelectric Project (FERC Project No. P-1394). It is located in Bishop, California on Bishop Creek and its smaller tributaries, including the South Fork and Middle Fork of Bishop Creek, Green Creek, Birch Creek, and McGee Creek. Bishop Creek is a tributary to the Owens River. Southern California Edison (SCE) is the Project owner and operator. SCE has a relicensing website with links to project filings and information which you can access here:

<https://www.sce.com/regulatory/hydro-licensing/bishop-creek-project-relicensing>. Please let me know if you have any other questions.

Sincerely,

Emily Waters  
Licensing & Regulatory Coordinator  
***Kleinschmidt***  
971-236-5853  
[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)  
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**From:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>  
**Sent:** Monday, April 25, 2022 9:33 AM

**To:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>

**Subject:** RE: Consistency Determination

Hi Emily –

Thanks for reaching out on this. Can you provide more information about the hydropower facility being relicensed (name, location, watercourse)? Please also note that our offices are still closed so the best way to reach me is via email.

Thanks,  
Cassidy

*Cassidy Teufel*  
*Manager*  
*Energy, Ocean Resources*  
*and Federal Consistency*  
*California Coastal Commission*  
*455 Market Street, Suite 228*  
*San Francisco, CA 94105-2219*  
*(805) 585-1825*  
<http://www.coastal.ca.gov/>

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**From:** Emily Waters <[Emily.Waters@Kleinschmidtgroup.com](mailto:Emily.Waters@Kleinschmidtgroup.com)>

**Sent:** Monday, April 25, 2022 9:24 AM

**To:** Teufel, Cassidy@Coastal <[Cassidy.Teufel@coastal.ca.gov](mailto:Cassidy.Teufel@coastal.ca.gov)>

**Subject:** Consistency Determination

Hello,

I'm following up about a voicemail I left last week at a phone number listed for Cassidy Teufel, who is listed as the federal consistency coordinator on the Coastal Commission website. I'm working on a hydropower project relicensing located in Bishop, California. Due to the project's location, we do not believe that the project affects the coastal zone, but it is a federally regulated project (FERC) so we are inquiring about getting a negative determination or consistency determination from the California Coastal Commission. I am hoping that you or someone else at the Commission can provide us a written statement regarding our need (or lack thereof) for a consistency determination that we can include in our final license application to FERC. If I should contact someone else at the Commission for this request, kindly pass along their contact information.

Sincerely,

Emily Waters  
Licensing & Regulatory Coordinator

***Kleinschmidt***

971-236-5853

[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)

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**From:** [Carissa Shoemaker](mailto:Carissa.Shoemaker@kleinschmidtgroup.com)  
**Cc:** [finlay.anderson@kleinschmidtgroup.com](mailto:finlay.anderson@kleinschmidtgroup.com); [Shannon.Luoma@KleinschmidtGroup.com](mailto:Shannon.Luoma@KleinschmidtGroup.com); [martin.ostendorf@sce.com](mailto:martin.ostendorf@sce.com); [matthew.woodhall@sce.com](mailto:matthew.woodhall@sce.com); [Kelly.Larimer@KleinschmidtGroup.com](mailto:Kelly.Larimer@KleinschmidtGroup.com)  
**Bcc:** [events@mammothmuseum.org](mailto:events@mammothmuseum.org); [frontierpacktrain@gmail.com](mailto:frontierpacktrain@gmail.com); [frontierpacktrain@gmail.com](mailto:frontierpacktrain@gmail.com); [ferccaseadmin@sce.com](mailto:ferccaseadmin@sce.com); [FOMLR@bodiefoundation.org](mailto:FOMLR@bodiefoundation.org); [info@friendsoftheinyo.org](mailto:info@friendsoftheinyo.org); [comdev@mono.ca.gov](mailto:comdev@mono.ca.gov); [info@monolake.org](mailto:info@monolake.org); [saddlebaglake@gmail.com](mailto:saddlebaglake@gmail.com); [chair@toiyabe.sierraclub.org](mailto:chair@toiyabe.sierraclub.org); [calweb@tnc.org](mailto:calweb@tnc.org); [tiogalodge@gmail.com](mailto:tiogalodge@gmail.com); [tiogapassresortllc@gmail.com](mailto:tiogapassresortllc@gmail.com); [triplepointh2o@gmail.com](mailto:triplepointh2o@gmail.com); [jonathan.aguayo@psomas.com](mailto:jonathan.aguayo@psomas.com); [victor.aguirreorco@usda.gov](mailto:victor.aguirreorco@usda.gov); [wayne.allen@sce.com](mailto:wayne.allen@sce.com); 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[Nick.Buckmaster@wildlife.ca.gov](mailto:Nick.Buckmaster@wildlife.ca.gov); [sb@snowhydrology.com](mailto:sb@snowhydrology.com); [burger@stillwatersci.com](mailto:burger@stillwatersci.com); [bburman@usbr.gov](mailto:bburman@usbr.gov); [seth.carr@sce.com](mailto:seth.carr@sce.com); [acohen@stillwatersci.com](mailto:acohen@stillwatersci.com); [rcollins@caltrout.org](mailto:rcollins@caltrout.org); [lcompas@hrassoc.com](mailto:lcompas@hrassoc.com); [lisa@monolake.org](mailto:lisa@monolake.org); [cdaly@mackaysposito.com](mailto:cdaly@mackaysposito.com); [shellydk@frontiernet.net](mailto:shellydk@frontiernet.net); [robbie@monolake.org](mailto:robbie@monolake.org); [matt.driscoll@sierranevada.ca.gov](mailto:matt.driscoll@sierranevada.ca.gov); [Lauren@stillwatersci.com](mailto:Lauren@stillwatersci.com); [gardenofegan@suddenlink.net](mailto:gardenofegan@suddenlink.net); [todd.ellsworth@usda.gov](mailto:todd.ellsworth@usda.gov); [blake.engelhardt@usda.gov](mailto:blake.engelhardt@usda.gov); [James.Erdman@wildlife.ca.gov](mailto:James.Erdman@wildlife.ca.gov); 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[nicolas.von@sce.com](mailto:nicolas.von@sce.com); [curator@monobasinhistory.org](mailto:curator@monobasinhistory.org); [Jameisha.Washington@usda.gov](mailto:Jameisha.Washington@usda.gov); [jennifer.watts@waterboards.ca.gov](mailto:jennifer.watts@waterboards.ca.gov); [johnwentworth@mltpa.org](mailto:johnwentworth@mltpa.org); [eric@friendsoftheriver.org](mailto:eric@friendsoftheriver.org); [vince.white@sce.com](mailto:vince.white@sce.com); [Scott@stillwatersci.com](mailto:Scott@stillwatersci.com); [Audry.Williams@sce.com](mailto:Audry.Williams@sce.com); [Brandy.Wood@Wildlife.ca.gov](mailto:Brandy.Wood@Wildlife.ca.gov); [daniel.yarborough@usda.gov](mailto:daniel.yarborough@usda.gov); [Andrew.Yoder@kleinschmidtgroup.com](mailto:Andrew.Yoder@kleinschmidtgroup.com)  
**Subject:** Lee Vining Study Plan Meeting Info  
**Date:** Wednesday, January 19, 2022 3:45:00 PM  
**Attachments:** [image001.png](#)

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Hello Lee Vining Relicensing participants,

Thank you for your involvement in our relicensing process to date and your review and feedback on the PAD and Draft Study Plans. As outlined in the Lee Vining PAD Process Plan and Schedule, SCE intends to hold a Study Plan Meeting on March 28, 2022 at 1pm PST to discuss the Revised Study Plans. The Plans will be modified versions from those previously filed with the PAD in August 2020, based on comments received during the FERC comment period. The Relicensing Team will distribute the revised study plans prior to the meeting so stakeholders have ample time to review. As appropriate, the discussion will include responses to comments received on the plans, and any additional study plan requests. This meeting will follow several other Study Plan-related deadlines, as shown below:

- The relicensing team assesses the comments and new requests, revise Study Plans - due to TWGs February 18.

- Stakeholder comments on revised Study Plans - due March 18.
- Study Plan meeting to discuss revisions and revised plans on March 28.

Please let us know if you have any questions.

Thanks!

**Carissa Shoemaker**  
*Senior Project Scientist*  
*Pronouns: she/her*

*I am on a part-time schedule, working a full day on Fridays. Other weekdays I will be online for short periods at a time, usually early afternoon and late evenings.*

**ERM**

1050 SW 6<sup>th</sup> Ave, Suite 1650 | Portland, OR 97204

**M** 907 575 0294

**E** [carissa.shoemaker@erm.com](mailto:carissa.shoemaker@erm.com) | **W** [www.erm.com](http://www.erm.com)



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## Ethan Muhlestein

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**From:** Shannon Luoma <Shannon.Luoma@Kleinschmidtgroup.com>  
**Sent:** Friday, March 4, 2022 11:18 AM  
**To:** Carissa Shoemaker  
**Subject:** FW: [External Email]Lee Vining Revised Study Plan [sent on behalf of Southern California Edison]

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Shannon Luoma  
Licensing and Regulatory Section Manager  
Office: 425.528.1614

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**From:** Ron W. Goode <rwgoode911@hotmail.com>  
**Sent:** Tuesday, March 1, 2022 2:07 PM  
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**Subject:** Re: [External Email]Lee Vining Revised Study Plan [sent on behalf of Southern California Edison]

There seems to be a number of unfinished or unaddressed issues in terms of cultural data, historic, archaeological and ethnographical. You mentioned using an ethnobotanical report from the San Joaquin River. Is that my ethnobotanical report of cultural plants or a botanical study done by the botanist. My report will be helpful as a model, but the tribes on the eastern side need to have lots of input.

This is the same for Lee Vining, Rush and Bishop relicenses. I'm familiar with Utility time-lines and putting that on FERC but these studies need to be right now or as tribes we will work with FERC to ensure these studies are in proper order. Meaning do it right now or that time-line goes out the door as tribes and stakeholders we do not have to concur with the HPMP. I and several other stakeholders Intervened on SCE Big Creek 4 relicensing and the Long Range Operating Rules got stretched out for 18 years. I don't believe that is in anyone's best interest.

Ron

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**From:** McNeill, Richard - FS, BISHOP, CA <[Richard.McNeill@usda.gov](mailto:Richard.McNeill@usda.gov)>

**Sent:** Tuesday, March 1, 2022 12:43 PM

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**Subject:** Re: [External Email]Lee Vining Revised Study Plan [sent on behalf of Southern California Edison]

Hi Finlay

What are you looking for with this round of review?

I see you responses to my comments, do you want a further response to that?

What if a comment did not receive a response from SCE?

rick



Rick McNeill (he/him/his)  
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**Sent:** Tuesday, February 22, 2022 10:17

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Hello Lee Vining Technical Working Group members,

The Lee Vining Revised Technical Study Plans were filed with FERC on Friday February 18, 2022. The Study Plan document is available on the [Lee Vining Relicensing website](#) and can also be found on the Project's FERC docket online ([at this link](#)). SCE greatly appreciates your review and comment on these plans. You now have 30 days to review; SCE would like your comments by March 21. On March 28, SCE is holding a virtual Study Plan meeting to discuss the pertinent comments received. If you haven't received an invitation to that meeting and you would like to attend please let us know.

Thank you!

**Finlay Anderson**  
**Sr. Regulatory Advisor**

***Kleinschmidt***

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**Subject:** Lee Vining Study Plan Meeting Agenda  
**Date:** Thursday, March 17, 2022 11:00:00 AM  
**Attachments:** [image001.png](#)  
[Lee Vining SP Meeting Agenda 20220328.pdf](#)

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Hello Lee Vining Relicensing participants,

Please see the attached agenda for the Revised Technical Study Plan meeting on March 28.  
Let me know if you have any questions.

Thanks  
See you then!

**Carissa Shoemaker**  
*Senior Project Scientist*  
*Pronouns: she/her*

*I am on a part-time schedule, working a full day on Fridays. Other weekdays I will be online for short periods at a time, usually early afternoon and late evenings.*

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**From:** [Steve Norton](#)  
**To:** [Erdman, James@Wildlife](#); [Marquez, Alyssa@Wildlife](#)  
**Cc:** [Matthew Woodhall](#); [Brad Blood](#); [Shannon Luoma](#); [Carissa Shoemaker](#); [Finlay Anderson](#)  
**Subject:** 3/30/22 Wildlife Study Plan Meeting Minutes  
**Date:** Wednesday, March 30, 2022 6:48:06 PM  
**Attachments:** [image003.png](#)  
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[Wildlife Study Plan Meeting Minutes\\_033022.pdf](#)

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Hi Jim and Alyssa,

Attached is a brief summary of the topics we discussed at the meeting.

Let me know if you have any edits or additions.

Thanks again for meeting with us.

-Steve

**Steve Norton**

**PSOMAS** | Balancing the Natural and Built Environment

Senior Biologist / Project Manager / Associate

Resource Management

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# Lee Vining Wildlife Study Plan Agenda and Minutes

March 30, 2022

- 1) Quick introduction
  - a. Alyssa Marquez
  - b. Jim Erdman
  - c. Matt Woodhall
  - d. Steve Norton
  - e. Brad Blood
  - f. Finlay Anderson
  - g. Carissa Shoemaker
  - h. Shannon Luoma
  
- 2) Meeting Goal
  - a. Finalize Wildlife Study Plan
  - b. If time: Continue planning for 2022 field season
  
- 3) Recent Study Plan Updates
  - a. Updated rec study components
    - i. Data of interest:
      1. Timing of recreationalists use relative to YOTO breeding season
        - a. May (post-snowmelt)
      2. Determine type of recreational transit: foot or bicycle
  - b. Updated YOTO survey methods, notably:
    - i. removed June 1-Sept 30.
    - ii. replaced with: start after snow melt. Will include communication with SCE operations staff to assist in determining appropriate survey start date.
    - iii. Determined to use inlets to Tioga Lake as indicator location of snow melt
    - iv. Psomas to provide SCE Ops with criteria for Tioga Lake inlet check (Photo sites, etc.).
    - v. Will use CDFW high mnt datasheet or similar to collect relevant data
    - vi. GPS location, habitat photo, and (where relevant) life-stage photo, will be collected at each YOTO observation site.
    - vii. Will record lake elevations during each visit.
  - c. Expanded Study Area
    - i. Now includes inlets at Tioga Lake.
    - ii. Include flexibility to expand survey area where relevant.
    - iii. Previously included areas include:
      1. area downstream of Tioga Dam.



2. north and south inlets at Saddlebag.
  3. known population south of Saddlebag.
  - iv. Include focused habitat assessment in 2022 of presumptive wet-meadows along Lee Vining Creek (generally located upstream of Sawmill Campground). Locations determined based on Google Earth aerial photography but need ground truthing. Areas will be evaluated as suitable habitat based on the presence of USFWS-defined Primary Constituent Elements.
  - v. 2023 YOTO survey efforts will be determined based on the results of 2022 survey results and other related licensing efforts.
  - d. Review of mapped contours of Tioga littoral zone.
- 4) General project information
- a. Lake elevations at Tioga and Ellery are mandated to be kept within a narrow range (generally speaking: near full capacity) for most of the recreational year.
  - b. Saddlebag daily release amount established at the beginning of each year (generally in April) then generally remains unchanged until the Fall.
- 5) Action Items
- a. License team to communicate with SCE operations staff to schedule at minimum a weekly photograph of the snowpack/melt at the southern inlet to Tioga Lake. Photo will be sent to License team to determine when toad surveys must start. Psomas to email to CDFW and USFWS.
  - b. CDFW to send approximate points of focused habitat assessment along Lee Vining Creek to be conducted by License Team in 2022 field season.

## Lee Vining, FERC Project No. 1388

### WILDLIFE STUDY PLAN MEETING NOTES MARCH 25, 2022; 3:30 PM – 4:30 PM PDT

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

#### Attendees

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##### Relicensing Team Members

Brad Blood, Psomas  
Carissa Shoemaker, ERM  
Finlay Anderson, Kleinschmidt  
Jonathan Aguayo, Psomas  
Shannon Luoma, Kleinschmidt  
Steve Norton, Psomas

##### Agencies and Interested Stakeholders

Alyssa Marquez, CDFW  
James “Jim” Erdman, CDFW

#### Recreation-Habitat interactions

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- CDFW concerns:
  - Recreational crossings of inlet streams
    - Specifically on Tioga and Saddlebag.
  - Type of recreation
    - Specifically hiking or biking
  - Timing and frequency of use
    - Include early rec season (as early as May)
- Potential Study Solutions
  - Trail use counters to capture frequency and timing.
  - Motion cameras to capture type (biking or hiking)
  - Counters and cameras don't need to be at the crossings, but along the relevant trails

#### Study Areas

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- Focus studies on SCE use areas (O&M) within the FERC boundary.
- Continue to assess additional areas incorporating CDFW institutional knowledge and desktop analysis in consultation with CDFW

#### Study Timing

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- SCE staff to update license team (weekly or 2x/week) on road access to Saddlebag and on snow pack at Tioga Lake inlet
  - License team and CDFW to have frequent and regular updates with each other on timing
- Survey schedules to be flexible pending toad reproductive stage observed (egg masses, tadpoles, etc).
  - Survey between 2-3 weeks

- CDFW focus is on location of eggs and larvae stages: operations most likely to affect those life-stages rather than adults or metamorphs

#### Other Notes

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- CDFW concerned about long-term climate change effects on YOTO with respect project lake levels.
- CDFW ideal impact avoidance measure of pedestrian bridges across inlets to Tioga and on northern inlet to Saddlebag.



**DRAFT MEETING NOTES\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**REVISED TECHNICAL STUDY PLAN STAKEHOLDER MEETING**  
**MARCH 28, 2022, 1:00PM - 4:00PM**

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

**1.0 OBJECTIVES**

- Review changes made to Study Plans since filing with FERC (Feb 2022)
- Review comments received since February filing
- Discuss Final Study Plans and implementation

**2.0 ATTENDEES**

Relicensing Team Members

Audry Williams, SCE  
Martin Ostendorf, SCE  
Matt Woodhall, SCE  
Seth Carr, SCE  
Nicolas von Gersdorff, SCE  
Angela Whelpley, Kleinschmidt  
Brandon Kulik, Kleinschmidt  
Finlay Anderson, Kleinschmidt  
Kelly Larimer, Kleinschmidt  
Shannon Luoma, Kleinschmidt  
Adam Cohen, Stillwater  
Heather Bowen Neff, Stillwater  
Allison Rudalevige, Psomas  
Brad Blood, Psomas  
Steve Norton, Psomas  
Carissa Shoemaker, ERM  
Edith Read, E Read and Associates, Inc.  
Lynn Compas, HRA  
Shelly Davis-King, Davis-King & Associates

Facilitation Team

Lindsay Tryba, KW

Technical Working Group Members & Interested Parties

Adam Barnett, USFS  
Ashley Blythe Haverstock, USFS  
Sheila Irons, USFS  
Richard McNeill, USFS  
Monique Sanchez, USFS  
Nathan Sill, USFS  
Thomas Torres, USFS  
Jameisha Washington, USFS  
Michael Wiese, USFS  
Brandy Wood, CDFW  
Alyssa Marquez, CDFW  
Beth Lawson, CDFW  
Nick Buckmaster, CDFW  
James Erdman, CDFW  
Chad Mellison, USFWS

Saeed Jorat, LADWP  
Christina McDonald, North Fork Rancheria of  
Mono Indians of California  
Raymond Andrews, Bishop Paiute Tribe  
Bartshe Miller, MLC  
Greg Reis, MLC

Chris Shutes, CSPA  
Naomi Jensen, TEAM Engineering &  
Management, Inc.  
Greg Foote, TEAM Engineering & Management,  
Inc.

### 3.0 COMPILED ACTION ITEMS

- **Chris Shutes** (CSPA) wants to be included in the next hydrology/operations meeting.
- **Relicensing Team** will schedule a separate meeting with CDFW to discuss CDFW's comments that were sent to SCE on 3/25.
- **Relicensing Team** will differentiate between the terms "alluvial" and "colluvial" in the Lower Lee Vining Creek Channel Morphology (AQ-6) study and in the DLA/FLA.
- **Relicensing Team** will consider including CDFW's request to include anecdotal *Didymo* surveys in the updated study plan.
- **Relicensing Team** will distribute a proposed schedule for the Yosemite Toad portion of the Wildlife study following the Relicensing Team's 3/29 internal Wildlife Study Plan meeting.
  - **Relicensing Team** will schedule another meeting (if needed) for all parties interested in the Yosemite Toad / Wildlife study plan and surveys.

### 4.0 WELCOME & INTRODUCTIONS

Finlay Anderson, Kleinschmidt, welcomed Technical Working Group (TWG) members to the meeting, introduced the Relicensing Team, and provided an overview of the agenda. Audry Williams, SCE, provided tribal land recognition. Matthew Woodhall, SCE, introduced the SCE Team and Shannon Luoma, Kleinschmidt, introduced the Consultant Team. The purpose of today's call is to review changes made to the Study Plans since filing with FERC, review comments received since the February filing, and discuss Final Study Plans and implementation.

### 5.0 RELICENSING SCHEDULE OVERVIEW

Finlay Anderson, Kleinschmidt, provided an overview of the Process Review and the Traditional Licensing Process (TLP). The agencies' involvement in the technical study plans typically ends with the FERC comment period, which occurs after the first stage of consultation. SCE chose to add additional steps to maintain collaboration with the TWG members, including: 2021 TWG meetings, complete study plan meetings, and after the first stage consultation, revised study plans and a Study Plan Meeting. Additionally, the Dispute Resolution Process exists if needed.

### 6.0 FISH, AQUATICS, AND HYDROLOGY STUDY PLANS DISCUSSION

**Topic: Stream and Reservoir Water Quality Study (WQ-1). See slides for further details.**

TWG member questions and comments are summarized below:

- Question (Q) (North Fork Rancheria of Mono Indians of California): If tissue mercury levels are elevated, then would you test Ellery Lake also?
  - Response (R) (Team): Ellery rarely, if ever, stratifies, which means that it is unlikely to methylate and bioaccumulate into fish. The data shows that Ellery does not have a problem with mercury.
- (Q) (CDFW): Are you seeing lower DO levels in the hypolimnion in the other reservoirs?
  - (R) (Team): There was some DO in limited circumstances, but it is not a major concern.
- (Q) (CDFW): Does the water temperature affect DO?
  - (R) (Team): If the reservoir is stratified for a long period of time, then dissolved oxygen has an opportunity for mercury to methylate. Stratification is not a concern for Ellery.
- (C) (CDFW): If sediment is removed from behind dams and added to the stream, would that move mercury into the stream? Perhaps you could test the sediment behind the dams to see if there is mercury.
  - (R) (Team): There is no reason to expect that there is mercury in the streams. The potential concern would be mercury accumulated in fish.
- (Q) (CDFW): Yes, it is very rare to find mercury at this altitude. Has it ever been documented at this altitude?
  - (R) (Team): It is possible. Some of the data in the PAD shows it, but it is limited and rare.

**Topic: Reservoir Fish Population Study (AQ-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (C) (CDFW): CDFW included in a comment (on 3/25) about an inaccuracy in this study. CDFW can provide reference studies if needed.
  - (R) (Team): Thank you, the Relicensing Team is looking over the comments now. The comments were received on Friday (3/25), and the Team has not had a chance to review the comments before today's (3/28) meeting.

**Topic: Stream Fish Populations Study (AQ-2). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Aquatic Habitat Mapping and Sediment Characterization (AQ-3). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): Would it be helpful to schedule a separate meeting to discuss CDFW's comments?
  - (R) (Team): The Team is reviewing the comments sent on 3/25 and will follow up with any questions in the coming weeks.

**Topic: Aquatic Invasive Plants Survey (AQ-4). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Lower Lee Vining Creek Channel Morphology (AQ-6). See slides for further details.**

TWG member questions and comments are summarized below:

- (C) (CDFW): There was a suggestion to differentiate between the terms “alluvial” and “colluvial” in the PAD.
  - (R) (Team): SCE will difference between the terms alluvial and colluvial in the Lower Lee Vining Creek Channel Morphology (AQ-6) study and in the DLA/FLA.

**Topic: Operations and Hydrology Model (AQ-5). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): What is the channel morphology below the Poole powerhouse? Is it primarily bedrock or ground riffle?
  - (R) (Team): It is not a plunge-pool system; it is more of a riffle-run system.
- (Q) (CSPA): Will the model have reservoir levels in stage, storage, and spills?
  - (R) (Team): Yes.
- (Q) (CSPA): Is there a provision for unimpaired hydrology?
  - (R) (Team): The Relicensing Team is currently considering this request.
- (Q) (CSPA): Will there be a daily reported average value for flows in each of the major project streams reaches?
  - (R) (Team): Yes, in cfs. The model is predictive, and the initial study report will show how the model works, define input levels, and describe the expected reporting. TWGs can provide feedback on the updated model to ensure that the initial study reports will meet TWGs’ needs. There will be a final study plan in April to address CDFW’s comments.
- (Q) (CDFW): Could you include anecdotal *Didymo* surveys in the updated study plan?
  - (R) (Team): The Relicensing Team will consider including CDFW’s request to include anecdotal *Didymo* surveys in the updated study plan.
- (Q) (CDFW): Feel free to set up a meeting with CDFW. We’d rather have a meeting to discuss this rather than to reply back and forth via email.
  - (R) (Team): Thank you. We want to continue this effective collaboration. Once we have a chance to review your comments, we will come up with a schedule to have conversations.

**7.0 TERRESTRIAL AND BOTANICAL STUDY PLANS DISCUSSION**

**Topic: General Botanical Resources Survey (TERR-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (Bishop Paiute Tribe): Is there an invasive plant removal plan?
  - (R) (Team): SCE has a corporate vegetation management plan that is implemented on all SCE projects.

**Topic: General Wildlife Resources Survey (TERR-2). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): How many people do you have on your survey crew?

- (R) (Team): The survey crew includes two permanent surveyors and potentially additional assistance from partner agencies.

## **8.0 CULTURAL AND TRIBAL STUDY PLANS DISCUSSION**

**Topic: Cultural Resources (CUL-1). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Tribal Resources (TRI-1). See slides for further details.**

There were no questions or comments from TWG members.

## **9.0 RECREATION AND LAND USE STUDY PLANS DISCUSSION**

**Topic: Recreation Use Assessment (REC-1). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Facilities Condition Assessment (REC-2). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Project Lands and Roads Assessment (LAND-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): Regarding the Yosemite Toad / Wildlife study, can we convene another meeting for all interested in the study plan and surveys?
  - (R) (Team): The Team is meeting tomorrow (3/29) to discuss this. The Relicensing Team will distribute a proposed schedule for the Yosemite Toad study following the Relicensing Team's 3/29 internal Wildlife Study Plan meeting.
    - The Relicensing Team will schedule another meeting (if needed) for all parties interested in the Yosemite Toad / Wildlife study plan and surveys.

**Topic: Aesthetics Resource Assessment (LAND-2). See slides for further details.**

There were no questions or comments from TWG members.

## **10.0 SCHEDULE AND NEXT STEPS**

The Relicensing Team provided a schedule of upcoming important dates and events.

## **11.0 FINAL Q&A**

There were no further questions. The Relicensing Team adjourned the meeting.





**DRAFT MEETING NOTES\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**REVISED TECHNICAL STUDY PLAN STAKEHOLDER MEETING**  
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Carissa Shoemaker, ERM  
Edith Read, E Read and Associates, Inc.  
Lynn Compas, HRA  
Shelly Davis-King, Davis-King & Associates

Facilitation Team

Lindsay Tryba, KW

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Sheila Irons, USFS  
Richard McNeill, USFS  
Monique Sanchez, USFS  
Nathan Sill, USFS  
Thomas Torres, USFS  
Jameisha Washington, USFS  
Michael Wiese, USFS  
Brandy Wood, CDFW  
Alyssa Marquez, CDFW  
Beth Lawson, CDFW  
Nick Buckmaster, CDFW  
James Erdman, CDFW  
Chad Mellison, USFWS

Saeed Jorat, LADWP  
Christina McDonald, North Fork Rancheria of  
Mono Indians of California  
Raymond Andrews, Bishop Paiute Tribe  
Bartshe Miller, MLC  
Greg Reis, MLC

Chris Shutes, CSPA  
Naomi Jensen, TEAM Engineering &  
Management, Inc.  
Greg Foote, TEAM Engineering & Management,  
Inc.

### 3.0 COMPILED ACTION ITEMS

- **Chris Shutes** (CSPA) wants to be included in the next hydrology/operations meeting.
- **Relicensing Team** will schedule a separate meeting with CDFW to discuss CDFW's comments that were sent to SCE on 3/25.
- **Relicensing Team** will differentiate between the terms "alluvial" and "colluvial" in the Lower Lee Vining Creek Channel Morphology (AQ-6) study and in the DLA/FLA.
- **Relicensing Team** will consider including CDFW's request to include anecdotal *Didymo* surveys in the updated study plan.
- **Relicensing Team** will distribute a proposed schedule for the Yosemite Toad portion of the Wildlife study following the Relicensing Team's 3/29 internal Wildlife Study Plan meeting.
  - **Relicensing Team** will schedule another meeting (if needed) for all parties interested in the Yosemite Toad / Wildlife study plan and surveys.

### 4.0 WELCOME & INTRODUCTIONS

Finlay Anderson, Kleinschmidt, welcomed Technical Working Group (TWG) members to the meeting, introduced the Relicensing Team, and provided an overview of the agenda. Audry Williams, SCE, provided tribal land recognition. Matthew Woodhall, SCE, introduced the SCE Team and Shannon Luoma, Kleinschmidt, introduced the Consultant Team. The purpose of today's call is to review changes made to the Study Plans since filing with FERC, review comments received since the February filing, and discuss Final Study Plans and implementation.

### 5.0 RELICENSING SCHEDULE OVERVIEW

Finlay Anderson, Kleinschmidt, provided an overview of the Process Review and the Traditional Licensing Process (TLP). The agencies' involvement in the technical study plans typically ends with the FERC comment period, which occurs after the first stage of consultation. SCE chose to add additional steps to maintain collaboration with the TWG members, including: 2021 TWG meetings, complete study plan meetings, and after the first stage consultation, revised study plans and a Study Plan Meeting. Additionally, the Dispute Resolution Process exists if needed.

### 6.0 FISH, AQUATICS, AND HYDROLOGY STUDY PLANS DISCUSSION

**Topic: Stream and Reservoir Water Quality Study (WQ-1). See slides for further details.**

TWG member questions and comments are summarized below:

- Question (Q) (North Fork Rancheria of Mono Indians of California): If tissue mercury levels are elevated, then would you test Ellery Lake also?
  - Response (R) (Team): Ellery rarely, if ever, stratifies, which means that it is unlikely to methylate and bioaccumulate into fish. The data shows that Ellery does not have a problem with mercury.
- (Q) (CDFW): Are you seeing lower DO levels in the hypolimnion in the other reservoirs?
  - (R) (Team): There was some DO in limited circumstances, but it is not a major concern.
- (Q) (CDFW): Does the water temperature affect DO?
  - (R) (Team): If the reservoir is stratified for a long period of time, then dissolved oxygen has an opportunity for mercury to methylate. Stratification is not a concern for Ellery.
- (C) (CDFW): If sediment is removed from behind dams and added to the stream, would that move mercury into the stream? Perhaps you could test the sediment behind the dams to see if there is mercury.
  - (R) (Team): There is no reason to expect that there is mercury in the streams. The potential concern would be mercury accumulated in fish.
- (Q) (CDFW): Yes, it is very rare to find mercury at this altitude. Has it ever been documented at this altitude?
  - (R) (Team): It is possible. Some of the data in the PAD shows it, but it is limited and rare.

**Topic: Reservoir Fish Population Study (AQ-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (C) (CDFW): CDFW included in a comment (on 3/25) about an inaccuracy in this study. CDFW can provide reference studies if needed.
  - (R) (Team): Thank you, the Relicensing Team is looking over the comments now. The comments were received on Friday (3/25), and the Team has not had a chance to review the comments before today's (3/28) meeting.

**Topic: Stream Fish Populations Study (AQ-2). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Aquatic Habitat Mapping and Sediment Characterization (AQ-3). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): Would it be helpful to schedule a separate meeting to discuss CDFW's comments?
  - (R) (Team): The Team is reviewing the comments sent on 3/25 and will follow up with any questions in the coming weeks.

**Topic: Aquatic Invasive Plants Survey (AQ-4). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Lower Lee Vining Creek Channel Morphology (AQ-6). See slides for further details.**

TWG member questions and comments are summarized below:

- (C) (CDFW): There was a suggestion to differentiate between the terms “alluvial” and “colluvial” in the PAD.
  - (R) (Team): SCE will difference between the terms alluvial and colluvial in the Lower Lee Vining Creek Channel Morphology (AQ-6) study and in the DLA/FLA.

**Topic: Operations and Hydrology Model (AQ-5). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): What is the channel morphology below the Poole powerhouse? Is it primarily bedrock or ground riffle?
  - (R) (Team): It is not a plunge-pool system; it is more of a riffle-run system.
- (Q) (CSPA): Will the model have reservoir levels in stage, storage, and spills?
  - (R) (Team): Yes.
- (Q) (CSPA): Is there a provision for unimpaired hydrology?
  - (R) (Team): The Relicensing Team is currently considering this request.
- (Q) (CSPA): Will there be a daily reported average value for flows in each of the major project streams reaches?
  - (R) (Team): Yes, in cfs. The model is predictive, and the initial study report will show how the model works, define input levels, and describe the expected reporting. TWGs can provide feedback on the updated model to ensure that the initial study reports will meet TWGs’ needs. There will be a final study plan in April to address CDFW’s comments.
- (Q) (CDFW): Could you include anecdotal *Didymo* surveys in the updated study plan?
  - (R) (Team): The Relicensing Team will consider including CDFW’s request to include anecdotal *Didymo* surveys in the updated study plan.
- (Q) (CDFW): Feel free to set up a meeting with CDFW. We’d rather have a meeting to discuss this rather than to reply back and forth via email.
  - (R) (Team): Thank you. We want to continue this effective collaboration. Once we have a chance to review your comments, we will come up with a schedule to have conversations.

**7.0 TERRESTRIAL AND BOTANICAL STUDY PLANS DISCUSSION**

**Topic: General Botanical Resources Survey (TERR-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (Bishop Paiute Tribe): Is there an invasive plant removal plan?
  - (R) (Team): SCE has a corporate vegetation management plan that is implemented on all SCE projects.

**Topic: General Wildlife Resources Survey (TERR-2). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): How many people do you have on your survey crew?

- (R) (Team): The survey crew includes two permanent surveyors and potentially additional assistance from partner agencies.

## **8.0 CULTURAL AND TRIBAL STUDY PLANS DISCUSSION**

**Topic: Cultural Resources (CUL-1). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Tribal Resources (TRI-1). See slides for further details.**

There were no questions or comments from TWG members.

## **9.0 RECREATION AND LAND USE STUDY PLANS DISCUSSION**

**Topic: Recreation Use Assessment (REC-1). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Facilities Condition Assessment (REC-2). See slides for further details.**

There were no questions or comments from TWG members.

**Topic: Project Lands and Roads Assessment (LAND-1). See slides for further details.**

TWG member questions and comments are summarized below:

- (Q) (CDFW): Regarding the Yosemite Toad / Wildlife study, can we convene another meeting for all interested in the study plan and surveys?
  - (R) (Team): The Team is meeting tomorrow (3/29) to discuss this. The Relicensing Team will distribute a proposed schedule for the Yosemite Toad study following the Relicensing Team's 3/29 internal Wildlife Study Plan meeting.
    - The Relicensing Team will schedule another meeting (if needed) for all parties interested in the Yosemite Toad / Wildlife study plan and surveys.

**Topic: Aesthetics Resource Assessment (LAND-2). See slides for further details.**

There were no questions or comments from TWG members.

## **10.0 SCHEDULE AND NEXT STEPS**

The Relicensing Team provided a schedule of upcoming important dates and events.

## **11.0 FINAL Q&A**

There were no further questions. The Relicensing Team adjourned the meeting.

**From:** [Steve Norton](#)  
**To:** [Erdman, James@Wildlife](#); [Marquez, Alyssa@Wildlife](#)  
**Cc:** [Matthew Woodhall](#); [Brad Blood](#); [Shannon Luoma](#); [Carissa Shoemaker](#); [Finlay Anderson](#)  
**Subject:** 3/30/22 Wildlife Study Plan Meeting Minutes  
**Date:** Wednesday, March 30, 2022 6:48:06 PM  
**Attachments:** [image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[Wildlife Study Plan Meeting Minutes\\_033022.pdf](#)

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Hi Jim and Alyssa,

Attached is a brief summary of the topics we discussed at the meeting.

Let me know if you have any edits or additions.

Thanks again for meeting with us.

-Steve

**Steve Norton**

**PSOMAS** | Balancing the Natural and Built Environment

Senior Biologist / Project Manager / Associate

Resource Management

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# Lee Vining Wildlife Study Plan Agenda and Minutes

March 30, 2022

- 1) Quick introduction
  - a. Alyssa Marquez
  - b. Jim Erdman
  - c. Matt Woodhall
  - d. Steve Norton
  - e. Brad Blood
  - f. Finlay Anderson
  - g. Carissa Shoemaker
  - h. Shannon Luoma
  
- 2) Meeting Goal
  - a. Finalize Wildlife Study Plan
  - b. If time: Continue planning for 2022 field season
  
- 3) Recent Study Plan Updates
  - a. Updated rec study components
    - i. Data of interest:
      1. Timing of recreationalists use relative to YOTO breeding season
        - a. May (post-snowmelt)
      2. Determine type of recreational transit: foot or bicycle
  - b. Updated YOTO survey methods, notably:
    - i. removed June 1-Sept 30.
    - ii. replaced with: start after snow melt. Will include communication with SCE operations staff to assist in determining appropriate survey start date.
    - iii. Determined to use inlets to Tioga Lake as indicator location of snow melt
    - iv. Psomas to provide SCE Ops with criteria for Tioga Lake inlet check (Photo sites, etc.).
    - v. Will use CDFW high mnt datasheet or similar to collect relevant data
    - vi. GPS location, habitat photo, and (where relevant) life-stage photo, will be collected at each YOTO observation site.
    - vii. Will record lake elevations during each visit.
  - c. Expanded Study Area
    - i. Now includes inlets at Tioga Lake.
    - ii. Include flexibility to expand survey area where relevant.
    - iii. Previously included areas include:
      1. area downstream of Tioga Dam.

