Initial Statement

BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE FOR
MAJOR WATER POWER PROJECT

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in the initial statement of its license application.

(1) (Name of Applicant) applies to the Federal Energy Regulatory Commission for a (license or new license, as appropriate) for the (name of project) water power project, as described in the attached exhibits. (Specify any previous FERC project number designation.)

(2) The location of the project is:
State or territory:_____
County:_____
Township or nearby town:_____
Stream or other body of water:_____

(3) The exact name and business address of the applicant are:

_____
_____
_____

The exact name and business address of each person authorized to act as agent for the applicant in this application are:

_____
_____
_____

(4) The applicant is a [citizen of the United States, association of citizens of the United States, domestic corporation, municipality, or state, as appropriate] and (is/is not) claiming preference under section 7(a) of the Federal Power Act. See 16 U.S.C. 796.

(5)

(i) The statutory or regulatory requirements of the state(s) in which the project would be located that affect the project as proposed, with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting, and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act, are: [provide citation and brief identification of the nature of each requirement; if the applicant is a municipality, the applicant must submit copies of applicable state or local laws or a municipal charter, or, if such laws or documents are not clear, other appropriate legal authority, evidencing that the municipality is competent under such laws to engage in the business of developing, transmitting, utilizing, or distributing power.]

(ii) The steps which the applicant has taken or plans to take to comply with each of the laws cited above are: [provide brief description for each law].

(6) The applicant must provide the name and address of the owner of any existing project facilities. If the dam is federally owned or operated, provide the name of the agency.

(1) Southern California Edison Company (SCE or Applicant) applies to the Federal Energy Regulatory Commission (FERC or Commission) for a new license for the existing Kaweah Project (Project), as described in the attached exhibits. The existing Project is designated as Project No. 298 in the records of the Commission, pursuant to a license issued by the Commission on January 31, 1992, and effective on January 1, 1992, for a period of 30 years and terminating on December 31, 2021. This Application For New License for Major Project - Existing Dam is filed pursuant to 18 CFR §5.18.

(2) The location of the project is:

State: California
Counties: Tulare
Township or Nearby Towns: Three Rivers
Stream or Other Body of Water: Kaweah River and East Fork Kaweah River

(3) The exact name and business address of the Applicant are:

Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
Telephone: (626) 302-9741

The exact name and business address of the person authorized to act as agent for the Applicant in this application is:

Wayne P. Allen
Principal Manager, Regulatory Support Services
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770
Telephone: (626) 302-9741

(4) The Applicant is a domestic corporation and is not claiming preference under Section 7(a) of the Federal Power Act. See 16 U.S.C. 796.

(5)

(i) The statutory or regulatory requirements in California, the state in which the Project is located, that affect the Project with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting, and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act are:

A. *California Fish and Game Code §1602* – requires that parties notify the California Department of Fish and Wildlife (CDFW) prior to conducting any work in a streambed.

B. *California Water Code §102* – allows for appropriation and use of water for power purposes.

C. *California Water Code §13160; Title 23 California Code of Regulations §3855* – regulates the federally required filing of applications for water quality certification with the State Water Board.

D. *California Water Code §6102* – requires owners of dams to cooperate with the California Division of Safety of Dams (CDSOD) in the inspection and maintenance of dams.

E. *Public Utilities Code §201, et seq.* – regulates the right of the public utility to produce, generate, transmit, or furnish power to the public.

(ii) The steps which the Applicant has taken or plans to take to comply with each of the laws cited above are:

A. Applicant will submit a §1602 notification to CDFW should work in a streambed be required.

B. The Applicant has the water rights necessary to operate the Project.

C. The Applicant will request a water quality certification, including proof of the date on which the certifying agency received the request, no later than 60 days following FERC's issuance of the Notice of Acceptance and Ready for Environmental Analysis (REA).

D. Applicant cooperates with CDSOD on annual inspections of Project dams.

E. The California Public Utilities Commission has authorized SCE to produce, generate, transmit, or furnish power to the public.

(6) The Applicant is the owner and existing licensee of the Project. The dams associated with the Project are not federally owned or operated.

Date: July 26, 2019

By: W Wayne Allen

Wayne Allen
Principal Manager
Regulatory Support Services

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Section 5.18 Application Content

Section 5.18(a) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) describes general content requirements that an applicant for a new license (License for Major Project – Existing Dam) must include in its license application.

a) *General content requirements*. Each license application filed pursuant to this part must:

(1) Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project;

(2) Identify (providing names and mailing addresses):

(i) Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located;

(ii) Every city, town, or similar local political subdivision:

(A) In which any part of the project, and any Federal facilities that would be used by the project, would be located; or

(B) That has a population of 5,000 or more people and is located within 15 miles of the project dam;

(iii) Every irrigation district, drainage district, or similar special purpose political subdivision:

(A) In which any part of the project, and any Federal facilities that would be used by the project, would be located; or

(B) That owns, operates, maintains, or uses any project facilities that would be used by the project;

(iv) Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application; and

(v) All Indian tribes that may be affected by the project.

(3)

(i) For a license (other than a license under section 15 of the Federal Power Act) state that the applicant has made, either at the time of or before filing the application, a good faith effort to give notification by certified mail of the filing of the application to:

(A) Every property owner of record of any interest in the property within the bounds of the project, or in the case of the project without a specific project boundary, each such owner of property which would underlie or be adjacent to any project works including any impoundments; and

(B) The entities identified in paragraph (a)(2) of this section, as well as any other Federal, state, municipal or other local government agencies that there is reason to believe would likely be interested in or affected by such application.

(ii) Such notification must contain the name, business address, and telephone number of the applicant and a copy of the Exhibit G contained in the application, and must state that a license application is being filed with the Commission.

(4)

(i) As to any facts alleged in the application or other materials filed, be subscribed and verified under oath in the form set forth in paragraph (a)(3)(B) of this Section by the person filing, an officer thereof, or other person having knowledge of the matters set forth. If the subscription and verification is by anyone other than the person filing or an officer thereof, it must include a statement of the reasons therefore.

(ii) This application is executed in the:

State of: _____
County of:_____
By: _____
(Name): _____
(Address): _____
being duly sworn, depose(s) and say(s) that the contents of this application are true to the best of (his or her) knowledge or belief. The undersigned Applicant(s) has (have) signed the application this ___ day of _____, 2__.

(Applicant(s))
By: _____

Subscribed and sworn to before me, a [Notary Public, or title of other official authorized by the state to notarize documents, as appropriate] this ___ day of _____, 2__.

/SEAL [if any]
(Notary Public, or other authorized official)

(1) To the knowledge of the Applicant, no person, citizen, association of citizens, domestic corporation, municipality, or state, other than the Applicant has or intends to obtain any proprietary right necessary to construct, operate, or maintain the Project.

