

# Kaweah Project

## FERC Project No. 298

### Updated Study Report Meeting

November 6, 2019

# Agenda

- Welcome and introductions
- Meeting objectives
- Relicensing process overview
- Technical study implementation
- Key contacts
- Adjourn

# Meeting Objectives

- Describe overall progress in implementing study plans including any:
  - Outstanding elements
  - Variances
  - Ongoing studies
  - New studies proposed by the applicant

# Relicensing Process Overview

Relicensing Milestone	Date
NOI/PAD	Dec 14, 2016
Study Plan Development	
- Proposed Study Plan	May 24, 2017
- Revised Study Plan	Sept 19, 2017
- FERC Study Plan Determination	Oct 24, 2017
Study Implementation	
- First Year / Second Year Studies	2018 / 2019
- Initial Study Report / Meeting	Oct 18 / Nov 1, 2018
- Updated Study Report	Oct 23, 2019
- Updated Study Report Meeting	Nov 6, 2019
- Updated Study Report Meeting Summary	Nov 23, 2019
- Disputes / Requests to Amend Study Plan Due	Dec 23, 2019
Application for New License	
- Draft License Application	Jul 26, 2019
- Comments due on Draft License Application	Nov 1, 2019
- Final License Application	Dec 31, 2019

# Relicensing Process Overview

## Integrated Licensing Process Steps



KTT22 AT SQUAW VALLEY SKI RESORT

# Technical Study Implementation

## Data Collection

- SCE initiated technical studies in 2018
- Majority of data collection completed by Q4 2018
- Additional data collection completed in 2019, included:
  - AQ 4 – Water Temperature
    - Collected water temperature data at tributary inflows and in deep pools to identify potential availability of water temperature refugia for trout was conducted in August 2019
  - AQ 9 – Entrainment
    - Directly estimated the potential for entrainment and mortality by sampling fish entrainment in the Kaweah No. 2 and No. 3 flowlines in May and July 2019

# Technical Study Implementation

## Updated Study Report

- Updated Study Report filed Oct 23, 2019
- Documents study activities implemented between Oct 1, 2018 and Sept 30, 2019
- Updated Study Report components:
  - Cover Letter
  - Attachment A – Certificate of Service
  - Attachment B – Distribution List
  - Attachment C – TSR Distribution Dates
  - Attachment D – TSP Implementation Summary
- Available for download here:
  - [www.sce.com/kaweah](http://www.sce.com/kaweah)
  - [www.ferc.gov/docs-filing/elibrary.asp](http://www.ferc.gov/docs-filing/elibrary.asp)

# Technical Study Implementation

## TSR Distribution

- TSRs developed for each study with exception of ongoing AQ 9 – Entrainment
  - To be distributed to stakeholders following completion of study in 2020
- Most TSRs distributed to stakeholders for 90-day review period prior to DLA filing and comments addressed, as applicable
- Comments received during DLA review period will be addressed in FLA



# Technical Study Implementation

## TSR Distribution

Technical Study Report <sup>1</sup>	Draft TSR Distribution Date	Revised TSR Distribution Date	
		DLA: Aug 3, 2019	FLA: Dec 31, 2019
<b>Aquatic Resources</b>			
AQ 1 – Instream Flow	Aug 3, 2019 (DLA)		X
AQ 2 – Fish Population	Apr 2, 2019	X	
AQ 3 – Macroinvertebrates	Aug 3, 2019 (DLA)		X
AQ 4 – Water Temperature	Aug 3, 2019 (DLA)		X
AQ 5 – Geomorphology	Aug 3, 2019 (DLA)		X
AQ 6 – Water Quality	Apr 2, 2019	X	
AQ 7 – SS Amphibians and Aquatic Reptiles	Aug 3, 2019 (DLA)		X
AQ 8 – Fish Passage	Apr 2, 2019	X	
AQ 9 – Entrainment <sup>2</sup>	TBD		
<b>Cultural Resources<sup>3</sup></b>			
CUL 1 – Cultural, Built Environment	Jan 22, 2019	X	
CUL 1 – Cultural, Archaeology	Jan 22, 2019	X	
CUL 1 – Cultural, Ethnography	Feb 15, 2019	X	
<b>Land Resources</b>			
LAND 1 – Transportation	Jan 22, 2019	X	
LAND 2 – Aesthetic Resources	Jan 22, 2019	X	
LAND 3 – Land Use	Feb 15, 2019	X	
<b>Recreation Resources</b>			
REC 1 – Recreation Resources	Aug 3, 2019 (DLA)		X
REC 2 – Whitewater Boating	Jan 22, 2019	X	
<b>Terrestrial Resources</b>			
TERR 1 – Botanical Resources	Jan 22, 2019	X	
TERR 2 – Wildlife Resources	Jan 30, 2019	X	