2. north and south inlets at Saddlebag.
  3. known population south of Saddlebag.
  - iv. Include focused habitat assessment in 2022 of presumptive wet-meadows along Lee Vining Creek (generally located upstream of Sawmill Campground). Locations determined based on Google Earth aerial photography but need ground truthing. Areas will be evaluated as suitable habitat based on the presence of USFWS-defined Primary Constituent Elements.
  - v. 2023 YOTO survey efforts will be determined based on the results of 2022 survey results and other related licensing efforts.
  - d. Review of mapped contours of Tioga littoral zone.
- 4) General project information
- a. Lake elevations at Tioga and Ellery are mandated to be kept within a narrow range (generally speaking: near full capacity) for most of the recreational year.
  - b. Saddlebag daily release amount established at the beginning of each year (generally in April) then generally remains unchanged until the Fall.
- 5) Action Items
- a. License team to communicate with SCE operations staff to schedule at minimum a weekly photograph of the snowpack/melt at the southern inlet to Tioga Lake. Photo will be sent to License team to determine when toad surveys must start. Psomas to email to CDFW and USFWS.
  - b. CDFW to send approximate points of focused habitat assessment along Lee Vining Creek to be conducted by License Team in 2022 field season.



## Lee Vining, FERC Project No. 1388

### WILDLIFE STUDY PLAN MEETING NOTES MARCH 30, 2022; 2:00 PM – 3:00 PM PDT

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

#### Attendees

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##### Relicensing Team Members

Brad Blood, Psomas  
Carissa Shoemaker, ERM  
Finlay Anderson, Kleinschmidt  
Matthew Woodhall, SCE  
Shannon Luoma, Kleinschmidt  
Steve Norton, Psomas

##### Agencies and Interested Stakeholders

Alyssa Marquez, CDFW  
James “Jim” Erdman, CDFW

#### Meeting Goal

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- Finalize Wildlife Study Plan
- If time: Continue planning for 2022 field season

#### Recent Study Plan Updates

---

- Updated rec study components
  - Data of interest:
    - Timing of recreationalists use relative to YOTO breeding season
      - May (post-snowmelt)
    - Determine type of recreational transit: foot or bicycle
- Updated YOTO survey methods, notably:
  - removed June 1-Sept 30.
  - replaced with: start after snow melt. Will include communication with SCE operations staff to assist in determining appropriate survey start date.
  - Determined to use inlets to Tioga Lake as indicator location of snow melt
  - Psomas to provide SCE Ops with criteria for Tioga Lake inlet check (Photo sites, etc.).
  - Will use CDFW high mnt datasheet or similar to collect relevant data
  - GPS location, habitat photo, and (where relevant) life-stage photo, will be collected at each YOTO observation site.
  - Will record lake elevations during each visit.
- Expanded Study Area
  - Now includes inlets at Tioga Lake.
  - Include flexibility to expand survey area where relevant.
  - Previously included areas include:
    - area downstream of Tioga Dam.

- north and south inlets at Saddlebag.
- known population south of Saddlebag.
- Include focused habitat assessment in 2022 of presumptive wet-meadows along Lee Vining Creek (generally located upstream of Sawmill Campground). Locations determined based on Google Earth aerial photography but need ground truthing. Areas will be evaluated as suitable habitat based on the presence of USFWS-defined Primary Constituent Elements.
- 2023 YOTO survey efforts will be determined based on the results of 2022 survey results and other related licensing efforts.
- Review of mapped contours of Tioga littoral zone.

### General Project Information

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- Lake elevations at Tioga and Ellery are mandated to be kept within a narrow range (generally speaking: near full capacity) for most of the recreational year.
- Saddlebag daily release amount established at the beginning of each year (generally in April) then generally remains unchanged until the Fall.

### Action Items

---

- License team to communicate with SCE operations staff to schedule at minimum a weekly photograph of the snowpack/melt at the southern inlet to Tioga Lake. Photo will be sent to License team to determine when toad surveys must start. Photos to email to CDFW and USFWS.
- CDFW to send approximate points of focused habitat assessment along Lee Vining Creek to be conducted by License Team in 2022 field season.

**From:** [Matthew Woodhall](#)  
**Cc:** [Shannon Luoma](#); [Finlay Anderson](#); [Martin Ostendorf](#); [Kelly.Larimer@KleinschmidtGroup.com](mailto:Kelly.Larimer@KleinschmidtGroup.com); [Carissa Shoemaker](#); [allison.rudalevige@psomas.com](mailto:allison.rudalevige@psomas.com); [Brad Blood](#); [steve.norton@psomas.com](mailto:steve.norton@psomas.com); [marshmistress@msn.com](mailto:marshmistress@msn.com); [Shelly DavisKing](#); [Audry Williams](#); [lcompas@hrassoc.com](mailto:lcompas@hrassoc.com); [Matthew.Harper@Kleinschmidtgroup.com](mailto:Matthew.Harper@Kleinschmidtgroup.com); [Angela.Whelpley@KleinschmidtGroup.com](mailto:Angela.Whelpley@KleinschmidtGroup.com); [Heather Bowen Neff](#); [Adam Cohen](#)  
**Subject:** Lee Vining Final Technical Study Plans  
**Date:** Friday, May 6, 2022 1:10:01 PM  
**Attachments:** [image001.png](#)

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Hello Lee Vining Technical Working Group members,  
The Lee Vining Final Technical Study Plans were filed with FERC on Monday April 25, 2022. The document is now available on the [Lee Vining Relicensing website](#) and can also be found on the Project's FERC docket (P-1388) online ([at this link](#)). SCE greatly appreciates your input in developing these plans. Several of the studies will be implemented this spring. We are looking forward to kicking off the fieldwork and sharing the study results with you when they are available.  
As a general reminder, all stakeholders have the option to register and subscribe on FERC's public website to receive communication directly from FERC throughout the relicensing process. This will ensure timely receipt of all filings made by FERC, SCE, and stakeholders. Once registered, future communications related to this relicensing will arrive primarily via FERC communications, therefore, it is important that interested parties register on FERC's website <https://www.ferc.gov/docs-filing/esubscription.asp>.

Thanks,  
Matthew C. Woodhall  
Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office



**From:** [Steve Norton](#)  
**To:** [Chad Mellison@fws.gov](mailto:Chad_Mellison@fws.gov); [James.Erdman@wildlife.ca.gov](mailto:James.Erdman@wildlife.ca.gov); [Matthew Woodhall](#); [Brad Blood](#); [Shannon Luoma](#); [Carissa Shoemaker](#); [Lauren Rosenkranz](#); [Finlay Anderson](#); [Sarah Berryman](#)  
**Subject:** Agenda for Tuesday's Conference Call regarding the Lee Vining Hydroelectric Relicensing Project  
**Date:** Friday, January 6, 2023 3:45:41 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[Agenda Lee Vining YOTO Agency Meeting 010623.pdf](#)

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Please see the attached agenda and I look forward to speaking with you all on Tuesday at 10:00!  
-Steve

**Steve Norton**  
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**MEETING AGENDA**

**January 10, 2023**

**Conference call between SCE, Kleinschmidt, Psomas, CDFW, and USFWS**

**SUBJECT:**

**2023 Proposed Yosemite Toad Field Survey and Research Efforts for the  
Lee Vining Hydroelectric Relicensing Project**

- 1) Brief summary of 2022 Yosemite toad survey results.
- 2) General inquiry on the anticipated Section 7 Consultation: any additional input from USFWS?
- 3) Discuss revised survey locations for 2023.
- 4) Discuss additional data collection efforts proposed.
  - a. DNA collection
    - i. tail clips and mouth swabs for assessing *Anaxyrus canorus* v. *A. boreas*
    - ii. eDNA for presence/absence in potential breeding ponds
- 5) Discuss available options for authorizing DNA collection (permitting options).

**From:** [Steve Norton](#)  
**To:** [Carissa Shoemaker](#); [Shannon Luoma](#); [Matthew Woodhall](#)  
**Cc:** [Lauren Rosenkranz](#); [Brad Blood](#)  
**Subject:** Meeting Minutes - Lee Vining Hydro Relicensing - 2023 Amphibian Survey  
**Date:** Wednesday, February 8, 2023 4:19:33 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[Minutes Lee Vining YOTO INF Meeting\\_020123.docx](#)

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Hello all,

Please review and approve the meeting minutes from our meeting with the INF. Please also note, I hope to meet up with Thomas in person this week. I will let you know if anything substantive comes out of it.

-Steve

**Steve Norton**

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## MEETING MINUTES

**MEETING:** February 2, 2023, conference call between Project Team (SCE, ERM, and Psomas), and Inyo National Forest (INF)

**SUBJECT:** Lee Vining Hydroelectric Relicensing Project 2023 Yosemite Toad Field Season Update to INF

### ATTENDEES:

Thomas Torres, INF

Matt Woodhall, SCE

Steve Norton, Psomas

Brad Blood, Psomas

Carissa Shoemaker, ERM

### MEETING AGENDA

- Introductions
- Discuss shared YOTO observations
  - 2022 YOTO survey results (Project Team)
  - Additional YOTO observations (INF)
- Discuss revised anticipated 2023 survey locations
- Discuss additional data collection proposed: DNA
  - General methods
  - Potential Partners
- Next Steps

### DISCUSSION SUMMARY:

- Project Team presented detailed findings from 2022 amphibian surveys.
  - Thomas discussed observations of breeding near northern shore of Saddlebag Lake (downhill of USFS cabin) in years past and also near northwest inlet into Saddlebag Lake but none observed in 2022. Steve also confirmed looking but not seeing any breeding in these locations.
  - Thomas noted no previous observations of breeding near Project Team observation along Lee Vining Creek.
- Project Team discussed preliminary plans to collect DNA of toads within the Study Area to assess potential presence of western toads and potential hybridization.
  - Project Team discussed preliminary outreach efforts to determine study feasibility. Prior to furthering discussions with potential partners, Project Team sought to update and engage INF.
- Thomas stated he has a current permit to collect DNA via toe clips and tail clips from YOTO.
- Thomas expressed interest in the preliminary study proposed by the Project Team, however, he cannot commit without first reviewing draft methods and checking in with Jim Erdman and additional INF staff. Thomas to update Project Team on his discussions following his return from the Wildlife Society meeting next week.
- Thomas noted that among other responsibilities, he has time allotted during the 2023 field season to conduct amphibian survey efforts.

- Psomas to outline proposed methods and how we can collaborate with INF.
- Thomas noted collaborating with Alexa Lundberg and Roland Knapp with the Sierra Nevada Aquatic Resource Laboratory (SNARL). Thomas to reach out to Alexa to discuss.
- SCE offered potentially funding supplies for the survey efforts if done exclusively by INF.
- Unrelated to amphibians, at the request of Psomas, INF to suggest additional potential wildlife camera locations for 2023 deployment.



**From:** [Carissa Shoemaker](#)  
**To:** [Lauren Rosenkranz](#)  
**Subject:** FW: Meeting with Thomas Torres (INF Wildlife Biologist)  
**Date:** Friday, February 10, 2023 3:00:56 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

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Carissa Shoemaker

*My part-time work schedule is generally as follows: Tuesday morning, Thursday morning, and all day Friday.*

*I can be available outside of these times if given advanced notice.*

**ERM**

**M 907 575 0294**

---

**From:** Brad Blood <[bblood@psomas.com](mailto:bblood@psomas.com)>  
**Sent:** Friday, February 10, 2023 1:13 PM  
**To:** Steve Norton <[steve.norton@psomas.com](mailto:steve.norton@psomas.com)>; Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>; Shannon Luoma <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>  
**Cc:** Carissa Shoemaker <[Carissa.Shoemaker@erm.com](mailto:Carissa.Shoemaker@erm.com)>  
**Subject:** RE: Meeting with Thomas Torres (INF Wildlife Biologist)

**EXTERNAL MESSAGE**

Thanks for the up date. I would like a Mountain Beaver photo. That would be amazing!

Cheers

---

**From:** Steve Norton <[steve.norton@psomas.com](mailto:steve.norton@psomas.com)>  
**Sent:** Friday, February 10, 2023 1:07 PM  
**To:** Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>; Brad Blood <[bblood@psomas.com](mailto:bblood@psomas.com)>; Shannon Luoma <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>  
**Cc:** Carissa Shoemaker <[Carissa.Shoemaker@erm.com](mailto:Carissa.Shoemaker@erm.com)>  
**Subject:** Meeting with Thomas Torres (INF Wildlife Biologist)

Hello all,

Yesterday, I sat down with Thomas and had a really good and long discussion about our proposed YOTO efforts. Below are the highlights.

- He is still very interested in the study.
- Prior to entertaining effort of collecting new DNA samples, he wants us to see if there are any existing samples we can use for this study.
  - I told him the points of contact identified by Alexa with SNARL were all operating under Rob Grasso's permit in Yosemite and none were from Saddlebag or the Lee Vining Creek. He was very impressed we did the leg work ahead of time. He is going to

continue following up with SNARL to see if there are any other previously-collected potential DNA banks from our project area that we can use. We both have action items on this.

- I am going to reach out to Paul Maier to see if swab samples are sufficient for hybrid DNA analysis, once we hear back from SNARL.
- He reviewed his existing permit for YOTO and didn't explicitly see toe or tail clipping on it and will likely need to amend his permit. While we spoke, he emailed the regional permit coordinator in Vallejo to see what it would take to have it amended.
- I am going to connect Thomas and Jeff Mabe (ENF) so they can discuss how to process the permit amendment.
- Thomas was open to letting Jeff or Rob do the collection, if no existing DNA samples are used.
- We discussed logistics of doing the surveys and getting up there as early as possible.
  - I told him we would be up there weekly as soon as we had access.
  - He mentioned he is snowmobile certified and the INF has one available if we choose to go up before 120 opens. There are some significant avalanche risks that would have to be discussed if we went that route.
- He is interested in the photos and video we took last year of mating with snow on the ground. I will be sending him those videos.
- He is going to look up some potential good wildlife camera locations for us to possible place cameras this year.
- He also mentioned asking Beaver's Sporting Goods where they had their Mountain beaver sighting as a potential camera location.
- Also I learned that the Stanislaus NF didn't have any Yosemite toad observations last year confirming it was a strange survey year.

## Steve Norton

**PSOMAS** | Balancing the Natural and Built Environment

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Resource Management

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**DRAFT MEETING NOTES\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**RECREATION AND LAND USE TECHNICAL WORKING GROUP MEETING**  
**MARCH 1, 2023, 9:00 AM–11:00 AM**

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

**1.0 OBJECTIVES**

---

- Present 2023 implementation plans for REC-1, REC-2, and LAND-2

**2.0 ATTENDEES**

---

Relicensing Team Members

Martin Ostendorf, Southern California Edison (SCE)  
Matt Woodhall, SCE  
Finlay Anderson, Kleinschmidt  
Shannon Luoma, Kleinschmidt  
Kelly Larimer, Kleinschmidt  
Angela Whelpley, Kleinschmidt  
Karen Klosowski, Kleinschmidt  
Lauren Rosenkranz, Kleinschmidt  
Carissa Shoemaker, ERM

Technical Working Group Members & Interested Parties

Adam Barnett, U.S. Forest Service (USFS)  
Stephanie Heller, USFS  
Sheila Irons, USFS  
Jameisha Washington, USFS  
Alyssa Hockaday, California Department of Fish and Wildlife (CDFW) (Federal Energy Regulatory Commission [FERC] coordinator in southern region)  
Adam Cohen, State Water Resources Control Board (SWRCB)  
Bryan Muro, SWRCB

**3.0 COMPILED ACTION ITEMS**

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- **Relicensing Team** will send datasheets / survey forms out after this meeting for stakeholder review. Complete.
- **Relicensing Team** will send meeting invite for 3/15 at 9 am to 10 am Pacific Time. Complete.
- **Relicensing Team** will look for the USFS Over Snow Vehicle Use Management Plan coming out in May 2023.
- **Relicensing Team and USFS** will discuss logistics and necessity/nexus for over snow /winter surveys.

- **CDFW, Alyssa Hockaday** will confirm with Nick Buckmaster when the reservoirs will be stocked (before Fishmas?) and which target species will be stocked. Completed – usually yes, reservoirs would be stocked before Fishmas, but it depends on snowpack; rainbow trout is the only species that CDFW stocks.
- **Relicensing Team** will further assess the request to add Lower Lee Vining and Moraine campgrounds to the REC-2 survey.
- **Relicensing Team** will add the “industrial” area on the north side of Ellery Lake as a Key Observation Point (KOP) to the Aesthetics survey. Completed.

#### **4.0 WELCOME AND INTRODUCTIONS**

---

Shannon Luoma, Kleinschmidt, welcomed Technical Working Group (TWG) members to the meeting, everyone introduced themselves, and Shannon provided an overview of the agenda. Finlay Anderson, Kleinschmidt, provided a safety moment.

Shannon reminded the group of the Project baseline: based on the 1992 FERC Environmental Assessment, there are no recreation facilities within the FERC Project Boundary.

#### **5.0 REC-1 COMMENT 1: INCLUDE LOWER LEE VINING AND MORAINES CAMPGROUNDS IN REC-1 SURVEY**

---

Question (Q) (Adam Barnett): Nearly a third of respondents from the area reported that they come to recreate in the upper canyon. Substantial can be debated, the amount responded was more than negligible. If we’re trying to evaluate the need for facilities it would make sense to ask people from those two new locations [Moraine and Lee Vining campgrounds].

Response (R) (Matthew Woodhall): We found that folks staying in the lower canyon did want to be there, so we conclude that they are camping where they want to be. Your concern was folks were being displaced from the upper area, which we did not find evidence of.

(R) (Adam Barnett): We will take a closer look at your results so we can understand.

#### **6.0 REC-1 COMMENT 2: ASSESS THE OVER SNOW RECREATION IN PROJECT AREA**

---

(Q) (Shannon Luoma): We want to clarify if USFS wants SCE to conduct additional surveys during the winter or just add additional over snow recreation questions to our surveys? We can include snowmobiling and skiing on the survey, but don’t see a clear nexus so don’t intend to do additional surveys.

(R) (Stephanie Heller): The over snow use is not huge in the area, but asking questions in the summer wouldn’t capture accurate results, because the user groups are not the same.

(Q) (Shannon Luoma): We do intend to be out there in April and May, are you asking us to come out specifically in winter to survey these groups?

(Q) (Finlay Anderson): Has the USFS measured winter recreation in the area?

(R) (Stephanie Heller): Unsure, but anecdotal evidence and winter-use guides for the area are available. I'm unsure if actual surveys have been done.

(Q) (Finlay Anderson): We would like to figure out how much of the project itself is driving use. We are trying to figure out how the recreation is connected to the project.

(R) (Stephanie Heller): The USFS is in the middle of over snow use management planning; the Saddlebag Lake area has been discussed a lot among user groups. Also, the backside of Tioga Lake where people want to have access to snowmobile. They access by going on the highway / Tioga Pass Road over snow on snowmobiles. They couldn't get up there last year, this year they can because there is enough snow.

(R) (Jameisha Washington): The use is not only snowmobiles, but also folks accessing Tuolumne Park on skis. Saddlebag is adjacent to that park, people are just looking to get out and do fun things, so they'll take the long road.

(Q) (Jameisha Washington): Regarding the ice climbing comment, how are we deciding what is in the project area? Doesn't the ice exist because of the project? The ice that is near the Poole Powerhouse.

(R) (Martin Ostendorf): The ice climbing group seems to be very specific. We think that ice climbing information can be obtained with consultation with those user groups and shouldn't warrant further questionnaires. How much of the use is induced by our project? We may want to survey use just to figure out how it is used and then determine if there is nexus.

(C) (Sheila Irons): I would add the ice climbing is more accessible since Poole Power Plant Road is plowed to the powerhouse.

(R) (Finlay Anderson): It sounds like the USFS is already starting to determine what use occurs. Ice climbing may be an additional discussion. The USFS is making an over snow management plan. We would like to collaborate and make sure the information is carried forward in our Draft License Application (DLA).

(Q) (Shannon Luoma): We have had some discussions with individuals at the Access Fund about ice climbing. Does the USFS have other contacts within the ice climbing community that we can engage with?

(R) (Adam Barnett): This year is going to be a late start even for summer recreation surveys, so the shoulder/spring season could be more focused on over snow use than other recreation in the canyon, so you may not need additional survey work, but converting earlier surveys to different questions to focus on over snow activities. I'm unsure what snowmobile use will be like this spring, but Saddlebag Lake Road will be used by snowmobilers.

(R) (Shannon Luoma): There are additional logistical challenges getting up there to survey in the snow. We can discuss this further.

(R) (Matthew Woodhall): We're having an almost record-setting snow year this year, so we'll gather that information as we get into the season. For example, the campground surveys will be delayed because of the snow. We'd be capturing the conditions during the high-snow season.

(Q) (Finlay Anderson): Would the USFS be able to provide the Relicensing Team with information about your management plan updates as it relates to winter recreation? This would be really useful for the license application.

(R) (Stephanie Heller): We are only at the very beginning of Over Snow Vehicle Use Management planning. We've had conversations with user groups, but we haven't done formal scoping yet. Our proposed action won't be out until May.

## **7.0 REC-1 STUDY PLAN FOR 2023**

---

Angela Whelpley shared study plans for 2023.

(Q) (Angela Whelpley): Will CDFW be stocking the reservoirs prior to Fishmas?

(R) (Alyssa Hockaday): I'm unsure, but I will check with Nick Buckmaster and he will let us know.

(Q) (Angela Whelpley): We also want to know which target species will be stocked? Are there others to add to our list?

(R) (Alyssa Hockaday): I will ask Nick to confirm.

## **8.0 REC-2 COMMENT 1: INCLUDE SAWMILL WALK-IN AND JUNCTION CAMPGROUNDS IN REC-2**

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No stakeholder comments.

## **9.0 REC-2 COMMENT 2: INCLUDE LOWER LEE VINING AND MORAINES CAMPGROUNDS IN REC-2**

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(Q) (Adam Barnett): This is a similar issue to one we faced with Bishop Creek relicensing, there may become a need for additional overnight facilities in upper canyon, but we may not be able to expand them because of topographical constraints. We might not need to do a facilities assessment, but it would be worthwhile to determine if expansion is needed at those lower sites.

(R) (Angela Whelpley): We recognize that there is a ton of use in the vicinity, but we don't feel that including those additional sites is necessary at this time.

(R) (Adam Barnett): The USFS position is that there is a need for additional recreational capacity in the canyon. Sites in the lower canyon may be the only area that we can provide that in this project vicinity.

(R) (Finlay Anderson): We'll take this comment and work it into our process.

(R) (Matthew Woodhall): SCE's position is that in the condition assessment, assessing the condition now based on an unknown outcome is not worthwhile, if there is a known capacity issue in the upper canyon and we had to do offsets at other locations, then we could do some assessments to determine how to make that work. We don't believe these recreation sites are project-induced. We can look at these later if we ever get there.

## **10.0 REC-2 STUDY PLAN FOR 2023**

---

Angela Whelpley shared study plans for 2023.

No stakeholder comments.

### **11.0 LAND-2 STUDY PLAN FOR 2023**

---

Shannon Luoma shared study plans for 2023.

(Q) (Adam Barnett): There is an SCE area north of Ellery Lake that is “industrial looking” not USFS property and is in the project area. It is a denuded area north of the lake with some old structures and pull offs. We would like you to include that in the Aesthetics survey.

(R) (Shannon Luoma): Confirmed which area Adam was referring to in ArcGIS Online (AGOL) (IMG-0354 location).

(Q) (Carissa Shoemaker): Would the USFS want to help select the exact location [GPS coordinate] of each KOP?

(R) (Adam Barnett): Yes, we’d like to review the areas you choose.

Karen Klosowski summarized the KOP selection process, datasheet information that will be collected, and how the data will be used in the report.

### **12.0 SCHEDULE AND NEXT STEPS**

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Shannon asked the group if a March 15 meeting from 9 am to 10 am would work to discuss comments on the survey methods. No objections were heard, Adam Barnett and SCE can attend. Relicensing Team will send out an invitation and the survey methods documents.

### **13.0 FINAL Q&A**

---

No stakeholder comments.

The Relicensing Team adjourned the meeting.



# Lee Vining Hydroelectric Project Relicensing

## Recreation and Land Use TWG Meeting

March 1, 2023, 9:00 a.m. – 11:00 a.m. PDT via Microsoft Teams

### Objective

- Present 2023 implementation plans for REC-1, REC-2, and LAND-2

Duration (minutes)	Agenda Topic/Subtopic	Lead
10	<b>Welcome, Introductions, Meeting Objectives</b>	
	<ul style="list-style-type: none"> <li>- Safety moment</li> <li>- Introductions</li> <li>- Meeting objectives</li> </ul>	Matthew Woodhall Shannon Luoma
35	<b>REC-1: Use and Needs</b>	
	<ul style="list-style-type: none"> <li>- Present RUNS proposed locations               <ul style="list-style-type: none"> <li>o Address/review comments received on Tech Memo</li> <li>o Intercept Surveys/Spot counts</li> <li>o Traffic/trail counters and calibrations</li> <li>o Winter survey locations</li> </ul> </li> <li>- User Survey Methods               <ul style="list-style-type: none"> <li>o Schedule, timing</li> <li>o Survey instrument</li> <li>o Questions</li> </ul> </li> <li>- Creel Survey Methods               <ul style="list-style-type: none"> <li>o Schedule, timing</li> <li>o Survey instrument</li> </ul> </li> </ul>	Angela Whelpley
20	<b>REC-2: Facilities Inventory</b>	
	<ul style="list-style-type: none"> <li>- Methods               <ul style="list-style-type: none"> <li>o Address/review comments received</li> <li>o Proposed locations</li> <li>o Schedule, timing</li> <li>o Data sheet</li> </ul> </li> </ul>	Angela Whelpley
10	<b>10-minute break</b>	
20	<b>LAND-2: Aesthetic Resources</b>	
	<ul style="list-style-type: none"> <li>- Overview of data sources and data gaps</li> </ul>	Karen Klosowski



	<ul style="list-style-type: none"> <li>- Present proposed KOPs</li> <li>- Methods <ul style="list-style-type: none"> <li>o Schedule, timing</li> <li>o Data sheet</li> <li>o Report/Deliverables</li> </ul> </li> </ul>	
5	<b>Schedule and Next Steps</b>	
	<ul style="list-style-type: none"> <li>- Action items and homework</li> <li>- Next meeting</li> </ul>	Shannon Luoma
10	<b>Final Q&amp;A</b>	
	<b>Adjourn</b>	



**DRAFT MEETING NOTES\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**RECREATION AND LAND USE TECHNICAL WORKING GROUP MEETING**  
**MARCH 15, 2023, 9:00 AM–10:00 AM**

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

**1.0 OBJECTIVE**

---

- Review methods and approach for 2023 surveys and locations per Recreation and Land Use Study Plans

**2.0 ATTENDEES**

---

Relicensing Team Members

Martin Ostendorf, Southern California Edison (SCE)  
Matt Woodhall, SCE  
Finlay Anderson, Kleinschmidt  
Shannon Luoma, Kleinschmidt  
Kelly Larimer, Kleinschmidt  
Angela Whelpley, Kleinschmidt  
Lauren Rosenkranz, Kleinschmidt  
Carissa Shoemaker, ERM

Technical Working Group Members & Interested Parties

Adam Barnett, U.S. Forest Service (USFS)  
Stephanie Heller, USFS  
Sheila Irons, USFS  
Adam Cohen, State Water Resources Control Board (SWRCB)  
Bryan Muro, SWRCB

**3.0 COMPILED ACTION ITEMS**

---

- **Relicensing Team** will review scales of options for questions in the REC-1 survey sheet; it will be made similar to the 1-9 scales used in the Bishop Creek REC survey(s).
- **Relicensing Team** will update REC-1 user survey data sheets to be comparable with past studies.
- **Relicensing Team** will adjust language on question #9 of the REC-1 user survey data sheet to replace “reservoir” with “lake.”
- **Relicensing Team** will add language about holiday use to question #13 of the REC-1 user survey data sheet.

- **Relicensing Team** will adjust language on questions #16-19 of the REC-1 user survey data sheet to include “Lee Vining Canyon” as well as provide a map to orient users.
- **Relicensing Team** will develop an alternative survey timeframe to account for potential delays due to weather.
- **Relicensing Team** will send meeting invite for 4/19/2023 at 9 am to 10 am Pacific Time. Complete.

#### 4.0 WELCOME AND INTRODUCTIONS

---

Shannon Luoma, Kleinschmidt, welcomed Technical Working Group (TWG) members to the meeting, and provided an overview of the agenda. Shannon provided a safety moment.

#### 5.0 REC-1 SURVEY DATES, SCHEDULE, and DATA SHEETS

---

Angela Whelpley, Kleinschmidt, provided an overview of the REC-1 study sites, schedule, and data sheet package. Angela asked for questions.

Question (Q) (Adam Barnett): Can you explain the counter site selection?

Response (R) (Angela Whelpley): One traffic counter will be installed to count all the traffic at the proposed sites. To collect more realistic use numbers, we intend to work with US Forest Service (USFS) to gather count data at sites that don’t have counters.

Angela Whelpley described the methods of choosing and randomizing survey dates, including holidays and Fishmas.

(Q) (Adam Barnett): Is this for both creel surveys and the user survey?

(R) (Angela Whelpley): Yes, the methods are the same. User survey dates are expanded through October to gather data for sites that don’t open until July.

(Q) (Adam Barnett): How many user survey dates are there?

(R) (Shannon Luoma): Confirmed 15 days of user surveys.

(Q) (Adam Barnett): Question #9 on the survey data sheets mentions trail use or hiking in wilderness areas. These terms are not realistic and may limit user data to within or outside of John Muir Wilderness Area. There are other wilderness areas, and people aren’t expected to know the difference. An option would be to differentiate by day use hiking or backpacking.

(R) (Angela Whelpley): Agreed, it may be worthwhile for us to understand if people are day hiking or overnight backpacking. This might be more beneficial information.

(Q) (Adam Barnett): Yes, that’s a more common way of understanding that type of use. Also, we discussed at our last meeting to include snow activities.

(R) (Angela Whelpley): Yes, we intend to include snow activities on these data sheets.

(Q) (Matt Woodhall): Good comment on hiking versus trail use. Would it be more appropriate to use the term “backpacking” or “overnight hiking?”

(R) (Adam Barnett): Yes, distinguish overnight backpacking from day use hiking. Also on question #9, the language “fishing in the reservoir” may be confusing to users. “Lake” might be more common nomenclature as opposed to reservoir.

Angela and Matt agreed that the term “lake” would be more appropriate.

(Q) (Adam Barnett): Could you provide something a bit more meaningful on question #12, with a wider scale of options for more useful information.

(R) (Angela Whelpley): We looked at this scale with our statistician and she said the opposite, that with more options for the data is not as valid. Data collection is more succinct with a smaller number range.

Comment (C) (Adam Barnett): Sure, that makes sense; but a larger scale makes it easier to assign meaning to the results.

(R) (Angela Whelpley): I can absolutely review that comment with the statistician.

(Q) (Matt Woodhall): Adam which option would you prefer?

(R) (Adam Barnett): I’m not going to second guess the statistician and Angela’s decision; just thinking out loud. I would defer to your statistician.

(C) (Matt Woodhall): We want to make sure we’re collecting appropriate information.

(C) (Adam Barnett): It would be more useful to have comparable data, considering other surveys done in the Inyo National Forest. We would like to use this data for other information.

(Q) (Martin Ostendorf): Did other surveys use 1-10 scale?

(R) (Angela Whelpley): We used a 1-9 scale at Bishop Creek recreation surveys.

(C) (Adam Barnett): So maybe for comparability we stick to 1-9.

(C) (Martin Ostendorf): I’m comfortable using the scale to remain consistent.

(Q) (Adam Barnett): For question #13 [on the user survey data sheet], does it make sense to include “avoiding holidays”? That’s a typical response.

(R) (Angela Whelpley): Yes, we know that holidays tend to have higher use than peak season. We can add some language about holiday use.

(C) (Adam Barnett): I have no comments with questions #14 or 15 [on the user survey data sheet]. I also have not heard comments from Jameisha [Washington].

(Q) (Angela Whelpley): Would you prefer that we keep these questions consistent with prior surveys?

(C) (Adam Barnett): Yes.

(Q) (Shannon Luoma): To clarify, all scales that are 1-5 we will change 1-9?

(R) (Angela Whelpley): We will change any scales to make them consistent with surveys conducted at Bishop Creek.

(Q) (Adam Barnett): [In regard to questions #16-19 on the user survey data sheet] I wonder how people interpret the Lee Vining “Area?” Typically, recreation areas are referred to as Lee Vining “Canyon.”

(R) (Angela Whelpley): Yes, we can adjust language on questions #16-19 to include Lee Vining Canyon as well as provide a map to orient users.

(C) (Adam Barnett): Agreed, that makes sense.

Angela Whelpley briefly reviewed the Angler Survey Data sheet for creel surveys.

(Q) (Matt Woodhall): Was this derived from our previous creel surveys and approach? Since California Fish and Wildlife (CDFW) is not on the call, I wanted to make sure we covered these.

(R) (Angela Whelpley): Yes, this was developed similar to Bishop Creek work.

(Q) (Shannon Luoma): So everyone knows, we have been discussing with Alyssa Marquez at CDFW who can’t be on the call. But we have been reviewing these data sheets and haven’t heard any comments thus far. Just want to make sure the TWG knows we are coordinating with CDFW on creel surveys.

No further stakeholder comments or questions.

## **6.0 REC-2 SURVEY DATES AND SCHEDULE**

---

Angela Whelpley provided an overview of the REC-2 study sites and schedule. Angela asked for questions.

(Q) (Angela Whelpley): Given that some of the recreation facilities do not open until July, we’ll be conducting these surveys in mid-July. Does USFS have suggestions on better timing to conduct an effective survey?

(Q) (Martin Ostendorf): Adam, will those sites be open by July?

(R) (Adam Barnett): They should be, but we may not know for certain for a while.

(Q) (Martin Ostendorf): If needed could we push these dates to August?

(R) (Angela Whelpley): Yes, we want to factor in adjustments to the schedule based on weather and would like to communicate any changes as necessary.

No further stakeholder comments or questions.

## **7.0 LAND-2 SURVEY DATES AND SCHEDULE**

---

Shannon Luoma reviewed the LAND-2 study sites and KOP locations.

(C) (Adam Barnett): That works, thank you for adding that location [on the north side of Ellery Lake as a key observation point].

No further stakeholder comments or questions.

## **8.0 SCHEDULE AND NEXT STEPS**

---

(Q) (Shannon Luoma): Can we formalize a process for delaying the start of REC-1 studies, if necessary, due to weather and varied opening dates for sites? Should we check in again in April to discuss?

(Q) (Matt Woodhall): We should definitely have some sort of check-in as it relates to schedule updates. We're looking at the overall study approach for items that may push if needed due to snow. We would like inputs on what stakeholders could see as potential impacts due to weather. We would like to take a segmented approach. Is our current plan going to provide useful data? Will pushing the study for a year be more effective? We're trying to get ahead of a unique year.

(R) (Adam Barnett): That makes sense to me to develop a plan B survey frame now, without compressing the survey sampling frame.

(Q) (Shannon Luoma): Currently there are 15 days scheduled for user surveys and 108 spot counts; is there a threshold (for USFS) of surveys for a sufficient study plan? Let's go ahead and schedule another check-in for the last week of April.

(Q) (Martin Ostendorf): One of our concerns, Adam, is that the survey is going to provide adequate user data in a unique year. Will this data be valid and representative?

(R) (Adam Barnett): We want to capture data at the low and moderate use locations also. We should pursue this year, there are a lot fewer normal years than we used to have.

(C) (Martin Ostendorf): Let's have a check-in in April, please understand our concerns with cost. We need the data for the licensing but want to make sure it's representative.

(C) (Adam Barnett): Understood.

Shannon asked the group if an April 19 meeting from 9 am to 10 am would work to discuss any updates to the schedule. No objections were heard. Relicensing Team will send out an invitation.

## **9.0 FINAL Q&A**

---

Shannon concluded that the primary objectives of the meeting have been met. Shannon asked for any additional discussions around responses to comments received from technical memos. Shannon confirmed that official responses to these comments are being developed in the next few weeks, including meeting minutes, which will be shared and filed with FERC.

No further stakeholder comments or questions.

The Relicensing Team adjourned the meeting.

**From:** [Carissa Shoemaker](#)  
**To:** [Shannon Luoma](#)  
**Cc:** [Lauren Rosenkranz](#)  
**Subject:** FW: Lee Vining Recreation and Land Use TWG  
**Date:** Tuesday, March 7, 2023 9:32:30 AM

---

I think we already knew this, but CDFW cannot attend on March 15.

Carissa Shoemaker

*My part-time work schedule is generally as follows: Tuesday morning, Thursday morning, and all day Friday.*

*I can be available outside of these times if given advanced notice.*

**ERM**

**M** 907 575 0294

-----Original Appointment-----

**From:** Marquez, Alyssa@Wildlife <Alyssa.Marquez@Wildlife.ca.gov>

**Sent:** Monday, March 6, 2023 11:12 AM

**To:** Carissa Shoemaker

**Subject:** Declined: Lee Vining Recreation and Land Use TWG

**When:** Wednesday, March 15, 2023 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Microsoft Teams Meeting

**EXTERNAL MESSAGE**

CDFW will not be able to attend this meeting. Our entire Region 6 unit will be in an all day meeting.