(2)

(i) All Project boundaries and facilities are located in Tulare County. The principal administrative office location is:

Tulare County
Board of Supervisors/Administrative Office
2800 West Burrel Avenue
Visalia, CA 93291

(ii) The Project is not located within the city limits or boundary of any incorporated community. There are no cities, towns, or political subdivisions with a population of 5,000 or more people within 15 miles of any Project dam. No Federal facility is used or is proposed to be used by the Project.

(iii) There are no irrigation districts, drainage districts, or other similar special purpose political subdivisions located within the Project area or which own, operate, or maintain any Project facilities. No Federal facility is used or is proposed to be used by the Project.

(iv) There are no other political subdivisions in the area of the Project that the Applicant believes would be interested in, or affected by this notification. However, portions of the Project are located on public lands administered by the Bureau of Land Management (BLM) and they are likely to be interested in this notification. In addition, the boundary for the Sequoia National Park (SNP) is located directly adjacent to and north of the Kaweah No. 2 Diversion Dam and Kaweah No. 3 Powerhouse, and the Project utilizes non-Project diversions and flowlines located within the SNP under a Special Use Permit (SUP). The addresses for the BLM and SNP are as follows:

Bureau of Land Management
Bakersfield Field Office
3801 Pegasus Drive
Bakersfield, CA 93308

Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, CA 93271-9700

(v) The following tribal contacts were provided to SCE by the California Native American Heritage Commission or were otherwise believed by the Applicant to potentially have an interest in the Project:

California Indian Basketweavers Association
428 Main Street
Woodland, CA 95695

Cold Springs Tribe
PO Box 209
Tollhouse, CA 93667

Dunlap Band of Mono Indians
5509 East McKenzie Avenue
Fresno, CA 93727

Dunlap Band of Mono-Indians - Historical Preservation Society
PO Box 18
Dunlap, CA 93621

Kern Valley Indian Community
PO Box 1010
Lake Isabella, CA 93240

Mono Elder, Keith Turner
PO Box 306
Auberry, CA 93602

North Fork Mono Tribe
13396 Tollhouse Road
Clovis, CA 93619

Northern Band of Mono Yokuts
PO Box 234
Dunlap, CA 93621

Picayune Rancheria of Chukchansi Indians
PO Box 2226
Oakhurst, CA 93644

Santa Rosa Indian Community of the Santa Rosa Rancheria
PO Box 8
Lemoore, CA 93245

Tachi-Yokut Tribe
PO Box 8
Lemoore, CA 93245

Tubatulabas of Kern Valley
PO Box 226
Lake Isabella, CA 93240

Tule River Indian Tribe
PO Box 589
Porterville, CA 93258

Wukchumni Tribal Council
4737 West Concord Avenue
Visalia, CA 93277

Wuksache Indian Tribe / Eshom Valley Band
1179 Rock Haven Court
Salinas, CA 93906

(3) The Applicant has made a good faith effort to give notification by certified mail of the filing of this License Application to every property owner of record of any interest in the Project, the entities identified in paragraph (a)(2) of this section, as well as any other Federal, state, municipal or other local government agencies that there is reason to believe would likely be interested in or affected by such application. The complete Project distribution list identifying these entities is provided in Appendix A.

The Applicant will publish notice of the availability of the License Application twice within 14 days after the FERC filing date in a daily or weekly newspaper of general circulation in Tulare County (e.g., Visalia Times-Delta and/or Kaweah Commonwealth).

A complete copy of the License Application, with the exception of confidential or sensitive materials, will be made available to the public for review at the following locations:

- FERC's eLibrary at: https://www.ferc.gov/docs-filing/elibrary.asp
- SCE's relicensing website at: https://www.sce.com/kaweah
- By appointment only at the Kaweah Hydro Headquarters Office, 44511 Sierra Drive, Three Rivers, CA 93271. To make an appointment contact David Moore, SCE Relicensing Project Manager at either 626-302-9494 or david.moore@sce.com.
- Three Rivers Branch Library, 42052 Eggers Drive, Three Rivers, CA 93271

(4) Notarized statement.

[THE FOLLOWING NOTARIZED STATEMENT WILL BE INCLUDED WITH LICENSEE'S FINAL LICENSE APPLICATION, AND IS ATTACHED BELOW FOR REFERENCE ONLY]

VERIFICATION

This Application for New License for Major Project – Existing Dam is executed in the State of California, County of Los Angeles, California, by Wayne P. Allen, who being duly sworn, depose(s) and say(s) that the contents of this application are true to the best of his knowledge or belief. The undersigned Applicant has signed the application this __ day of December, 2019.

SOUTHERN CALIFORNIA EDISON COMPANY

By: _____

WAYNE P. ALLEN
Principal Manager
Regulatory Support Services

Subscribed and sworn to before me, a Notary Public of the State of California, this __ day of December, 2019.

_____

Notary Public
in and for the County of
Los Angeles, State of California

My commission expires _____

(Notary Seal)

APPENDIX A

Project Distribution List

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Organization	Name	Street Address	City, State, Zip	Email
Federal Government / Representatives				
Federal Energy Regulatory Commission	Kimberly D. Bose	888 First Street, N.E.	Washington, DC 20426	
Federal Energy Regulatory Commission	Frank Winchell	888 First Street, N.E.	Washington, DC 20426	frank.winchell@ferc.gov
Federal Energy Regulatory Commission	Jim Hastreiter			james.hastreiter@ferc.gov
National Marine Fisheries Service	Maria Rea			maria.rea@noaa.gov
National Marine Fisheries Service	Jeff McLain			jeff.mclain@noaa.gov
Sequoia and Kings Canyon National Parks	Woody Smeck	47050 Generals Highway	Three Rivers, CA 93271-9700	woody_smeck@nps.gov
Sequoia and Kings Canyon National Parks	Nancy Hendricks	47050 Generals Highway	Three Rivers, CA 93271-9700	nancy_hendricks@nps.gov
Sequoia and Kings Canyon National Parks	Ginger Bradshaw	47050 Generals Highway	Three Rivers, CA 93271-9700	ginger_bradshaw@nps.gov
Sequoia and Kings Canyon National Parks	Jane Allen	47050 Generals Highway	Three Rivers, CA 93271-9700	jane_allen@nps.gov
National Park Service	Stephen M. Bowes	333 Bush Street, Suite 500	San Francisco, CA 94104	stephen_bowes@nps.gov
National Park Service	Susan Rosebrough	333 Bush Street, Suite 500	San Francisco, CA 94104	susan_rosebrough@nps.gov
National Park Service	Barbara Rice	333 Bush Street, Suite 500	San Francisco, CA 94104	barbara_rice@nps.gov
U.S. Army Corps of Engineers		1325 J Street, Room 1513	Sacramento, CA 95814	spk-pao@usace.army.mil
U.S. Bureau of Indian Affairs	Amy Dutschke	2800 Cottage Way	Sacramento, CA 95825	amy.dutschke@bia.gov
U.S. Bureau of Land Management	Christina Castellon	3801 Pegasus Drive	Bakersfield, CA 93308	ccastellon@blm.gov
U.S. Bureau of Land Management	Amy Girado	3801 Pegasus Drive	Bakersfield, CA 93308	agirado@blm.gov
U.S. Bureau of Land Management	Maria Soto	3801 Pegasus Drive	Bakersfield, CA 93308	msoto@blm.gov
U.S. Bureau of Land Management	Carly Summers	3801 Pegasus Drive	Bakersfield, CA 93308	csummers@blm.gov
U.S. Bureau of Land Management	Tamara Whitley	3801 Pegasus Drive	Bakersfield, CA 93308	twhitley@blm.gov
U.S. Bureau of Land Management	Brien Chartier	3801 Pegasus Drive	Bakersfield, CA 93308	bchartie@blm.gov
U.S. Bureau of Land Management	Romina Copado	3801 Pegasus Drive	Bakersfield, CA 93308	rcopado@blm.gov