1 For Draft TSRs included in the Draft License Application (DLA), comments will be addressed and the Final TSR included in the Final License Application (FLA).

2 The AQ 9 – Entrainment study is ongoing and will not be complete until after the FLA is filed with FERC. A Draft TSR will be distributed to stakeholders for review and comment in 2020 upon completion of the study.

3 To aid in clarity and ease of stakeholder review, the CUL 1 – TSR was distributed as three separate reports – Built Environment, Archaeology, and Ethnography.

# Technical Study Implementation

## Study Status

- Studies categorized as follows:
  - **Complete:** These studies are complete with no variances and no proposed modifications
  - **Outstanding Study Element:** These studies have outstanding administrative elements to be completed, including data distribution or reporting on specific components
  - **Variance:** These studies have a variance from the TSP
  - **Ongoing:** These studies have elements that are ongoing (field work/consultation) that will extend beyond filing of the FLA in Dec 2019

# Technical Study Implementation

## Study Status

Technical Study	Complete	Outstanding Study Element		Variance	Ongoing
		Data Distribution	Reporting		
AQ 1 – Instream Flow	■				
AQ 2 – Fish Population		■			
AQ 3 – Macroinvertebrates		■			
AQ 4 – Water Temperature			■		
AQ 5 – Geomorphology	■				
AQ 6 – Water Quality				■	
AQ 7 – Special-status Amphibians and Aquatic Reptiles		■			
AQ 8 – Fish Passage	■				
AQ 9 – Entrainment					■
CUL 1 – Built Environment <sup>1</sup>	■				
CUL 1 – Archaeology <sup>1</sup>					■
CUL 1 – Ethnography <sup>1</sup>					■
LAND 1 – Transportation		■			
LAND 2 – Aesthetics	■				
LAND 3 – Land Use	■				
REC 1 – Recreation	■				
REC 2 – Whitewater Boating	■				
TERR 1 – Botanical		■			
TERR 2 – Wildlife		■			

<sup>1</sup> To aid in clarity and ease of stakeholder review, the CUL 1 – TSR was distributed as three separate reports – Built Environment, Archaeology, and Ethnography.

# Technical Study Implementation

## Study Status

- Completed Studies
  - AQ 1 – Instream Flow
  - AQ 5 – Geomorphology
  - AQ 8 – Fish Passage
  - CUL 1 – Built Environment
  - LAND 2 – Aesthetic Resources
  - LAND 3 – Land Use
  - REC 1 – Recreation Resources
  - REC 2 – Whitewater Boating

# Technical Study Implementation

## Study Status

- Outstanding Study Element – Data Distribution
  - AQ 2 – Fish Population
  - AQ 3 – Macroinvertebrates
  - AQ 7 – Special-status Amphibians and Aquatic Reptiles
  - LAND 1 – Transportation System
  - TERR 1 – Botanical Resources
  - TERR 2 – Wildlife Resources

# Technical Study Implementation

## Study Status

- Outstanding Study Element – Reporting
  - AQ 4 – Water Temperature
    - Additional field work to collect water temperature data at tributary inflows and in deep pools to identify potential availability of water temperature refugia for trout was conducted in August 27-29, 2019
    - Results of this data collection will be incorporated into the Final TSR and effects analysis included in the FLA