---

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**From:** [Carissa Shoemaker](#)  
**To:** [Arianna Bresnan](#)  
**Cc:** [Lauren Rosenkranz](#)  
**Subject:** FW: (External):Bridgeport Indian Colony  
**Date:** Thursday, April 20, 2023 11:10:15 AM

---

For consultation log

Carissa Shoemaker

*My part-time work schedule is generally as follows: Tuesday morning, Thursday morning, and all day Friday.*

*I can be available outside of these times if given advanced notice.*

**ERM**

**M** 907 575 0294

---

**From:** Lynn Johnson <[lynn@teamenvironmental.com](mailto:lynn@teamenvironmental.com)>  
**Sent:** Wednesday, April 19, 2023 10:46 AM  
**To:** Audry Williams <[Audry.Williams@sce.com](mailto:Audry.Williams@sce.com)>  
**Cc:** Naomi Jensen <[naomi@teamenvironmental.com](mailto:naomi@teamenvironmental.com)>; Mary Farrell <[mary@teamenvironmental.com](mailto:mary@teamenvironmental.com)>  
**Subject:** (External):Bridgeport Indian Colony

**\*\*\* EXTERNAL EMAIL - Use caution when opening links or attachments \*\*\***

Hello Audry,

This came in just before today's TWG meeting started:

Mrs. Johnson,

Thank you for the letter and invitation regarding the project in Lee Vining. The Bridgeport Indian Colony views these issues very important to us as a Tribe and fully support your effort on including us in the conversation. At this point, we defer all negotiations and decision making to the Mono Lake KuKootzaduka Tribe.

At anytime we will make ourselves available and show support when needed. Thank you for allowing us to respond.

Respectfully,

Debbie Lundy-Painter,  
CULTURE COORDINATOR

---

**Lynn Johnson**  
Ethnographer/Historian  
[lynn@teamenvironmental.com](mailto:lynn@teamenvironmental.com)



## **TEAM ENVIRONMENTAL**

459 W. Line Street, Suite A, Bishop, CA 93514

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## Lee Vining, FERC Project No. 1388

### CULTURAL AND TRIBAL RESOURCES TWG MEETING NOTES APRIL 19, 2023; 10:00 AM – 11:30 AM PDT

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

#### 1. Attendees

---

##### Relicensing Team Members

Audry Williams, SCE  
Barb Siskin, FarWestern  
Carissa Shoemaker, ERM  
Finlay Anderson, Kleinschmidt  
Jay King, FarWestern  
Kelly Larimer, Kleinschmidt  
Lynn Johnson, TEAM Environmental  
Mary Farrell, TEAM Environmental  
Matthew Woodhall, SCE  
Naomi Jensen, TEAM Environmental  
Shannon Luoma, Kleinschmidt

##### Agencies, Tribes, and Interested Stakeholders

Ashley Blythe-Haverstock, USFS  
Jacqueline Beidl, USFS  
Kathy Bancroft, Lone Pine Paiute-Shoshone Tribe  
Raymond Andrews, Bishop Paiute Tribe

#### 2. Compiled Action Items for Relicensing Team

---

- Audry Williams will send Raymond Andrews a copy of the final Tribal report from the Bishop Creek Project

#### 3. Welcome and Introductions

---

- The Relicensing Team introduced the meeting, gave a land acknowledgement, presented a safety moment
- TWG participants introduced themselves

#### 4. Relicensing Process, Project Overview

---

- Matt Woodhall provided a Lee Vining Project overview
- Shannon Luoma provided a regulatory process look back and look forward summary
- Shannon provided a list of all the Lee Vining studies and the implementation schedule

#### 5. Cultural Resources Study (CUL-1)

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- Audry Williams provided a summary of the Cultural Resources study plan progress so far.
- She also discussed the plan for continued 2023 studies.

## 6. Tribal Resources Study (TRI-1)

---

- Audry Williams provided a summary of the Tribal Resources study plan progress so far.
- She also discussed the plan for continued 2023 studies.

## 7. Schedule and Next Steps

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- Audry provided a summary of the Lee Vining vs Lundy vs Rush Creek relicensing schedules as they are all happening at once.
- Comment: Raymond Andrews, Unaffiliated –
  - Is the Lundy project website online yet?
- Response: Shannon Luoma, Kleinschmidt and Audry Williams, SCE –
  - The Lundy webpage is not up yet, but should be online soon. You'll get a notification when things start to get going.
- Comment: Raymond Andrews, Unaffiliated –
  - Is the Bishop Project complete?
- Response: Audry Williams, SCE –
  - For Bishop, the final license application has been submitted, FERC will make their decisions soon. The Bishop webpage has the DLA, FLA, and a summary of the Tribal report. The full Tribal report was not posted online, I can send that to you.
- Finlay Anderson, Kleinschmidt, provided a summary of the Lundy Project schedule. The relicensing team anticipates filing the Pre-Application Document in January/February 2024. This fall you should start seeing information about it.

## 8. Upcoming TWG Meetings

---

None scheduled at this time, TBD as needed.

**From:** [Carissa Shoemaker](#)  
**To:** [Arianna Bresnan](#)  
**Cc:** [Lauren Rosenkranz](#)  
**Subject:** FW: Lee Vining Relicensing Cultural and Tribal TWG  
**Date:** Thursday, April 20, 2023 11:12:51 AM  
**Attachments:** [image001.png](#)  
[Lee Vining Cultural-Tribal TWG Apr2023 PP.pdf](#)

---

For consultation log, please include the PDF too

Carissa Shoemaker

*My part-time work schedule is generally as follows: Tuesday morning, Thursday morning, and all day Friday.*

*I can be available outside of these times if given advanced notice.*

**ERM**

**M** 907 575 0294

---

**From:** Audry Williams <Audry.Williams@sce.com>

**Sent:** Wednesday, April 19, 2023 11:25 AM

**To:** ssmiwuknation@gmail.com; sandra47roy@gmail.com; kathybancroft@gmail.com; chair@monolaketribe.us; dtonenna@monolaketribe.us; s.saulque@bentontribe.org; claymiwumati@gmail.com; secretary@southernsierramiwuknation.org; l.stewart@bigpinepaiute.org; d.gutierrez@bigpinepaiute.org; c.levine@bigpinepaiute.org; s.manning@bigpinepaiute.org; meryl.picard@bishoppaiute.org; darren.delgado@bishoppaiute.org; chair@bridgeportindiancolony.com; culture@bridgeportindiancolony.com; carl@fortindependence.com; falconkeeper22@gmail.com; chair@lppsr.org; patsiata@yahoo.com; jsheltraw@monolaketribe.us; char54lange@gmail.com; paiute11@aol.com; dtonenna@gmail.com; Rwgode911@hotmail.com; fbeihn@nfr-nsn.gov; cmcdonald@northforkrancheria-nsn.gov; efink@nfr-nsn.gov; jtthompson@timbisha.com; one\_mug@yahoo.com; administrator@timbisha.com; andrea@mewuk.com; jon@mewuk.com; rfuller@mewuk.com; shanesaulque@hotmail.com; t.braithwaite@bentonpaiuterreservation.org; chairman@wrpt.org; omcloud@wrpt.org; lucy\_basket4@yahoo.com; nayanake@comcast.net; nativearchdoc@yahoo.com; serrell.smokey@washoetribe.us; THPO@WashoeTribe.us; kutzanuumu@yahoo.com; Blythe Haverstock, Ashley - FS <ashley.blythehaverstock@usda.gov>; Beidl, Jacqueline A -FS <jacqueline.beidl@usda.gov>; Jay King <jay@farwestern.com>; Shannon Luoma <Shannon.Luoma@Kleinschmidtgroup.com>; Matthew Woodhall <Matthew.Woodhall@sce.com>; Lynn Johnson <lynn@teamenvironmental.com>; Barb Siskin <barb@farwestern.com>; Carissa Shoemaker <Carissa.Shoemaker@erm.com>

**Cc:** Fred Beihn <fbeihn@northforkrancheria-nsn.gov>; Kelly Larimer <Kelly.Larimer@KleinschmidtGroup.com>; Lauren Rosenkranz <Lauren.Rosenkranz@KleinschmidtGroup.com>; Naomi Jensen <naomi@teamenvironmental.com>; Mary Farrell <mary@teamenvironmental.com>; admin@bridgeportindiancolony.com <admin@bridgeportindiancolony.com>; Linzey Scott <lscott@wrpt.org>; Martin Ostendorf <Martin.Ostendorf@sce.com>; Waylon Coats <vicechair@southernsierramiwuknation.org>; Barbara Durham <thpo@timbisha.com>

**Subject:** Lee Vining Relicensing Cultural and Tribal TWG

**WARNING:** The sender of this email could not be validated and may not match the person in the "From" field.

**EXTERNAL MESSAGE**

Hi there

Thank you to all those who were able to attend the meeting this morning. For those of you were not able to attend the meeting as well as those that did, I have attached a pdf copy of the presentation from the meeting for your information. We look forward to continuing consultation with you on the project.

Thank you!

**Audry Williams**

Senior Advisor, Archaeology Program

Operational Excellence

T. 626-302-5104 | M. 310-617-2636

2244 Walnut Grove Ave., Rosemead, CA 91770



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# Lee Vining Hydroelectric Project

FERC No. 1388

Cultural and Tribal Resources  
Technical Working Group Meeting  
April 19, 2023

# Welcome and Land Acknowledgment

SCE would like to take a moment and recognize that the Lee Vining Project is located on the Mono Lake Kutzadikaa Tribes' traditional lands, which they have stewarded for generations.

# Safety Moment





# Agenda

- Welcome & Introductions
  - Land Acknowledgement
  - Safety Moment
  - Introductions
  - Meeting goals
- Review Project and Relicensing Process
  - Project overview
  - Review relicensing process
  - Review study implementation schedule
- Discuss 2022 Implementation and 2023 Plans
- Schedule, Next Steps, Action Items
  - Relicensing Project Schedule
  - Other action items
- Final Questions

# Lee Vining Relicensing 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

**Shannon Luoma**  
Project Manager

**Lynn Johnson**  
Tribal Lead

**Finlay Anderson**  
Technical Advisor

**Barb Siskin and Jay King**  
Cultural Leads

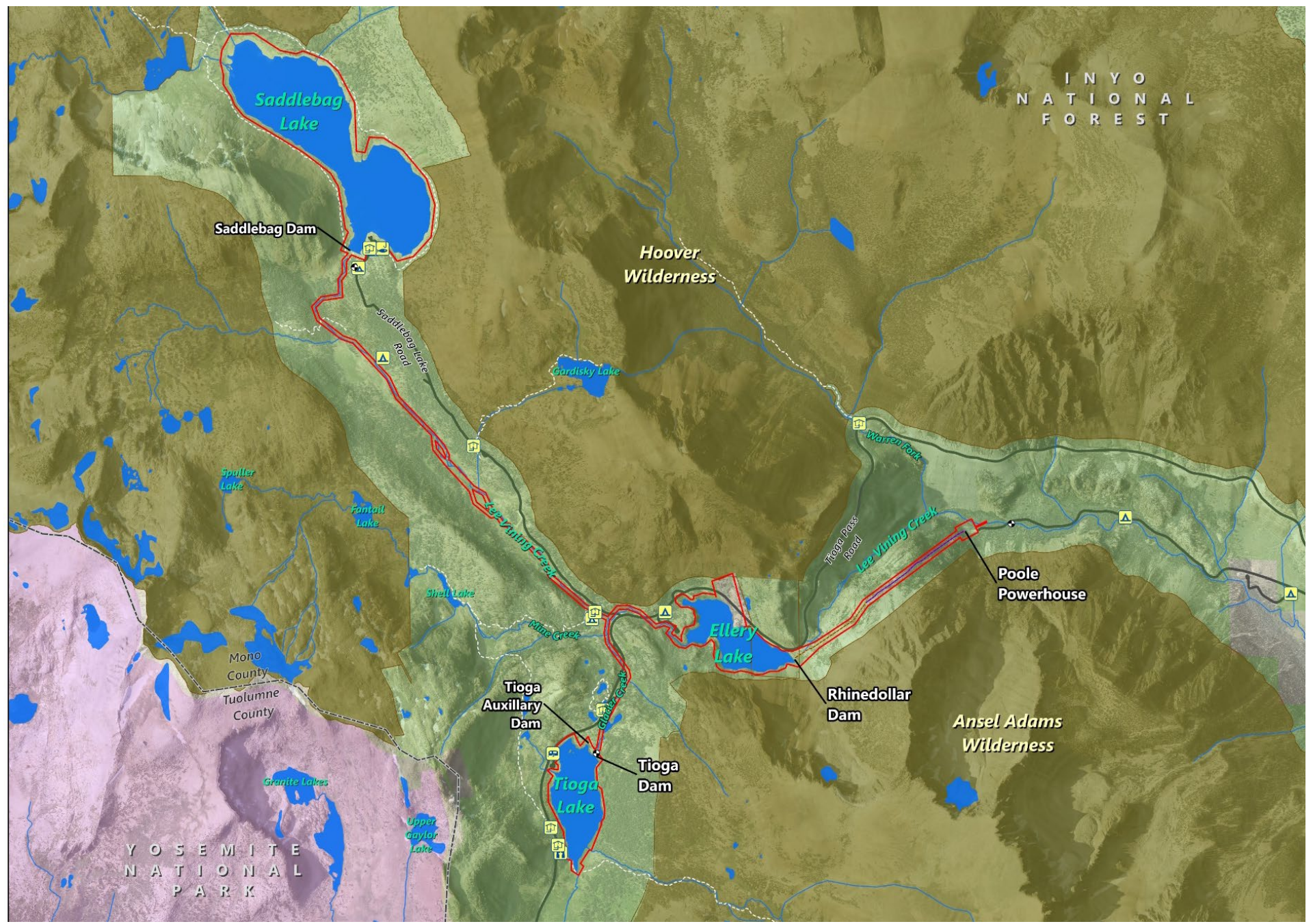
**Kelly Larimer**  
Project Director

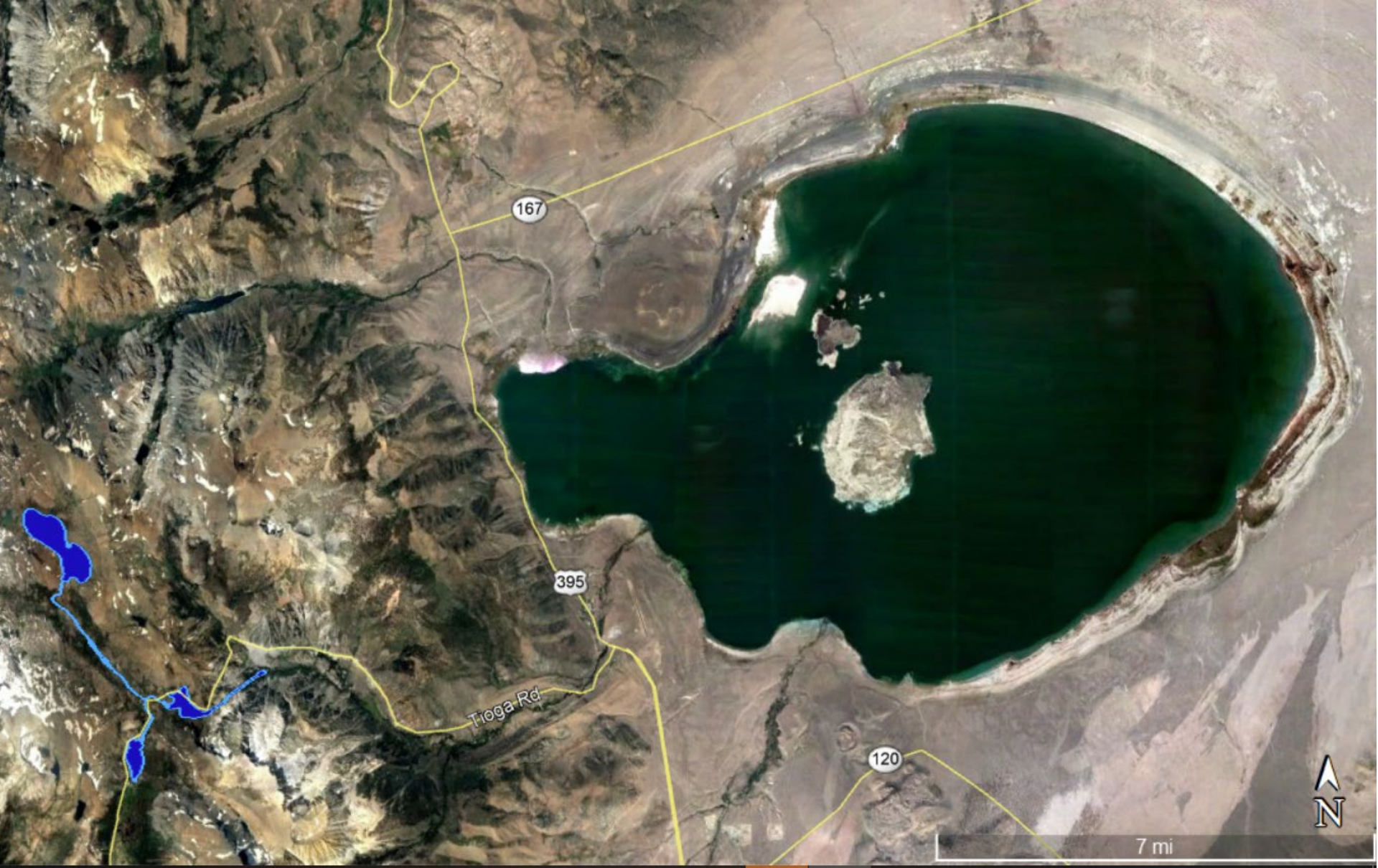
**Carissa Shoemaker**  
TWG Coordinator

# Confidential/Sensitive Information Disclaimer

- We are aware that sensitive issues may be discussed during this meeting, TWGs are open to all people but we believe this to be a safe place to share
- We welcome suggestions on how to include confidential or sensitive information
- If there is information that you'd rather not discuss here, please contact Audry Williams [audry.williams@sce.com](mailto:audry.williams@sce.com)

# LEE VINING HYDROELECTRIC PROJECT REFRESHER





Lee Vining Project in relation to Mono Lake

# 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



Aerial Overview of Lee Vining Project Area



# 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*



# Regulatory & Process - Look Back

- SCE is utilizing the Traditional Licensing Process (TLP)
  - The Federal Energy Regulatory Commission (FERC) does not engage until end of process
  - Less structured “formal” milestone schedule around studies
- Study Plans were developed in collaboration with Technical Work Group (TWG) members:
  - 12+ TWG meetings January-May 2021
- Notice of Intent (NOI) and Preliminary Application Document (PAD) filed August 2021
- Site Visit and Joint Agency Meeting – Fall 2021
- Study Plan revisions – February 2022
- Final Study Plans filed – April 2022
- Some studies began in 2022, continuing into 2023
- Tech Memos distributed January 23, 2023
- Tech Memos filed March 31, 2023 (available on SCE website)

# Regulatory & Process - Look Ahead

- Focused TWG meetings for select resources prior to 2023 field season as needed
- Select draft technical reports for completed studies to be distributed spring 2023 for 60-day review\*
- 2023 field season
- Draft technical reports for remaining studies to be distributed fall 2023 and spring 2024 for 60-day review\*
- Draft License Application due to FERC September 2024
  - Will include final technical reports
- Final License Application due to FERC January 2025
- Lee Vining license expires January 2027

\* *Confidential Cultural and Tribal Reports will only be shared with appropriate individuals*

# Study Implementation Schedule

Study Plan Title	Year(s) of Implementation
Cultural Resources (CUL-1)	2022-2023
Tribal Resources (TRI-1)	2023
Stream and Reservoir Water Quality (WQ-1)	2022-2023
Reservoir Fish Populations (AQ-1)	2022
Stream Fish Populations (AQ-2)	2022
Aquatic Habitat Mapping and Sediment Characterization (AQ-3)	2023
Aquatic Invasive Plants (AQ-4)	2023
Operations Model (AQ-5)	2022-2023
Lower Lee Vining Creek Channel Morphology (AQ-6)	2022-2023
Botanical Resources Survey (TERR-1)	2022-2023
Wildlife Resources Survey (TERR-2)	2022-2023
Recreation Use Assessment (REC-1)	2022-2023
Existing Recreation Facilities Condition Assessment (REC-2)	2022-2023
Project Lands and Roads (LAND-1)	2023
Visual Resource Assessment (LAND-2)	2023

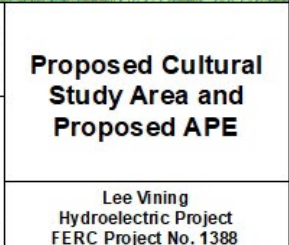
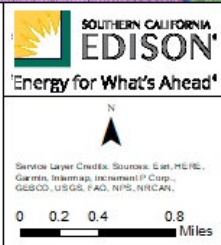
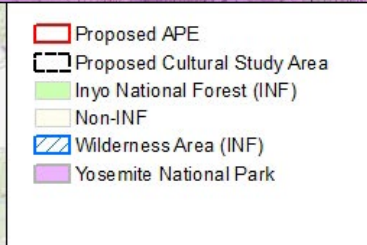
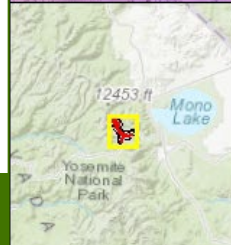
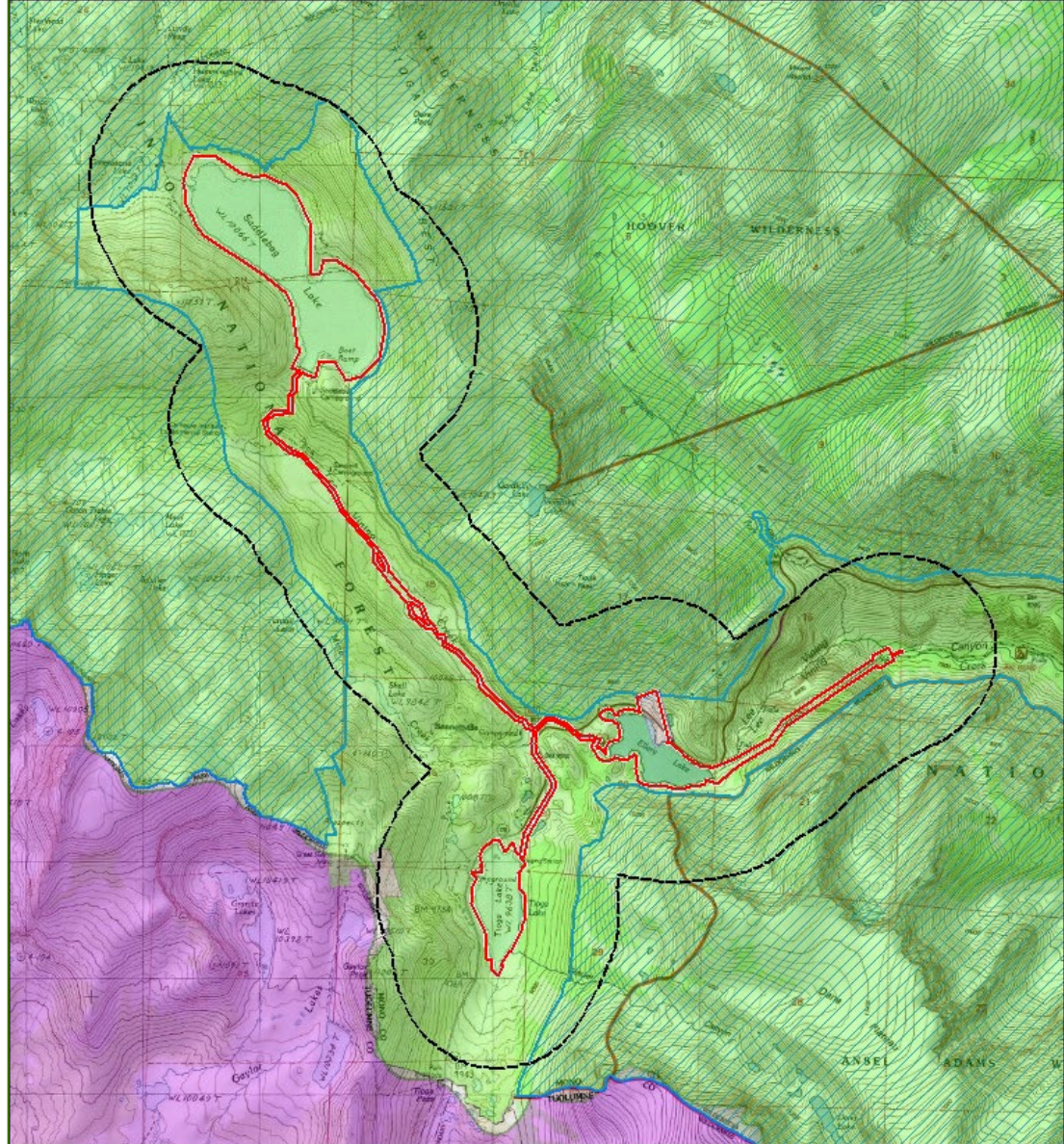
Questions?



# 2022 Implementation

# Cultural Resources (CUL-1)

## Area of Potential Effects (APE) and Study Area Map



# Cultural Resources (CUL-1)

- Goals/objectives
  - Meet FERC and Section 106 compliance requirements by determining if Project-related activities and public access will have an adverse effect on historic properties
  - Identify all archaeological resources, built-environment resources, and Traditional Cultural Resources (TCRs) within the APE; determine which are historic properties; and develop the Historic Properties Management Plan (HPMP) based on those results
  - Ensure that future Project facilities and operations are consistent with the desired conditions described in the Land Management Plan for the Inyo National Forest



# Cultural Resources (CUL-1)

- Preliminary data summary
  - Completed background research in summer 2022
  - Surveyed APE in July and August 2022
  - Submitted draft reports to SCE and USFS in Q1 2023, will distribute to the rest of TWG with the Tribal Report in Q2 2024
  - Archaeology: recorded 20 resources (16 new), mostly historic-period, including 6 with built environment elements
  - Built Environment: recorded 32 resources, including 13 elements of LVHP; Tioga Pass Resort; Saddlebag Lake Resort; Saddlebag Wilderness Cabin; Tioga Road

# Cultural Resources (CUL-1)

- Preliminary data summary: National Register of Historic Places (NRHP) Eligibility
  - All archaeological resources recommended NRHP ineligible except 3 remaining unevaluated: 2 precontact lithic scatters and a submerged road segment
  - All built environment resources recommended NRHP ineligible, including LVHP, except two buildings individually eligible (Poole Powerhouse, Triplex Cottage)
  - Evaluation/treatment options to be developed in HPMP

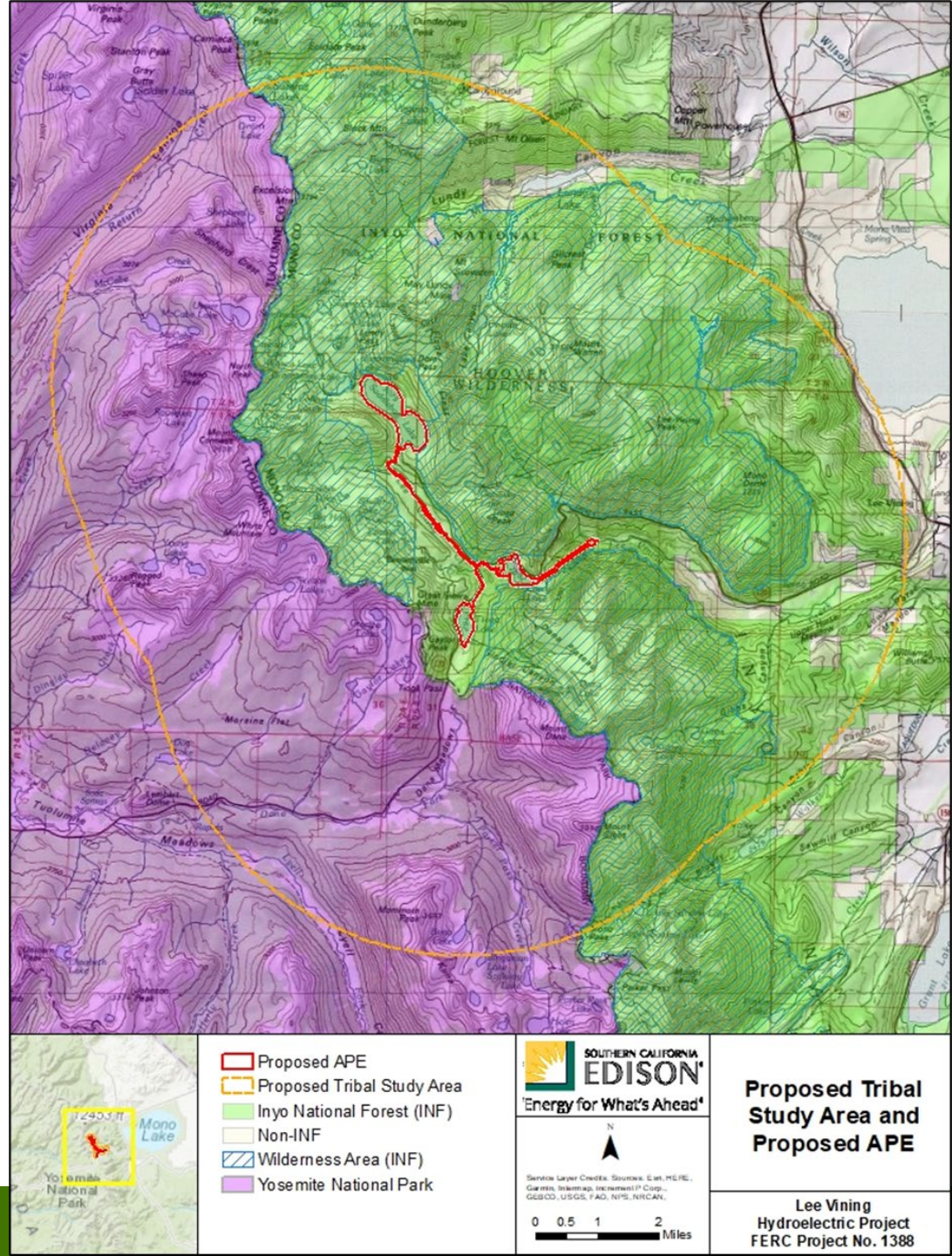
# Cultural Resources (CUL-1)

## Next Steps

Date	Activity
2023–Spring/Fall	Conduct archaeological site evaluations
2023/2024–Winter	Prepare archaeological site evaluation report
2024–Spring	Distribute draft report to stakeholders for review and comment
2024–Summer	Resolve comments and prepare draft final report
2024–Spring/Summer	Prepare draft HPMP
2024–September	Distribute final reports and HPMP in Draft License Application

# Tribal Resources (TRI-1)

## APE and Study Area Map



# Tribal Resources (TRI-1)

- Methods
  - Archival research
  - Assist other resource specialists
  - Meetings with Tribal governments
  - Interviews
  - Documentation and evaluation
  - Reporting and Historic Properties Management Plan
- 2022 Data Summary
  - Background research was conducted in 2022, study will commence in 2023 with interviews

# Tribal Resources (TRI-1)

## Next Steps

Date	Activity
2023–Summer/Fall	Conduct Tribal site visits; identification and evaluation of Tribal resources
2023/2024–Winter	Prepare draft TRI-1 Study Report
2024–Spring	Distribute draft report to stakeholders for review and comment
2024–Spring	Prepare draft Tribal resource HPMP for review and comment
2024–Summer	Resolve comments and prepare final reports
2024–September	Distribute final reports and HPMP in Draft License Application

Questions?



# RELICENSING SCHEDULE OVERVIEW

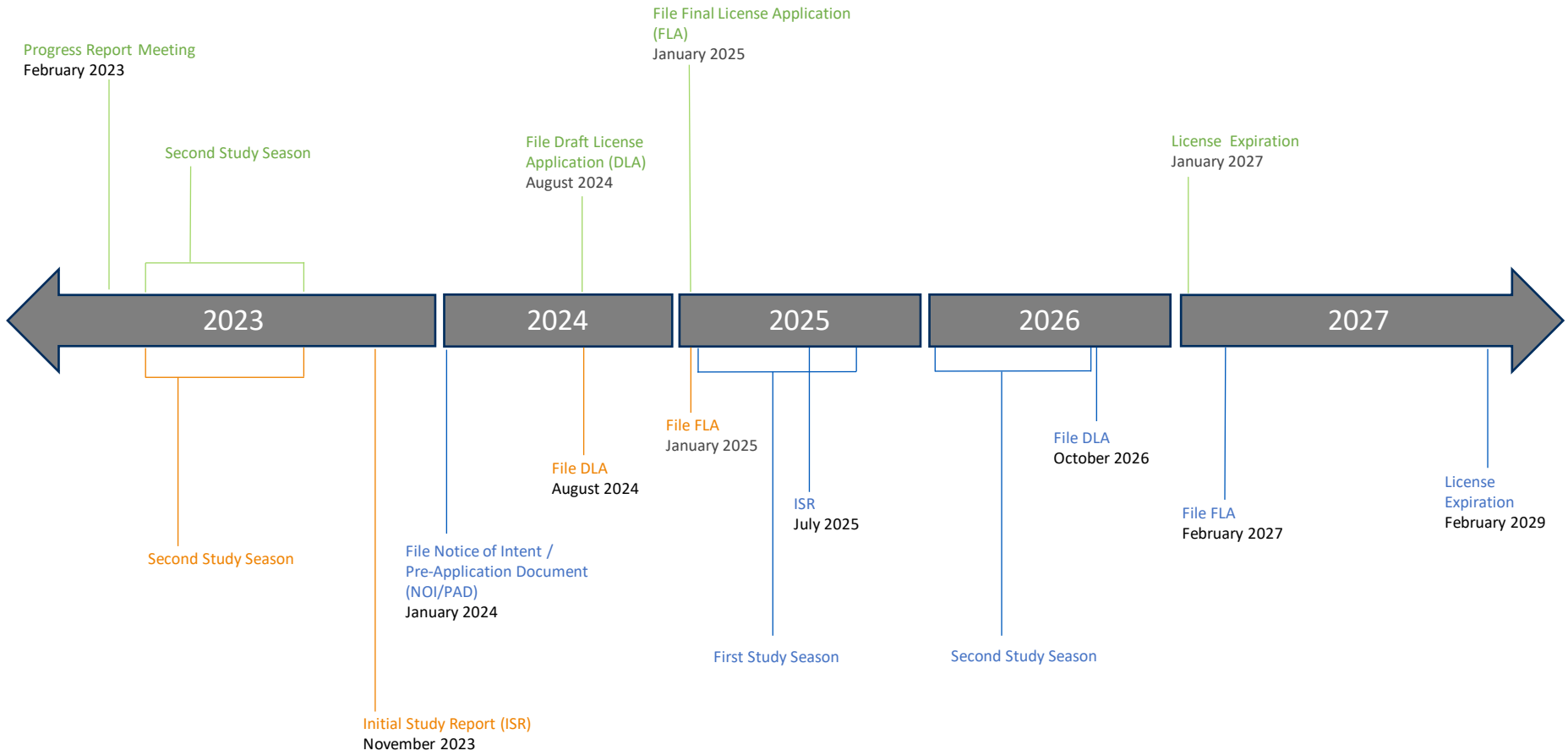


# Relicensing Process Schedule

Date	Activity
Spring – Fall 2023	2023 field studies
Spring 2023	Select Technical Reports <ul style="list-style-type: none"> <li>• Stream and Reservoir Water Quality Study (WQ-1)</li> <li>• Reservoir Fish Population Study (AQ-1)</li> <li>• Stream Fish Populations Study (AQ-2)</li> <li>• General Botanical Resources Survey (TERR-1)</li> </ul>
Fall 2023	<ul style="list-style-type: none"> <li>• Operations and Hydrology Model (AQ-5)</li> </ul>
Spring 2024	Remaining Technical Reports <ul style="list-style-type: none"> <li>• Aquatic Habitat Mapping and Sediment Characterization (AQ-3)</li> <li>• Aquatic Invasive Plants Survey (AQ-4)</li> <li>• Lower Lee Vining Creek Channel Morphology (AQ-6)</li> <li>• General Wildlife Resources Survey (TERR-2)</li> <li>• Project Lands and Roads Assessment (LAND-1)</li> <li>• Visual Resource Assessment (LAND-2)</li> <li>• Recreation Use Assessment (REC-1)</li> <li>• Facilities Condition Assessment (REC-2)</li> <li>• Cultural Resources (CUL-1)</li> <li>• Tribal Resources (TR-1)</li> </ul>
September 2024	SCE Files Draft License Application
January 2025	SCE Files Final License Application

# How to Stay Involved

- Check the Project website for updates/news at [www.sce.com/leevining](http://www.sce.com/leevining)
- You can view other SCE relicensing Projects at [www.sce.com/regulatory/hydro-licensing](http://www.sce.com/regulatory/hydro-licensing)
- 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](http://www.ferc.gov)
- Email Carissa Shoemaker [carissa.shoemaker@erm.com](mailto:carissa.shoemaker@erm.com) or Audry Williams with questions



**Legend**

- Lee Vining Relicensing Milestones (Green)
- Lundy Relicensing Milestones (Blue)
- Rush Creek Relicensing Milestones (Orange)

# Final Questions?



Thank you!



**DRAFT MEETING NOTES\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**RECREATION AND LAND USE TECHNICAL WORKING GROUP MEETING**  
**APRIL 19, 2023, 9:00 AM–10:00 AM**

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

**1.0 OBJECTIVE**

---

- Discuss 2023 Recreation Study Plan Implementation

**2.0 ATTENDEES**

---

Relicensing Team Members

Matt Woodhall, SCE  
Finlay Anderson, Kleinschmidt  
Shannon Luoma, Kleinschmidt  
Kelly Larimer, Kleinschmidt  
Angela Whelpley, Kleinschmidt  
Carissa Shoemaker, ERM

Technical Working Group Members & Interested Parties

Adam Barnett, U.S. Forest Service (USFS)  
Sheila Irons, USFS  
Jameisha Washington, USFS  
Eric Rios-Bretado, USFS  
Adam Cohen, State Water Resources Control Board (SWRCB)  
Beth Lawson, California Department of Fish and Wildlife (CDFW)  
Bryan Muro, SWRCB  
Raymond Andrews, Bishop Paiute Tribe

**3.0 COMPILED ACTION ITEMS**

---

- **Relicensing Team** will send the revised REC-1 User questionnaire to Adam Barnett for review. Complete.
- **Jameisha Washington (USFS)** will confirm that the proposed opening dates for recreation sites will be posted to the webpage when they become available.
- **Beth Lawson (CDFW)** will discuss stocking question with Trisha Moyer and let the relicensing team know the results.