Organization	Name	Street Address	City, State, Zip	Email
U.S. Bureau of Land Management	Alison Lipscomb	3801 Pegasus Drive	Bakersfield, CA 93308	alipscomb@blm.gov
U.S. Bureau of Land Management	Karen Doran	3801 Pegasus Drive	Bakersfield, CA 93308	kdoran@blm.gov
U.S. Bureau of Land Management	Sarah Bullock	3801 Pegasus Drive	Bakersfield, CA 93308	sbullock@blm.gov
U.S. Bureau of Land Management	CJ Clara Hurley	3801 Pegasus Drive	Bakersfield, CA 93308	cchase@blm.gov
U.S. Bureau of Reclamation	Michael Jackson	1243 N Street	Fresno, CA 93721-1813	mjackson@usbr.gov
U.S. Fish and Wildlife Service	Daniel Welsh	2800 Cottage Way, W-2605	Sacramento, CA 95825	Daniel_Welsh@fws.gov
U.S. Fish and Wildlife Service	Alison Willy	2800 Cottage Way, W-2605	Sacramento, CA 95825	alison_willy@fws.gov
U.S. Fish and Wildlife Service	Richard Kuyper	2800 Cottage Way, W-2605	Sacramento, CA 95825	richard_kuyper@fws.gov
U.S. Geological Survey	Denis O'Halloran	6000 J Street	Sacramento, CA 95819	dohall@usgs.gov
U.S. House of Representatives	TJ Cox	2700 M. Street, Suite 250B	Bakersfield, CA 93301	
U.S. House of Representatives	Devin Nunes	113 North Church Street, Suite 208	Visalia, CA 93291	
U.S. House of Representatives	Kevin McCarthy	4100 Empire Drive, Suite 150	Bakersfield, CA 93309	
U.S. Senate	Kamala Harris	501 I Street, Suite 7-800	Sacramento, CA 95814	
U.S. Senate	Dianne Feinstein	One Post Street, Suite 2450	San Francisco, CA 94104	
State Government / Representatives				
California Department of Fish and Wildlife	Julie Vance	1234 E. Shaw Avenue	Fresno, CA 93710	julie.vance@wildlife.ca.gov
California Department of Fish and Wildlife	Abimael León	1130 E. Shaw Avenue	Fresno, CA 93710	abimael.leon@wildlife.ca.gov
Office of Historic Preservation	Julianne Polanco	1725 23rd Street, Suite 100	Sacramento, CA 95816	julianne.polanco@parks.ca.gov
Office of Historic Preservation	Jessica Tudor	1725 23rd Street, Suite 100	Sacramento, CA 95816	jessica.tudor@parks.ca.gov
California Public Utilities Commission		505 Van Ness Avenue	San Francisco, CA 94102-3214	
California State Senate	Shannon Grove	State Capitol, Room 3048	Sacramento, CA 95814-4900	
California State Senate	Melissa Hurtado	State Capitol, Room 2054	Sacramento, CA 95814-4900	

Organization	Name	Street Address	City, State, Zip	Email
Central Valley Regional Water Quality Control Board		1685 E Street	Fresno, CA 93706-2007	
Native American Heritage Commission		1550 Harbor Boulevard, Suite 100	West Sacramento, CA 95691	nahc@nahc.ca.gov
State Water Resources Control Board	Jeff Wetzel	1001 I Street, 14th Floor	Sacramento, CA 95814	jeff.wetzel@waterboards.ca.gov
State Water Resources Control Board	Nathan Fisch	PO Box 2000	Sacramento, CA 95812	nathan.fisch@waterboards.ca.gov
State Water Resources Control Board	Ann Marie Ore	1001 I Street, 14th Floor	Sacramento, CA 95814	annmarie.ore@waterboards.ca.gov
State Water Resources Control Board	Erin Ragazzi	1001 I Street, 14th Floor	Sacramento, CA 95814	erin.ragazzi@waterboards.ca.gov
Local Government				
Tulare County	Michael Washam	5961 South Mooney Blvd.	Visalia, CA 93277	mwasham@co.tulare.ca.us
Tulare County		221 South Mooney Blvd., Room 103	Visalia, CA 93291	
Tulare County Library		200 W. Oak Avenue	Visalia, CA 93291	
Tulare County Water Commission	Denise England	2800 W. Burrell Avenue	Visalia, CA 93291	dengland@co.tulare.ca.us
Tulare County	Jessica Willis	5961 South Mooney Blvd.	Visalia, CA 93277	jwillis@co.tulare.ca.us
Tulare County	Hector Guerra	5961 South Mooney Blvd.	Visalia, CA 93277	hguerra@co.tulare.ca.us
City of Tulare	Josh McDonnell	411 East Kern Avenue	Tulare, CA 93274	jmcdonnell@tulare.ca.gov
City of Visalia	Paul Bernal	315 E. Acequia Avenue	Visalia, CA 93291	paul.bernal@visalia.city
Public Agency				
Exeter Irrigation District		150 S. E Street	Exeter, CA 93221	
Ivanhoe Irrigation District		33777 Road 164	Visalia, CA 93292	
Kaweah Delta Water Conservation District	Mark Larsen	2975 N. Farmersville Blvd.	Farmersville, CA 93223	mlarsen@kdwcd.com
Lindmore Irrigation District	Michael Hagman	PO Box 908	Lindsay, CA 93247	mhagman@lindmoreid.com
Tulare Irrigation District	J. Paul Hendrix	6826 Avenue 240	Tulare, CA 93274	jph@tulareid.org