# Technical Study Implementation

## Study Status

- Outstanding Study Element – Reporting
  - Tributary Water Temperature Refugia Results
    - During summer/early fall, the East Fork Kaweah was the only tributary that provided significant inflow to the Kaweah River and there were no significant tributaries to the East Fork Kaweah
    - East Fork Kaweah water temperature was 0.5°C (0.9°F) to 1.6°C (2.8°F) cooler than the Kaweah River near the confluence (Aug to Nov), but during July and August the East Fork Kaweah average water temperature was 23.4°C (74.1°F) and 22.6°C (72.7°F), which is too warm for trout
  - Deep Pool Water Temperature Refugia Results
    - Vertical temperature profiles and vertical thermograph strings detected no temperature stratification in six deep pools (4 Kaweah River, 2 East Fork Kaweah River)

# Technical Study Implementation

## Study Status

- Variance
  - AQ 6 – Water Quality
    - AQ 6 – TSP included approach to conduct total and fecal coliform sampling
    - Lab processed coliform samples using SWB updated total coliform and *E. Coli* recreation contact criteria approach and not fecal coliform approach outlined in TSP
    - AQ 6 – TSR was modified to more explicitly identify how samples were processed and the criteria
    - While using updated criteria is a variance, the data collected indicate that there was not an issue with bacterial contamination at the study site



# Technical Study Implementation

## Study Status

- Ongoing
  - AQ 9 – Entrainment
    - Field work delayed due to infrastructure and environmental concerns; unsafe weather conditions; and operating constraints
    - Work completed to date will be documented in FLA
    - TSR to be distributed following completion of sampling

# Technical Study Implementation

## Study Status

- Ongoing
  - AQ 9 – Entrainment

Location	Representative Time Periods	Sampling Dates	Sampling Type	
			Drift Netting	Fyke Trapping
Kaweah No. 1 Flowline	Monitoring will be initiated once repairs are completed on Kaweah No. 1 Flowline		P	P
			P	P
			P	P
			P	P
Kaweah No. 2 Flowline	May/June 2019	May 2019	C	C
	July 2019	July 2019	C	C
	January/February 2020	TBD	P	P
	March/April 2020	TBD	P	P
Kaweah No. 3 Flowline	May/June 2019	May 2019	C	—*
	July 2019	July 2019	C	—*
	January/February 2020	TBD	P	—*
	March/April 2020	TBD	P	—*

\* Due to high risk at the Kaweah No. 3 Flowline, the revised study plan proposes to use entrainment monitoring in the Kaweah No. 1 and No. 2 flowlines to approximate entrainment in Kaweah No. 3 Flowline. The revised study plan allows for additional entrainment sampling based on consultation with agency biologists/staff.

TBD = To Be Determined; C = Complete; P = Pending

# Technical Study Implementation

## Study Status

- Ongoing
  - AQ 9 – Entrainment Results

Location	Sampling Dates	Results	
		Sampling Type	
		Drift Netting	Fyke Trapping
Kaweah No. 2 Flowline	May 2019	0	1 (juvenile pikeminnow)
	July 2019	0	0
Kaweah No. 3 Flowline	May 2019	0	—*
	July 2019	0	—*

\* Due to high risk at the Kaweah No. 3 Flowline, the revised study plan proposes to use entrainment monitoring in the Kaweah No. 1 and No. 2 flowlines to approximate entrainment in Kaweah No. 3 Flowline. The revised study plan allows for additional entrainment sampling based on consultation with agency biologists/staff.

# Technical Study Implementation

## Study Status

- Ongoing
  - CUL 1 – Archaeology and Ethnography
    - Preparation of National Register of Historic Places (NRHP) Evaluation Plan is ongoing (TSP element)
    - Preparation of a Historic Properties Management Plan (HPMP) is ongoing (FERC requested, non-TSP element)
    - Prior to FLA, documents will be distributed to stakeholders for review and comment
    - Draft HPMP and NRHP Evaluation Plan included in FLA