- **Relicensing Team** will reach out to Jim Erdman to inquire about stocking timeframe and likelihood.

#### **4.0 WELCOME AND INTRODUCTIONS**

---

Shannon Luoma, Kleinschmidt, welcomed Technical Working Group (TWG) members to the meeting, and provided an overview of the agenda. Shannon provided a safety moment.

#### **5.0 2023 STUDY IMPLEMENTATION APPROACH**

---

SCE is planning to file the updated study plans with FERC Friday (4/21) to formalize the changes that have been made.

SCE will remain flexible with study season implementation due to the snow conditions and record water year. An example, delayed, schedule was drafted and shared with stakeholders.

SCE is working with a temporary staffing agency in Lee Vining to identify field staff for the REC-1 survey. The condensed schedule would start as soon as the survey sites are open. Angela Whelpley showed a revised schedule with the example start date of July 1. The condensed schedule would still include two major holiday weekends (July 4 and Labor Day). April, May, and June dates would be redistributed throughout the later part of the summer and fall.

There were no stakeholder comments on this example schedule shift.

The reporting schedule would likely remain the same. SCE would meet again with this TWG in early 2024, maybe January to discuss again. Prior to that meeting, a draft report and initial results would be given to TWG for review.

SCE will continue to coordinate with USFS and will monitor road conditions via the NPS and CalTrans websites.

#### **6.0 QUESTIONS FOR USFS AND CDFW**

---

Question (Q) Shannon Luoma (Kleinschmidt): SCE would like to better understand what the USFS' plan is to open up the campgrounds and day use areas this summer. Is there a possibility some may be closed for the season? How long does it take you get to the facilities when roads are opened? We understand that some people are comparing this water year with the 2017 water year.

Response (R) Adam Barnett (USFS): We have two district representatives on the call today, Jameisha and Eric are on.

(R) Jameisha Washington (USFS): It really depends how long it takes to open sites after roads have opened. I estimate 2-3 weeks if we are lucky. We do intend to open all the campgrounds this summer. Hazard tree mitigation will need to happen at each site to make them safe.

(R) Eric Rios-Bretado (USFS): We still have a few feet of snow at Lower Lee Vining Campground and Aspen Campground, Aspen will likely flood, which will delay the opening dates. Big Bend Campground may also flood. Recreators out there right now are mostly skiing. I would guess a June opening for Lower

Lee Vining, Aspen may be longer because of flooding and under bank cutting issues. There are also a lot of downed trees at Aspen.

(Q) Matt Woodhall (SCE): Can we access current conditions online anywhere or should we just keep in contact with you (Jameisha and Eric) to get updates?

(R) Jameisha Washington (USFS): Lisa Cox, our public affairs sends out updates of campgrounds and facilities. You can also visit our website on Rec page, there is a status list of developed sites. You can reach out to Eric and I directly too, we intend to keep that updated. I will confirm that the proposed opening dates will be posted to the website: <https://www.fs.usda.gov/recmain/invo/recreation>

(Q) Shannon Luoma (Kleinschmidt): Does CDFW plan on stocking any fish this year in the project area?

(R) Beth Lawson (CDFW): I'm not sure yet, I will need to talk to fisheries staff in the region. It's a hatchery-by-hatchery question this year, based on availability. There are always disease concerns with hatchery-raised fish.

(R) Matt Woodhall (SCE): We can reach out to CDFW's Jim Erdman to point us in the right direction. We want to be in the field for creel surveys right when stocking occurs, if it does.

(R) Beth Lawson (CDFW): I have a meeting with Trisha Moyer, we will discuss it at that meeting and will let you know what comes of it.

## **7.0 Q&A**

---

(Q) Adam Barnett (USFS): Is there a revised version of the REC-1 User questionnaire since our last meeting?

(R) Matt Woodhall (SCE): Yes, we can get you a copy of the revised form to review.

(Q) Adam Cohen (SWRCB): Is there a contingency plan if any facilities are damaged and end up closed or are inaccessible for the whole year?

(R) Shannon Luoma (Kleinschmidt): On the relicensing side we have discussed this, the basic premise of the user survey is to capture a representative sample of the 2023 recreation season, so if there are closed facilities that is part of the year and it would still be representative. Why we added the additional check in early 2024 to review the data prior to finalizing everything. We'll capture the data as the sites open.

(Q) Beth Lawson (CDFW): CDFW is still stocking FERC projects but we have to go through outside hatcheries. Did they not stock at all at the Lee Vining project last year?

(R) Matt Woodhall (SCE): Last year in the Eastern Sierras, CDFW did not put any fish in. Out of the last three years the lakes have only been stocked once. Within the region there is a supplemental effort, Mono County has set out buckets to collect money to help fund. Aquaculturalists in Oregon and Idaho are bringing in fish too. Matt provided a summary of the Lee Vining project license's stocking requirements.

(R) Beth Lawson (CDFW): I would assume something similar will go into a new license. We should expect that going forward.



(R) Matt Woodhall (SCE): Stocking as a license requirement would need to be tied to a project-related impact.

Shannon Luoma summarized action items.

No further stakeholder comments or questions.

The Relicensing Team adjourned the meeting.

# Lee Vining Hydroelectric Project

FERC No. 1388

Welcome!

Operations Model  
TWG Meeting  
May 18, 2023

# Welcome and Land Acknowledgment

SCE would like to take a moment and recognize that the Lee Vining Project is located on the Mono Lake Kutzadikaa Tribes' traditional lands, which they have stewarded for generations.

# Safety Moment



# Welcome and Introductions: Lee Vining Relicensing Team

## SCE Team

**Matthew Woodhall**  
Project Manager

**Martin Ostendorf**  
Senior Manager

**Audry Williams**  
Cultural Resources  
Manager

**Seth Carr**  
Operations Manager

**Lyle Laven**  
Production Manager

## Consultant Team

**Shannon Luoma**  
Project Manager

**Finlay Anderson**  
Technical Advisor

**Kelly Larimer**  
Project Director

**Carissa Shoemaker**  
TWG Coordinator

**Heather Neff**  
Aquatics Lead

**Bret Hoffman**  
Operations Model  
Lead

**Isha Deo**  
Resource  
Optimization Analysis  
Lead

# Meeting Agenda

- Safety moment, welcome and introductions
- Meeting objectives
- Study Plan Goals and Objectives
- Schematic of Mass Balance Model
- Constraints / Rules
- Intra-day model / Hydro Optimization
- Schedule, next steps, action items
- Final questions

# Meeting Objectives

- Information sharing of operations model
  - Status and direction
- Discuss how model will be used

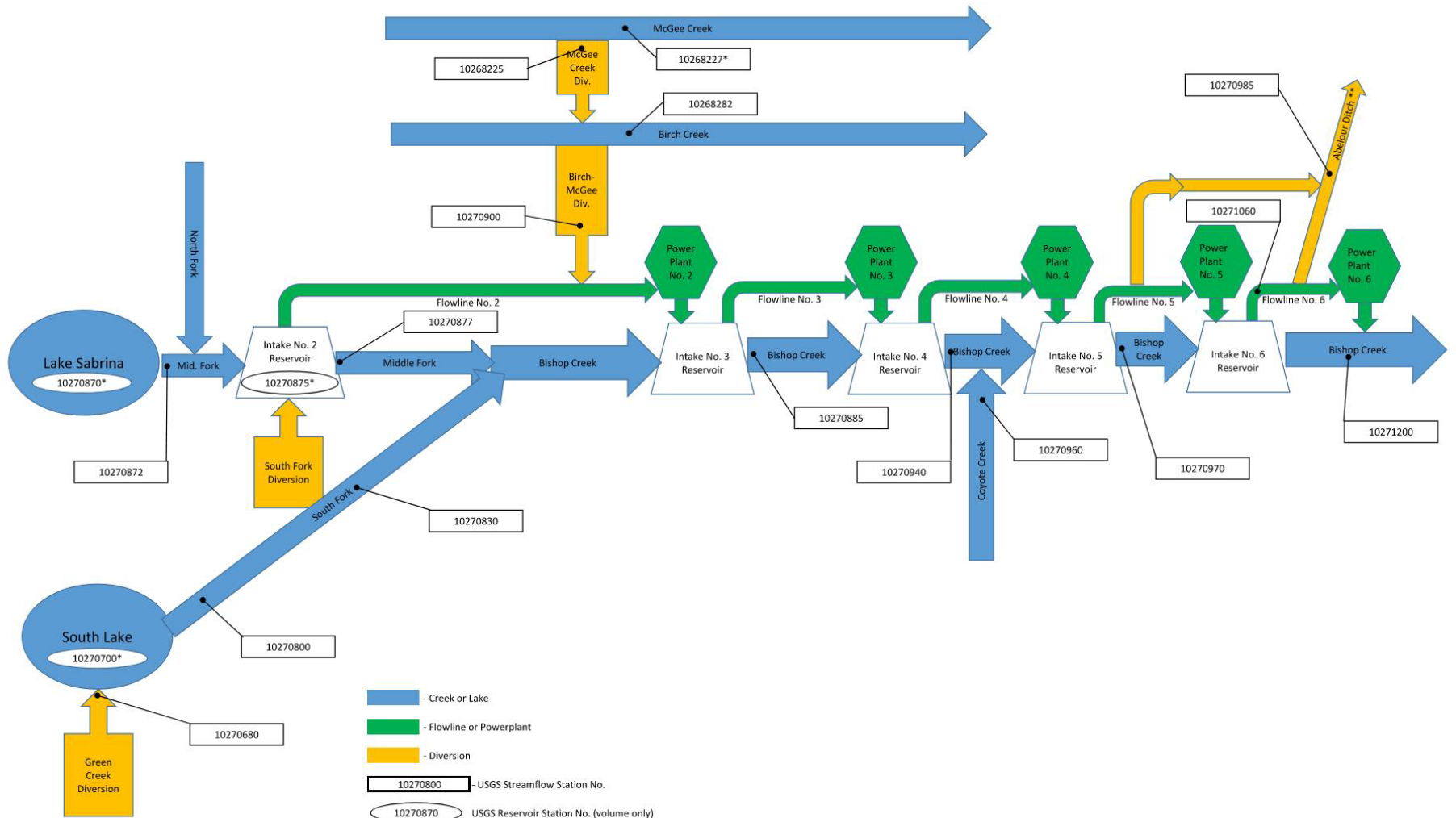
# Operations Model



# Operations Model (AQ-5)

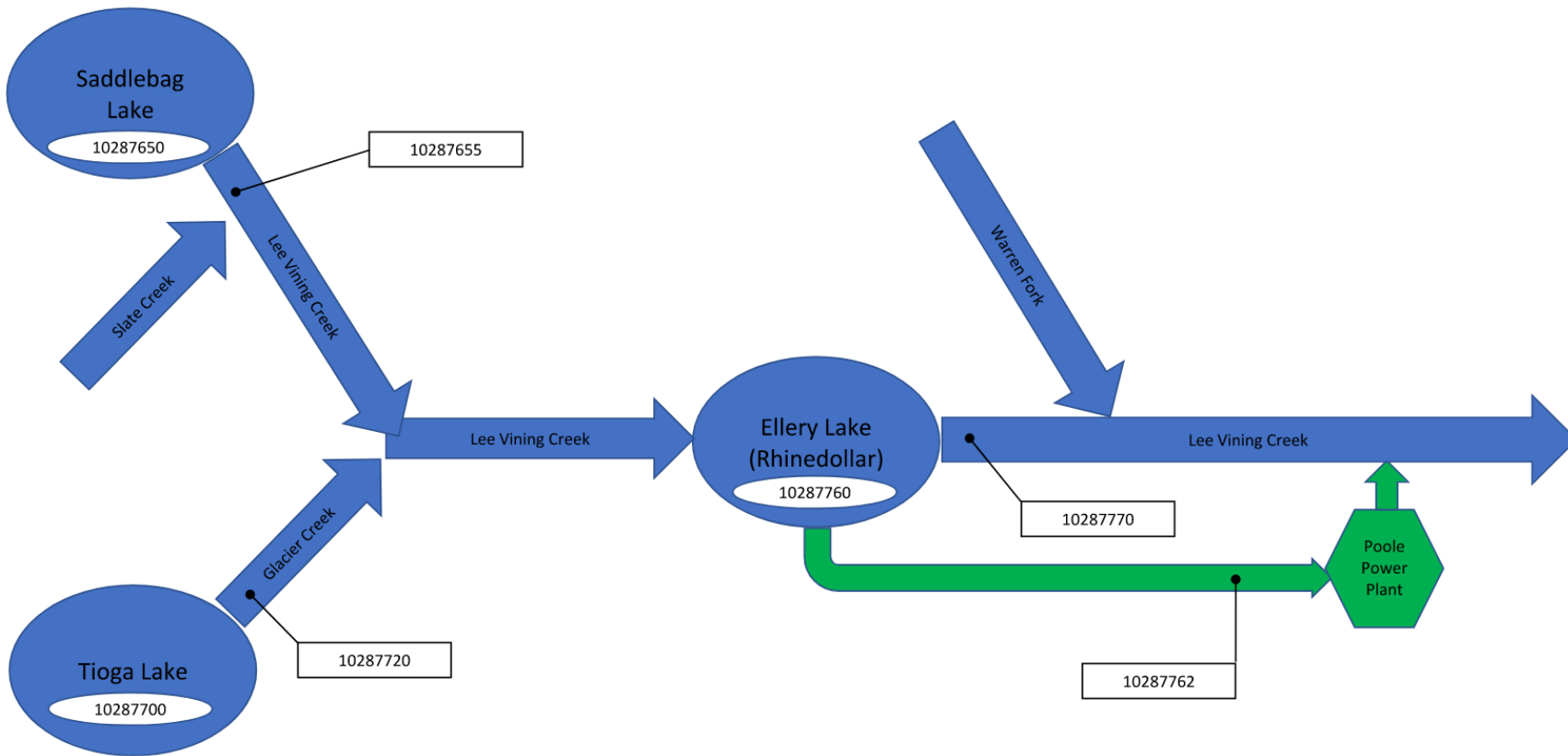
## Goals/Objectives for Operations Model Study Plan

- Develop a robust Operations Model (Model) to assist SCE and stakeholders in understanding how Project operations interact with Lee Vining hydrology
- Accurately model the systems inflows, outflows, and operational constraints
- Align model with needs of other relicensing studies and information needs
- Develop procedures to configure model for alternative operational scenarios and document results
- Determine effective operating limits the Poole Powerhouse to accurately represent installed and dependable capacity for licensing documents



█ - Creek or Lake  
█ - Flowline or Powerplant  
█ - Diversion  
10270800 - USGS Streamflow Station No.  
10270870 USGS Reservoir Station No. (volume only)  
 \* Monthly statistics not available  
 \*\* Primary diversion is from No. 6 penstock. If Plant No. 6 not operational, diversion is from No. 5 penstock.

**SCHEMATIC OF BISHOP CREEK FLOW REGIME**



- Creek or Lake
- Flowline or Powerplant
- 10280000 - USGS Streamflow Station No.
- 10280000 USGS Reservoir Station No. (volume only)

**SCHEMATIC OF LEE VINING FLOW REGIME**

# Methods

## Represent Characteristics, Variables of System

- Physical Constraints
  - Stage/Storage Curves, Spillways, Penstock/Poole Powerhouse
  - Extent of Models
- Hydrologic Input
  - Data Sources: Streamflow Gages, Snow Courses, Other?
  - Limitations: Temporal Resolution, Period of Record
- Release Influences/Impacts
  - Separated Into Intraday for Pulse Operations and Daily to Examine Resource Allocation on Seasonal/Annual Basis

# Methods (continued)

## Represent System Operational Rules/Targets

- SCE Obligations
  - Resource Allocation (Daily Model)
  - Sales Agreement (Annual Model)
  - Grid System Response & Stability (Intraday Model)
- FERC License (Daily Model)
  - Minimum Flows, Reservoir Targets
  - Seasonality, Year Type, Prioritization
- Alternative Scenarios

# Baseline Conditions and Constraints

- SCE Operational Requirements
  - Draw Reservoirs Within % of Empty (Yearly)
- FERC Current License Requirements
  - 30 cfs Below Poole PH
  - 2 cfs (Seasonal) Below Tioga
  - 14/9/6 cfs (Year Dependent) Below Saddlebag
  - Limit Daily Fluctuations Below Saddlebag (Seasonal)
  - Tioga Lake Within 2/6 Feet Full (Year Dependent, Seasonal)
  - Ellery Lake Within 2 Feet Full (Seasonal)

# Resource Optimization Analysis

# Methods

- Develop Python code to identify and analyze hydro optimization events in time series
- Available Data:
  - 15-min Poole Powerhouse + Spillway Outflow
  - LADWP gage data
  - SCADA demand data
- Moving average algorithm used to quantify peaks
  - Sharp variations from recent average flow values strongly correspond with known hydro optimization peaks
- Use statistics to characterize any differences in hydro optimization pre- and post-2015



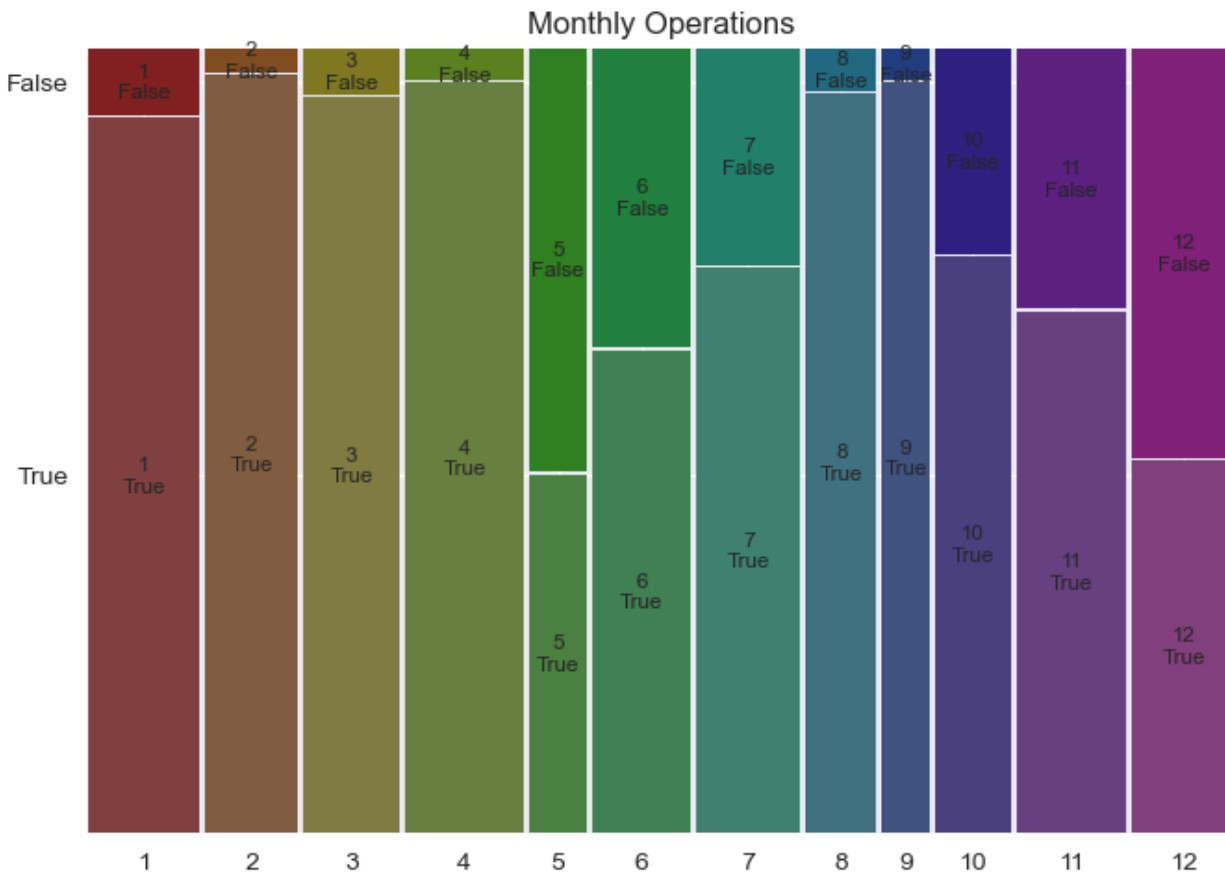
# Calibration Results

- Explicitly calibrated to capture the most flow peaks corresponding with demand peaks
  - Moving average length
  - Variation from moving average
  - Size of peak event
  - Length of peak event
- Final parameters indicate that approximately 77.5% of flow peaks correspond directly with a demand peak
  - As the exact peak timing captured varies based on duration/magnitude of peak, this value seems reasonable
  - Captures 807 hydropeaking events between Oct 2009 – Dec 2021

# Likelihood of Peaking Each Month Pre- and Post-Operations Shift

## Chi-Squared Test

- Indicates that there is a difference in frequency of peaks pre- and post-2016
- Operation change in 2016 did make a statistically significant difference on the frequency of peaks
- p-value << 0.05



# T-Test on Peak Magnitude

- Indicates there is a difference in peak magnitude pre- and post-2016
  - Operation change in 2016 did make a statistically significant difference on the magnitude of peaks
- p-value  $\ll 0.05$

# Questions?



# How to Stay Involved

- Check the Project website for updates/news at [www.sce.com/leevining](http://www.sce.com/leevining)
- You can view other SCE relicensing Projects at [www.sce.com/regulatory/hydro-licensing](http://www.sce.com/regulatory/hydro-licensing)
- Sign up to receive Project-related emails through the Contact Registration Form/Project Questionnaire on the Project website
- Sign up for FERC's for e-subscription (docket number "P-1388") at [www.ferc.gov](http://www.ferc.gov)
- Email Carissa Shoemaker with questions [carissa.shoemaker@erm.com](mailto:carissa.shoemaker@erm.com)

# Final Questions?



Thank you!

**From:** [Carissa Shoemaker](#)  
**To:** [Lauren Rosenkranz](#); [Arianna Bresnan](#)  
**Subject:** FW: Mono Lake Kutzadika Tribe letter  
**Date:** Wednesday, June 28, 2023 8:01:57 AM  
**Attachments:** [image001.png](#)  
[SharpMFP-D257710\\_20230627\\_071941.pdf](#)

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Attachment for the consultation log

Carissa Shoemaker

*I am on a flexible part-time work schedule over the summer months.*

**ERM**

**M** 907 575 0294

---

**From:** Finlay Anderson <[finlay.anderson@kleinschmidtgroup.com](mailto:finlay.anderson@kleinschmidtgroup.com)>  
**Sent:** Tuesday, June 27, 2023 9:42 AM  
**To:** Shannon Luoma <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>  
**Cc:** Carissa Shoemaker <[Carissa.Shoemaker@erm.com](mailto:Carissa.Shoemaker@erm.com)>  
**Subject:** FW: Mono Lake Kutzadika Tribe letter

**EXTERNAL MESSAGE**

---

**From:** Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>  
**Sent:** Tuesday, June 27, 2023 10:16 AM  
**To:** Seth Carr <[seth.carr@sce.com](mailto:seth.carr@sce.com)>; Audry Williams <[audry.williams@sce.com](mailto:audry.williams@sce.com)>  
**Cc:** Finlay Anderson <[finlay.anderson@kleinschmidtgroup.com](mailto:finlay.anderson@kleinschmidtgroup.com)>; Shannon Luoma <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>  
**Subject:** FW: Mono Lake Kutzadika Tribe letter

Thanks Seth, I have included our relicensing team and Audry on this reply. Appreciate you passing the letter along.

Matthew C. Woodhall  
Southern California Edison  
Generation-Regulatory Support Services  
909-362-1764 - Cell  
626-302-9596 - Office

---



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**From:** Seth Carr <[Seth.Carr@sce.com](mailto:Seth.Carr@sce.com)>  
**Sent:** Tuesday, June 27, 2023 7:20 AM



**To:** Matthew Woodhall <[Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)>

**Subject:** Mono Lake Kutzadika Tribe letter

Matt, we got this in the mail while I was on vacation from the Mono Lake tribe and I thought it might have to do with our re-licensing efforts .

Seth Carr

Senior Supervisor, Generation

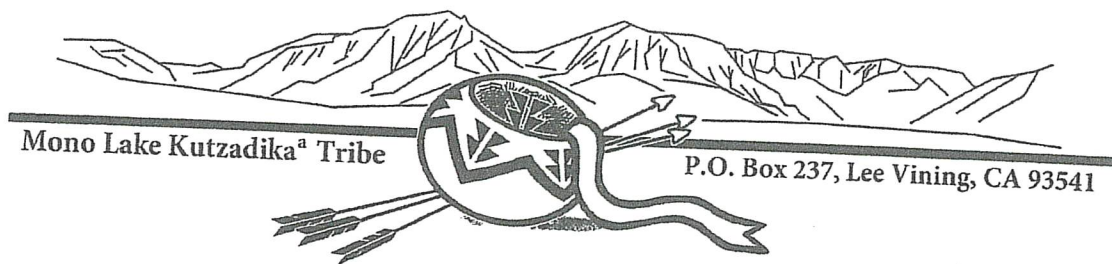
Eastern Operations, Bishop/Mono Basin

T. 760-873-0722 | M. 760-937-1451

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June 19, 2023

Southern California Edison  
4000 E. Bishop Creek  
Bishop, CA 93514

To Whom It May Concern:

The Mono Lake Kutzadika<sup>a</sup> Tribe is requesting Tribal Consultation for the Lee Vining Hydroelectric Project.

Thank you for your cooperation in this matter.

Sincerely,

Charlotte Lange, Chairperson  
760-709-1273  
[chair@monolaketribe.us](mailto:chair@monolaketribe.us)

CC Kenneth Holbrook

**From:** [Arianna Bresnan](#)  
**To:** [Olivia Smith](#)  
**Subject:** FW: Lee Vining Aquatics Tech Reports for review  
**Date:** Wednesday, January 31, 2024 1:39:49 PM

---

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**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Sent:** Tuesday, September 19, 2023 2:21 PM  
**To:** Arianna Bresnan <Arianna.Bresnan@KleinschmidtGroup.com>  
**Subject:** FW: Lee Vining Aquatics Tech Reports for review

For LV consultation log

Carissa Shoemaker  
Licensing Coordinator  
[www.kleinschmidtgroup.com](http://www.kleinschmidtgroup.com)  
907-575-0294

---

**From:** Meese, Graham@Wildlife <[Graham.Meese@Wildlife.ca.gov](mailto:Graham.Meese@Wildlife.ca.gov)>  
**Sent:** Tuesday, September 19, 2023 2:14 PM  
**To:** Carissa Shoemaker <[Carissa.Shoemaker@KleinschmidtGroup.com](mailto:Carissa.Shoemaker@KleinschmidtGroup.com)>  
**Cc:** Moyer, Patricia (Trisha)@Wildlife <[Patricia.Moyer@Wildlife.ca.gov](mailto:Patricia.Moyer@Wildlife.ca.gov)>  
**Subject:** RE: Lee Vining Aquatics Tech Reports for review

Great, thank you for sharing. Please include me in any future correspondence.

Best,

Graham

---

**From:** Carissa Shoemaker <[Carissa.Shoemaker@KleinschmidtGroup.com](mailto:Carissa.Shoemaker@KleinschmidtGroup.com)>  
**Sent:** Tuesday, September 19, 2023 1:59 PM  
**To:** Meese, Graham@Wildlife <[Graham.Meese@Wildlife.ca.gov](mailto:Graham.Meese@Wildlife.ca.gov)>  
**Subject:** FW: Lee Vining Aquatics Tech Reports for review

You don't often get email from [carissa.shoemaker@kleinschmidtgroup.com](mailto:carissa.shoemaker@kleinschmidtgroup.com). [Learn why this is important](#)

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi Graham,  
I'm forwarding this recent communication regarding Lee Vining aquatics.

Thanks

Carissa Shoemaker  
Licensing Coordinator  
[www.kleinschmidtgroup.com](http://www.kleinschmidtgroup.com)  
907-575-0294

---

**From:** Carissa Shoemaker  
**Sent:** Wednesday, September 13, 2023 4:39 PM  
**Cc:** 'heather@stillwatersci.com' <[heather@stillwatersci.com](mailto:heather@stillwatersci.com)>; 'Kelly Larimer' <[Kelly.Larimer@KleinschmidtGroup.com](mailto:Kelly.Larimer@KleinschmidtGroup.com)>; Finlay Anderson <[finlay.anderson@kleinschmidtgroup.com](mailto:finlay.anderson@kleinschmidtgroup.com)>; 'Shannon Luoma' <[Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)>; Lauren Rosenkranz <[Lauren.Rosenkranz@KleinschmidtGroup.com](mailto:Lauren.Rosenkranz@KleinschmidtGroup.com)>; 'matthew.woodhall@sce.com' <[matthew.woodhall@sce.com](mailto:matthew.woodhall@sce.com)>; 'martin.ostendorf@sce.com' <[martin.ostendorf@sce.com](mailto:martin.ostendorf@sce.com)>; 'audry.williams@sce.com' <[audry.williams@sce.com](mailto:audry.williams@sce.com)>; Carissa Shoemaker <[Carissa.Shoemaker@KleinschmidtGroup.com](mailto:Carissa.Shoemaker@KleinschmidtGroup.com)>  
**Subject:** Lee Vining Aquatics Tech Reports for review

Hello Lee Vining Fish and Aquatics TWG Members,

The Lee Vining relicensing team has prepared three Draft Technical Reports of 2022 survey findings. The draft reports include Reservoir Fish Population Study (AQ-1), Stream Fish Populations Study (AQ-2), and Year 1 Water Quality Study (WQ-1).

We are submitting these reports to you for a 60-day comment period. Please let us know if you have any comments or questions on the drafts by Monday, 13 November. We will incorporate your comments, as appropriate, into the final versions and file the Final Technical Reports with FERC along with the Draft License Application in September 2024.

Other Lee Vining studies are ongoing and their reports will be coming to you for review as they are completed. Let me know if you have questions on the schedule or status of other studies.

You can access "LV\_WQ-1\_Tech\_Report.pdf" at: <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:372f3cdf-8a1e-458d-981b-3c75579294d8>

You can access "LV\_AQ-1\_Tech\_Report.pdf" at: <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:1f4f4ea9-dc64-4ac7-816d-df9f4bb4906e>

You can access "LV\_AQ-2\_Tech\_Report.pdf" at: <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:2732996e-ae35-4fe3-91ee-338d68963316>

Please let me know if you have any questions.  
Thank you

Carissa Shoemaker  
Licensing Coordinator  
  
C: 907-575-0294

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**From:** [Carissa Shoemaker](#)  
**To:** [Olivia Smith](#)  
**Subject:** FW: Lee Vining Rec and Land Use TWG Materials 2/28 meeting  
**Date:** Wednesday, February 28, 2024 8:02:44 PM  
**Attachments:** [2024 REC Survey Package for TWG.pdf](#)  
[REC TWG Agenda 02282024.pdf](#)

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For LV consultation log

Carissa Shoemaker  
Licensing Coordinator  
[www.kleinschmidtgroup.com](http://www.kleinschmidtgroup.com)  
907-575-0294

---

**From:** Carissa Shoemaker  
**Sent:** Thursday, February 22, 2024 5:30 PM  
**To:** erik@accessfund.org; adam.barnett@usda.gov; stephen\_bowes@nps.gov; kayla@friendsoftheinyo.org; Nick.Buckmaster@wildlife.ca.gov; sb@snowhydrology.com; adam.cohen@waterboards.ca.gov; ryan.cooper@wildlife.ca.gov; Alisa.Ellsworth@wildlife.ca.gov; katie@accessfund.org; andrea@accessfund.org; stephanie.heller@usda.gov; Alyssa.Hockaday@Wildlife.ca.gov; sheila.irons@usda.gov; lilian\_jonas@contractor.nps.gov; beth.lawson@wildlife.ca.gov; Bryant.Luu@wildlife.ca.gov; graham.meese@wildlife.ca.gov; bartshe@monolake.org; bryan.muro@waterboards.ca.gov; eric.rios-bretado@usda.gov; monique.sanchez@usda.gov; Jameisha.Washington@usda.gov; michael.wiese@usda.gov; cmcdonald@nfr-nsn.gov; Rwgode911@hotmail.com; kutzanuumu@yahoo.com  
**Cc:** Shannon Luoma <Shannon.Luoma@KleinschmidtGroup.com>; Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Kelly Larimer <Kelly.Larimer@KleinschmidtGroup.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>; Hannah Gorin <Hannah.Gorin@KleinschmidtGroup.com>; Ethan Muhlestein <Ethan.Muhlestein@KleinschmidtGroup.com>; Matthew Woodhall <Matthew.Woodhall@sce.com>; Martin Ostendorf <martin.ostendorf@sce.com>  
**Subject:** Lee Vining Rec and Land Use TWG Materials 2/28 meeting

Hello Lee Vining Recreation and Land Use TWG!

In preparation for next week's meeting, please find attached our package of meeting materials outlining our plan to implement the Recreation Use and Needs Study this year. This material should all look familiar as very minor modifications have been made since our discussion in 2023 when we were still hoping we could implement the surveys last year. To aid in your review and discussion for next week, we have the below notes about how we developed the survey schedules:

#### Creel Survey Date Selection

- There are a total of 128 days included in the study season
- Per a CDFW request last year, 30% of those days will be surveyed between Fishmas and Labor Day 2024 (April 27, 2024 through September 2, 2024)
  - (30% of 128 = 38.4 days rounded up to 40 for even distribution of days)

th

- 4 holidays included: Memorial Day, Juneteenth National Independence Day, 4<sup>th</sup> of July, Labor Day
- Remaining 36 days divided equally between weekdays (18) and weekends (18)
- Per CDFW request last year “a minimum of 10 days per month should be sampled”, dates were equally distributed throughout May (including dates in April to account for Fishmas), June, July, and August (including dates in September through Labor Day) to equal 10 days per month

#### Visitor Intercept Survey and Spot Count Date Selection

- Per the study plan, we have planned for 11 survey days between Memorial Day and October 31, 2024
  - (2 days per month, 1 weekday and 1 weekend day; 1 holiday weekend day selected from 4 holidays during study season)
- The randomly selected holiday was Memorial Day weekend 2024

Please let me know if you have any questions.

Thank you and see you next week!

Carissa Shoemaker  
Licensing Coordinator

***Kleinschmidt***

C: 907-575-0294

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# Lee Vining Hydroelectric Project Relicensing

## Recreation and Land Use TWG Meeting

February 28, 2024, 1:30-2:30pm PDT via Microsoft Teams

### Objectives

- Discuss property ownership with USFS
- Look at ownership transfer documents
- Identify data gaps and action items for Project Boundary
- Review REC-1 work to date
- Present 2024 implementation plans for REC-1

Duration (minutes)	Agenda Topic/Subtopic	Lead
10	<b>Welcome, Introductions, Meeting Objectives</b>	
	<ul style="list-style-type: none"><li>- Safety moment</li><li>- Introductions</li><li>- Meeting objectives</li></ul>	Matthew Woodhall Shannon Luoma
35	<b>REC-1: Use and Needs</b>	
	<ul style="list-style-type: none"><li>- Present RUNS proposed locations<ul style="list-style-type: none"><li>o Address/review comments received on Tech Memo</li><li>o Intercept Surveys/Spot counts</li><li>o Traffic/trail counters and calibrations</li><li>o Winter survey locations</li></ul></li><li>- User Survey Methods<ul style="list-style-type: none"><li>o Schedule, timing</li><li>o Survey instrument</li><li>o Questions</li></ul></li><li>- Creel Survey Methods<ul style="list-style-type: none"><li>o Schedule, timing</li><li>o Survey instrument</li></ul></li><li>- Study Plan data needs/request</li></ul>	Angela Whelpley
5	<b>Schedule and Next Steps</b>	
	<ul style="list-style-type: none"><li>- Action items and homework</li><li>- Next meeting</li></ul>	Shannon Luoma
10	<b>Final Q&amp;A</b>	
	<b>Adjourn</b>	



**Table 1. 2024 Study Sites and Survey Type**

Site ID	Site Name	User Surveys (2024)	Creel Surveys (2024)	Spot Counts (2024)	Counters (2024)
1	Saddlebag Lake Campground	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Saddlebag Lake DUA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Saddlebag Lake Trailhead	<input checked="" type="checkbox"/>	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Sawmill Walk-In Campground	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No
7	Junction Campground	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No
8	Bennettville Trailhead	<input checked="" type="checkbox"/>	No	<input checked="" type="checkbox"/>	No
9	Tioga Lake Overlook Info Site / Glacier Canyon Trailhead	<input checked="" type="checkbox"/> <sup>b</sup>	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	Tioga Lake Campground	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No
14	Ellery Lake Campground	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	Informal Fishing Access Turnout along Saddlebag Lake Rd <sup>a</sup>	No	<input checked="" type="checkbox"/>	No	No
23	Ellery Lake CALDOT Pullout <sup>b</sup>	<input checked="" type="checkbox"/>	No	<input checked="" type="checkbox"/>	No

DUA = Day Use Area; CALDOT = California Department of Transportation

<sup>a</sup> CDFW requested that creel surveys be conducted at this informal site. Flyers will be placed at the site requesting users to fill out a survey online, no in person surveys will be conducted.

<sup>b</sup> Requests from Mono Lake Committee and Access Fund were received to include the formal California Department of Transportation pullout site in the REC-1 study. This site is included in the list of sites to have user surveys and spot counts completed.