Organization	Name	Street Address	City, State, Zip	Email
Kaweah River Power Authority	Terry Stafford	2975 N. Farmersville Blvd.	Farmersville, CA 93223	tstafford@kdwcd.com
Non-Governmental Organization				
American Whitewater	Dave Steindorf	4 Baroni Drive	Chico, CA 95928-4314	dave@americanwhitewater.org
American Whitewater	Theresa Simsiman			theresa@americanwhitewater.org
California Sportfishing Protection Alliance	Christopher Shutes			cshutes@calsport.org
CalTrout – Sierra Headwaters Region	Eric Huber	PO Box 3442	Mammoth Lakes, CA 93546	ehuber@caltrout.org
CalTrout – Central California Region	Jacob Katz	930 Shiloh Rd., Bldg. 40-#6	Windsor, CA 95492	jkatz@caltrout.org
Friends of the River	Eric Wesselman	1418 20th Street, Suite 100	Sacramento, CA 95811	eric@friendsoftheriver.org
Trout Unlimited	James Polfer			jpolfer@hotmail.com
Trout Unlimited	John Sikora	4005 Manzanita Avenue, Suite 6, Box 302	Carmichael, CA 95608	JESIKORA@SBCGLOBAL.NET
Trout Unlimited	Walt Bentley			bentley46@earthlink.net
Advisory Council on Historic Preservation	John Eddins	401 F Street, NW, Suite 308	Washington, DC 20001-2637	jeddins@achp.gov
Tulare County Historical Society	Mike Chrisman	PO Box 295	Visalia, CA 93279	
Three Rivers Historical Museum	Thomas Marshall	PO Box 162	Three Rivers, CA 93271	history@3rmuseum.org
Native American Tribes				
Tule River Indian Tribe	Neil Peyron	PO Box 589	Porterville, CA 93258	Neil.Peyron@tulerivertribe-nsn.gov
Santa Rosa Indian Community of the Santa Rosa Rancheria	Ruben Barrios Sr.	PO Box 8	Lemoore, CA 93245	rbarrios@tachi-yokut-nsn.gov
Tule River Indian Tribe	Kerri Vera	PO Box 589	Porterville, CA 93258	tuleriverenv@yahoo.com
Tule River Indian Tribe	Joseph Garfield	PO Box 589	Porterville, CA 93258	joseph.garfield@yahoo.com
Tule River Indian Tribe	Zack Jaroko	PO Box 589	Porterville, CA 93258	
Wukchumni Tribal Council	Hector Lalo Franco	4737 West Concord Avenue	Visalia, CA 93277	hlfranco54@gmail.com

Organization	Name	Street Address	City, State, Zip	Email
Tachi-Yokut Tribe	Greg Cuara	PO Box 8	Lemoore, CA 93245	gcuara@tachi-yokut-nsn.gov
Tachi-Yokut Tribe	Shana Powers	PO Box 8	Lemoore, CA 93245	spowers@tachi-yokut-nsn.gov
Dunlap Band of Mono-Indians - Historical Preservation Society	Mandy Marine	PO Box 18	Dunlap, CA 93621	mandy_marine@hotmail.com
Northem Band of Mono Yokuts	Delaine Bill	PO Box 234	Dunlap, CA 93621	
Cold Springs Tribe	Carol Bill	PO Box 209	Tollhouse, CA 93667	csrchair@netptc.net
Cold Springs Tribe	Blossom Hunter	PO Box 209	Tollhouse, CA 93667	csradmin1@netptc.net
Cold Springs Tribe	Eric Smith	PO Box 209	Tollhouse, CA 93667	csrepa@netptc.net
California Indian Basketweavers Association	Linda Navarro	428 Main Street	Woodland, CA 95695	ciba@ciba.org
Mono Elder	Keith Turner	PO Box 306	Auberry, CA 93602	keithturner1950@yahoo.com
North Fork Mono Tribe	Ron Goode	13396 Tollhouse Road	Clovis, CA 93619	rwgoode911@hotmail.com
Kern Valley Indian Community	Julie Turner	PO Box 1010	Lake Isabella, CA 93240	administrator@kawaiisu.org
Kern Valley Indian Community	Robert Robinson	PO Box 1010	Lake Isabella, CA 93240	bbutterbredt@gmail.com
Tubatulabas of Kern Valley	Robert L. Gomez Jr.	PO Box 226	Lake Isabella, CA 93240	rgomez@tubatulabal.org
Wuksache Indian Tribe / Eshom Valley Band	Kenneth Woodrow	1179 Rock Haven Ct.	Salinas, CA 93906	kwood8934@aol.com
Picayune Rancheria of Chukchansi Indians	Jennifer Ruiz	PO Box 2226	Oakhurst, CA 93644	jruiz@chukchansitribe.net
Wukchumni Tribal Council	Darlene Franco	4737 West Concord Avenue	Visalia, CA 93277	
Dunlap Band of Mono Indians	Dirk Charley	5509 East Mckenzie Avenue	Fresno, CA 93727	dcharley2016@gmail.com
Dunlap Band of Mono Indians	Benjamin Charley, Jr.	470 Winuba Lane	Bishop, CA 93621	charley07@verizon.net
	Rene Roederer	46468 Mineral King Road	Three Rivers, CA 93271	reneeroederer@gmail.com

Organization	Name	Street Address	City, State, Zip	Email
Public				
Bear Ranch	Daniel Armstrong	616 South Irena Avenue	Redondo Beach, CA 90277	davidarmstrong43@gmail.com
Bear Ranch	Philip Armstrong	1723 Beaver Dam Road	Vilas, NC 28692	
	Autumn Davidson	46262 Mineral King Road	Three Rivers, CA 93271	clarion@value.net
	William Haxton	PO Box 811	Three Rivers, CA 93271	mountainviewrealty@sbcglobal.net
	Anne Haxton	PO Box 811	Three Rivers, CA 93271	mountainviewrealty@sbcglobal.net
	David Dunham	44024 Sierra Drive	Three Rivers, CA 93271	2shiners@sbcglobal.net
	Mike Hauber	PO Box 1116	Three Rivers, CA 93271	m.d.hauber@gmail.com
	Francis Kunz	44229 Kaweah River Drive	Three Rivers, CA 93271	
	Joy Kunz	222 E. Constance Avenue	Santa Barbara, CA 93105	
	D. Eleanor Newman	PO Box 66	Three Rivers, CA 93271	redbudacres28@aol.com
	Dana Sun	PO Box 276 44229-C Kaweah River Drive	Three Rivers, CA 93271	redbudacres28@aol.com
St. Anthony's Retreat	Mike Hand	43816 Sierra Drive	Three Rivers, CA 93271	mike@stanthonyretreat.org
	Betty Wood	PO Box 83	Three Rivers, CA 93271	brwood6@sbcglobal.net
	Ben Peña	43815 Dinley Drive	Three Rivers, CA 93271	penarb@sbcglobal.net
	Ginger Curtis	44044 Dinely Drive	Three Rivers, CA 93271	ginger.curtis@att.net
	Robert Ruehling	44044 Dinely Drive	Three Rivers, CA 93271	ruehling@att.net
	Doug Hammer	44751 Dinely Drive	Three Rivers, CA 93271	hhp682@gmail.com
	John Gibler	43459 Sierra Drive	Three Rivers, CA 93271	john.gibler@yahoo.com
	Rudy Nesmith	43429-A Sierra Drive	Three Rivers, CA 93271	rudy@viewpt.com
	Dan Dellinges	43429 Sierra Drive	Three Rivers, CA 93271	
	Coleen Bath	43429 Sierra Drive	Three Rivers, CA 93271	monosail@earthlink.net
Lake Elowin Resort	Milton Melkonian	43840 Dinely Drive	Three Rivers, CA 93271	catchall@lake-elowin.com

Organization	Name	Street Address	City, State, Zip	Email
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Exhibit A
Description of Project

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in Exhibit A of its license application.