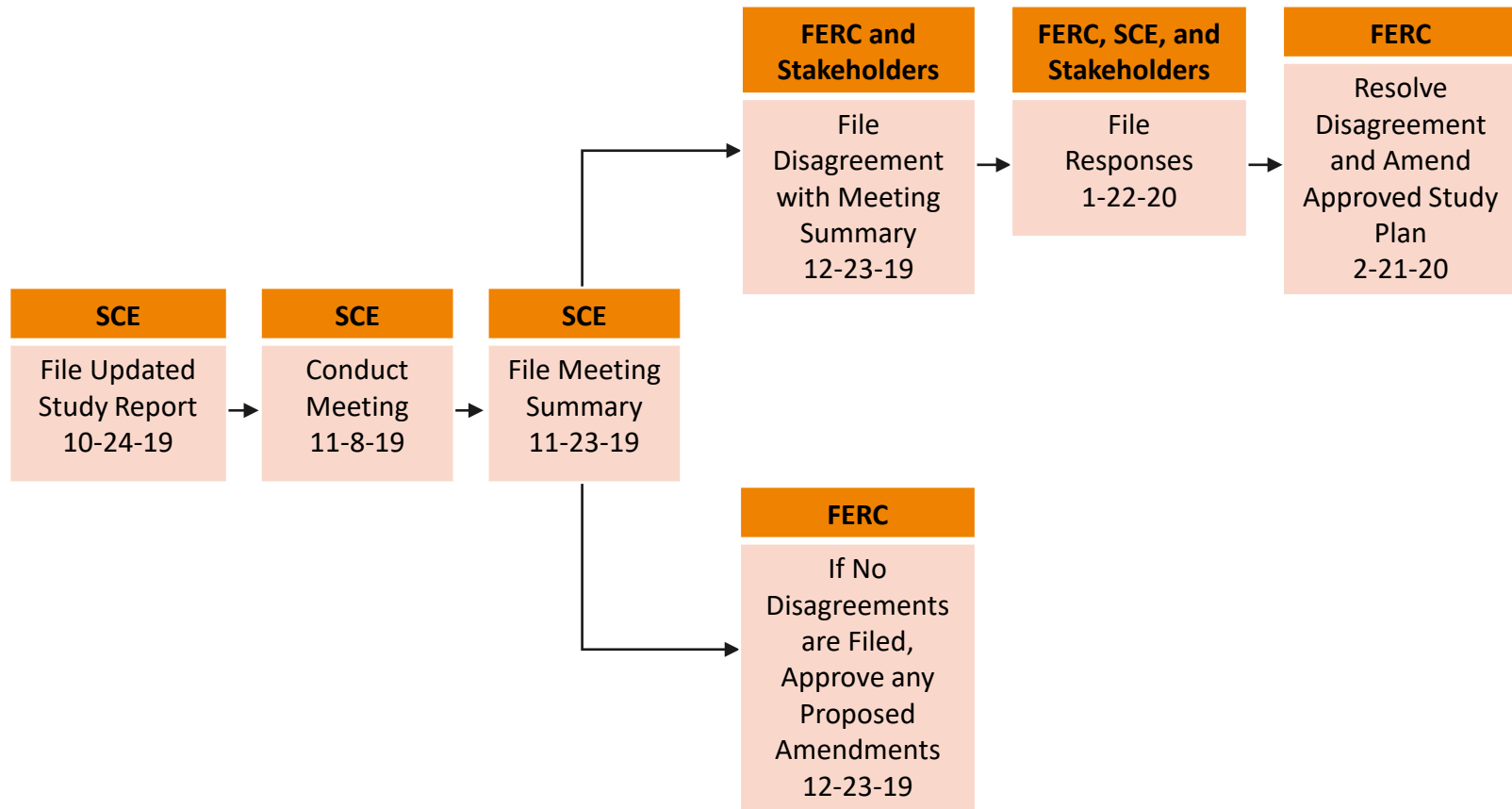
# Technical Study Implementation

## New Studies

- No new studies are proposed by SCE

# Technical Study Implementation

## Next Steps per FERC ILP Regulations



18 CFR §5.15(f)

Dates represent FERC deadlines identified in Scoping Document 2

# Key Contacts

Name	Role/Resource	E-mail	Phone
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<b>Janelle Nolan &amp; Associates Environmental Consulting</b>			
Janelle Nolan	Terrestrial	janelle@jna-consulting.com	530-277-4582

SCE Relicensing website: [www.sce.com/kaweah](http://www.sce.com/kaweah)

# Key Contacts

Name	Role/Resource	E-mail	Phone
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**[www.ferc.gov/esubscribenow.htm](http://www.ferc.gov/esubscribenow.htm)**

Access documents filed related to the Kaweah Project

**[www.ferc.gov/docs-filing/elibrary.asp](http://www.ferc.gov/docs-filing/elibrary.asp)**



# Adjourn