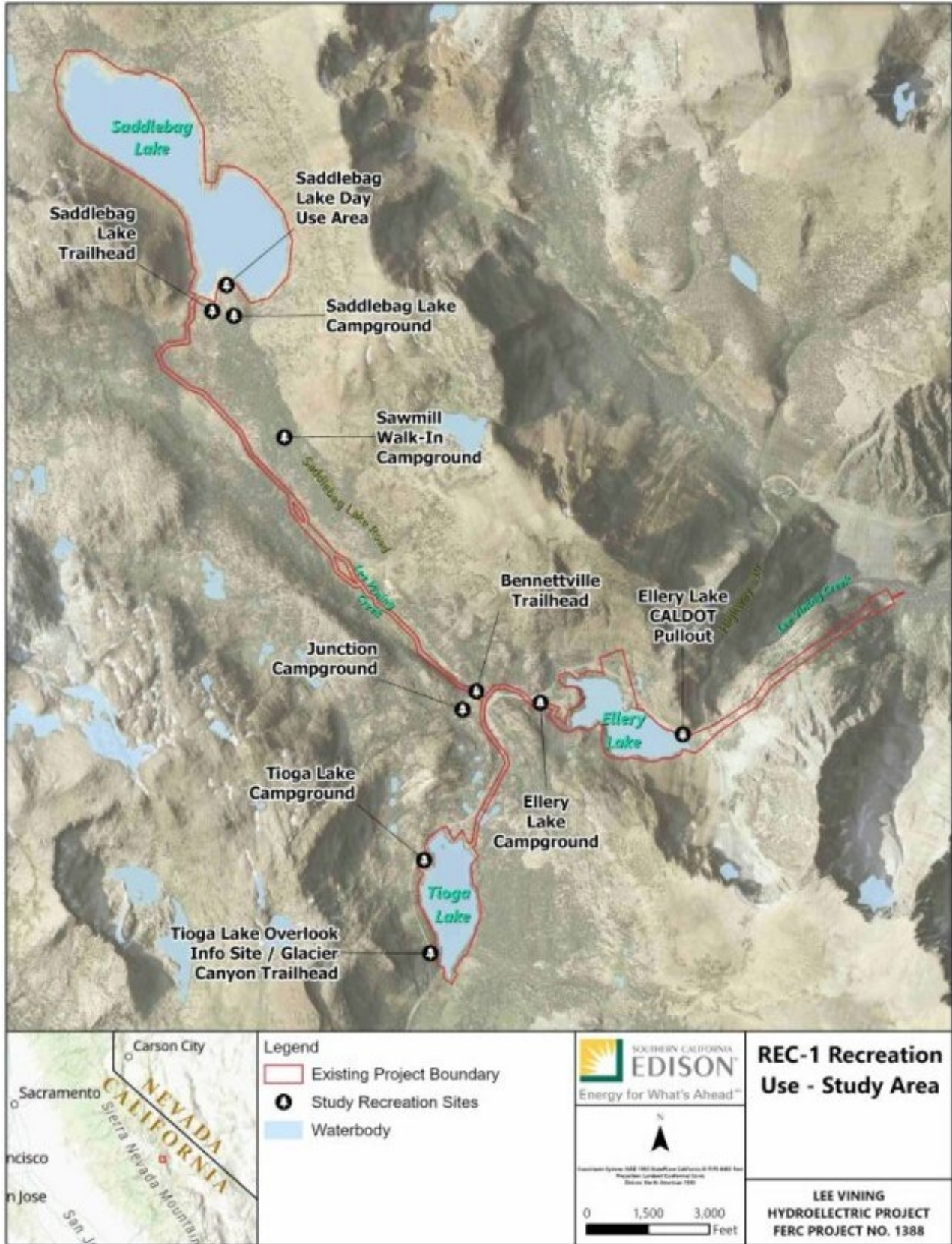


Figure 1. 2024 Survey and Data Collection Sites

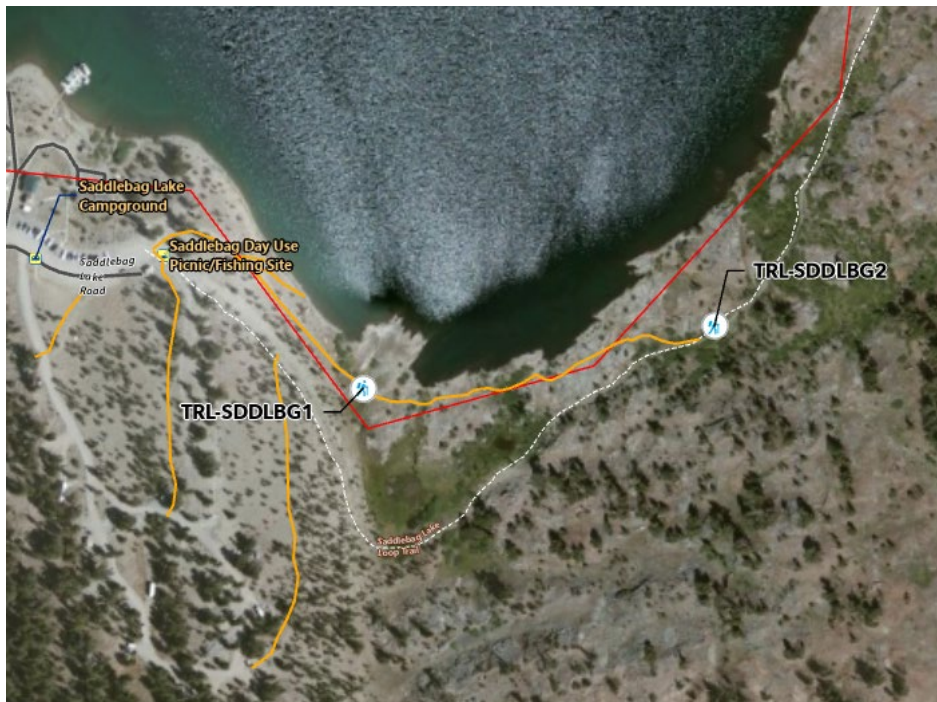
**Traffic and Trail Counter Locations**

**Saddlebag Lake Area**

<b>Site ID</b>	<b>Informal Name</b>	<b>Type</b>	<b>Latitude, Longitude</b>	<b>Mile Marker</b>	<b>General Location</b>
VEH-SDDLBG1	Saddlebag Traffic	Traffic	37.9637, -119.2730	n/a	Saddlebag Lake, road going into recreation general area. Vehicle counter to be placed along Saddlebag Lake Road just before pull-outs for access to dam or rec area amenities.
TRL-SDDLBG1	Saddlebag Trail West	Trail	37.9651, -119.2692	n/a	Saddlebag Lake, trail segment west of potential amphibian habitat. Counter to be placed after trail & side trail converge.
TRL-SDDLBG2	Saddlebag Trail East	Trail	37.9654, -119.2668	n/a	Saddlebag Lake, trail segment east of potential amphibian habitat. Counter to be placed after trails converge



Traffic Counter Location



Trail Counter Locations

Ellery Lake Area Trail Counter Locations

Site ID	Informal Name	Type	Latitude, Longitude	Mile Marker	General Location
TRL-ELLERY1	Ellery-Lee Vining Creek Trail	Trail	37.9375, -119.2457	2.25	Ellery Lake, eastern trail approximately 560' up canyon from Ellery Lake Campground. 2 trails that converge along the river. Trail counter to be placed after the trails meet to capture traffic from both access paths.
TRL-ELLERY2	Ellery-Rhinedollar Trail	Trail	37.9346, -119.2315	3.2	Ellery Lake, Rhinedollar dam climbing access. Trail Counter to be placed along the uphill path to the climbing areas at logical trail bottleneck.



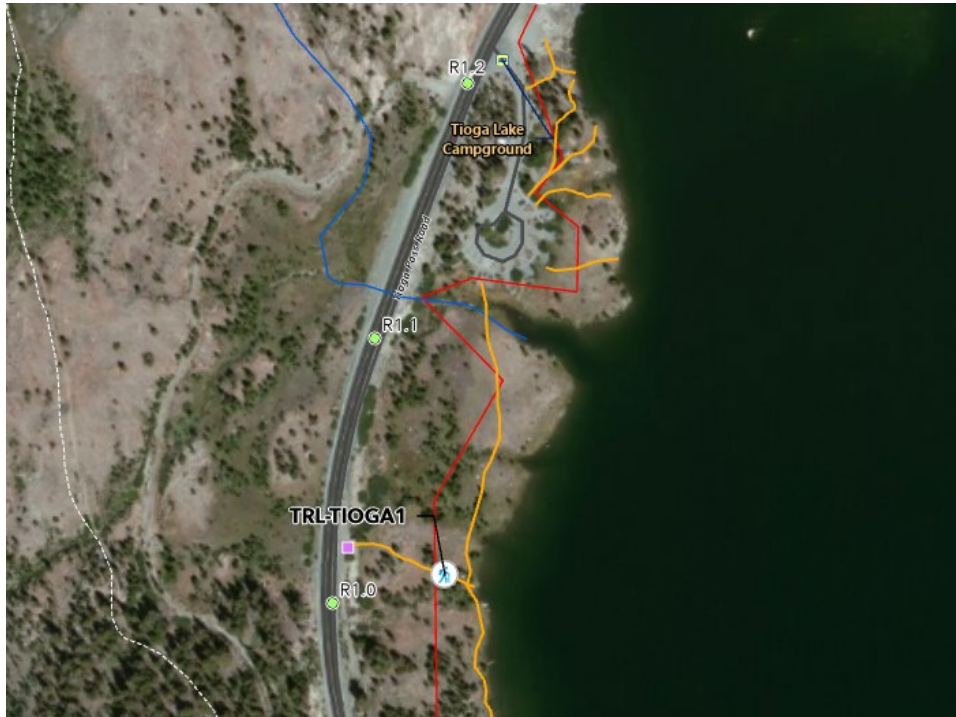
Trail Counter Location 1



Trail Counter Location 2

Tioga Lake Area Trail Counter Location

Site ID	Informal Name	Type	Latitude, Longitude	Mile Marker	General Location
TRL-TIOGA1	Tioga Pullout Access Trail	Trail	37.9254, -119.2555	1	Tioga Lake, informal eastern lake access. Approx 1000 ft up canyon from Tioga Lake Campground. Counter should be placed within approximately 100' of reservoir max fill to ensure that the counter is within the project boundary.



Trail Counter Location

**Table 2. 2024 Proposed REC-1 Survey Schedule**

<b>Date</b>	<b>Activity</b>
Sunday, April 28, 2024	Creel Surveys
Friday, May 3, 2024	Creel Surveys
Saturday, May 4, 2024	Creel Surveys
Wednesday, May 8, 2024	Visitor Intercept Surveys / Spot Counts
Saturday, May 11, 2024	Creel Surveys
Sunday, May 12, 2024	Visitor Intercept Surveys / Spot Counts
Wednesday, May 15, 2024	Creel Surveys
Sunday, May 19, 2024	Creel Surveys
Wednesday, May 22, 2024	Creel Surveys
Thursday, May 23, 2024	Creel Surveys
<b>Saturday, May 25, 2024</b>	Visitor Intercept Surveys / Spot Counts
<b>Sunday, May 26, 2024</b>	Creel Surveys
Tuesday, May 28, 2024	Creel Surveys
Saturday, June 1, 2024	Visitor Intercept Surveys / Spot Counts
Sunday, June 2, 2024	Calibration Counts
Sunday, June 9, 2024	Creel Surveys
Saturday, June 15, 2024	Creel Surveys
Sunday, June 16, 2024	Creel Surveys
Monday, June 17, 2024	Creel Surveys
Tuesday, June 18, 2024	Creel Surveys
<b>Wednesday, June 19, 2024</b>	Creel Surveys
Tuesday, June 25, 2024	Creel Surveys
Thursday, June 27, 2024	Creel Surveys
Friday, June 28, 2024	Creel Surveys
	Visitor Intercept Surveys / Spot Counts
Sunday, June 30, 2024	Creel Surveys
Tuesday, July 2, 2024	Creel Surveys
<b>Sunday, July 7, 2024</b>	Creel Surveys
Monday, July 8, 2024	Creel Surveys
Saturday, July 13, 2024	Visitor Intercept Surveys / Spot Counts
Sunday, July 14, 2024	Creel Surveys
Tuesday, July 16, 2024	Creel Surveys
Thursday, July 18, 2024	Creel Surveys
Saturday, July 20, 2024	Creel Surveys
Sunday, July 21, 2024	Creel Surveys
Tuesday, July 23, 2024	Visitor Intercept Surveys / Spot Counts
Friday, July 26, 2024	Creel Surveys
Sunday, July 28, 2024	Creel Surveys
Saturday, August 3, 2024	Visitor Intercept Surveys / Spot Counts
Sunday, August 4, 2024	Creel Surveys



Friday, August 9, 2024	Creel Surveys
Sunday, August 11, 2024	Creel Surveys
Monday, August 12, 2024	Creel Surveys
Friday, August 16, 2024	Creel Surveys
	Visitor Intercept Surveys / Spot Counts
Saturday, August 17, 2024	Creel Surveys
Sunday, August 18, 2024	Creel Surveys
Tuesday, August 20, 2024	Calibration Counts
Friday, August 23, 2024	Creel Surveys
Monday, August 26, 2024	Creel Surveys
<b>Sunday, September 1, 2024</b>	Creel Surveys
Friday, September 6, 2024	Visitor Intercept Surveys / Spot Counts
Sunday, September 8, 2024	Visitor Intercept Surveys / Spot Counts
Tuesday, October 8, 2024	Calibration Counts
Sunday, October 13, 2024	Visitor Intercept Surveys / Spot Counts
Thursday, October 31, 2024	Visitor Intercept Surveys / Spot Counts

**Bold text** notes holiday weekend survey dates.



14. We are interested in your opinion about the **number of existing recreation facilities** in the Upper Lee Vining Canyon.  
(Please indicate a response for **any** of the following facilities you have used during your visit)

		Too High				About Right				Too Low	Don't Know
<b>Publicly Available Recreation Sites</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Restrooms</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Parking</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Picnic or Day Use Areas</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Boat Launches</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Public Docks</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Hiking Trails</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Swim Areas</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Campsites</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Signage</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Fish Cleaning Stations</b>	Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

15. We are interested in your opinion about the **condition of existing recreation facilities** in the Upper Lee Vining Canyon.  
(Please indicate a response for **any** of the following facilities you have used during your visit)

		Too High				About Right				Too Low	Don't Know
<b>Publicly Available Recreation Sites</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Restrooms</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Parking</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Picnic or Day Use Areas</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Boat Launches</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Public Docks</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Hiking Trails</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Swim Areas</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Campsites</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Signage</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Fish Cleaning Stations</b>	Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

16. How would you rate the use fees associated with the campgrounds in the Upper Lee Vining Canyon? (Mark one for each item)

	Too High				About Right				Too Low	Don't Know
<b>Boat Rental</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
<b>Campground Fees</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

17. What did you like **most** about your visit to the Upper Lee Vining Canyon?

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18. What did you like **least** about your visit to the Upper Lee Vining Canyon?

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19. Do you have any additional comments about public recreation opportunities and facilities in the Upper Lee Vining Canyon?  
(Please be as specific as possible)

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## Angler Survey Data Sheet

**GENERAL INFO (will likely be the same for all interviews at the same survey location. Ok to put Ditto)**

Date		General Weather Conditions	Sunny/Clear    Overcast    Cloudy
Survey Location			Rain            Heavy Rain    Snow/sleet/hail
Notes		Air Temp: _____ °F	

**ANGLER INFO**

Interview Time	
Number of anglers in party	
ZIP code	
What time did you start fishing?	
How much longer will you fish?	
Target Species (primary)	
2 <sup>nd</sup> Target Species (If applicable)	
How often (frequency) do you fish in the area?	<i>Examples</i> <i>Just passing through</i> <i># times per year</i>
How do you define quality of fishing?	Fish Species/Size    Catch Rate    Natural Setting Solitude                    Park Amenities            Water Access Proximity <i>Any other potential variables</i>
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													





# Lee Vining Hydroelectric Project Relicensing

## Technical Report Review Stakeholder Meeting

May 14, 2024, 9:00 a.m. – 4:00 p.m. PDT in-person  
 Lee Vining Community Center, 296 Mattly Ave, Lee Vining, CA

### Objectives

- Review Technical Study Reports
- Address stakeholder questions
- Preview Draft License Application

Duration (minutes)	Agenda Topic/Subtopic	Lead
25	<b>Welcome, Introductions, Meeting Objectives</b>	
	<ul style="list-style-type: none"> <li>- Safety moment</li> <li>- Introductions</li> <li>- Regulatory and Process, Look Back and Look Ahead</li> <li>- Meeting objectives</li> </ul>	Matthew Woodhall Shannon Luoma
25	<b>Action Alternatives</b>	
	<ul style="list-style-type: none"> <li>- No Action               <ul style="list-style-type: none"> <li>o Continue with current license</li> </ul> </li> <li>- Proposed Action               <ul style="list-style-type: none"> <li>o Modified Project Boundary</li> <li>o Additional/modified PMEs and management plans</li> </ul> </li> </ul>	Shannon Luoma
120	<b>Aquatics and Hydrology Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Operations Modeling AQ-5</li> <li>o Stream and Reservoir Water Quality WQ-1</li> <li>o Lower LVC Channel Morphology AQ-6</li> <li>o Aquatic Invasive Plants AQ-4</li> <li>o Aquatic Habitat Mapping and Sediment Char. AQ-3</li> <li>o Stream Fish Population AQ-2</li> <li>o Reservoir Fish Population AQ-1</li> </ul> </li> </ul>	Bret Hoffman Isha Deo Heather Neff Noah Hume Matt McKechnie
60	<b>Lunch break</b>	
60	<b>Terrestrial Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Botanical TERR-1</li> <li>o Wildlife TERR-2</li> </ul> </li> </ul>	Allison Rudalevige Steve Norton

30	<b>Cultural and Tribal Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o Cultural CUL-1</li> <li>o Tribal TRI-1</li> </ul> </li> </ul>	Audry Williams
30	<b>Recreation and Land Use Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o <i>Recreation Use and Assessment REC-1</i></li> <li>o Facilities Condition Assessment REC-2</li> <li>o Aesthetic Resources LAND-2</li> <li>o Project Lands and Roads LAND-1</li> </ul> </li> </ul>	Angela Whelpley Shannon Luoma
10	<b>Schedule and Next Steps</b>	
	<ul style="list-style-type: none"> <li>- Project Schedule</li> <li>- Deadlines and Next Steps</li> </ul>	Shannon Luoma
60	<b>Final Q&amp;A</b>	
	<b>Adjourn</b>	

**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Sent on:** Thursday, February 29, 2024 4:03:34 AM  
**To:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>; Olivia Smith <Olivia.Smith@KleinschmidtGroup.com>; Shannon Luoma <Shannon.Luoma@KleinschmidtGroup.com>; Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>; Kelly Larimer <Kelly.Larimer@KleinschmidtGroup.com>; Hannah Gorin <Hannah.Gorin@KleinschmidtGroup.com>; Ethan Muhlestein <Ethan.Muhlestein@KleinschmidtGroup.com>; matthew.woodhall@sce.com; martin.ostendorf@sce.com; kutzanuumu@yahoo.com; Rwoode911@hotmail.com; cmcdonald@northforkrancheria-nsn.gov; erik@accessfund.org; adam.barnett@usda.gov; stephen\_bowes@nps.gov; kayla@friendsoftheinyo.org; Nick.Buckmaster@wildlife.ca.gov; sb@snowhydrology.com; adam.cohen@waterboards.ca.gov; ryan.cooper@wildlife.ca.gov; Alisa.Ellsworth@wildlife.ca.gov; katie@accessfund.org; andrea@accessfund.org; stephanie.heller@usda.gov; Alyssa.Hockaday@Wildlife.ca.gov; sheila.irons@usda.gov; lilian\_jonas@contractor.nps.gov; beth.lawson@wildlife.ca.gov; Bryant.Luu@wildlife.ca.gov; graham.meese@wildlife.ca.gov; bartshe@monolake.org; bryan.muro@waterboards.ca.gov; eric.rios-bretado@usda.gov; monique.sanchez@usda.gov; Jameisha.Washington@usda.gov; michael.wiese@usda.gov  
**Subject:** Lee Vining Rec & Lands TWG

-----Original Appointment-----

**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Sent:** Wednesday, February 28, 2024 8:04 PM  
**To:** Carissa Shoemaker; Olivia Smith; Shannon Luoma; Finlay Anderson; Angela Whelpley; Kelly Larimer; Hannah Gorin; Ethan Muhlestein; matthew.woodhall@sce.com; martin.ostendorf@sce.com; kutzanuumu@yahoo.com; Rwoode911@hotmail.com; cmcdonald@northforkrancheria-nsn.gov; erik@accessfund.org; adam.barnett@usda.gov; stephen\_bowes@nps.gov; kayla@friendsoftheinyo.org; Nick.Buckmaster@wildlife.ca.gov; sb@snowhydrology.com; adam.cohen@waterboards.ca.gov; ryan.cooper@wildlife.ca.gov; Alisa.Ellsworth@wildlife.ca.gov; katie@accessfund.org; andrea@accessfund.org; stephanie.heller@usda.gov; Alyssa.Hockaday@Wildlife.ca.gov; sheila.irons@usda.gov; lilian\_jonas@contractor.nps.gov; beth.lawson@wildlife.ca.gov; Bryant.Luu@wildlife.ca.gov; graham.meese@wildlife.ca.gov; bartshe@monolake.org; bryan.muro@waterboards.ca.gov; eric.rios-bretado@usda.gov; monique.sanchez@usda.gov; Jameisha.Washington@usda.gov; michael.wiese@usda.gov  
**Subject:** FW: Lee Vining Rec & Lands TWG  
**When:** Wednesday, February 28, 2024 1:30 PM-2:30 PM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Microsoft Teams Meeting

For LV consultation log

-----Original Appointment-----

**From:** Carissa Shoemaker  
**Sent:** Thursday, January 11, 2024 2:22 PM  
**To:** Shannon Luoma; Finlay Anderson; Angela Whelpley; Kelly Larimer; Hannah Gorin; Ethan Muhlestein; [matthew.woodhall@sce.com](mailto:matthew.woodhall@sce.com); [martin.ostendorf@sce.com](mailto:martin.ostendorf@sce.com); [kutzanuumu@yahoo.com](mailto:kutzanuumu@yahoo.com); [Rwoode911@hotmail.com](mailto:Rwoode911@hotmail.com); [cmcdonald@northforkrancheria-nsn.gov](mailto:cmcdonald@northforkrancheria-nsn.gov); [erik@accessfund.org](mailto:erik@accessfund.org); [adam.barnett@usda.gov](mailto:adam.barnett@usda.gov); [stephen\\_bowes@nps.gov](mailto:stephen_bowes@nps.gov); [kayla@friendsoftheinyo.org](mailto:kayla@friendsoftheinyo.org); [Nick.Buckmaster@wildlife.ca.gov](mailto:Nick.Buckmaster@wildlife.ca.gov); [sb@snowhydrology.com](mailto:sb@snowhydrology.com); [adam.cohen@waterboards.ca.gov](mailto:adam.cohen@waterboards.ca.gov); [ryan.cooper@wildlife.ca.gov](mailto:ryan.cooper@wildlife.ca.gov); [Alisa.Ellsworth@wildlife.ca.gov](mailto:Alisa.Ellsworth@wildlife.ca.gov); [katie@accessfund.org](mailto:katie@accessfund.org); [andrea@accessfund.org](mailto:andrea@accessfund.org); [stephanie.heller@usda.gov](mailto:stephanie.heller@usda.gov); [Alyssa.Hockaday@Wildlife.ca.gov](mailto:Alyssa.Hockaday@Wildlife.ca.gov); [sheila.irons@usda.gov](mailto:sheila.irons@usda.gov); [lilian\\_jonas@contractor.nps.gov](mailto:lilian_jonas@contractor.nps.gov); [beth.lawson@wildlife.ca.gov](mailto:beth.lawson@wildlife.ca.gov); [Bryant.Luu@wildlife.ca.gov](mailto:Bryant.Luu@wildlife.ca.gov); [graham.meese@wildlife.ca.gov](mailto:graham.meese@wildlife.ca.gov); [bartshe@monolake.org](mailto:bartshe@monolake.org); [bryan.muro@waterboards.ca.gov](mailto:bryan.muro@waterboards.ca.gov); [eric.rios-bretado@usda.gov](mailto:eric.rios-bretado@usda.gov); [monique.sanchez@usda.gov](mailto:monique.sanchez@usda.gov); [Jameisha.Washington@usda.gov](mailto:Jameisha.Washington@usda.gov); [michael.wiese@usda.gov](mailto:michael.wiese@usda.gov)  
**Subject:** Lee Vining Rec & Lands TWG  
**When:** Wednesday, February 28, 2024 1:30 PM-2:30 PM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Microsoft Teams Meeting

Hello Lee Vining Rec and Lands Technical Working Group,

We will use this meeting time to discuss plans for the Recreation Use Assessment Study (REC-1) fieldwork this 2024 spring and summer, 2/28 1:30-2:30 Pacific.

Thank you  
Let me know if you have any questions.

Carissa Shoemaker  
Licensing Coordinator



C: 907-575-0294

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We provide practical **solutions** for renewable energy, water and environmental projects!

## Microsoft Teams meeting

Join on your computer, mobile app or room device





**MEETING SUMMARY\***  
**LEE VINING, FERC PROJECT NO. 1388**  
**AQUATIC TECHNICAL WORKING GROUP**  
**MAY 18, 2023, 1:00PM -2:45PM**

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

**1.0 OBJECTIVE**

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- Information sharing of the operations model.
- Solicit stakeholder feedback.

**2.0 ATTENDEES**

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Relicensing Team Members

Matt Woodhall, SCE  
Martin Ostendorf, SCE  
Seth Carr, SCE  
Finlay Anderson, Kleinschmidt Associates  
(KA)  
Shannon Luoma, KA  
Bret Hoffman, KA  
Isha Deo, KA  
Lauren Rosenkranz, KA  
Heather Neff, Stillwater  
Carissa Shoemaker, ERM

Technical Working Group Members

Chris Shutes, California Sportfishing  
Protection Alliance (CSPA)  
Greg Reis, Mono Lake Committee (MLC)  
Sheila Irons, US Forest Service (USFS)  
Michael Wiese, USFS  
Chad Mellison, USFWS  
Beth Lawson, California Department of Fish  
and Wildlife (CDFW)  
Amy Chandos, CDFW  
Michael Tovar, CDFW  
Adam Cohen, California State Waterboards  
Bryan Muro, California State Waterboards  
Rajaa Hassan, California State Waterboards  
Ron Goode, North Fork Mono Tribe

### **3.0 COMPILED ACTION ITEMS**

---

- Greg Reiss, MLC, will share additional remote sensing and model-based snow data products potentially relevant to the operations model. Greg will include California functional flow tools as well.
- The Team will review recommended data sources and consider which pieces will fit into the operations model. During the review, the Team will consider: seasons, water year types, reservoir elevations, target elevations, potential variables and prioritization of them, and the limitations of multiple constraints.
- The Team will integrate recommended data sources as functionality of the tool allows, and schedule another TWG meeting to share results.

### **4.0 WELCOME & INTRODUCTIONS**

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Shannon Luoma, the Relicensing Team (“Team”) Project Manager, welcomed TWG members to the meeting and provided a land acknowledgement. Finlay Anderson, The Team Technical Advisor, provided a safety moment around high temperatures. Matthew Woodhall introduced the SCE team, and Shannon introduced the consulting team. Shannon provided an overview of the meeting agenda and objectives.

### **5.0 OPERATIONS MODEL**

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Finlay reiterated the goals and objectives of the study plan, which are similar to a previous model created for SCE’s Bishop Creek Project. The goal for the Lee Vining Project (“Project”) Operations Model (“Model”) is to understand how Project operations interact with Lee Vining hydrology. Additionally, there is a specific nuance with Lee Vining Creek optimization at Poole Powerhouse, and SCE wants to accurately represent capacity for licensing efforts. Finlay compared the Lee Vining Model to the Bishop Creek model, and by contrast the Lee Vining Model is simpler.

Bret Hoffman, the Operations Model Lead, agreed that this is a simpler model. Bret discussed the methods used to represent characteristics of the Project hydrologic system, including constraints, inputs, and project impacts. Bret continued that the Model will provide a resource balance calculated on both a daily and annual basis. The Model will represent system operational targets and scenarios, and will consider baseline conditions and constraints.

Question (Q) Greg Reis (Mono Lake Committee [MLC]) – Regarding Snow Courses as a data source, how will the snow data be used in the model? Is forecasting data used in the model?

Response (R) Bret Hoffman (Kleinschmidt [KA]): Yes, forecasting year type is the primary use of Snow Courses data. For Bishop Creek, the data was also used to correlate information between flow and hydrologic inputs.

Comment (C) Greg Reis (MLC): There are lots of data sources available, in the future the Team should consider available data from remote sensing and other sources.

Q (Bret Hoffman, KA): Can the Team have access to these sources?

R (Greg Reis, MLC): Yes, we can provide some resources. Only sporadic data is available, but it could provide insight to the model. In its early stages, consider implementing this data when it becomes available.

Q (Bret Hoffman, KA): Is the available data useful for forecasting and how snow can impact hydrology?

R (Greg Reis, MLC): Yes, it is useful as a predictive tool. I will share links to the data.

Bret continued to discuss the methods of each model. Bret briefly discussed the baseline conditions and constraints based on SCE operational requirements and the current FERC license requirements.

Q (Chris Shutes, CSPA): What are the specific requirements at the reservoirs at the end of the year? Are there any targets or constraints for the reservoir level at Saddlebag Lake? The Team should consider dam safety with reservoir levels.

R (Matt Woodall, SCE): Saddlebag Lake does not have elevation requirements, but Ellery and Tioga do have them. Saddlebag Lake has an in-stream flow requirement.

R (Bret Hoffman, KA): We want to understand any potential changes to targets now.

R (Finlay Anderson, KA): Let's discuss whether or not to add that constraint based on management objectives and specific outcomes.

R (Bret Hoffman, KA): Agreed, the need to warrant any additional features and logic to the models, or incorporating more constraints into a modeling effort, should have a basis.

C (Greg Reis, MLC): One constraint that I'm interested in seeing added is how daily fluctuations limit the flow below Poole Powerhouse.

R (Bret Hoffman, KA): Yes, that is currently a consideration of the intra-day modeling effort. This may not impact operations as a whole, but may give us daily allocation flow data. That would be used to inform the broader model.

## 6.0 RESOURCE OPTIMIZATION ANALYSIS

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Isha Deo described the methods used to perform the statistical intra-day analysis portion of the model. The first step after developing the algorithm was the calibration to the demand peaks. 78% of flow peaks correspond directly with demand peaks. This helps to validate that the data we're using corresponds with known operation. The operation change in 2016 did make a statistically significant difference on the frequency of peaks. Peaking likelihood is much higher post-operations shift. The Team is in the process of developing the hydraulic model for analyzing stage/velocity effects downstream due to optimization.

## 7.0 QUESTIONS

---

Q (Beth Lawson, CDFW): How does SCE plan to use the model? How do other stakeholders in the relicensing process intend to use the model?

R (Finlay Anderson, KA): The intent of the Model is to connect the operations of the Project with a correlation to stage, and to understand the potential effects of this mode of operations on downstream resources. The intent is to communicate that to stakeholders, and integrate with objectives and operations moving forward. We are analyzing multiple resource areas and having many conversations with stakeholders.

Q (Beth Lawson, CDFW): Are you able to correlate peaking and operations? How are you planning to use the output from operations modeling? Will it be used to look at new scenarios in the operations model?

R (Finlay Anderson, KA): It's a two-step process: 1) understand relationship and correlation; 2) understand impacts and how to manage them in the future. This will help agencies who may want to add operational structure in relation to how the model interacts with the grid.

R (Matthew Woodhall and Martin Ostendorf, SCE): What is the ultimate goal? We are looking for a license that will guide operations in the future, and guide conversations about what we've learned from optimization.

R (Matthew Woodhall, SCE): It's a simpler process, we came into this recognizing that optimization operation came into effect after the issuance of a previous license. Any change in operations will be presumed an optimization, a presumed change in hydrology. This effort is to clarify any changes in operations and correlate it with hydrology. Project effects is a requirement of licensing process, and the model will help optimize operations on ecological impacts, benefits, or restoration activities.

C (Beth Lawson, CDFW): I'm speaking for the needs of my resource agency; looking at peaking and resource optimization is great, but we want to ensure that it will be tied back to us and

making considerations regarding how we/you operate the project. We need a clear picture of how the models are being built. In order for us to analyze, we are interested in functional flows, peaking, and adding seasonal flows back into the creeks. There is a strong pressure to add seasonal flow back into river environments. We want to be able to use these tools. We want to understand peaking and how it returns to the river.

R (Matthew Woodhall, SCE): We may need to interject conditions into other study plans. Bret, will this Model be able to look at these varying flows? We're interested in understanding the relationship between species, other ecological decisions, and this Model.

R (Bret Hoffman, KA): Yes, that's a part of this Model. That's what I'm hoping to get out of this meeting is the agencies' needs and what needs to be added to the system. Currently we're using existing targets and constraints.

R (Isha Deo, KA): I just wanted to note that downstream effects will be easier to quantify once the hydraulic model is finished and operating. These models are specifically looking at downstream data.

C (Beth Lawson, CDFW): We want to build in the option to see seasonal variability, with our experience from the Bishop project. We would like to look at SCE's power generation in order to do a trade-off analysis, recognizing that there is sensitivity there.

R (Finlay Anderson, KA): The power generation piece is a larger issue that should be discussed between SCE and stakeholders. We understand the desire for it, but there needs to be some clear sideboards. Maybe we can get some direction to Bret, he can include seasonal inputs for sure. For the reaches below Saddlebag and Tioga, we want to be able to look at shoulder seasons. Bret will need enough guidance to begin putting constraints in his Model. Pausing on the power generation question for now.

C (Chris Shutes, CSPA): For the intra-day issue, there is immediate focus on the reach downstream of Poole Powerhouse. There should also be focus on reservoirs and daily streamflow fluctuations especially between Saddlebag and Ellery Lakes, and focus on the confluence with Tioga. Hydropower operations are going to pull from upstream. Depending on hydraulics and seasonality, is there some way to limit the degree of fluctuation by reducing the peak or bringing up the base, that would impact the drafting of the reservoirs? Warren Fork may help by bringing up the bases when you go into high flows at the powerhouse.

R (Matthew Woodhall, SCE): To clarify, there is no drafting of Saddlebag or Tioga Lake as it relates to hydro optimization. They do have an instream flow requirement and Tioga has to remain within a specified range of the spillway elevation for part of the year. Everything is managed from Ellery Lake, where there is an approximately 2-foot elevation change that we

can manage. We use that to optimize intra-day. There is no control at Saddlebag or Tioga under the current license.

R (Chris Shutes, CSPA): That's a helpful clarification. What's the volume of water in that 2-ft stage of Ellery Lake?

R (Matthew Woodhall, SCE): I'm unsure of the top of my head. Bret may know. However, we are not proposing operational changes above (note: Bret clarified that the 2-foot stage of Ellery Lake is 118 acre-feet).

Q (Chris Shutes, CSPA): How do you manage changes of conditions above?

R (Matthew Woodhall, SCE): Greg brought up that we'll be spilling Saddlebag this year. There is a prescribed in-stream flow release, we meet annually with USFS and USFWS and assess the water year and then decide on that year's instream flow cfs requirements. We can manage Saddlebag Lake from spilling pretty easily. Ellery Lake is the managing reservoir.

C (Greg Reis, MLC): I support what Beth was saying about functional flows, the California Environmental Flows Framework (CEFF) has this laid out well, they indicate the importance of flows and how to evaluate them. When I send the Snow Survey information, I will send that too. Saddlebag Lake stuff might help inform other resources but might miss something. With the functional flows, you assume that natural flows will support the ecosystem. The operational change in the recent years and the variance that USFS has given turns the natural hydrograph upside down, natural flows are higher in the summer than winter.

Q (Matthew Woodhall, SCE): Would you address the reach below Saddlebag, you want more flexibility there?

R (Greg Reis, MLC): Yes, if you want functional flows, what is happening here is largely different than what happens in a natural hydrograph.

Q (Matthew Woodhall, SCE): Which reaches are you saying this issue is relevant?

R (Greg Reis, MLC): Looking at a hydrograph would be helpful for seasonal variants. There is a difference from the natural hydrograph anywhere there is a shift from natural flow. This applies to all reaches.

C (Beth Lawson, CDFW): I would echo Greg's point; we are interested in looking at functional flows in all reaches. You should bring functional flow metrics into the operations Model. There are different pulses based on season. A mass-balance approach is worth discussing. I can post

the link to CEFF flow methodology. The point is not to replace studies but to work with existing methodologies to see where there are missing pieces.

Rajaa Hassan, California State Waterboards shared [eFlows](#) link in the chat.

Greg Reis, MLC shared [CEFF framework](#) link in the chat, which includes hydrograph modeling for different scenario conditions.

Bret will look into these recommended components and consider what pieces will fit into the Operations Model. Things to consider: seasons, water year types, reservoir elevations, target elevations, potential variables and prioritization of them, consider limitations of multiple constraints. Finlay summarized an action item for Bret to consider these data sources, but reiterated that we need to compare with management goals and objectives. Regarding the intra-day analysis, we can connect calibration with a HEC-RAS model which will provide a tool to look at multiple downstream scenarios and tie in with other studies. Bret what does the next iteration of the model look like?

C (Beth Lawson, CDFW): We are trying to balance operations (power generation) with maintaining as much of the natural hydrograph as possible. The collision is the whole reason why we make a model, so we don't break things in real life. We want to figure out what components you need so we can figure out how much we can push the system and how much we can put back into the creek.

C (Chris Shutes, CSPA): What is the maximum outlet capacity of Saddlebag and Tioga Lakes?

R (Bret Hoffman, KA): That isn't something I have found yet.

R (Greg Reis, MLC): I think Tioga was something like 40 cfs.