Exhibit A is a description of the project. This exhibit need not include information on project works maintained and operated by the United States Army Corps of Engineers, the Bureau of Reclamation, or any other department or agency of the United States, except for any project works that are proposed to be altered or modified. If the project includes more than one dam with associated facilities, each dam and the associated component parts must be described together as a discrete development. The description for each development must contain:

(1) The physical composition, dimensions, and general configuration of any dams, spillways, penstocks, powerhouses, tailraces, or other structures, whether existing or proposed, to be included as part of the project;

(2) The normal maximum surface area and normal maximum surface elevation (mean sea level), gross storage capacity and usable storage capacity of any impoundments to be included as part of the project;

(3) The number, type, and rated capacity of any turbines or generators, whether existing or proposed, to be included as part of the project;

(4) The number, length, voltage, and interconnections of any primary transmission lines, whether existing or proposed, to be included as part of the project [see 16 U.S.C. 796(11)];

(5) The specifications of any additional mechanical, electrical, and transmission equipment appurtenant to the project; and

(6) All lands of the United States that are enclosed within the project boundary described under each paragraph (h) of this section (Exhibit G), identified and tabulated by legal subdivisions of a public land survey of the affected area or, in the absence of a public land survey, by the best available legal description. The tabulation must show the total acreage of the lands of the United States within the project boundary.

(1) General Configuration

Southern California Edison Company (SCE or Licensee) owns and operates the Kaweah Project (Project) consisting of three developments: Kaweah No. 1, Kaweah No. 2, and Kaweah No. 3, which commenced operation in June 1899, February 1905, and May 1913, respectively. The Project has limited storage capacity and is operated in a “run-of-river” mode. The total generating capacity is 8.85 megawatts (MW). Water captured at diversion structures is transported through a connecting flowline and penstock to the powerhouse and then returned to the river through the powerhouse tailrace.

The Project is located on the Kaweah River and East Fork Kaweah River near the community of Three Rivers in Tulare County, California, on the western slope of the Sierra Nevada. Lake Kaweah (non-Project facility) is located approximately 5 miles downstream of the Kaweah No. 2 Powerhouse. The boundary for the Sequoia National Park (SNP) is located directly adjacent to and north of the Kaweah No. 2 Diversion Dam and Pool and Kaweah No. 3 Powerhouse. The Project is located on private lands and public lands administered by the Bureau of Land Management (BLM). An overview of the major Project facilities and land jurisdictions in the vicinity of the Project are shown on Map A-1.

Portions of the Kaweah No. 1 and No. 3 developments are located within the SNP and are, therefore, not under Federal Energy Regulatory Commission (FERC or Commission) jurisdiction (Map A-1). All facilities located within the SNP are currently operated under a Special Use Permit (SUP) (Permit No. PWR-SEKI-6000-2016-015) issued to SCE by the National Park Service (NPS). The current SUP expires on September 8, 2026. Appendix A-1 includes a description of the non-FERC portions of the Kaweah No. 1 and No. 3 developments. Since these facilities are not under FERC jurisdiction they are not subject to relicensing and are not further considered in this document.

A description of the existing Project facilities under FERC jurisdiction is included below. Map A-2a-h includes a detailed map series of all Project facilities and a general elevation profile of the Project is shown on Figure A-1. The physical characteristics and facility specifications of the primary Project facilities is provided in Table A-1. No new facilities are proposed for the Project.

Kaweah No. 1 Development

Diversion Dam and Diversion Pool

The Kaweah No. 1 Diversion is located on the East Fork Kaweah River. The diversion structure is a 6-foot high overflow concrete gravity dam, with a crest length of 20 feet at an elevation of 2,583 feet. The Kaweah No. 1 Diversion Pool has a design and current capacity of approximately 0.03 ac-ft. The dam's outlet works is a 6-foot high, 3-foot wide, unlined tunnel controlled by a manually operated slide gate. The outlet works has a maximum capacity of 24 cubic feet per second (cfs). The tunnel extends approximately 50 feet and empties into a sandbox (sediment trap) at the downstream end. The sandbox has a spillway crest elevation of 2,580 feet. Water leaving the sandbox flows through a trash rack and a 36-inch by 36-inch slide gate into the Kaweah No. 1 Flowline (24 cfs capacity).

Flowline

The Kaweah No. 1 Flowline consists of an elevated steel flume supported by a wooden support structure. The flowline traverses 30,723 feet along the south side of East Fork Kaweah River Canyon from Kaweah No. 1 Diversion slide gate to the Kaweah No. 1 Forebay Tank. The flowline has a maximum diversion capacity of approximately 24 cfs. There are two water user diversions (WUD) off of the Kaweah No. 1 Flowline (Bear WUD and Summit WUD).

SCE conveys water from the flowline through a short tap line to a valve/manifold. The short tap line and valve/manifold are not under FERC jurisdiction. Local water users take delivery of the water at the valve/manifold. From the valve/manifold, water users have established their own distribution system made up of individual valves to regulate water taken by each water user consistent with their water rights. The water users self-regulate the quantity of water taken by individual water user at the delivery point. Water users are also responsible for maintaining the water distribution system from the valve/manifold to their respective property. SCE does not have the responsibility or authority to govern individual use by the water users or to maintain the water distribution system. SCE only has the authority to operate and maintain the flowline, short tap line, and valve/manifold such that the total volume of water available to the local water users at each delivery point is consistent with the commitments made in the original deed.

Kaweah No. 1 Forebay Tank

The Kaweah No. 1 Forebay consists of a 24-foot diameter steel tank with a capacity of 0.18 ac-ft. Water enters the forebay tank from the Kaweah No. 1 Flowline and exits via the Kaweah No. 1 Penstock.

Overflow from the Kaweah No. 1 Forebay Tank is directed through a spillway flume into a natural drainage channel located adjacent to the penstock. Once in the natural channel, the water travels approximately 0.72 mile downslope before flowing into the Kaweah River just south of the Kaweah No. 1 Powerhouse Campus.

In addition, a low-level outlet in the forebay tank is routinely opened during normal operations to flush sand and fine sediment from the bottom of the tank into the adjacent natural drainage channel.

Kaweah No. 1 Penstock

The Kaweah No. 1 Penstock is a 3,340-foot long buried steel pipe varying in diameter from 48–19 inches. Water from the forebay enters the penstock and is conveyed to the Kaweah No. 1 Powerhouse.