Q (Heather Neff, Stillwater): I have a question for Beth regarding functional flows. All of the fish species in Lee Vining Creek are non-native. How would we integrate CEFF for the non-native species?

R (Beth Lawson, CDFW): There are other important ecological components outside of fish species. Sediment, riparian vegetation, BMI species are all components of healthy ecosystem not tied specifically to native fish species.

Q (Heather Neff, Stillwater): Are all functional flow components necessary to look at since we are not focusing on the non-native trout species? Are there specific functional flow components to prioritize?

R (Beth Lawson, CDFW): Pulse flows, Winter higher flows, Summer base flows, and the Snowmelt hydrograph. Prioritize an amount of winter base flow, amount of summer base flow,

and some way to calculate snowmelt hydrograph. This is not specific to time, but water balance modeling.

R (Greg Reis, MLC): The fall pulse flow and wet season peak flow are also a part of CEFF.

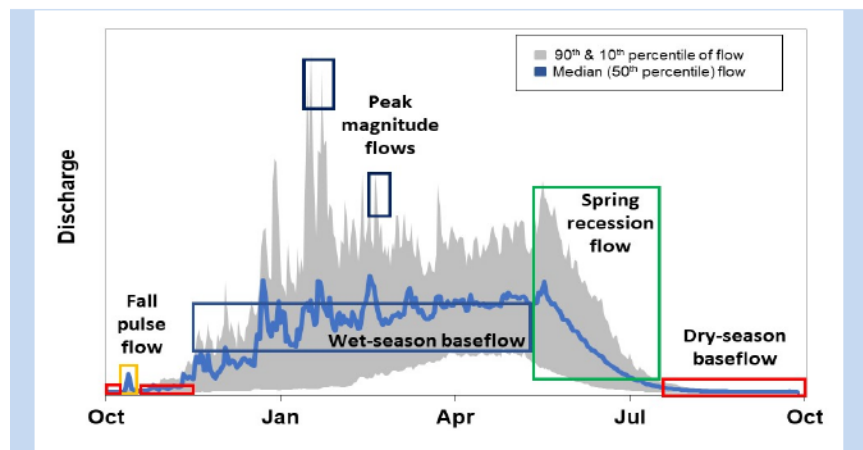
R (Beth Lawson, CDFW): The eFlows tool can be used with an unimpaired hydrograph, Rajaa posted that in the chat. That would help implement all of those flows.

C (Chris Shutes, CSPA): We are interested in all fish species, native or not, as they are a large part of recreation activities. We would not want to harm those species.

C (Martin Ostendorf, SCE): We are looking at the baseline project. We hear that there is a desire to go back to a natural hydrograph, but we need to understand the environmental impacts of the baseline project operations. The tradeoff is that SCE is not here to return the stream to the natural hydrograph. We need a balance between restoration and project impacts. This will come into consideration during PM&Es. This is our tool to help understand the baseline and develop that balance.

C (Beth Lawson, CDFW): This discussion to implement CEFF is happening across all FERC projects in California. In concept it sounds easy, but the goal is to look at the functional flow metrics and results of the studies and pair those together to see if there is a problem.

Rajaa Hassan, California State Waterboards posted a graph as an example in the chat.



C (Martin Ostendorf, SCE): I just don't want to be misleading that we will for sure be implementing functional flows.

C (Chris Shutes, CSPA): The unimpaired hydrograph may show you how big of an impact/impairment there is, there shouldn't be a lot of controversy on including the snowmelt runoff from the inflow creeks like Warren Fork. It would be good to know how much these side channels add to the stream.



C (Greg Reis, MLC): The peak flow study I had suggested can be looked at with these methods, and can be evaluated without any costs. It could possibly show that operations do not negatively impact ecosystem.

## **8.0 NEXT STEPS AND CLOSING**

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C (Martin Ostendorf, SCE): So, for next steps, Bret will look at the level of functionality in the tool and then we'll have a follow up meeting with the group to share results.

C (Finlay Anderson, KA): Let us know if you have questions.

No further stakeholder comments or questions.

The Relicensing Team adjourned the meeting.



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## State Water Resources Control Board

November 13, 2023

Mr. Wayne Allen  
Southern California Edison Company  
1515 Walnut Grove Avenue  
Rosemead, CA 91770  
Sent via email: [Wayne.Allen@sce.com](mailto:Wayne.Allen@sce.com)

**Lee Vining Hydroelectric Project**  
**Federal Energy Regulatory Commission Project No. 1388**  
**Mono County**  
**Lee Vining Creek, Glacier Creek, Ellery Lake, Tioga Lake, and Saddlebag Lake**

### **COMMENTS ON THE DRAFT TECHNICAL REPORTS OF 2022 SURVEY FINDINGS FOR THE LEE VINING HYDROELECTRIC PROJECT**

Dear Mr. Wayne Allen:

Southern California Edison Company (SCE) owns and operates the Lee Vining Hydroelectric Project (Project) that is located on the eastern slope of the Sierra Nevada, approximately 9 miles upstream from Mono Lake in Mono County. The Project currently operates under a 30-year Federal Energy Regulatory Commission (FERC) license that expires on January 31, 2027. As part of Project relicensing, on September 14, 2023, SCE provided four draft technical reports that document 2022 survey results for stakeholders comment and review. The draft technical reports included results for the following studies: (1) Reservoir Fish Population Study; (2) Stream Fish Populations Study; (3) Year 1 Stream and Reservoir Water Quality Study, and (4) General Botanical Resources Survey. State Water Board staff have reviewed the draft technical reports and is submitting the enclosed comments pertaining to the Stream and Reservoir Water Quality Study in Attachment A: *Comments on 2022 Stream and Reservoir Water Quality Study for Lee Vining Hydroelectric Project*.

---

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

If you have questions regarding this letter, please contact Bryan Muro, Project Manager, by email at [Bryan.Muro@waterboards.ca.gov](mailto:Bryan.Muro@waterboards.ca.gov). Written correspondence should be directed to:

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

Sincerely,



Bryan Muro  
Project Manager  
Water Quality Certification Program  
Division of Water Rights

Attachment: Attachment A: Comments on Stream and Reservoir Water Quality Study  
for Lee Vining Hydroelectric Project

ec: Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
**Via e-filing to FERC Project Docket**

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Southern California Edison Company  
[Matthew.woodhall@sce.com](mailto:Matthew.woodhall@sce.com)

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[Finlay.Anderson@kleinschmidtgroup.com](mailto:Finlay.Anderson@kleinschmidtgroup.com)

ATTACHMENT A: COMMENTS ON 2022 STREAM AND RESERVOIR  
WATER QUALITY STUDY FOR LEE VINING HYDROELECTRIC PROJECT

State Water Resources Control Board (State Water Board) staff are providing the following comments on Southern California Edison Company's (SCE) *Stream and Reservoir Water Quality Study for the Lee Vining Hydroelectric Project*:

1. Reference errors are present in the *Stream and Reservoir Water Quality Study for the Lee Vining Hydroelectric Project* (i.e., under Section 4.1.2 Stream Water Quality). Please resolve these issues prior to the finalizing the study report.
2. Saddlebag and Tioga lakes pH data collected in 2022 recorded minimum summer pH values of 5.1 and 5.5, respectively. By contrast, summer pH values reported at site LV-1 (Lee Vining Creek Inflow to Saddlebag Lake) and site LV-10 (Glacier Creek Inflow to Tioga Lake) were 8.7 and 8.3, respectively.

The Water Quality Control Plan for the Lahontan Region (Basin Plan) pH objective states that: "In fresh waters with designated beneficial uses of COLD<sup>1</sup> or WARM<sup>2</sup>, changes in normal ambient pH levels shall not exceed 0.5 pH units." Lee Vining Creek upstream of the Los Angeles Department of Water and Power (LADWP) diversion includes COLD as a beneficial use. Data collected in 2023 will help inform to what extent low pH values recorded in Saddlebag and Tioga lakes is an ongoing condition, and how protection, mitigation, and enhancement (PM&E) measures could be applied, as applicable, to address low pH values.

3. Dissolved oxygen concentrations collected in the bottom six meters of both Saddlebag and Tioga lakes were less than 80 percent saturation in fall 2022. In Tioga Lake, dissolved oxygen reached a minimum of 32 percent (2.7 milligrams per liter [mg/L]) in summer, and a minimum of 0 percent (0 mg/L) in fall.

The Basin Plan objective for dissolved oxygen states: "The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent saturation." The Basin Plan further states for waters with beneficial uses of COLD with SPWN<sup>3</sup> (such as Lee Vining Creek), the following additional criteria are applicable:

- a 7 Day Mean concentration of 9.5 mg/L, and
- a 1 Day Minimum of 8.0 mg/L.

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<sup>1</sup> Cold Freshwater Habitat is defined as beneficial uses of waters that support cold water ecosystems, including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

<sup>2</sup> Warm Freshwater Habitat is defined as beneficial uses of water that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

<sup>3</sup> Spawning, Reproduction, and Development is defined as beneficial uses of water that support high quality aquatic habitat necessary for reproduction and early development of fish and wildlife.

To better inform potential PM&E measures, SCE should consider collecting additional dissolved oxygen data to determine the spatial extent within Tioga and Saddlebag lakes where low dissolved oxygen values are occurring, and if Tioga and Saddlebag lakes are providing adequate water quality to support designated beneficial uses.

4. Fecal coliform bacteria data collected in 2022 ranged from 49 to 540 most probable number per 100 milliliters (MPN/100 mL) on a single sampling date. The Basin Plan objective for fecal coliform states that “The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100mL.” Data collected in 2023 will help inform under what conditions and how often these values occur and may also inform PM&Es associated with Project recreational activities.
5. State Water Board staff look forward to reviewing and discussing the hydro-resource optimization event turbidity monitoring data as it becomes available. We recommend including the data in .xlsx or .csv format for simplified sharing and review by interested stakeholders.



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

GAVIN NEWSOM, Governor  
CHARLTON H. BONHAM, Director



*Via e-mail*

November 22, 2023

Matthew Woodhall  
Southern California Edison  
Generation-Regulatory Support Services/ Project Lead  
1515 Walnut Grove Ave  
Rosemead, CA 91770  
matthew.woodhall@sce.com

**Subject: California Department of Fish and Wildlife Comments on Southern California Edison's 2023 Draft Technical Reports WQ-1, AQ-1, AQ-2, and TERR-1 for the Relicensing of the Lee Vining Creek Hydroelectric Project, FERC Project No. 1388**

Dear Mr. Woodhall:

The California Department of Fish and Wildlife (CDFW) has received and reviewed the *2023 Draft Technical Reports for WQ-1, AQ-1, AQ-2, and TERR-1* drafted by Southern California Edison (SCE) for the Federal Energy Regulatory Commission (FERC) relicensing of the Lee Vining Creek Hydroelectric Project (Project, FERC No. 1388). The 2023 Technical Reports were provided to the Project's Technical Working Group (TWG) members via email on October 30, 2023. As requested by SCE, CDFW is now providing written comments and recommendations on the Draft Technical Reports.

## **AUTHORITIES**

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

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

*Conserving California's Wildlife Since 1870*

Matt Woodhall  
SCE  
November 22, 2023  
Page 2

## **DRAFT TECHNICAL REPORT RECOMMENDATIONS, COMMENTS AND QUESTIONS**

### **WQ-1 Interim Technical Report: Stream and Reservoir Water Quality**

#### **General Comment**

- **Comment:** CDFW staff look forward to reviewing and discussing the hydro-resource optimization turbidity monitoring data. Please make the data available to TWG members in .xlsx or .csv format.

#### **Section 3.1 Modifications to Methods**

- **Question:** What parameters for thermal stratification were used to determine that thermal stratification was too weak to warrant sample collection at depth?
- **Question:** Was continuous water temperature collected in stream reaches?

#### **Section 3.2.1 Stream and Reservoir Water Quality Sampling**

- **Comment:** Please include what types of water quality sensors/sondes were used to collect *in situ* water quality parameters.
- **Question:** What was the calibration protocol used for the water quality sondes? Please include a summary of the calibration dates and results or a log of the calibrations performed as an appendix.

#### **Section 3.2.3 Hydro-Resource Optimization Event Turbidity Monitoring**

- **Question:** What was the calibration protocol used for the turbidity loggers? Please include a summary of the calibration dates and results or a log of the calibrations performed as an appendix.

#### **Section 4.1.1 Reservoir Water Quality**

- **Comment:** Please include a discussion in the Final Technical Report on why data (e.g., pH, temperature, and specific conductivity) varies between reservoirs and sampling sites.

#### **Section 4.1.2.2 Glacier Creek**

- **Comment:** Table 4.1-1 has a reference error. Please correct in the final draft.

#### **Table 4.1-2 Analytical Laboratory Data**

- **Question:** Many of the orthophosphate samples were received by the analytical laboratory outside of the Environmental Protection Agency (EPA) recommended holding time of the samples. Does SCE plan to retake these samples? If not, please include a rationale for this decision.



Matt Woodhall  
SCE  
November 22, 2023  
Page 3

## **AQ-1 Reservoir Fish Populations and AQ-2 Stream Fish Populations**

### General Comment

- **Comment:** CDFW has reviewed the 2023 Draft Technical Reports and currently does not have comments.

## **TERR-1 General Botanical Resources Survey**

### General Comments

- **Comment:** The CNPS identifies that mountain bent grass (*Agrostis humilis*) (California Rare Plant Rank 2B.3-rare, threatened or endangered in California) is threatened by foot traffic and vehicles and possibly threatened by grazing and trampling. SCE should identify the potential for these threats and any other threats (e.g., maintenance activities) at each population location to determine the vulnerability, condition of occurrences, and if PME measures are needed (e.g., signage, fencing) to protect the plant.
- **Comment:** On January 14<sup>th</sup>, 2022, CDFW proposed a *Riparian Monitoring and Community Health Study*. SCE responded that 'sufficient data exists from ongoing Riparian Monitoring Evaluations conducted as part of the license'. SCE has shared with CDFW via email various *Riparian Reports* associated with the existing FERC License requirements; however, these reports should be made available for review on the Projects relicensing website. Additionally, SCE responded in the *Revised Technical Study Plans* that raw data would be provided to the TWG. This data should also be made available on the Projects relicensing website. All existing available data that SCE produced as part of the license (e.g., riparian monitoring and evaluations) should be made available for review. Providing this data later with the Draft License Application will not provide stakeholders sufficient time to review the data in a meaningful way.

### Attachment 1 – TERR 1 Mapbook

- **Comment:** Much of the Botanical Resource study area is outside of the FERC Project area and is focused only around Project facilities or recreational areas.
- **Question:** Does sufficient data exist to provide a baseline of the distribution of special status plant species within the FERC Project area?

## **GIS DATA REQUEST**

CDFW requests the following spatial data be provided as shapefiles or geodatabase:

- Sampling sites for water quality, bacterial, turbidity and fish tissue sampling
- Reaches for the Channel Morphology Study
- Botanical Study Area boundary
- NDVI

Matt Woodhall  
SCE  
November 22, 2023  
Page 4

- Sampling plots (wet meadow)
- Sampling plots (willow riparian scrub)
- Study Sites (Test)
- Study Sites (Control)
- Special-status plant species populations
- Tunnel from Ellery to Pool Powerhouse
- Gaging Stations

## OTHER

- CDFW requests that SCE make the 1933 Sales Agreement between Southern Sierras Power Company and LADWP available on the Projects relicensing website.
- CDFW requests that SCE make the following resource management plans available on the Projects relicensing website:
  - Avian Protection Plan and Bird Nesting Guidelines (includes provisions for reporting wildlife and avian interactions with the Project)
  - Vegetation Management Operations Manual
  - Invasive Mussel Prevention Plan
  - Fire Suppression Plan (part of the Project's Emergency Action Plan)
  - Soil Disposal Plan

## CONCLUSION

CDFW appreciates the opportunity to comment on the Draft Technical Studies provided to the Project's TWG members via email on October 30, 2023 for the FERC relicensing of the Lee Vining Creek Hydroelectric Project. CDFW looks forward to further discussions with the Technical Working Group members.

If you have any question pertaining to this letter, please contact Graham Meese, Senior Environmental Scientist (Specialist), at (760) 996-7387 or [Graham.Meese@wildlife.ca.gov](mailto:Graham.Meese@wildlife.ca.gov)

Sincerely,

DocuSigned by:  
  
AB3BB977DEA9442...  
Trisha Moyer

Habitat Conservation Program Supervisor  
Inland Deserts Region 6, Eastern Sierra

Matt Woodhall  
SCE  
November 22, 2023  
Page 5

cc: California Department of Fish and Wildlife

Alisa Ellsworth, Environmental Program Manager  
[Alisa.Ellsworth@wildlife.ca.gov](mailto:Alisa.Ellsworth@wildlife.ca.gov)

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Beth Lawson, Senior Hydraulic Engineer  
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United States Forest Service

Tristan Leong, Region 5 Hydroelectric Coordinator  
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State Water Resources Control Board

Brian Muro, Water Resources Control Engineer  
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Adam Cohen, Senior Environmental Scientist  
[Adam.Cohen@Waterboards.ca.gov](mailto:Adam.Cohen@Waterboards.ca.gov)

**From:** Shannon Luoma <Shannon.Luoma@Kleinschmidtgroup.com>  
**Sent on:** Monday, November 27, 2023 3:53:00 PM  
**To:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>; Arianna Bresnan <Arianna.Bresnan@KleinschmidtGroup.com>  
**Subject:** FW: (External):CDFW Comments on Draft Technical Reports - Lee Vining Hydroelectric Project  
**Attachments:** CDFW\_Lee\_Vining\_Creek\_Draft\_Tech\_Reports\_Comment\_Letter 11.22.23.pdf (315.13 KB)

Carissa, FYI  
 Arianna, for the consultation log

**Shannon Luoma**  
 Office: 425.528.1614

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**From:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**Sent:** Monday, November 27, 2023 7:32 AM  
**To:** Shannon Luoma <Shannon.Luoma@Kleinschmidtgroup.com>  
**Cc:** Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>; Heather Bowen Neff <heather@stillwatersci.com>; Brad Blood <bblood@psomas.com>  
**Subject:** FW: (External):CDFW Comments on Draft Technical Reports - Lee Vining Hydroelectric Project

FYI, comments/questions from CDFW

Matthew C. Woodhall  
 Southern California Edison  
 Generation-Regulatory Support Services  
 909-362-1764 - Cell  
 626-302-9596 - Office




---

**From:** Meese, Graham@Wildlife <Graham.Meese@Wildlife.ca.gov>  
**Sent:** Wednesday, November 22, 2023 3:39 PM  
**To:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**Cc:** Ellsworth, Alisa@Wildlife <Alisa.Ellsworth@wildlife.ca.gov>; Moyer, Patricia (Trisha)@Wildlife <Patricia.Moyer@Wildlife.ca.gov>; Lawson, Beth@Wildlife <Beth.Lawson@wildlife.ca.gov>; Leong, Tristan - FS, CA <tristan.leong@usda.gov>; Sanchez, Monique - FS, CA <monique.sanchez@usda.gov>; Muro, Bryan@Waterboards <Bryan.Muro@Waterboards.ca.gov>; Cohen, Adam@Waterboards <Adam.Cohen@Waterboards.ca.gov>  
**Subject:** (External):CDFW Comments on Draft Technical Reports - Lee Vining Hydroelectric Project

Dear Matt,

The California Department of Fish and Wildlife has received and reviewed the *2023 Draft Technical Reports for WQ-1, AQ-1, AQ-2, and TERR-1* for the Federal Energy Regulatory Commission relicensing of the Lee Vining Creek Hydroelectric Project. The 2023 Draft Technical Reports were provided on September 14, 2023 for stakeholder comment and review. As requested by Southern California Edison, CDFW is providing written comments and recommendations in the attached letter.

Sincerely,

Graham Meese  
 Senior Environmental Scientist  
 California Department of Fish and Wildlife  
 Inland Deserts Region | Habitat Conservation | Water  
 787 North Main Street, Suite 220  
 Bishop, CA 93514  
 (760) 996-7387



**Date:** 12/27/2023

**Subject:** FERC Relicensing Technical Studies

**To:** Southern California Edison

This letter is to comment on the technical surveys performed for the 2022 and 2023 period as required for the relicensing of the Southern California Edison hydroelectric facilities in the Lee Vining Creek drainage. The survey studies are: general botanical resources, water quality, stream fish populations, reservoir fish populations and hydrology operation modeling. For the Owens River watershed, the 2022 water year received a very low snowpack with a seasonal average of 40% and a precipitation average of 40% as well. The 2023 water year saw the largest recorded snowpack in recorded history with a seasonal average of 266% and a seasonal precipitation average of 161%. For seasonal snowpack this a drastic change of approximately 565% between the two years and a 300% change for seasonal precipitation. The hydroelectric license is for a 30-year period and with only these two years of data collection guiding the relicensing process, anomalous weather events could skew what is already a limited dataset and provide a flawed basis for management decisions. A similar situation occurred with Colorado River water flows, when past allocation decisions were based on very high flow years. We are concerned that a similar situation could unfold given that these survey studies are based on two years of data collection, with one of those years being the extreme winter of 2022-2023. For this reason, we would like to see at least one more year of data collection for the relicensing process.

Thank you for allowing us to comment on the technical studies.

Sincerely,

Michael Wiese  
Forest Hydrologist



**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>

**Sent on:** Tuesday, April 16, 2024 6:29:41 PM

**To:** adam.barnett@usda.gov; adam.cohen@waterboards.ca.gov; Adam.Perez@ladwp.com; Alisa.Ellsworth@wildlife.ca.gov; Alyssa.Hockaday@Wildlife.ca.gov; andrea@accessfund.org; ashley.blythehaverstock@usda.gov; bartshe@monolake.org; beth.lawson@wildlife.ca.gov; bryan.muro@waterboards.ca.gov; Bryant.Luu@wildlife.ca.gov; Chad\_Mellison@fws.gov; clerkrecorder@mono.ca.gov; courtney.rowe@usda.gov; cshutes@calsport.org; culture@bridgeportindiancolony.com; curator@monobasinhistory.org; dannon.dirgo@usda.gov; meryl.picard@bishoppaiute.org; darren.delgado@bishoppaiute.org; cheyenne.stone@bigpinepaiute.org; chair@bridgeportindiancolony.com; THPO@WashoeTribe.us; easternsierraartist@gmail.com; eric.tillemans@ladwp.com; erik@accessfund.org; kutzanuumu@yahoo.com; nayanake@comcast.net; patsiata@yahoo.com; kathybancroft@gmail.com; ssmiwuknation@gmail.com; sandra47roy@gmail.com; carl@fortindependence.com; secretary@southernsierramiwuknation.org; Rwgooode911@hotmail.com; d.gutierrez@bigpinepaiute.org; kyle@mewuk.com; char54lange@gmail.com; chair@monolaketribe.us; s.manning@bigpinepaiute.org; cmcdonald@nfr-nsn.gov; jon@mewuk.com; lucy\_basket4@yahoo.com; claymiwumati@gmail.com; s.saulque@bentontribe.org; falconkeeper22@gmail.com; serrell.smokey@washoeTribe.us; dtonenna@gmail.com; dtonenna@monolaketribe.us; events@mammothmuseum.org; geoff@monolake.org; graham.meese@wildlife.ca.gov; greg@monolake.org; Jacqueline.beidl@usda.gov; Jameisha.Washington@usda.gov; James.Erdman@wildlife.ca.gov; jennifer.watts@waterboards.ca.gov; justin\_barrett@fws.gov; kary.schlick@usda.gov; kary.schlick@usda.gov; katie@accessfund.org; kayla@friendsoftheinyo.org; lilian\_jonas@contractor.nps.gov; michael.tovar@wildlife.ca.gov; michael.wiese@usda.gov; monique.sanchez@usda.gov; nathan.sill@usda.gov; Nick.Buckmaster@wildlife.ca.gov; parker.thaler@Waterboards.ca.gov; Patricia.Moyer@Wildlife.ca.gov; Rajaa.Hassan@waterboards.ca.gov; ryan.cooper@wildlife.ca.gov; Saeed.Jorat@ladwp.com; sb@snowhydrology.com; sheila.iron@usda.gov; stephanie.heller@usda.gov; todd.ellsworth@usda.gov; tristan.leong@usda.gov; Wilfred.Nabahe@usda.gov

**CC:** Matthew Woodhall <Matthew.Woodhall@sce.com>; Martin Ostendorf <martin.ostendorf@sce.com>; Shannon Luoma <Shannon.Luoma@KleinschmidtGroup.com>; Finlay Anderson <finlay.anderson@kleinschmidtgroup.com>; Kelly Larimer <Kelly.Larimer@KleinschmidtGroup.com>; Angela Whelpley <Angela.Whelpley@KleinschmidtGroup.com>; Hannah Gorin <Hannah.Gorin@KleinschmidtGroup.com>; Bret Hoffman <Bret.Hoffman@KleinschmidtGroup.com>; Isha Deo <Isha.Deo@KleinschmidtGroup.com>; Ethan Muhlestein <Ethan.Muhlestein@KleinschmidtGroup.com>; Steve Norton <steve.norton@psomas.com>; Brad Blood <bblood@psomas.com>; Allison Rudalevige <allison.rudalevige@psomas.com>; Heather Neff <heather@stillwatersci.com>; Ian Pryor <ian@stillwatersci.com>; Matt McKechnie <mmckechnie@stillwatersci.com>; Christina Buck <cbuck@stillwatersci.com>; Noah Hume <noah@stillwatersci.com>

**Subject:** Lee Vining Hydro 2023 Draft Technical Reports for review (#3)

Hello Lee Vining Technical Working Group members,

The Lee Vining Hydroelectric Project Relicensing Team has drafted several Technical Reports summarizing data collected in the 2022 and 2023 studies. These draft reports are all now available for your review:

- General Wildlife Resources Survey (TERR-2) at: [LV TERR-2 Wildlife Tech Report.pdf](#)

Provided last week:

- Aquatic Habitat Mapping and Sediment Characterization (AQ-3) at: [LV AQ-3 Aquatic Habitat Sediment Tech Report.pdf](#)
- Aquatic Invasive Plants Survey (AQ-4) at: [LV AQ-4 Aquatic Invasive Plants Tech Report.pdf](#)
- Operations and Hydrology Model (AQ-5) at: [LV AQ-5 Ops Model Tech Report.pdf](#)
- Lower Lee Vining Creek Channel Morphology (AQ-6) at: [LV AQ-6 Channel Morph Tech Report.pdf](#)
- Stream and Reservoir Water Quality Study (WQ-1) at: [LV WQ-1 Water Quality Tech Report.pdf](#)
- General Botanical Resources Survey (TERR-1) at: [LV TERR-1 Botanical Tech Report.pdf](#)
- Project Lands and Roads Assessment (LAND-1) at: [LV LAND-1 Project Lands Tech Report.pdf](#)
- Aesthetic Resources Study (LAND-2) at: [LV LAND-2 Aesthetics Tech Report.pdf](#)
- Facilities Condition Assessment (REC-2) at: [LV REC-2 Facilities Condition Tech Report.pdf](#)

These draft reports are being distributed for a 60-day review. Comments received will be reviewed and incorporated into the Final Technical Reports as appropriate, to be filed with the Draft License Application in September. Please send us your comments and questions by June 11.

We plan to discuss these Draft Technical Reports with you on May 14 at our in-person meeting in Lee Vining, please reach out if you do not have this invitation.

Let us know if you have any questions.

SCE's project manager: Matthew Woodhall [Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)

Kleinschmidt's project manager: Shannon Luoma [Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)

Thank you

Carissa Shoemaker  
Licensing Coordinator  
***Kleinschmidt***

C: 907-575-0294

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We provide practical **solutions** for renewable energy, water and environmental projects!

**From:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**Sent on:** Friday, April 19, 2024 8:55:34 PM  
**To:** Matthew Woodhall <Matthew.Woodhall@sce.com>  
**CC:** Seth Carr <seth.carr@sce.com>; Shannon Luoma <Shannon.Luoma@Kleinschmidgroup.com>; Steve Norton <steve.norton@psomas.com>; Kelly Larimer <Kelly.Larimer@KleinschmidGroup.com>; Jay King <jay@farwestern.com>; Martin Ostendorf <Martin.Ostendorf@sce.com>; Heather Bowen Neff <heather@stillwatersci.com>; Finlay Anderson <finlay.anderson@kleinschmidgroup.com>; Allison Rudalevige <allison.rudalevige@psomas.com>; Audry Williams <audry.williams@sce.com>; Brad Blood <bblood@psomas.com>; Carissa Shoemaker <Carissa.Shoemaker@KleinschmidGroup.com>; Matthew Woodhall <Matthew.Woodhall@sce.com>; Angela Whelpley <Angela.Whelpley@KleinschmidGroup.com>; Lynn Johnson <lynn@teamenvironmental.com>; Ian Pryor <Ian@stillwatersci.com>; Christina Buck <cbuck@stillwatersci.com>; Noah Hume <noah@stillwatersci.com>; Matthew C Paruolo <MATTHEW.PARUOLO@SCE.COM>; Matt McKechnie <mmckechnie@stillwatersci.com>  
**Subject:** Save the Dates: Lee Vining and Lundy Stakeholder Meetings

Hello Lee Vining and Lundy relicensing interested parties,

This is a reminder of SCE and FERC's upcoming stakeholder meetings for the Projects coming up in mid-May. These are in-person meetings with no virtual or call-in options available. If you have not received an invitation for the Lee Vining Tech Report Review meeting (May 14), Lundy Site Visit (May 15), or Lundy Scoping Meetings (May 14 and 15) please let me know. The relicensing team is hoping to get a better idea of attendance at these meetings, so please 'accept' the invitation(s) if you do plan to attend.

I would also like to inform you of some beneficial changes to the tentative schedule provided on January 26 (below). The meetings and site visit have been condensed into two days, rather than three.

**Lee Vining Hydro Project (P-1388)**

Tuesday May 14, 9am-4pm: Technical Study Report and Initial Project Effects stakeholder meeting, hosted by SCE. This will be a daytime in-person meeting held at the Lee Vining Community Center. The purpose is to review draft Technical Reports, begin discussions on potential Project effects, and address stakeholder questions. This will be open to the general public. An all-day placeholder invite was sent out, an agenda and other materials will be sent out closer to the meeting date.

**Lundy Hydro Project (P-1390)**

- Wednesday May 15 8:30am-12pm: Site visit / Project tour: Participants will meet at the Guss Hess Community Park (129 Mattly Ave, Lee Vining) and then drive, caravan-style, to the Lundy Project area to view and discuss Project infrastructure, operations, and resources. Extent of the tour will be determined by road conditions and accessibility. NOTE that FERC recently sent out a Notice of this site visit with an incorrect time of 9:00am and the community center as a starting point. They have since issued an errata to clarify the details herein. We will send out a calendar invite for the site visit shortly.
- Tuesday May 14 (6pm-8pm) and Wednesday May 15 (2pm-5pm): The two public meetings, hosted by FERC will be in-person meeting held at the Lee Vining Community Center. These will be open to the general public. The same information will be presented at both meetings. The purpose of the public meetings and site visit are to:
  - Initiate scoping pursuant to the National Environmental Policy Act (NEPA);
  - Review and discuss existing conditions and resource management objectives;
  - Review and discuss existing information and make preliminary identification of information and study needs;
  - Review, discuss, and finalize the process plan and schedule for pre-filing activity that incorporates the time periods provided for in this part and, to the extent reasonably possible, maximizes coordination of Federal, state, and tribal permitting and certification processes, including consultation under section 7 of the Endangered Species Act and water quality certification or waiver thereof under section 401 of the Clean Water Act; and
  - Discuss the appropriateness of any Federal or state agency or Indian tribe acting as a cooperating agency for development of an environmental document pursuant to the NEPA.

Thank you, and please let me know if you have any questions.

Matthew C. Woodhall  
 Southern California Edison  
 Generation-Regulatory Support Services  
 909-362-1764 - Cell  
 626-302-9596 - Office



**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Sent on:** Monday, April 29, 2024 5:48:47 PM  
**To:** Greg Reis <greg@monolake.org>  
**CC:** Bartshe Miller <bartshe@monolake.org>; Robert Di Paolo <robbie@monolake.org>; Shannon Luoma <Shannon.Luoma@KleinschmidtGroup.com>  
**Subject:** RE: Lee Vining Hydro 2023 Draft Technical Reports for review (#2)

Thank you for the comments, Greg!

Carissa Shoemaker  
Licensing Coordinator  
[www.kleinschmidtgroup.com](http://www.kleinschmidtgroup.com)  
907-575-0294  
Upcoming outage, traveling for work: May 13-16

**From:** Greg Reis <greg@monolake.org>  
**Sent:** Saturday, April 27, 2024 6:40 AM  
**To:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Cc:** Bartshe Miller <bartshe@monolake.org>; Robert Di Paolo <robbie@monolake.org>  
**Subject:** RE: Lee Vining Hydro 2023 Draft Technical Reports for review (#2)

The following are my comments on the geomorphology report

- Figure 3.2-1 shows a period of time in March when Total SCE was much higher than LADWP. Please explain how this is possible, and if one of the traces is likely erroneous, which one and why?
- Table 3.3-1 refers to SCE and USGS gauges. These gauges should be shown on the map, and the footnote should note what flow path is being measured by each gauge. If one of the gauges matches "Total SCE" in Figure 3.2-1, that should be noted.
- The peak discharge of 470 cfs noted on page 11 is higher than the peak shown for "Total SCE" in Figure 3.2-1.
- I recommend separate analysis of the cross section data focused on stages that occur during typical hydropeaking resource optimization operations. These frequent repeated fluctuations in a similar stage range could be impacting the morphology, benthic macroinvertebrate community, and vegetation community in these ranges.

**Greg Reis, Information & Restoration Specialist, Mono Lake Committee**  
**(760) 647-6386 x141 (direct/voicemail) | 415-342-6390 (mobile)**  
**Hwy 395 at Third St, PO Box 29, Lee Vining, CA 93541**  
[www.monolake.org](http://www.monolake.org) | [www.monobasinresearch.org](http://www.monobasinresearch.org)

*Saving Mono Lake for future generations through protection, restoration, education, and science.*  
**Long Live Mono Lake!**

**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
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**Subject:** Lee Vining Hydro 2023 Draft Technical Reports for review (#2)

Hello Lee Vining Technical Working Group members,

The Lee Vining Hydroelectric Project Relicensing Team has drafted several Technical Reports summarizing data collected in the 2022 and 2023 studies. These draft reports are becoming available for your review on a rolling basis, nine of which are ready now:

- Aquatic Habitat Mapping and Sediment Characterization (AQ-3) at: [LV\\_AQ-3\\_Aquatic\\_Habitat\\_Sediment\\_Tech\\_Report.pdf](#)
- Operations and Hydrology Model (AQ-5) at: [LV\\_AQ-5\\_Ops\\_Model\\_Tech\\_Report.pdf](#)
- Stream and Reservoir Water Quality Study (WQ-1) at: [LV\\_WQ-1\\_Water\\_Quality\\_Tech\\_Report.pdf](#)
- General Botanical Resources Survey (TERR-1) at: [LV\\_TERR-1\\_Botanical\\_Tech\\_Report.pdf](#)
- Project Lands and Roads Assessment (LAND-1) at: [LV\\_LAND-1\\_Project\\_Lands\\_Tech\\_Report.pdf](#)

Provided earlier this week:

- Aquatic Invasive Plants Survey (AQ-4) at: [LV\\_AQ-4\\_Aquatic\\_Invasive\\_Plants\\_Tech\\_Report.pdf](#)
- Lower Lee Vining Creek Channel Morphology (AQ-6) at: [LV\\_AQ-6\\_Channel\\_Morph\\_Tech\\_Report.pdf](#)
- Facilities Condition Assessment (REC-2) at: [LV\\_REC-2\\_Facilities\\_Condition\\_Tech\\_Report.pdf](#)
- Aesthetic Resources Study (LAND-2) at: [LV\\_LAND-2\\_Aesthetics\\_Tech\\_Report.pdf](#)

This remaining report will be coming early next week in a separate email:

- General Wildlife Resources Survey (TERR-2)

These draft reports are being distributed for a 60-day review. Comments received will be reviewed and incorporated into the Final Technical Reports as appropriate, to be filed with the Draft License Application in September. Please send us your comments and questions by June 11.

We plan to discuss these Draft Technical Reports with you on May 14 at our in-person meeting in Lee Vining, please reach out if you do not have this invitation.

Let us know if you have any questions.

SCE's project manager: Matthew Woodhall [Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)  
Kleinschmidt's project manager: Shannon Luoma [Shannon.Luoma@KleinschmidtGroup.com](mailto:Shannon.Luoma@KleinschmidtGroup.com)

Thank you

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We provide practical solutions for renewable energy, water and environmental projects!



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**Subject:** Lee Vining Tech Report Review stakeholder meeting  
**Attachments:** [image001.jpg](#)  
[LV Tech Report Review Meeting Agenda 05072024.pdf](#)

---

Our agenda is attached!

See you Tuesday.

\*\*\*\*\*

Hello Lee Vining relicensing interested parties,

Please join the Lee Vining relicensing team for an in-person stakeholder meeting on May 14. During the meeting, we will discuss draft Technical Reports, potential Project effects, and address stakeholder questions. It will be held at the Lee Vining Community Center at 296 Mattly Ave, Lee Vining, CA 93541.

Please let me know if you have any questions.

Thank you

Carissa Shoemaker

Licensing Coordinator

<<https://www.kleinschmidtgroup.com/>>

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# Lee Vining Hydroelectric Project Relicensing

## Technical Report Review Stakeholder Meeting

May 14, 2024, 9:00 a.m. – 4:00 p.m. PDT in-person  
 Lee Vining Community Center, 296 Mattly Ave, Lee Vining, CA

### Objectives

- Review Technical Study Reports
- Address stakeholder questions
- Preview Draft License Application

Duration (minutes)	Agenda Topic/Subtopic	Lead
25	<b>Welcome, Introductions, Meeting Objectives</b>	
	<ul style="list-style-type: none"> <li>- Safety moment</li> <li>- Introductions</li> <li>- Regulatory and Process, Look Back and Look Ahead</li> <li>- Meeting objectives</li> </ul>	Matthew Woodhall Shannon Luoma
25	<b>Action Alternatives</b>	
	<ul style="list-style-type: none"> <li>- No Action               <ul style="list-style-type: none"> <li>o Continue with current license</li> </ul> </li> <li>- Proposed Action               <ul style="list-style-type: none"> <li>o Modified Project Boundary</li> <li>o Additional/modified PMEs and management plans</li> </ul> </li> </ul>	Shannon Luoma
120	<b>Aquatics and Hydrology Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Operations Modeling AQ-5</li> <li>o Stream and Reservoir Water Quality WQ-1</li> <li>o Lower LVC Channel Morphology AQ-6</li> <li>o Aquatic Invasive Plants AQ-4</li> <li>o Aquatic Habitat Mapping and Sediment Char. AQ-3</li> <li>o Stream Fish Population AQ-2</li> <li>o Reservoir Fish Population AQ-1</li> </ul> </li> </ul>	Bret Hoffman Isha Deo Heather Neff Noah Hume Matt McKechnie
60	<b>Lunch break</b>	
60	<b>Terrestrial Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Botanical TERR-1</li> <li>o Wildlife TERR-2</li> </ul> </li> </ul>	Allison Rudalevige Steve Norton

30	<b>Cultural and Tribal Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o Cultural CUL-1</li> <li>o Tribal TRI-1</li> </ul> </li> </ul>	Audry Williams
30	<b>Recreation and Land Use Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o <i>Recreation Use and Assessment REC-1</i></li> <li>o Facilities Condition Assessment REC-2</li> <li>o Aesthetic Resources LAND-2</li> <li>o Project Lands and Roads LAND-1</li> </ul> </li> </ul>	Angela Whelpley Shannon Luoma
10	<b>Schedule and Next Steps</b>	
	<ul style="list-style-type: none"> <li>- Project Schedule</li> <li>- Deadlines and Next Steps</li> </ul>	Shannon Luoma
60	<b>Final Q&amp;A</b>	
	<b>Adjourn</b>	

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**Subject:** Lee Vining 2023 Technical Report Review Meeting PPT  
**Date:** Friday, May 17, 2024 10:10:00 AM  
**Attachments:** [image001.jpg](#)  
[LV Tech Report Review Meeting PPT 05142024.pdf](#)

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Hello!

Thank you for joining us on Tuesday May 14 for the Lee Vining 2023 Technical Report Review Meeting. The day went really well and we are so glad we had the opportunity to see you all in person.

Attached is the PowerPoint presentation and below is a list of all the meeting attendees, including those that presented.

We are compiling meeting notes and will distribute those when they are completed as well.

And just a reminder that we would like your comments on the Draft Tech Reports by June 11.

Please let me know if you have any questions!

Thanks everyone

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Carissa Shoemaker  
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# Summary of Comments on Draft Terrestrial Wildlife (TERR-2) Technical Report

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Date: 5/28/2024 1:16:36 PM


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Page: 10

Author: Daniel Anderson


Before the dam was implemented, in a drought year would the ponds always go dry?

 Page: 12      Author: Daniel Anderson  
Were there previously nesting sites in the area?

---

 Page: 12      Author: Daniel Anderson  
Has the dam caused consistent increased flows in any areas? In years of excess snowmelt, is it possible the dam restricts natural water diversion, increasing flows, and reducing suitable habitat for flycatchers?

---

 Page: 12      Author: Daniel Anderson  
Is 3 cameras sufficient?

---



Relevance of predatory animals not noted. 1 DNA sample sent, but are there any other plans to consider their impact as keystone species? Is there absence or presence insignificant?

Page: 24 Author: Daniel Anderson

---

Are any other dense foliage (suitable nesting sites) areas impacted by project?

Page: 24 Author: Daniel Anderson

---

Has reduced and/or modified flow had an impact on the willow populations? Are there any areas of the site that either promote overly dense willow habitat or lack of sufficient willows completely?

What role do bighorn sheep play in the project area ecosystem? Positive, negative? Are there any water sources in the area known to have more sheep than the others?

Page: 27 Author: Daniel Anderson

---

Have trail cameras been used? Have toga lake inlets been added?

Page: 27 Author: Daniel Anderson

---

Could surveying these 12 ponds create helpful comparable data between YOTO populations within and outside of the project area? As YOTO females go to higher elevations after breeding, maybe those ponds could be a good indicator of fitness levels in the project area population.

Should stocking data and disease trend data be correlated with YOTO survival to identify more clear understanding?

 Page: 49 Author: Daniel Anderson


---

Upland suitable habitat and nesting areas should be monitored.

 Page: 49 Author: Guest 1

---

Please add which Critical Habitat Unit this project is located in. There is specific language in the Critical Habitat rule which talks about the physical and biological features within each Unit where special management considerations may be required. See page 59082 in the Federal Register Notice for Yosemite toad Critical Habitat.

 Page: 49 Author: Daniel Anderson

---

Critical habitat is determinable...not sure if this is enough info

---

How is the ecological impact of the dam affected by heavy or low snow years?

Page: 52 Author: Daniel Anderson

---

Are enough cameras in appropriate locations?

Page: 52 Author: Daniel Anderson

---


Could the dams impact on the water cycle and local biodiversity have an impact on YOTO outside of 200 ft buffer zone?





---

Is there a pattern year for YOTO breeding?

 Page: 54      Author: Daniel Anderson

---

What is the plan to increase YOTO #s after a 50% decline?

 Page: 54      Author: Daniel Anderson

---

Does project impact any YOTO prey species?



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Should surveillance be increased around snowmelt?

Should correlation between YOTO survival and chytrid fungus, roads, and grazing proximity be more closely monitored to determine the most serious threat?

---

When does the distance between disconnected YOTO patches become too far for reliable migration?

Instead of focusing on the breeding habitat, where their presence is short and identification difficult, maybe upland suitable habitat should be prioritized to provide more data.



---

Seems unlikely there are no consistent patterns in differences between occupied and unoccupied areas.

Should relationship and interaction levels between YOTO and tree frog be more closely monitored?



Overarching concerns: Lack of data from 2022-2023 field seasons may require another season of research before agreement is extended

Many suitable habitat areas are devoid of YOTO, especially compared to previously, are the dams a contributing factor?

Upland areas should be studied to compare YOTO populations to the project area.

How is YOTO impacted by stocking and disease rates?

Would improved water diversion tactics during a year of excess snowmelt provide YOTO with more suitable shallow water habitat?

Is the lack of willow catcher nesting sites related to the dam?

Should indicator species be surveyed more consistently?

Lack of historical data provided as well, at least in terms of clearly understanding whether the project is impacting species sustainability.

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**Subject:** Lee Vining Operations Model for review  
**Date:** Friday, June 7, 2024 10:16:00 AM  
**Attachments:** [image001.jpg](#)  
[LV AQ-5 Ops Model Tech Report.pdf](#)  
[LV\\_ops\\_model 060724.xlsx](#)

---

Hello!

Attached is a copy of the working Lee Vining Operations Model. Bret Hoffman has highlighted cells that can be manipulated.

I've also attached the AQ-5 Operations Model report for reference.

Notes from Bret:

As discussed, a lot of information examined during the development of the model is still present, just not used in the actual model calculations. I left it all in there and will try to note what it was for, but that is not critical. Just note that actual calcs and their bases are all from the model tab.

A suggestion for use would be to start by adjusting values in the green highlighted cells on the summary tab, see results for percentages there (I'm still adding those metrics and will send out updates as they are completed); also look at the model tab for daily actual calcs/results, and the output graphs for a few examples of additional impacts. I'm looking for your input on additional metrics and graphs that may be of value. Another graphic source of reservoir effects from adjustments is on the storage tab, which graphically shows the results of model run with reservoir levels versus historic, based on year type.

I was not able to find the release capacity from the reservoir outlets, but USGS records indicate the maximum for Saddlebag is 63 cfs when the reservoir is not spilling. Similarly, the maximum flow recorded at Glacier Creek when Tioga is below the spill capacity is 63 cfs.

Please play around with the model and have your questions, scenarios, and metrics ideas ready to discuss at our upcoming June 27 working session.

Thanks everyone!

Carissa Shoemaker  
Licensing Coordinator



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**Subject:** RE: Lee Vining Hydro 2023 Draft Technical Reports for review (#3)  
**Date:** Tuesday, June 11, 2024 5:37:49 PM  
**Attachments:** [image001.jpg](#)  
[Lee Vining Hydro Relicensing Comments from MLC.docx](#)

---

Hi all,

Please find the Mono Lake Committee's comments attached.

Thanks,

Greg

**Greg Reis, Information & Restoration Specialist, Mono Lake Committee**

**(760) 647-6386 x141 (direct/voicemail) | 415-342-6390 (mobile)**

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**[www.monolake.org](http://www.monolake.org) | [www.monobasinresearch.org](http://www.monobasinresearch.org)**

***Saving Mono Lake for future generations through  
protection, restoration, education, and science.***

***Long Live Mono Lake!***

---

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**Sent:** Tuesday, April 16, 2024 11:30 AM

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**Subject:** Lee Vining Hydro 2023 Draft Technical Reports for review (#3)

Hello Lee Vining Technical Working Group members,

The Lee Vining Hydroelectric Project Relicensing Team has drafted several Technical Reports summarizing data collected in the 2022 and 2023 studies. These draft reports are all now available for your review:

- General Wildlife Resources Survey (TERR-2) at: [LV TERR-2 Wildlife Tech Report.pdf](#)

Provided last week:

- Aquatic Habitat Mapping and Sediment Characterization (AQ-3) at: [LV AQ-3 Aquatic Habitat Sediment Tech Report.pdf](#)
- Aquatic Invasive Plants Survey (AQ-4) at: [LV AQ-4 Aquatic Invasive Plants Tech Report.pdf](#)
- Operations and Hydrology Model (AQ-5) at: [LV AQ-5 Ops Model Tech Report.pdf](#)

Lower Lee Vining Creek Channel Morphology (AQ-6) at: [LV\\_AQ-6\\_Channel\\_Morph\\_Tech\\_Report.pdf](#)

- Stream and Reservoir Water Quality Study (WQ-1) at: [LV\\_WQ-1\\_Water Quality\\_Tech\\_Report.pdf](#)
- General Botanical Resources Survey (TERR-1) at: [LV\\_TERR-1\\_Botanical\\_Tech\\_Report.pdf](#)
- Project Lands and Roads Assessment (LAND-1) at: [LV\\_LAND-1\\_Project\\_Lands\\_Tech\\_Report.pdf](#)
- Aesthetic Resources Study (LAND-2) at: [LV\\_LAND-2\\_Aesthetics\\_Tech\\_Report.pdf](#)
- Facilities Condition Assessment (REC-2) at: [LV\\_REC-2\\_Facilities\\_Condition\\_Tech\\_Report.pdf](#)

These draft reports are being distributed for a 60-day review. Comments received will be reviewed and incorporated into the Final Technical Reports as appropriate, to be filed with the Draft License Application in September. Please send us your comments and questions by June 11.

We plan to discuss these Draft Technical Reports with you on May 14 at our in-person meeting in Lee Vining, please reach out if you do not have this invitation.

Let us know if you have any questions.

SCE's project manager: Matthew Woodhall [Matthew.Woodhall@sce.com](mailto:Matthew.Woodhall@sce.com)

Kleinschmidt's project manager: Shannon Luoma [Shannon.Luoma@Kleinschmidtgroup.com](mailto:Shannon.Luoma@Kleinschmidtgroup.com)

Thank you

Carissa Shoemaker  
Licensing Coordinator



C: 907-575-0294

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*We provide practical **solutions** for renewable energy, water and environmental projects!*

From: Mono Lake Committee

Date: 6/11/24

To: Southern California Edison & Kleinschmidt

Re: Lee Vining Hydro Relicensing Comments

Thank you for the opportunity to comment on the study reports recently released; we offer the following comments on these reports. Because impacts of the hydropower project operation cross study areas and occur in areas not studied, and since we now have results that can lead toward the development of Protection, Mitigation, & Enhancement measures, we include additional relevant information and comments that go beyond the scope of any single study. These are hopefully useful in integrating the analyses.

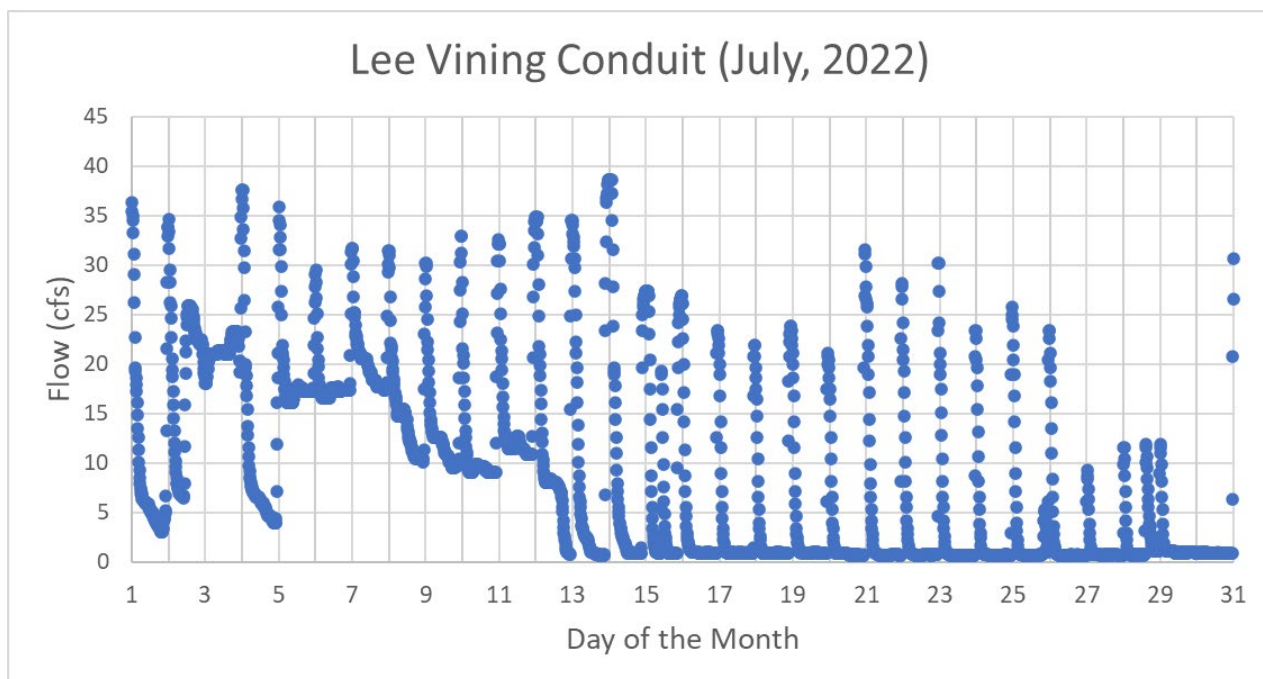
### **General comments regarding resource optimization (a.k.a. hydropeaking)**

At the 5/24/21 Aquatic Resources Technical Working Group Meeting, Southern California Edison (SCE) outlined a plan to analyze hydropeaking with “slight expansions of existing studies and integrating those studies into a framework for looking at [the] relationship between flows and resources.” We have not yet seen that integrated framework, and making piecemeal comments on each study is of limited value. Here we present our comments in an integrated manner.

Extreme fluctuations in flow since 2015 (Operations Modeling Study Table 5.4-3 shows a big increase in frequency since 2015 and Table 5.4-2 shows a big increase in magnitude) caused by SCE’s hydropower operations make it challenging to measure and implement minimum Stream Ecosystem Flows (SEFs) at the Lee Vining Creek Diversion Dam. Most of the time, the Los Angeles Department of Water & Power’s (LADWP) hourly operations dampen the flow changes and protect downstream ecological values compared to SCE’s hydropeaking patterns. LADWP is operating as best it can to divert flows in excess of the minimum SEFs, while doing everything it reasonably can to ensure the minimum flows are maintained below the diversion dam. However, there are certain configurations that LADWP employs under specific conditions that unintentionally transfer rapid flow changes to the bottomlands of either Lee Vining or Rush Creek.

Hydropeaking fluctuations and impacts cannot be consistently dampened at the Lee Vining Diversion Dam. For example, on 9/18/23, the flow at the Diversion Dam went from 45 cubic feet per second (cfs) to 120 cfs in 2 hours. Because diversions were shut off due to a nearly-full Grant Lake Reservoir, the impact of that flow change passed all the way down Lee Vining Creek to Mono Lake. Flow changes of this magnitude are not permitted under LADWP’s water rights license requirements, which are designed to maintain healthy stream ecosystem function. When diversion operations are able to protect lower Lee Vining Creek from hydropeaking fluctuations, the fluctuations are usually absorbed by Grant Lake Reservoir. However, if the reservoir is spilling or if the Five Siphons Bypass is being used to release water to Rush Creek, those fluctuations are transferred to Rush Creek. For example, during the month of July 2022, hydropeaking operations were observed in LADWP’s 15-minute flow data in the Lee Vining Conduit (Figure 1), which is the conduit that diverts water from Lee

Vining Creek to Grant Lake Reservoir. If the Lee Vining Conduit were not taking water at this time, rapid and large flow changes would have been impacting the creek downstream of the Lee Vining Diversion Dam. However, at this time, LADWP was delivering all Lee Vining Conduit flows directly to Rush Creek via the Five Siphon Bypass. During July 2022, SCE's operations, uncoordinated with LADWP's, produced unstudied yet potentially harmful flow variations in Rush Creek, another creek that is state-mandated for restoration.



*Figure 1 – 15-minute flow data for the Lee Vining Conduit, collected and shared by LADWP, during a period when this flow was augmenting Rush Creek. These fluctuations of up to 40 cfs in a few hours added to Rush Creek flow of 70 cfs on July 1 that slowly ramped down to 31 cfs on July 31. LADWP's water rights license specifies a maximum daily ramping rate of 10% for Rush Creek (this would be a limit of 7 cfs early in the month and 3 cfs at the end of the month) or 10 cfs, with a target ramping rate of 6% early in the month and 3% late in the month. For reference, LADWP's maximum permitted daily ramping rate is 20% on Lee Vining Creek—had this flow stayed in Lee Vining Creek, it would have augmented an average July flow of 31 cfs below the diversion dam, resulting in sub-daily fluctuations over 100% at times. No matter which creek the diversion dam directed this flow to, it would have exceeded these maximum ramping rates in LADWP's amended water rights licenses based on studies and recommendations found in the 2010 Synthesis Report.*

The studies conducted downstream of the Lee Vining Diversion Dam are summarized in the 2010 Synthesis Report (McBain & Trush, Inc. and Ross Taylor and Associates, 2010), and were used to inform the conditions on diversion dam operation in the Amended Licenses. SCE and the Federal Energy Regulatory Commission (FERC) can use these important studies and requirements to inform license conditions that ensure the creek is protected from SCE's operations and encourage consistent management throughout the entire length of the stream based on the best science.

Impacts from hydropeaking span multiple study areas. Geomorphology, riparian, macroinvertebrate, recreation, and fish impacts should all be looked at in an integrated way.



## **Botanical surveys and impacts**

Unfortunately, SCE chose not to extend the botanical study downstream to the Lee Vining Diversion Dam, with the exception of the Normalized Difference Vegetation Index (NDVI)--a study not conducted in the hydropeaking tidal zone and not likely to detect impacts from this type of operation. Frequent stage fluctuations in a narrow range of streambank would be expected to impact vegetation establishment and growth in that band, especially when seeds are deposited. During post-snowmelt peak seed dispersal, a steady drawdown would be a less impactful mode of operation. Understanding whether this is a problem would be helpful in determining if license conditions are needed to modify the seasonality, timing, and extent of the stage fluctuations.

Botanical Technical Study comments: It is concerning that despite California Department of Fish & Wildlife, US Forest Service, and California State Water Resources Control Board (SWRCB) consultations, Population 2 of Black Cottonwoods was unintentionally removed during large scale vegetation removal in fall 2022. The purpose was for wildfire risk reduction, however 8 healthy cottonwood saplings more than 200 feet away from the nearest structure would not appear to be a high wildfire risk, and the lack of care in this clearing indicates there may be a need for additional license conditions that protect important riparian species.

## **Macroinvertebrate impacts**

Kennedy et al. 2016 documents how hydropeaking can prevent viable populations of many aquatic insects from inhabiting rivers. Hydropeaking can eliminate some groups of aquatic insects, such as mayflies, caddisflies, and stoneflies. In contrast, the few insects that lay eggs in open water, such as blackflies (*Simulium arcticum*), are mostly unaffected by hydropeaking. However, the results also suggest that hydropeaking practices could be modified to help alleviate some of these negative impacts.

The authors found that rivers with greater variation in the volumes of discharged water were also home to fewer types of aquatic invertebrates. However, their model does indicate that a diverse assemblage of aquatic insects can still exist in a managed river, as long as the size of the artificial tides created by hydropeaking is not too large. Invertebrates play a crucial role in providing food for fish. In order to avoid negative impacts on stream invertebrates, the goal should be to create a flow regime that mimics the characteristics of the natural hydrograph. Reducing hydropeaking during crucial egg-laying periods for aquatic insects could benefit river communities.

There does not appear to be a study report addressing these concerns.

## **Fish impacts and aquatic habitat mapping**

The November-March SEF below the Lee Vining Diversion Dam is a constant flow rate (beginning in October in most years) and is designed to provide suitable holding habitat and to prevent “undesirable operational fluctuations caused by SCE’s upstream hydropower operations.” (McBain & Trush et al., 2010, page 42). The AQ-5 Operations Modeling Study found fluctuations in velocity of

up to 3 feet per second (fps; going from less than 2 fps to nearly 5 fps in Figure 5.5-5), and stage fluctuations of nearly 1.5 feet (Figure 5.5-4). Scruton et al. 2005 found “In winter, fish remained relatively sedentary in comparison with the summer foraging period, and this behavior may increase the likelihood for dewatering, stranding, and freezing. A secondary concern with hydropeaking regimes is the energetic cost to fish of moving to find suitable habitats, and during summer this cost could affect stored energy reserves, which could, in turn, affect overwinter survival.”

Seasonal implementation of hydropeaking raises other concerns. “Rapidly varying flows soon after emergence can either strand or flush newly emerged fry because they are relatively poor swimmers and have difficulty maintaining positions along the channel margins.” (Shepard et al. 2009)

Unfortunately, the aquatic habitat mapping study (AQ-3) does not focus on relevant metrics, such as fish habitat at different flow rates, and the effects on fish of rapidly varying those flow rates during sensitive seasons.

### **Geomorphic impacts**

In addition to our comments on the geomorphology study that we emailed on 4/27/24, we have the following comments.

- Recreationists have observed log jams forming in Lee Vining Creek due to hydropeaking. This should be investigated. Stage change behind these jams and other obstructions could be significantly higher than where geomorphology was studied, resulting in greater impacts than modeled.
- Freeze-thaw events, a natural way stage fluctuates in winter, should be compared to hydropeaking stage changes in order to assess how the frequency and magnitude of stage changes exceeds the natural occurrence.
- The study did not detect geomorphic change from the less than 2-foot (Operations Model Study Figure 5.5-5) stage change from hydropeaking operations. We recommend separate analysis of the cross-section data focused on stages that occur during typical hydropeaking resource optimization operations and the particle sizes most susceptible to mobilization. These frequent repeated fluctuations in a similar stage range could be impacting the morphology, benthic macroinvertebrate community, vegetation community, and fish population in these ranges.

### **Operations Modeling Study Draft Technical Report AQ-5**

We have not yet fully reviewed the operations model, and we look forward to participating in the 6/27/24 meeting focused on this model. Upon review of the study report, we have the following initial comments:

- Figure 5.2-1 appears to be missing data for October 2017-March 2018.
- Figure 5.5-3 has a y-axis that spans 100 feet, making it difficult to see the stage fluctuations. It should be split into 3 or 4 figures with a y-axis range of 5-10 feet.

## **Aquatic Invasive Plants Tech Report (AQ-4)**

- No didymo was detected in any creeks last year despite its previous detection. Its detection wouldn't be expected in an extreme-wet year like 2023, and SCE should conduct the survey again this year and in the next dry year.

## **Other**

- Recreation and public safety concerns of hydropeaking should be addressed.
- Local residents have observed American Dippers (*Cinclus mexicanus*) losing nests as a result of hydropeaking events. Seasonal timing and magnitude of hydropeaking during nesting season has the potential to continue to impact American Dippers.

## **Initial Protection, Mitigation, and Enhancement comments**

- SCE should publicly share real-time data for reservoir storage and flows, including the hourly and telemetry requirements found [here](https://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/water_measurement.html#who-needs-to)([https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/diversion\\_use/water\\_measurement.html#who-needs-to](https://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/water_measurement.html#who-needs-to)). Reporting these data to SWRCB appears to be required by state law, and these data are also essential for LADWP reporting and operations downstream. SCE's FERC license should have provisions that do not conflict with SWRCB requirements and where possible facilitate LADWP compliance with its water rights licenses. The California Department of Water Resources is seeking to add daily storage information from this project to the California Data Exchange Center, and as with other projects, can add a time lag that has addressed any market manipulation concerns at other projects. This is important for runoff tracking, downstream LADWP operations, restoration, and monitoring license requirements, as well as public recreation.
- SCE should share runoff forecast and planned monthly operations in April, as well as any updates or changes to those planned operations during the runoff year. This is important for downstream LADWP operations, restoration, and monitoring, as well as public recreation.
- SCE should coordinate operations with LADWP when requested. Downstream concerns are relevant where SCE's operations impact SWRCB water rights license requirements, which includes state-mandated restoration of Lee Vining Creek. There are times when a lack of coordination impairs the Lee Vining Creek restoration effort.
- Peak flow increases have been identified as important for Lee Vining Creek restoration, and we submitted a study plan request that was denied by SCE. In the absence of a new study, information is still available from the studies from downstream of the Diversion Dam, including the 2010 Synthesis Report, which included this recommendation. SCE operations should be modified where feasible to facilitate an increase in the frequency of peak flow magnitudes as outlined in the Synthesis Report and facilitate the restoration and maintenance of the stream ecosystem downstream of the diversion dam. Slightly modifying operations to increase peak flow magnitude when Tioga Lake Reservoir will fill would not impact hydro generation in many years and could have minimal impacts on generation in many more years. For example, this chart shows how adding 40 cfs from Tioga Lake to the peak flow could achieve the 2010 Synthesis Report goals for peak flow magnitude in many years.

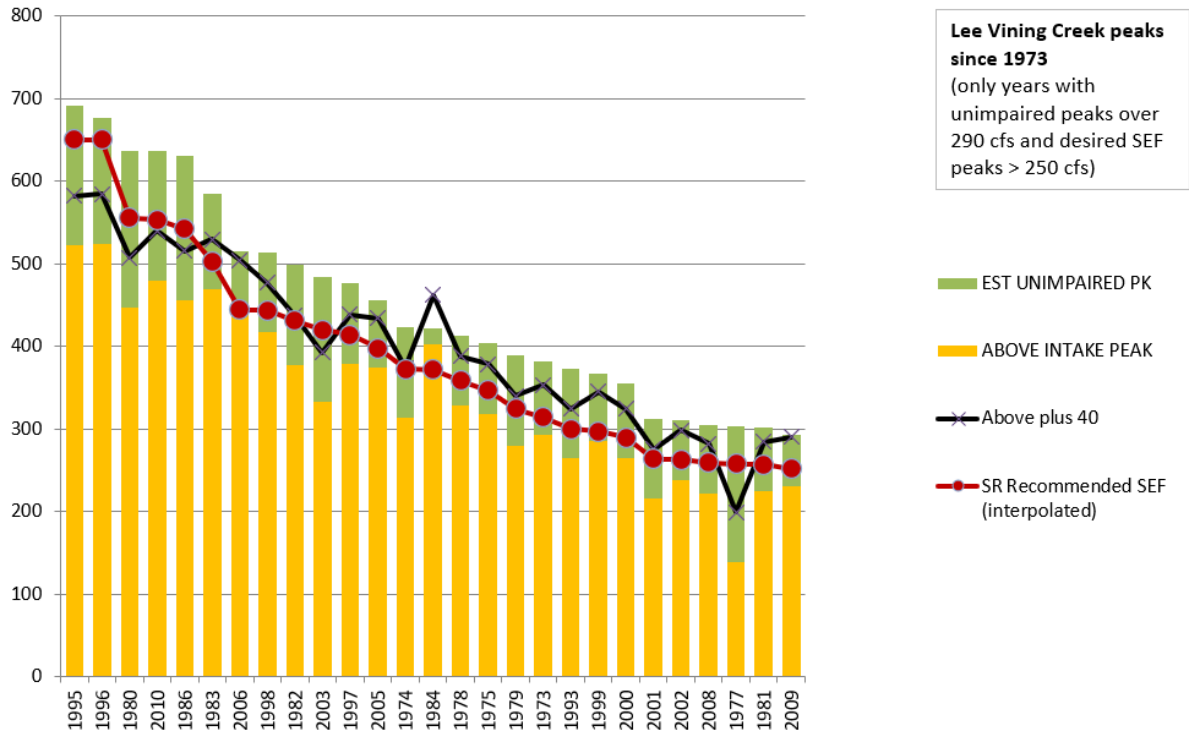


Figure 2 – A 2010 Mono Lake Committee analysis showed that adding 40 cfs from Tioga Lake Reservoir during the peak flow would result in exceeding Synthesis Report minimum goals for peak flow magnitude (when the black line exceeds the red line; in cfs at the diversion dam on the y-axis) in 20 out of 28 years, with improved performance toward the goal in the other years. The operations model (described in AQ-5) should be used to determine the feasibility and trade-offs of this operation.

Thank you for the opportunity to comment. Please contact me if you have any questions or would like to discuss these comments.

Sincerely,

Greg Reis  
Information and Restoration Specialist  
[Greg@monolake.org](mailto:Greg@monolake.org)

## References

Kennedy, Theodore & Muehlbauer, Jeffrey & Yackulic, Charles & Lytle, David & Miller, Scott & Dibble, Kimberly & Kortenhoeven, Eric & Metcalfe, Anya & Baxter, Colden. (2016). Flow Management for Hydropower Extirpates Aquatic Insects, Undermining River Food Webs. *BioScience*. 66. 10.1093/biosci/biw059.

McBain & 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.

Scruton, D. A., C. J. Pennell, M. J. Robertson, L. M. N. Ollerhead, K. D. Clarke, K. Alfredsen, A. Harby, and R. S. McKinley. 2005. Seasonal response of juvenile Atlantic salmon to experimental hydropeaking power generation in Newfoundland, Canada. *North American Journal of Fisheries Management* 25:964-974. *Note: Salmonids have similarities that make this study relevant, as such it was cited with regards to hydropeaking in Shepard, et al. 2009.*

Shepard, Brad, Ross Taylor, Ken Knudson, Chris Hunter. May 2009. Effects of Flow, Reservoir Storage, and Water Temperatures on Trout in Lower Rush and Lee Vining Creeks, Mono County, California

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**Subject:** State Water Resources Control Board Comments on Draft Technical Reports of 2022-2023 Survey Finding for the Lee Vining Hydroelectric Project  
**Date:** Tuesday, June 11, 2024 4:12:49 PM  
**Attachments:** [SWRCB Coments Study Results 2024.pdf](#)

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Dear Mr. Allen,

On April 9 and April 12, 2024, Southern California Edison Company distributed 4 and 6 draft technical reports, respectively, that document the 2022-2023 survey findings for the Lee Vining Hydroelectric Project for stakeholder comment and review. Please see the attached letter for the State Water Resources Control Board's comments.

Thank you,

Bryan Muro  
Water Resources Control Engineer  
Water Quality Certification Program  
Division of Water Rights  
State Water Resources Control Board  
Phone: 916-327-8702  
E-mail: [Bryan.Muro@Waterboards.ca.gov](mailto:Bryan.Muro@Waterboards.ca.gov)



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## State Water Resources Control Board

June 11, 2024

Mr. Wayne Allen  
Southern California Edison Company  
1515 Walnut Grove Avenue  
Rosemead, CA 91770  
Sent via email: [Wayne.Allen@sce.com](mailto:Wayne.Allen@sce.com)

**Lee Vining Hydroelectric Project  
Federal Energy Regulatory Commission Project No. 1388  
Mono County  
Lee Vining Creek, Glacier Creek, Ellery Lake, Tioga Lake, and Saddlebag Lake**

### **COMMENTS ON THE TECHNICAL REPORTS OF 2022-2023 SURVEY FINDINGS FOR THE LEE VINING HYDROELECTRIC PROJECT**

Dear Mr. Wayne Allen:

Southern California Edison (SCE) owns and operates the Lee Vining Hydroelectric Project (Project), also referred to as Federal Energy Regulatory Commission (FERC) Project No. 1388. As part of Project relicensing, on April 9, 2024, SCE distributed four draft technical reports of the 2022 – 2023 survey findings to the stakeholders for comment and review. On April 12, 2024, SCE distributed the remaining six draft technical reports of the 2022 – 2023 survey findings. The draft technical reports included the following studies: (1) Stream and Reservoir Water Quality; (2) Lower Lee Vining Creek Channel Morphology, (3) Facilities Condition Assessment; (4) Aesthetic Resources; (5) Aquatic Invasive Plants Survey; (6) Project Lands and Roads Assessment; (7) General Wildlife Resources Survey; (8) General Botanical Resources; (9) Aquatic Habitat Mapping and Sediment Characterization; and (10) Operations and Hydrology Model. SCE currently operates the Project under a 30-year license issued by FERC which will expire in 2027.<sup>1</sup>

On May 14, 2024, SCE held an in-person meeting at the Lee Vining Community Center in Lee Vining, to present findings to interested stakeholders and answer any questions.

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<sup>1</sup> FERC issued the original 30-year license on February 4, 1997. The license will expire on January 31, 2027.

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

SCE's collaboration in conducting and refining environmental studies over the past two study seasons has been invaluable in identifying potential Project impacts. State Water Resources Control Board staff has reviewed the draft technical reports and hereby submits the enclosed comments in Attachment A: Comments on Lee Vining Hydroelectric Project 2022 – 2023 Draft Technical Reports.

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

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

Sincerely,



Bryan Muro  
Project Manager  
Water Quality Certification Program  
Division of Water Rights

Attachment A: Comments on Lee Vining Hydroelectric Project 2022 – 2023 Draft  
Technical Reports.



cc: Ms. Debbie-Ann Reese, Acting Secretary  
Federal Energy Regulatory Commission  
**Via e-filing to FERC Project Docket**

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E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

ATTACHMENT A: COMMENTS ON LEE VINING HYDROELECTRIC PROJECT 2022 –  
2023 DRAFT TECHNICAL REPORTS

State Water Resources Control Board (State Water Board) staff are providing the following comments on Southern California Edison Company's (SCE) Lee Vining Hydroelectric Project (Project) draft technical reports.

**1. WQ-1: Stream and Reservoir Water Quality**

- Saddlebag and Tioga lakes had minimum summer 2023 pH values of 5.5 and 5.1, respectively. pH in the hypolimnia of both Saddlebag and Tioga lakes was similarly low in summer 2022, indicating an ongoing condition which did not respond strongly to water year type.

The Water Quality Control Plan for the Lahontan Region (Basin Plan) pH objective states that: "In fresh waters with designated beneficial uses of COLD<sup>2</sup> or WARM<sup>3</sup>, changes in normal ambient pH levels shall not exceed 0.5 pH units." Lee Vining Creek upstream of the Los Angeles Department of Water and Power (LADWP) diversion includes COLD as a beneficial use. Future discussions will help determine how protection, mitigation, and enhancement (PM&E) measures could be applied, to address low pH values.

Dissolved oxygen concentrations collected near the bottom of Saddlebag and Tioga lakes reached a minimum of 3.4 milligrams per liter (mg/L) and 0 mg/L in 2023, respectively. Dissolved oxygen was similarly low in summer 2022, indicating an ongoing condition which was not eliminated in a wet water year.

The Basin Plan objective for dissolved oxygen states: "The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent saturation." The Basin Plan further states for waters with beneficial uses of COLD with SPWN<sup>4</sup> (such as Lee Vining Creek), the following additional criteria are applicable: (1) a 7 Day Mean concentration of 9.5 mg/L, and (2) a 1 Day Minimum of 8.0 mg/L.

While low dissolved oxygen in Project reservoirs is likely related to decomposition in the hypolimnion and sediments, the extent to which

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<sup>2</sup> Cold Freshwater Habitat is defined as beneficial uses of waters that support cold water ecosystems, including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

<sup>3</sup> Warm Freshwater Habitat is defined as beneficial uses of water that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

<sup>4</sup> Spawning, Reproduction, and Development is defined as beneficial uses of water that support high quality aquatic habitat necessary for reproduction and early development of fish and wildlife.

Project operations promote or create these conditions at Tioga and Saddlebag lakes should be analyzed; particularly, maintaining Project reservoirs at maximum depth throughout the summer stratification period.

In addition, the Project does not appear to have a moderate level of algal productivity as implied in the response provided in WQ-1 to the State Water Board's 2023 comment letter. Water quality data collected in 2022 and 2023 as part of WQ-1 demonstrate that Project reservoirs are likely ultra-oligotrophic, as indicated by total phosphorus concentrations which were below the minimum detection limit at all sampling events.

As discussed below in this comment letter, mercury concentrations in fish in both Saddlebag and Tioga lakes are a concern, and understanding how Project operations may promote anoxia in reservoir sediments is critical to determining Project effects on beneficial uses. Low pH is also likely related to decomposition, but as with dissolved oxygen, the extent to which Project operations impact pH should be analyzed.

- Fecal coliform bacteria data collected in 2023 were within the Basin Plan objectives, however, data collected in 2022 ranged from 49 to 540 most probable number per 100 milliliters (MPN/100 mL) on a single sampling date. The Basin Plan objective for fecal coliform states that "The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100mL." Although sampling from 2022 may have been an isolated incident, it is important to understand: (1) under what conditions caused the exceedance; and (2) how frequently exceedances occur.