Powerhouse and Switchyard

The Kaweah No. 1 Powerhouse contains a single-jet, single-overhung impulse turbine with an installed capacity of 2.25 MW. The maximum estimated hydraulic capacity of the Kaweah No. 1 Powerhouse is 24 cfs. The above-grade portion of the powerhouse includes an approximately 22.5-foot by 26.3-foot reinforced concrete structure. The powerhouse is equipped with an 8-ton hand-operated traveling crane that provides hoisting facilities for all major equipment. From the powerhouse, a short tailrace canal returns the diverted water to the Kaweah River.

The Kaweah No. 1 Switchyard is located adjacent to the powerhouse. A galvanized structural steel switchrack supports the 66 kilovolt (kV) bus bar.[1] The switchgear consists of one remotely operated, 3-pole, 1,200 amp, 69 kV oil circuit breaker. The sitchyard also includes a transformer bank consisting of a single three phase, 3 mega volt amp (MVA), 39.9/64-2.4 kV, oil-air[2] (OA), 60 hertz (Hz) transformer. Disconnect switches, grounding switches, single-phase lightning arresters, and other related equipment are also located in the switchyard.

The powerhouse provides its own station light and power via the 2.4 kV bus that is energized by the generator when the unit is online and back fed from the 66 kV transmission line when the unit is offline. When the 66 kV line is not available, the station light and power is fed from the Salt Creek 12 kV line (non-Project) via a manual switch at the powerhouse/switchyard.

Kaweah No. 1 Powerhouse Campus

The Kaweah No. 1 Powerhouse Campus includes office, maintenance, and storage buildings (located adjacent to the Kaweah No. 1 Powerhouse). The office building includes space for supervisory and operations personnel and contains a lunch area, meeting area, and a restroom facility. The single maintenance building includes a machine, carpenter, and electrical shop areas, a restroom, warehouse, tool room, and office space for maintenance personnel.

Kaweah No. 2 Development

Diversion Dam and Pool

The Kaweah No. 2 Diversion is located on the Kaweah River. The diversion structure is a 7-foot high masonry overflow gravity dam, with an overall crest length of 161 feet at an elevation of 1,365 feet. The Kaweah No. 2 Diversion Pool has a design capacity of approximately 1–2 ac-ft. Over time, the diversion pool has filled in with sediment and it currently has a capacity of approximately 0.2 ac-ft. The outlet works has a maximum capacity of 100 cfs. A trash rack protects the intake at the upstream dam face. The concrete tunnel discharges into a 54-inch diameter by 42-foot long steel pipe, through a 54-inch square manually operated wooden slide gate and a fishwheel, and into the Kaweah No. 2 Flowline (87 cfs capacity). The minimum instream flow (MIF) release pipe comes off the concrete tunnel and releases into the Kaweah River before entering the Kaweah No. 2 Flowline.

[1] In electrical power distribution, a busbar is a metallic strip or bar (typically copper, brass or aluminum) that conducts electricity within a switchboard, distribution board, substation, battery bank, or other electrical apparatus. Its main purpose is to conduct a substantial current of electricity, and not to function as a structural member.

[2] Oil-Air, a cooling classification for transformers now classified as ONAN. Oil type, Natural convection flow through cooling equipment and in windings, & Air external cooling medium.

Flowline

The Kaweah No. 2 Flowline is approximately 21,607 feet in length, including 16,738 feet of concrete ditch; 3,822 feet of steel flume comprised of 19 segments; and 1,047 feet of 50-inch diameter steel pipe. The flowline generally parallels the north side of the Kaweah River extending from the Kaweah No. 2 Diversion Dam to the Kaweah No. 2 Forebay. The flowline has a maximum diversion capacity of approximately 87 cfs. There are four WUDs on the Kaweah No. 2 Flowline (Flume 5 WUD, Flume 6 WUD, Canal 9 WUD, and Flume 14 WUD).

SCE conveys water from the flowline through a short tap line to a valve/manifold. The short tap line and valve/manifold are not under FERC jurisdiction. Local water users take delivery of the water at the valve/manifold. From the valve/manifold, water users have established their own distribution system made up of individual valves to regulate water taken by each water user consistent with their water rights. The water users self-regulate the quantity of water taken by individual water user at the delivery point. Water users are also responsible for maintaining the water distribution system from the valve/manifold to their respective property. SCE does not have the responsibility or authority to govern individual use by the water users or maintain the water distribution system. SCE only has the authority to operate and to maintain the flowline, short tap line, and valve/manifold such that the total volume of water available to the local water users at each delivery point is consistent with the commitments made in the original 1903 indenture.

Wildlife Bridges and Escape Ramps

To reduce wildlife mortality (drownings) in the Kaweah No. 2 Flowline various wildlife protection measures were installed, including wildlife bridges, escape ramps, deer outs (chain link fencing attached to the side of the flowline), and hazers (log and cable booms crossing the flowline at an angle, to direct a swimming deer to an escape ramp).

Footbridges

Footbridges are installed at various intervals along the Kaweah No. 2 Flowline to allow SCE personnel to cross the flowline. The footbridges include signage that they are to be used by SCE personnel only and the public is cautioned to keep off.

Forebay

The Kaweah No. 2 Forebay is an enlargement of the Kaweah No. 2 Flowline. The forebay extends for a distance of 180 feet and has a cross section 13-feet wide by 14-feet deep and a capacity of 0.75 ac-ft. From the forebay, flow is conveyed to the Kaweah No. 2 Powerhouse through the Kaweah No. 2 Penstock.

At the Kaweah No. 2 Forebay, up to 87 cfs can overflow into three concrete-lined spillways. The primary spillway is located adjacent to the forebay and receives spill flows up to 40 cfs. Water from the spillway enters a natural drainage channel and flows approximately 0.23 mile downslope before converging with the Kaweah No. 2

Powerhouse Tailrace prior to entering the Kaweah River. The other two spillways are located along the flowline, approximately 300 feet and 500 feet upstream of the forebay and can receive spills up to a combined 47 cfs. Spillway flows enter two natural drainage channels that converge approximately 220 feet downslope from the flowline. After converging, the natural drainage channel extends 0.3 mile before discharging into the Kaweah River, approximately 0.16 mile upstream of the Kaweah No. 2 Powerhouse.

In addition, the forebay has several low-level outlets which are routinely opened during normal operations to flush small accumulation of sand and fine sediment from the bottom of the forebay into natural drainages.

Penstock

The Kaweah No. 2 Penstock is a 1,012-foot long buried steel pipe varying in diameter from 60–34 inches. Water from the forebay enters the penstock and is conveyed to the Kaweah No. 2 Powerhouse.

Powerhouse and Switchyard

The Kaweah No. 2 Powerhouse contains a single Francis-type turbine and electrical generator with an installed generating capacity of 1.8 MW. The maximum estimated hydraulic capacity of the Kaweah No. 2 Powerhouse is 82 cfs. The above-grade portion of the powerhouse includes an approximately 34-foot by 62-foot wood frame structure. The powerhouse is equipped with an 8-ton hand-operated traveling crane that provides hoisting facilities for all major equipment. From the powerhouse, a 0.3-mile long tailrace canal returns the diverted water to the Kaweah River.

The Kaweah No. 2 Switchyard is located adjacent to the powerhouse. A galvanized structural steel switchrack supports the 66 kV bus bar. The switchgear consists of one remotely operated, 3-pole, 1,200 amp, 69 kV oil circuit breaker. The switchyard also includes a transformer bank consisting of a single three phase, 2.25 MVA, 39.8/69-2.3 kV, OA, 60 Hz transformer. Disconnect switches, grounding switches, single-phase lightning arresters, and other related equipment are also located in the switchyard.

The powerhouse provides its own station light and power via the 2.4 kV bus that is energized by the generator when the unit is online and back fed from the 66 kV transmission line when the unit is offline. When the 66 kV line is not available, the station light and power is fed from the Salt Creek 12 kV line (non-Project) via a manual switch at the powerhouse/switchyard.

Kaweah No. 2 Powerhouse River Access Parking Area

Adjacent to the Kaweah No. 2 Powerhouse, SCE provides five regular and one handicapped parking spots near a public access point to the Kaweah River. Due to concerns from local residents, SCE only provides parking Monday – Thursday between the hours of 8:00 am and 7:00 pm. When the parking area is closed, an A-frame sign is posted at the entrance providing hours of operation and entry is

blocked by a barrier. Additional signage is provided at the parking area that specifies risks associated with usage of the property; rules and restrictions; prohibited activities; and emergency contact information.

Kaweah No. 3 Development

Flowline

The short segment of the Kaweah No. 3 Flowline is under FERC jurisdiction and consists of a 2,975-foot long concrete box flume that conveys water to the Kaweah No. 3 Forebay. The flowline has a maximum diversion capacity of approximately 97 cfs.

Wildlife Bridges and Escape Ramps

To reduce wildlife mortality (drownings) in the Kaweah No. 3 Flowline various wildlife protection measures were installed, including wildlife bridges, escape ramps, deer outs (chain link fencing attached to the side of the flowline), and hazers (log and cable booms crossing the flowline at an angle, to direct a swimming deer to an escape ramp).

Footbridges

Footbridges are installed at various intervals along the Kaweah No. 3 Flowline to allow SCE personnel to cross the flowline. The footbridges include signage that they are to be used by SCE personnel only and the public is cautioned to keep off.

Forebay

The Kaweah No. 3 Forebay is an embankment concrete forebay with a capacity of approximately 11 ac-ft. At the downstream end of the forebay, water is released into a 42-inch steel pipe, which connects to the Kaweah No. 3 Penstock.

At the Kaweah No. 3 Forebay, up to 97 cfs of flow can enter into an approximately 75-foot long concrete-lined spillway chute that begins at the upstream end of the forebay. The spillway chute discharges into an adjacent natural drainage channel that flows approximately 0.3 mile downslope into the Kaweah River (within the SNP boundary).

In addition, a low-level outlet is used to drain the forebay to conduct sediment management and Project maintenance activities. Water released from the low-level outlet enters a short concrete chute. The chute discharges into an adjacent natural drainage channel that flows approximately 0.5 mile into the Kaweah River (upstream of the Kaweah No. 2 Diversion Dam and within the SNP boundary).

Penstock

The Kaweah No. 3 Penstock is a 3,151-foot long buried steel pipe varying in diameter from 42–36 inches. Water from the forebay is released into a short steel pipe prior to flowing into the penstock. The penstock conveys water to the Kaweah No. 3 Powerhouse.

Powerhouse and Switchyard

The Kaweah No. 3 Powerhouse contains two single-jet, single-overhung impulse turbines with a combined installed generating capacity of 4.8 MW. The maximum estimated hydraulic capacity of the Kaweah No. 2 Powerhouse is 92 cfs. The above-grade portion of the powerhouse includes an approximately 52-foot-by-52-foot concrete structure. The powerhouse is equipped with a 13-ton hand-operated traveling crane that provides hoisting facilities for all major equipment. From the powerhouse, a short tailrace canal returns the diverted water to the Kaweah River.

A switchyard is located adjacent to the powerhouse. A galvanized structural steel switchrack supports the 66 kV bus bar. The switchgear consists of one remotely operated, 3-pole, 1,200 amp, 69 kV oil circuit breaker. The switchyard also includes a transformer bank consisting of four single-phase, 1.25 MVA, 41.6/72-2.4 kV, OA, 60 Hz transformers. One of the four transformers serves as a spare. Disconnect switches, grounding switches, single-phase lightning arresters, and other related equipment are also located in the switchyard.

The powerhouse provides its own station light and power via the 2.4 kV bus that is energized by the generator when the unit is online and back fed from the 66 kV transmission line when the unit is offline. When the 66 kV line is not available, the station light and power is fed from the Salt Creek 12 kV line (non-Project) via a manual switch at the powerhouse/switchyard.

(2) Storage Capacity

The Project has limited storage capacity and is operated in a “run-of-river” mode. The following provides a summary of the normal maximum surface area, normal maximum surface elevation, gross storage capacity, and usable storage capacity for the three Kaweah developments.

Storage Facility	Normal Maximum Surface Area (acre)	Normal Maximum Surface Elevation (feet)	Gross Storage (ac-ft)	Usable Storage[1] (ac-ft)
Kaweah No. 1 Forebay Tank	0.01	2,425	0.18	0.18
Kaweah No. 2 Forebay	0.05	1,332	0.75	0.75
Kaweah No. 3 Forebay	0.65	2,143	11	11

[1] SCE operates the Project’s storage facilities to within 0.4 foot of the gross storage capacity.

(3) Turbines and Generators

The Project includes three powerhouses as described in Item (1) above and Table A-1. A summary of the number, type, and rated capacity of the existing turbines and generators associated with the Project is provided below. No new turbines or generators are proposed for the Project.

- *Kaweah No. 1 Powerhouse* – The Kaweah No. 1 Powerhouse contains one single-jet, single-overhung impulse turbine (Allis-Chalmers) and one electrical generator with an installed generating capacity of 2.25 MW at 600 revolutions per minute (RPM).

- *Kaweah No. 2 Powerhouse* – The Kaweah No. 2 Powerhouse contains one Francis-type turbine and one electrical generator with an installed generating capacity of 1.8 MW at 720 RPM.

- *Kaweah No. 3 Powerhouse* – The Kaweah No. 3 Powerhouse contains two single-jet, single-overhung impulse turbines (Pelton), and two electrical generators each with an installed generating capacity of 2.4 MW at 300 RPM (total installed capacity of 4.8 MW).