State Water Board staff look forward to continued discussion with SCE regarding the fecal bacteria data collected to determine appropriate PM&E measures associated with the Project moving forward.

- Turbidity sampling data collected within Lee Vining Creek Downstream of Poole Powerhouse (Site LVC-DSPP1) from May through July 2023 ranged from 0 to 50 Nephelometric Turbidity Unit (NTU). Data collected in Lee Vining Creek near Lower Lee Vining Campground (Site LVC-DSPP2) from May through July 2023 ranged from 0 to 150 NTU.

The Basin Plan objective for turbidity states "Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent." From June through August of 2022, turbidity data shows that hydro-resource optimization events caused distinct, significant increases in turbidity. Relative to periods of stable low turbidity during minimum flows, clearly defined hydro-resource optimization events in

summer 2022 caused turbidity to increase roughly 100% and 133%, 0.2 mile and 4.3 miles downstream of Poole Powerhouse, respectively.

While equipment malfunctions and fouling can possibly skew data, there is still a concern for the correlation between peak flow rates and increased turbidity. State Water Board staff look forward to continued discussion with SCE to determine appropriate PM&E measures and prevent future exceedances.

- Mercury in fish tissue sampling data shows the mean total Mercury for fish in Saddlebag Lake and Tioga Lake is 0.121 and 0.056 micrograms per gram wet weight ( $\mu\text{g/g ww}$ ), respectively. These data are within the USEPA 304(a) recommended criterion standards for concentrations of methylmercury in fish tissue of 0.2 mg/kg<sup>5</sup>. However, on May 2, 2017, the State Water Board adopted Resolution 2017-0027, which approved “Final Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California - Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions.” Resolution 2017-0027 established new beneficial use definitions for tribal beneficial uses: Tribal Tradition and Culture (CUL), Tribal Subsistence Fishing (T-SUB), and Subsistence Fishing (SUB). Five new Mercury water quality objectives were established in the resolution for tribal beneficial uses.

The Lahontan Regional Water Resources Control Board is proposing to amend the Water Quality Control Plan for the Lahontan Region (Basin Plan) to designate Tribal Beneficial Uses to waterbodies in the Mono Basin, including Tioga and Saddlebag lakes. If the Basin Plan is amended, Saddlebag and Tioga lake mercury concentrations might exceed tribal beneficial use objectives.

## 2. AQ-5: Operations Modeling Study

- The intraday flow timeseries data presented in Figure 5.2-1 and used throughout Section 5.0 *Intraday and Hydraulic Model Description* should be provided to stakeholders for use and analysis.
- Please clarify whether any hydro-resource optimization events occurred in 2023. Information and timing of events specific to 2023 is relevant to interpreting turbidity results presented in WQ-1 Stream and Reservoir Water Quality.
- Section 5.3 *Model Calibration* states that “...the model identified 931 hydro-resource optimization events, 82 of which directly corresponded with a generation peak event.” To better understand the model output,

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<sup>5</sup> 1 mg/kg = 1  $\mu\text{g/g}$

please explain whether the additional 18% of events detected by the model are false positives and thus a potential overestimation of hydro-resource optimization events, or whether the additional detected events may have been caused by triggers other than price peaking, as suggested by Figure 5.3-3. If 18% of events not associated with generation do represent an overestimation, it would be informative to specify whether there is a seasonal or annual trend in those events.

- In Section 5.5.2 *Hydraulic Model Sample Results*, it does not appear that the March hydro-resource optimization events selected for analysis are representative of the range of flows that often occur during the events. Hydro-resource optimization events in summer 2022 frequently reached flows of 100 to 110 cubic feet per second (cfs) and maintained that maximum flow for several hours. The March events selected for hydraulic analysis reach a very brief peak of 81 cfs, but are primarily stable at 58 cfs. The water depth and flow velocity modeling must be conducted at 100 to 110 cfs to accurately represent potential changes downstream.
- The downstream-most cross section used for water depth and velocity analysis is located only 0.75 mile downstream of Poole Powerhouse, but the reach of Lee Vining Creek impacted by hydro-resource optimization extends an additional roughly 4.5 miles and passes multiple designated campgrounds. To understand the attenuation and timing of hydro-resource optimization events as flow moves downstream through the reach impacted by rapid flow fluctuations, the hydraulic modeling should be extended to the cross sections collected for sites LLV-G2 and LLV-G3 as specified in AQ-6 Lower Lee Vining Creek Channel Morphology.
- As currently presented in figures 5.5-4 and 5.5-5, during hydro-resource optimization events maximum water depth and velocity increased by an approximate peak of 1.5 feet and 2.5 feet per second, respectively. At maximum event flows of 110 cfs, depth and velocity are expected to increase even more drastically. These changes occur very rapidly and often take place in the late afternoon or early evening, and as such may present a safety concern to recreationists downstream, particularly near high-use recreation zones such as campgrounds.

### **3. AQ-4: Aquatic and Invasive Plants**

- Surveys conducted along Project reaches in 2023 found no evidence of *Didymosphenia geminata* (Didymo). During the May 14, 2024 meeting, stakeholders stressed Didymo was present along certain parts of the Project reaches in 2022. Didymo may have been scoured and washed further downstream due to elevated flow rates through the reach.

Didymo is historically documented in Lee Vining Creek. Once Didymo enters a system, it is almost impossible to eradicate. SCE should consider posting signs to inform visitors of its presence and remind recreationalists to check and clean their equipment to prevent the Didymo from spreading. The National Park Service provides guidelines to reduce the impact of Didymo. Link below:

[Invasive Species: Didymo or "Rock Snot" - Yosemite National Park \(U.S. National Park Service\) \(nps.gov\)](https://www.nps.gov/learn/education/invasive-species/didymo-or-rock-snot-yosemite-national-park)

#### **4. AQ-6: Lower Lee Vining Creek Channel Morphology, and AQ-3: Aquatic Habitat Mapping and Sediment Characterization**

- In AQ-6, Section 3.2.4 *Bed Mobility and Sediment Transport* states that “Peak discharge for the 2023 water year was calculated by combining flows measured at United States Geological Survey (USGS) Gage #10287770 (SCE gage 353) and USGS Gage #10287762 (SCE gage 363). However, as indicated in AQ-5 Operations Modeling Study, there is a significant unregulated inflow into Lee Vining Creek downstream of Ellery Lake. Particularly in wet years, the Warren Fork and other ungauged tributaries provide substantial flow in lower Lee Vining Creek. It is likely that the peak discharge used in the HEC-RAS model significantly underestimates 2023 peak flow. Figure 3.2-1 may also reflect this discrepancy, as the peak flow at the LADWP gage is roughly 100 cfs greater than that labeled “Total SCE”. This may also be reflected in figures 4.1-4, 4.2-4, and 4.3-4, which all indicate that sediment larger than the predicted critical  $D_{50}$  was mobilized. To better interpret the results of AQ-6, it would be helpful to (1) provide discussion or estimated quantification of the underestimation of peak flow, or (2) work with the model developed for AQ-5 to incorporate a modeled peak flow from the unregulated tributaries downstream of Ellery Lake.

Given that bed particle size distribution field measurements were conducted in a dry year (2022), the subsequent wet year (2023) results from tracer rocks and modeling indicate that many smaller sediments measured in 2022 may have been mobilized during 2023 peak flows. Notably, AQ-3 Table 4.2-1 indicates that spawning gravels in lower Lee Vining Creek downstream of Poole Powerhouse were of lower quality, and less abundant than in Glacier Creek below Tioga Dam and upper Lee Vining Creek downstream of Slate Creek. Lower Lee Vining Creek also had no spawning gravel with an “excellent” quality score, although “excellent” was the most common score in upstream reaches where gravels were present. Discussion of Project impacts on sediment supply, accumulation, and mobilization, particularly of gravels relevant to fish spawning habitat elaborating on the results of AQ-3, should be included in the Draft License Application.

## 5. TERR-2: General Wildlife Resources Survey

- Yosemite toads (*Anaxyrus canorus*) are currently listed as threatened under the federal Endangered Species Act and designated as a Species of Special Concern by the California Department of Fish and Wildlife. Visual encounter and acoustic recording survey methods only encountered confirmed Yosemite toads in the South of Saddlebag Lake survey area. The study states Yosemite toads are known to interbreed with the Western toad (*Anaxyrus boreas*) with the closest known location being approximately 4.7 miles north of Saddlebag Lake. DNA samples collected in 2023 are currently being processed and compared against a hybrid genetic panel developed by the El Dorado National Forest and are not yet ready for review.

The results of the DNA sampling conducted in 2023 are vital in helping determine if Project operations affect critical habitat for the Yosemite toad. DNA sampling will also determine the frequency of interbreeding between the Yosemite and Western toads. State Water Board staff look forward to seeing the DNA sampling results to better understand potential Project effects.

If the populations of toad located in Upper Lee Vining Creek and adjacent to Tioga Lake are determined to be *Anaxyrus boreas*, the draft license application should include discussion regarding the extent to which Project operations (i.e., flows within Lee Vining Creek and Tioga Lake levels) support habitat for these populations. Additional data collection may be required to understand whether Yosemite toad populations in these two areas are stable, or how they may respond to Project operations under various water year types.

# Summary of Comments on Draft Terrestrial Wildlife (TERR-2) Technical Report

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Page: 47

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 Author: cmellison      Subject: Sticky Note      Date: 5/7/2024 5:21:19 PM

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What about a description of lakeshore habitat from all 3 reservoirs within the project area.


 Author: cmellison      Subject: Sticky Note      Date: 5/7/2024 5:21:49 PM

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Which reservoir are you referring to here?




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 Author: cmellison    Subject: Sticky Note    Date: 5/17/2024 2:03:31 PM

Please add which Critical Habitat Unit this project is located in (Tuolumne Meadows/Cathedral). There is specific language in the Critical Habitat rule which talks about the physical and biological features within each Unit where special management considerations may be required. See page 59082 in the Federal Register Notice for Yosemite toad Critical Habitat.

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 Author: cmellison    Subject: Sticky Note    Date: 5/17/2024 3:14:15 PM  
Ensure this PCE is addressed in your BA given the nature of the project.

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 Author: cmellison    Subject: Sticky Note    Date: 5/8/2024 3:41:47 PM


Dodge, C.M., C. Brown, A.J. Lind, R.A. Knapp, L.R. Wilkinson, and V.T. Vredenburg. 2024. Historical and contemporary impacts of an invasive fungal pathogen on the Yosemite toad. *Biological Conservation* 291:110504.

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 Author: cmellison    Subject: Sticky Note    Date: 5/17/2024 3:35:34 PM


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The average is 68", in 2023 the snow depth was 64.5" yet it was 211% of average. Please explain.

 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 4:17:07 PM

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To aid in identifying which areas are being described in the text, consider using the reference numbers (1-50) shown in Figures A-4 through A-5 to better help the reader. For example you could reference Northern Saddlebag Lake, Figure 4-1, pool numbers 1-9


 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 4:25:04 PM

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Add the pool numbers to aid the reader.


# Page: 68

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 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 4:43:47 PM

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Were these two ponds filled with water in 2023? Reference Figure in Appendix A.

 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 2:56:55 PM

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Did CDFW write a report? If they did, consider adding as an appendix.

---

 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 4:17:25 PM

To aid in identifying which areas are being described in the text, consider using the reference numbers (1-50) shown in Figures A-4 through A-5 to better help the reader. For example you could reference Upper Lee Vining Creek, acoustic recorder locations as Figure 4-2, pool number 16

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 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 4:38:02 PM

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Consider adding a Figure which depicts the critical habitat polygon compared to the action area.



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 Author: cmellison    Subject: Sticky Note    Date: 5/21/2024 3:14:26 PM

At the technical team meeting in Lee Vining it was conveyed that this breeding area is not within the FERC boundary yet this Figure clearly shows the boundary bisecting the breeding habitat. Please explain the discrepancy.

**From:** [Sill, Nathan - FS, CA](#)  
**To:** [Carissa Shoemaker](#); [Irons, Sheila - FS, CA](#)  
**Cc:** [Shannon Luoma](#)  
**Subject:** RE: [External Email]Lee Vining tech report comments  
**Date:** Wednesday, June 12, 2024 2:50:52 PM  
**Attachments:** [image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)  
[image008.jpg](#)

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Hi Carissa, I was able to skim through the WL report, and the only thing that stood out to me was the assumptions about egg masses not belonging to Yosemite toads if those observations weren't tied to positive auditory observations. I think we would assume the opposite, just because the acoustic monitors didn't capture a call doesn't mean those egg masses aren't Yosemite toads. My guess is the USFWS would want us to approach it this way. Other than that, no substantive comments. I think Andrew may have had a similar comment as well.

Thanks.



**Nathan Sill**  
**Resources/Planning Staff**  
**Officer**  
**Forest Service**  
**Inyo National Forest**  
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people**

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**From:** Carissa Shoemaker <Carissa.Shoemaker@KleinschmidtGroup.com>  
**Sent:** Wednesday, June 12, 2024 1:58 PM  
**To:** Sill, Nathan - FS, CA <nathan.sill@usda.gov>; Irons, Sheila - FS, CA <sheila.irons@usda.gov>  
**Cc:** Shannon Luoma <Shannon.Luoma@Kleinschmidtgroup.com>  
**Subject:** [External Email]Lee Vining tech report comments

[External Email]

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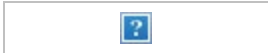
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Hello Nathan and Sheila,

I just wanted to check in and see if we should be expecting comments from USFS on the Lee Vining Tech Reports. You can email them to me directly or upload to this folder if the file is large: [LV Tech Report Comments June 2024](#)

Thank you!

Carissa Shoemaker  
Licensing Coordinator



C: 907-575-0294

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# Lee Vining Hydroelectric Project Relicensing

## Technical Report Review Stakeholder Meeting

May 14, 2024, 9:00 a.m. – 4:00 p.m. PDT in-person  
 Lee Vining Community Center, 296 Mattly Ave, Lee Vining, CA

### Objectives

- Review Technical Study Reports
- Address stakeholder questions
- Preview Draft License Application

Duration (minutes)	Agenda Topic/Subtopic	Lead
25	<b>Welcome, Introductions, Meeting Objectives</b>	
	<ul style="list-style-type: none"> <li>- Safety moment</li> <li>- Introductions</li> <li>- Regulatory and Process, Look Back and Look Ahead</li> <li>- Meeting objectives</li> </ul>	Matthew Woodhall Shannon Luoma
25	<b>Action Alternatives</b>	
	<ul style="list-style-type: none"> <li>- No Action               <ul style="list-style-type: none"> <li>o Continue with current license</li> </ul> </li> <li>- Proposed Action               <ul style="list-style-type: none"> <li>o Modified Project Boundary</li> <li>o Additional/modified PMEs and management plans</li> </ul> </li> </ul>	Shannon Luoma
120	<b>Aquatics and Hydrology Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Operations Modeling AQ-5</li> <li>o Stream and Reservoir Water Quality WQ-1</li> <li>o Lower LVC Channel Morphology AQ-6</li> <li>o Aquatic Invasive Plants AQ-4</li> <li>o Aquatic Habitat Mapping and Sediment Char. AQ-3</li> <li>o Stream Fish Population AQ-2</li> <li>o Reservoir Fish Population AQ-1</li> </ul> </li> </ul>	Bret Hoffman Isha Deo Heather Neff Noah Hume Matt McKechnie
60	<b>Lunch break</b>	
60	<b>Terrestrial Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects               <ul style="list-style-type: none"> <li>o Botanical TERR-1</li> <li>o Wildlife TERR-2</li> </ul> </li> </ul>	Allison Rudalevige Steve Norton

30	<b>Cultural and Tribal Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o Cultural CUL-1</li> <li>o Tribal TRI-1</li> </ul> </li> </ul>	Audry Williams
30	<b>Recreation and Land Use Studies</b>	
	<ul style="list-style-type: none"> <li>- Studies overview and Potential Project Effects <ul style="list-style-type: none"> <li>o <i>Recreation Use and Assessment REC-1</i></li> <li>o Facilities Condition Assessment REC-2</li> <li>o Aesthetic Resources LAND-2</li> <li>o Project Lands and Roads LAND-1</li> </ul> </li> </ul>	Angela Whelpley Shannon Luoma
10	<b>Schedule and Next Steps</b>	
	<ul style="list-style-type: none"> <li>- Project Schedule</li> <li>- Deadlines and Next Steps</li> </ul>	Shannon Luoma
60	<b>Final Q&amp;A</b>	
	<b>Adjourn</b>	

**From:** [Carissa Shoemaker](#)  
**To:** ["Adam.Perez@ladwp.com"](#); [Shannon Luoma](#); ["Alisa.Ellsworth@wildlife.ca.gov"](#); [Finlay Anderson](#); ["andrea@accessfund.org"](#); [Kelly Larimer](#); ["anne\\_mankowski@fws.gov"](#); [Matthew Woodhall](#); ["ashley.blythehaverstock@usda.gov"](#); [Martin Ostendorf](#); ["audry.williams@sce.com"](#); [Andrew.Lyons-gould@usda.gov](#); ["beth.lawson@wildlife.ca.gov"](#); [Adam.Cohen@Waterboards.ca.gov](#); ["carl@fortindependence.com"](#); [adam.barnett@usda.gov](#); ["chair@bridgeportindiancolony.com"](#); [greg@monolake.org](#); ["char54lange@gmail.com"](#); [James.Erdman@wildlife.ca.gov](#); ["cheyenne.stone@bigpinepaiute.org"](#); [bartshe@monolake.org](#); ["claymiwumati@gmail.com"](#); [Bryant.Luu@wildlife.ca.gov](#); ["clerkrecorder@mono.ca.gov"](#); [Chad Mellison@fws.gov](#); ["cmcdonald@nfr-nsn.gov"](#); [dannon.dirgo@usda.gov](#); ["courtney.rowe@usda.gov"](#); [Mary.Meagher@usda.gov](#); ["cshutes@calsport.org"](#); [robbie@monolake.org](#); ["culture@bridgeportindiancolony.com"](#); [sheila.irons@usda.gov](#); ["curator@monobasinhistory.org"](#); [tristan.leong@usda.gov](#); ["d.gutierrez@bigpinepaiute.org"](#); [Bryan.Muro@Waterboards.ca.gov](#); ["darren.delgado@bishoppaiute.org"](#); [nathan.sill@usda.gov](#); ["dtonenna@gmail.com"](#); [Graham.Meese@wildlife.ca.gov](#); ["easternsierraartist@gmail.com"](#); ["eric.tillemans@ladwp.com"](#); ["erik@accessfund.org"](#); ["events@mammothmuseum.org"](#); ["jacconkeeper22@gmail.com"](#); ["geoff@monolake.org"](#); ["heather.brashear@Wildlife.ca.gov"](#); ["Jacqueline.beidl@usda.gov"](#); ["Jameisha.Washington@usda.gov"](#); ["jennifer.watts@waterboards.ca.gov"](#); ["jon@mewuk.com"](#); ["justin\\_barrett@fws.gov"](#); ["kary.schlick@usda.gov"](#); ["katie@accessfund.org"](#); ["kayla@friendsoftheinyo.org"](#); ["kspears@mono.ca.gov"](#); ["kutzanuumu@yahoo.com"](#); ["kyle@mewuk.com"](#); ["lilian\\_jonas@contractor.nps.gov"](#); ["lori.gillem@LADWP.com"](#); ["lucy\\_basket4@yahoo.com"](#); ["lundylakeresort@gmail.com"](#); ["meryl.picard@bishoppaiute.org"](#); ["michael.tovar@wildlife.ca.gov"](#); ["michael.wiese@usda.gov"](#); ["monique.sanchez@usda.gov"](#); ["nayanake@comcast.net"](#); ["Nick.Buckmaster@wildlife.ca.gov"](#); ["parker.thaler@Waterboards.ca.gov"](#); ["Patricia.Moyer@Wildlife.ca.gov"](#); ["patsiata@yahoo.com"](#); ["rainbowpackers@aol.com"](#); ["Rajaa.Hassan@waterboards.ca.gov"](#); ["Rwgoode911@hotmail.com"](#); ["ryan.cooper@wildlife.ca.gov"](#); ["s.manning@bigpinepaiute.org"](#); ["s.saulque@bentontribe.org"](#); ["Saeed.Jorat@ladwp.com"](#); ["sb@snowhydrology.com"](#); ["secretary@southernsierramiwuknation.org"](#); ["serrell.smokey@washoetribe.us"](#); ["ssmiwuknation@gmail.com"](#); ["stephanie.heller@usda.gov"](#); ["THPO@WashoeTribe.us"](#); ["todd.ellsworth@usda.gov"](#); ["Wilfred.Nabahe@usda.gov"](#)  
**Subject:** Lee Vining PME discussion  
**Attachments:** [image001.jpg](#)

Hello, Lee Vining technical working group members!

Please join us in a discussion regarding the Lee Vining Project Protection, Mitigation, and Enhancement measures (PMEs) at 9am Pacific on June 11. We will discuss the existing measures SCE intends to bring forward into the new license and would like to hear about any suggested measures from you as well.

Thank you

Carissa Shoemaker

Licensing Coordinator

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<<https://www.kleinschmidtgroup.com/wp-content/themes/ironstrap/dist/images/logo-footer.gif>>

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**From:** [Isha Deo](#)  
**To:** [Carissa Shoemaker](#); [Finlay Anderson](#)  
**Subject:** Isha Deo shared the folder "HEC-RAS for Beth\_20240620" with you  
**Date:** Thursday, June 20, 2024 8:39:19 AM  
**Attachments:** [AttachedImage](#)  
[AttachedImage](#)  
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[AttachedImage](#)  
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## Isha Deo invited you to edit a folder

Hi Beth,

As discussed, I've uploaded a zip file of the HEC-RAS model developed for the AQ-5 operations study at Lee Vining. Please reach out with any questions or additional requests.

Isha



HEC-RAS for Beth\_20240620



This invite will only work for you and people with existing access.

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**From:** [Carissa Shoemaker](#)  
**To:** [greg@monolake.org](mailto:greg@monolake.org)  
**Subject:** Carissa Shoemaker shared the folder "SentToG.Reis\_20240705" with you  
**Date:** Friday, July 5, 2024 10:58:08 AM  
**Attachments:** [AttachedImage](#)  
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[AttachedImage](#)  
[AttachedImage](#)  
[AttachedImage](#)



## Carissa Shoemaker shared a folder with you

Hi Greg,  
at this OneDrive link you should find the HEC-RAS files for the Lee Vining intraday operations hydrology model. Please let us know if you have any questions or issues accessing the files.  
Thanks!



SentToG.Reis\_20240705



This link only works for the direct recipients of this message.

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**From:** [Carissa Shoemaker](mailto:Carissa.Shoemaker@kleinschmidtgroup.com)  
**To:** [ssmiwuknation@gmail.com](mailto:ssmiwuknation@gmail.com); [claymiwumati@gmail.com](mailto:claymiwumati@gmail.com); [Shannon Luoma](mailto:Shannon.Luoma@southernsierramiwuknation.org); [secretary@southernsierramiwuknation.org](mailto:secretary@southernsierramiwuknation.org); [Finlay Anderson](mailto:Finlay.Anderson@preservation@southernsierramiwuknation.org); [preservation@southernsierramiwuknation.org](mailto:preservation@southernsierramiwuknation.org); [Kelly Larimer](mailto:Kelly.Larimer@cheyenne.stone@bigpinepaiute.org); [cheyenne.stone@bigpinepaiute.org](mailto:cheyenne.stone@bigpinepaiute.org); [Matthew Woodhall](mailto:Matthew.Woodhall@d.gutierrez@bigpinepaiute.org); [d.gutierrez@bigpinepaiute.org](mailto:d.gutierrez@bigpinepaiute.org); [Martin Ostendorf](mailto:Martin.Ostendorf@s.manning@bigpinepaiute.org); [s.manning@bigpinepaiute.org](mailto:s.manning@bigpinepaiute.org); [nathan.sill@usda.gov](mailto:nathan.sill@usda.gov); [meryl.picard@bishoppaiute.org](mailto:meryl.picard@bishoppaiute.org); 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**Subject:** Lee Vining PME discussion #2  
**Attachments:** [image001.jpg](#)

-----Original Appointment-----

From: Carissa Shoemaker <[Carissa.Shoemaker@KleinschmidtGroup.com](mailto:Carissa.Shoemaker@KleinschmidtGroup.com)>

Sent: Tuesday, June 18, 2024 4:04 PM

To: Carissa Shoemaker; Shannon Luoma; Finlay Anderson; Kelly Larimer; Matthew Woodhall; Martin Ostendorf; nathan.sill@usda.gov; Andrew.Lyons-Gould@usda.gov; James.Erdman@wildlife.ca.gov; robbie@monolake.org; chad\_mellison@fws.gov; beth.lawson@wildlife.ca.gov; Mary.Meagher@usda.gov; Adam.Cohen@Waterboards.ca.gov; Bryan.Muro@Waterboards.ca.gov; Wilfred.Nabahe@usda.gov; Jameisha.Washington@usda.gov; Bryant.Luu@wildlife.ca.gov; greg@monolake.org; kyle@mewuk.com; dannon.dirgo@usda.gov; bartshe@monolake.org; kspears@mono.ca.gov; michael.wiese@usda.gov; Audry Williams; tristan.leong@usda.gov; sheila.irons@usda.gov; Graham.Meese@Wildlife.ca.gov; adam.barnett@usda.gov; kutzanuumu@yahoo.com; Jonathan Knight

Subject: Lee Vining PME discussion #2

When: Tuesday, July 16, 2024 2:00 PM-4:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: Microsoft Teams Meeting

Hello Lee Vining stakeholders,

Join us to discuss proposed Protection, Mitigation, and Enhancement (PME) measures. Please bring your ideas to discuss during the meeting.

Thank you!

Carissa Shoemaker

Licensing Coordinator

<<https://www.kleinschmidtgroup.com/>>

C: 907-575-0294

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Microsoft Teams Need help? <<https://aka.ms/JoinTeamsMeeting?omkt=en-US>>

Join the meeting now <[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_Nj10NDI2N2Mt0GVjMi00MjkzLWJlYWQYmMyNWY2MTNlYjEz%40thread.v2/0?](https://teams.microsoft.com/l/meetup-join/19%3ameeting_Nj10NDI2N2Mt0GVjMi00MjkzLWJlYWQYmMyNWY2MTNlYjEz%40thread.v2/0?)

context=%7b%22Tid%22%3a%22adc6e70c-c575-40a4-9676-24da4a1fdce9%22%2c%22Oid%22%3a%22527874e1-a95c-47f0-a80b-501855167fec%22%7d>

Meeting ID: 291 190 419 816

Passcode: CdP2t8

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For organizers: Meeting options <[https://teams.microsoft.com/meetingOptions/?organizerId=527874e1-a95c-47f0-a80b-501855167fec&tenantId=adc6e70c-c575-40a4-9676-24da4a1fdce9&threadId=19\\_meeting\\_NjI0NDI2N2MtOGVjMi00MjkzLWJlYWQtYmMyNWY2MTNlYjEz@thread.v2&messageId=0&language=en-US](https://teams.microsoft.com/meetingOptions/?organizerId=527874e1-a95c-47f0-a80b-501855167fec&tenantId=adc6e70c-c575-40a4-9676-24da4a1fdce9&threadId=19_meeting_NjI0NDI2N2MtOGVjMi00MjkzLWJlYWQtYmMyNWY2MTNlYjEz@thread.v2&messageId=0&language=en-US)>

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**From:** [Carissa Shoemaker](#)  
**To:** [Shannon Luoma](#); [Finlay Anderson](#); [Kelly Larimer](#); [Matthew.Woodhall@sce.com](#); [martin.ostendorf@sce.com](#); [nathan.sill@usda.gov](#); [Andrew.Lyons-Gould@usda.gov](#); [James.Erdman@wildlife.ca.gov](#); [robbie@monolake.org](#); [chad\\_mellison@fws.gov](#); [beth.lawson@wildlife.ca.gov](#); [Adam.Cohen@Waterboards.ca.gov](#); [Bryan.Muro@Waterboards.ca.gov](#); [Wilfred.Nabahe@usda.gov](#); [Jameisha.Washington@usda.gov](#); [Bryant.Luu@wildlife.ca.gov](#); [greg@monolake.org](#); [kyle@mewuk.com](#); [bartshe@monolake.org](#); [kspears@mono.ca.gov](#); [michael.wiese@usda.gov](#); [Audry Williams](#); [tristan.leong@usda.gov](#); [sheila.irons@usda.gov](#); [Graham.Meese@Wildlife.ca.gov](#); [adam.barnett@usda.gov](#); [kutzanuumu@yahoo.com](#); [Jonathan.Knight@usda.gov](#); [ssmiwuknation@gmail.com](#); [claymiwumati@gmail.com](#); [secretary@southernsierramiwuknation.org](#); [preservation@southernsierramiwuknation.org](#); [cheyenne.stone@bigpinepaiute.org](#); [d.gutierrez@bigpinepaiute.org](#); [s.manning@bigpinepaiute.org](#); [meryl.picard@bishoppaiute.org](#); [darren.delgado@bishoppaiute.org](#); [chair@bridgeportindiancolony.com](#); [carl@fortindependence.com](#); [falconkeeper22@gmail.com](#); [patsiata@yahoo.com](#); [char54lange@gmail.com](#); [dtonenna@gmail.com](#); [Rwggoode911@hotmail.com](#); [cmcdonald@nfr-nsn.gov](#); [administrator@timbisha.com](#); [jon@mewuk.com](#); [s.saulque@bentontribe.org](#); [lucy\\_basket4@yahoo.com](#); [nayanake@comcast.net](#); [errell.smokey@washotribe.us](#); [THPO@WashoeTribe.us](#); [Adam.Perez@ladwp.com](#); [Alisa.Ellsworth@wildlife.ca.gov](#); [andrea@accessfund.org](#); [anne\\_mankowski@fws.gov](#); [ashley.blythehaverstock@usda.gov](#); [clerkrecorder@mono.ca.gov](#); [courtney.rowe@usda.gov](#); [cshutes@calsport.org](#); [culture@bridgeportindiancolony.com](#); [curator@monobasinhistory.org](#); [easternsierraartist@gmail.com](#); [eric.tillemans@ladwp.com](#); [erik@accessfund.org](#); [events@mammothmuseum.org](#); [geoff@monolake.org](#); [heather.brashear@Wildlife.ca.gov](#); [Jacqueline.beidl@usda.gov](#); [jennifer.watts@waterboards.ca.gov](#); [justin\\_barrett@fws.gov](#); [kary.schlick@usda.gov](#); [katie@accessfund.org](#); [kayla@friendsoftheinyo.org](#); [lilian\\_jonas@contractor.nps.gov](#); [lori.gillem@LADWP.com](#); [lundylakeresort@gmail.com](#); [michael.tovar@wildlife.ca.gov](#); [monique.sanchez@usda.gov](#); [Nick.Buckmaster@wildlife.ca.gov](#); [parker.thaler@Waterboards.ca.gov](#); [Patricia.Moyer@Wildlife.ca.gov](#); [rainbowpackers@aol.com](#); [Rajaa.Hassan@waterboards.ca.gov](#); [ryan.cooper@wildlife.ca.gov](#); [Saeed.Jorat@ladwp.com](#); [sb@snowhydrology.com](#); [stephanie.heller@usda.gov](#); [todd.ellsworth@usda.gov](#); [wendy@friendsoftheinyo.org](#); [BlancaPaloma@msn.com](#); [Bret Hoffman](#); [seth.carr@sce.com](#)  
**Subject:** Lee Vining PME Meeting #3 agenda / proposed schedule  
**Date:** Wednesday, July 31, 2024 9:00:00 AM  
**Attachments:** [image001.jpg](#)

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Hello, Lee Vining TWG members!

Thank you for joining us in our previous two Protection, Mitigation, and Enhancement (PME) meetings. We have our next PME meeting tomorrow, 8/1 at 9:00. We heard several suggested PME discussion topics at the last meeting and developed a preliminary schedule organized by resource area for the next few months. For this week, we'd like to discuss aquatic invasives and fish stocking. We'll also spend some time up front setting the stage with how we see this process working moving forward. Briefly, if you (your agency/organization/Tribe) have a PME to request, please come prepared to the appropriate meeting with as much detail as you can provide, including a rationale such as tying it to resource agency management objectives and project nexus. Our expectation is that this rationale would be based on the results of studies that you have all reviewed and how those results inform an understanding of effects and/or speak to resource objectives.

At the end of the meeting, we'd like to take a few minutes to identify days for the next few meetings.

Please let us know if you have any questions. See you tomorrow.

Thank you!

### 8/1 Lee Vining PME Agenda

- SCE outline approach and process for reviewing and evaluating PMEs.
- Aquatic invasives
  - Review existing approach
  - Discuss proposal(s) from TWG members
- Fish stocking

Review existing approach

- Discuss proposal(s) from TWG members
- Schedule for upcoming meetings

Meeting Date	Resource Area
8/1	Fish/Aquatics
Week of 8/12	Operations/Fish/Aquatics
Week of 8/26	Operations/Fish/Aquatics
Week of 9/9	Operations/Fish/Aquatics
Week of 9/23	Operations/Fish/Aquatics
Week of 10/7	Operations/Fish/Aquatics
Week of 10/21	RTE Species, Recreation
Week of 11/4	Recreation, Fish/Aquatics
Week of 11/18	Recreation
Week of 12/2	Recreation
Week of 12/16	TBD, if needed

Carissa Shoemaker  
Licensing Coordinator



C: 907-575-0294

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[stephanie.heller@usda.gov](mailto:stephanie.heller@usda.gov); [todd.ellsworth@usda.gov](mailto:todd.ellsworth@usda.gov); [wendy@friendsoftheinyo.org](mailto:wendy@friendsoftheinyo.org)  
**Subject:** Lee Vining PME discussion #3

Hello Lee Vining interested parties,  
Join us to discuss proposed Protection, Mitigation, and Enhancement (PME) measures. Please bring your ideas to discuss during the meeting.

Thank you!

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**To:** [Ching, Mark](#); [Perez, Adam](#); [Tillemans, Eric](#); [Finlay Anderson](#); [Shannon Luoma](#); [Jorat, Saeed](#); [Martin Ostendorf](#); [Matthew Woodhall](#); [Alis.Pruett@ladwp.com](mailto:Alis.Pruett@ladwp.com); [Bret Hoffman](#); [Chad Lamacchia](#); [Ben Arcularius](#); [Isha Deo](#)  
**Subject:** SCE & LADWP - Lee Vining Creek questions

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**Subject:** Lee Vining PME discussion #4

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Hello, Lee Vining TWG members!

Thank you for joining us in our previous three Protection, Mitigation, and Enhancement (PME) meetings. We will have our next PME meeting Thursday 8/15, at 1:00. For this meeting, we'd like to discuss the topic of 'Minimum instream flows, reducing flow alteration requests, and streamlining annual consultation needs.' At the end of the meeting, we'd like to take a few minutes to identify days for the next few meetings.

Please let us know if you have any questions. See you next Thursday.

Thank you!

8/15 Lee Vining PME Agenda

- \* Minimum instream flows, reducing flow alteration requests, streamlining annual consultation needs
- \* Review existing approach
- \* Discuss proposal(s) from TWG members
- \* Schedule for upcoming meetings

Meeting Date

Resource Area

8/15

Operations/Fish/Aquatics

Week of 8/26

Operations/Fish/Aquatics

Week of 9/9

Operations/Fish/Aquatics

Week of 9/23

Operations/Fish/Aquatics

Week of 10/7



Operations/Fish/Aquatics

Week of 10/21

RTE Species, Recreation

Week of 11/4

Recreation, Fish/Aquatics

Week of 11/18

Recreation

Week of 12/2

Recreation

Week of 12/16

TBD, if needed

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**To:** [beth.lawson@wildlife.ca.gov](mailto:beth.lawson@wildlife.ca.gov); [tristan.leong@usda.gov](mailto:tristan.leong@usda.gov); [Meese.Graham@Wildlife; adam.cohen@waterboards.ca.gov](mailto:Meese.Graham@Wildlife.adam.cohen@waterboards.ca.gov); [cshutes@calsport.org](mailto:cshutes@calsport.org); [Robert Di Paolo](#); [Greg Reis](#); [bryan.muro@waterboards.ca.gov](mailto:bryan.muro@waterboards.ca.gov); [Shannon Luoma](#); [Finlay Anderson](#); [Kelly Larimer](#); [Bret Hoffman](#); [Isha Deo](#); [Matthew Woodhall](#); [Martin Ostendorf](#); [Heather Neff](#)  
**Subject:** Lee Vining ops model (PME discussion #4.5)  
**Attachments:** [image001.jpg](#)

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Hello folks,

At this Lee Vining ops model / PME discussion we hope you will bring MIF scenarios to the table. We'll view them in the operations model together.  
[and bring your favorite coffee mug to show off]

Thank you!

Carissa Shoemaker

Licensing Coordinator

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Phone conference ID: 175 454 562#

For organizers: Meeting options [>https://teams.microsoft.com/meetingOptions/?organizerId=527874e1-a95e-47f0-a80b-501855167fec&tenantId=adc6e70c-c575-40a4-9676-24da4a1fdce9&threadId=19\\_meeting\\_MDRINjNkOWQtMjhNS00MDIxLWJkOWYtZjQyN2ZkOTg0Mzdm@thread.v2&messageId=0&language=en-US](https://teams.microsoft.com/meetingOptions/?organizerId=527874e1-a95e-47f0-a80b-501855167fec&tenantId=adc6e70c-c575-40a4-9676-24da4a1fdce9&threadId=19_meeting_MDRINjNkOWQtMjhNS00MDIxLWJkOWYtZjQyN2ZkOTg0Mzdm@thread.v2&messageId=0&language=en-US) | Reset dial-in PIN [<https://dialin.teams.microsoft.com/usp/pstnconferencing>](https://dialin.teams.microsoft.com/usp/pstnconferencing)

[<https://www.kleinschmidtgroup.com/wp-content/themes/ironstrap/dist/images/logo-footer.gif>](https://www.kleinschmidtgroup.com/wp-content/themes/ironstrap/dist/images/logo-footer.gif)

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