(4) Primary Transmission Lines

There are three transmission lines associated with the Project—the primary line and two tap lines. The primary Project transmission line extends approximately 4.09 miles from the Kaweah No. 3 Powerhouse to the Three Rivers Substation.[3] The line is a 66 kV, 3-phase, single circuit line construction on a combination of wooden and steel poles with suspension-type insulators. The primary transmission line connects to the Kaweah No. 1 Switchyard via a 66 kV, 120-foot long tap line, and to the Kaweah No. 2 Switchyard via a 66 kV, 0.4-mile long tap line. Table A-2 provides a summary of the primary transmission lines and Map A-2a-h shows their location. No new primary transmission lines are proposed for the Project.

(5) Mechanical, Electrical, and Transmission Equipment

In addition to the facilities and equipment discussed in Items (1), (3), and (4) above, the Project also includes power and communication lines, a network of gaging stations, gaging cableways, solar power equipment, and satellite repeaters as summarized below. No new mechanical, electrical or transmission equipment is proposed for the Project.

[3] The Three Rivers Substation is not part of the Kaweah Project.

Power and Communication Lines

Various power and communication lines are used to operate Project equipment and allow communication between Project facilities. Table A-2 provides a summary of each power and communication line and Map A-2a-h shows their location.

Gages

SCE currently maintains a network of gaging stations to monitor and record water flow. The following summarizes Project gages by river reach, including the corresponding U.S. Geological Survey (USGS), SCE Gage Number, and purpose of the gage. Refer to Map A-2a-h for the location of Project gages. USGS maintains a contract with SCE to annually review Project gage streamflow records at USGS gages to satisfy license requirements.

East Fork Kaweah River

- East Fork Kaweah River Conduit 1 at Power Plant near Hammond CA (USGS Gage No. 11208800) (SCE Gage No. 200a) – Acoustic Velocity Meter (AVM) located on the penstock to the Kaweah No. 1 Powerhouse that measures flow into the powerhouse.

- East Fork Kaweah River near Three Rivers CA (USGS Gage No. 11208730) (SCE Gage No. 201) – Traditional stage-discharge stream gage located on the southwest bank of the East Fork Kaweah River that measures streamflow between the intake dam and the gage pool weir.

- Kaweah No. 1 MIF Release (SCE Gage No. 201a) – Operational AVM located on a release pipe that comes out of the Kaweah No. 1 Sandbox and measures MIF releases.

- East Fork Kaweah River Conduit 1 near Three Rivers CA (SCE Gage No. 202) – Operational AVM just downstream from the Kaweah No. 1 Flowline intake that measures flow in the flowline.

Kaweah River

- Kaweah River below Conduit No. 2 near Hammond CA (USGS Gage No. 11208600) (SCE Gage No. 203) – Traditional stage-discharge stream gage located on the west bank of the Kaweah River that measures streamflow approximately 500 feet downstream of the Kaweah No. 2 Diversion Dam.

- Kaweah River Conduit No. 2 near Hammond CA (SCE Gage No. 204a) – Operational Acoustic Doppler Current Profiler (ADCP) located on the Kaweah No. 2 Flowline that measures flow from the Kaweah No. 2 Intake into the flowline.

- Kaweah River Conduit No. 2 at Power Plant near Hammond CA (USGS Gage No. 11208818) (SCE Gage No. 205a) – AVM located on the penstock to the Kaweah No. 2 Powerhouse that measures flow into the powerhouse.

- Middle Fork Kaweah River Conduit No. 3 at Power Plant near Hammond CA (USGS Gage No. 11208565) (SCE Gage No. 206a) – AVM located on the penstock to the Kaweah No. 3 Powerhouse that measures flow into the powerhouse.

Gaging Cableways

The Project includes two gaging cableways, one located in the East Fork Kaweah River downstream of the Kaweah No. 1 Diversion Dam and another located in the Kaweah River downstream of the Kaweah No. 2 Diversion Dam. Cableways are used primarily to take hydrological measurements during high flows to calibrate the stream gages (develop accurate stage-discharge relationship).

Kaweah No. 1 Diversion Solar Panel

Approximately 500 feet west of the Kaweah No. 1 Diversion Dam is the Kaweah No. 1 Diversion Solar Panel that provides power for equipment and facility operation at the Kaweah No. 1 Diversion Dam.

Satellite Repeaters

The Project includes two satellite repeaters – Kaweah No. 1 Solar Yard Satellite Repeater located just north of the Kaweah No. 1 Diversion Solar Panel, and the Kaweah No. 1 Grapevine Repeater located at the terminus of the Kaweah No. 1 Flowline Access Road – Grapevine. These repeaters allow improved communication between facilities by receiving a signal and retransmitting it at a higher level/power, or onto the other side of an obstruction, so that the signal can cover longer distances.

(6) Lands of the United States within Project Boundaries

Information regarding lands of the United States that are within the Project boundaries, including legal subdivisions and acreage, will be included in the Final License Application.

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TABLES

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Table A-1. Project Facility Specifications

Kaweah No. 1 Development	
Diversion	
Dam	
Type	overflow concrete gravity dam
Height of Dam Crest above Streambed	6 feet
Dam Crest Length	20 feet
Volume	80 cubic feet
Elevation of Dam Crest	2,583 feet
Elevation of Streambed	2,577 feet
Pool	
Capacity (approx. design/current)	0.03 ac-ft/0.03 ac-ft
Outlet Works	
Type	unlined tunnel
Dimensions	50-feet long x 3-feet wide x 6-feet high
Control	manually operated slide gate
Maximum Capacity	24 cfs
Sandbox (Sediment Trap)	
Elevation of Spillway Crest	2,580 feet
Control	36-inch x 36-inch slide gate
Spillway	
Type	overflow concrete
Width	30 feet
Capacity	50 cfs
Flowline	
Type	steel flume
Length	30,723 feet
Maximum Capacity	24 cfs
Invert Gradient	29 feet/mile
Forebay Tank	
Type	steel
Diameter	24 feet
Capacity	0.18 ac-ft
Discharge	directly into penstock

Penstock	
Type	buried steel
Length	3,340 feet
Diameter	varies from 48–19 inches
Powerhouse	
Installed Capacity, Generator	2.25 MW
Type of Turbine	Allis-Chalmers impulse turbine
Horsepower	3,790
Design Head	1,260 feet
RPM	600
Minimum Load	150 kW with 2.5 cfs
Maximum Hydraulic Capacity	24 cfs
Maximum Tail Water Surface	60 square feet
Minimum Tail Water Surface	60 square feet
Elevation Runner	1,166 feet
Tailrace Structure/Length	rectangular flume 10 feet x 6 feet
Kaweah No. 2 Development	
Diversion	
Dam	
Type	overflow masonry gravity dam
Height of Dam Crest above Streambed	7 feet
Dam Crest Length	161 feet
Volume	2,500 cubic feet
Elevation of Dam Crest	1,365 feet
Elevation of Streambed	1,358 feet
Pool	
Capacity (approx. design/current)	1–2 ac-ft/0.2 ac-ft
Outlet Works	
Type	concrete tunnel
Dimensions	12.5-feet long x 10-feet wide x 10-feet high
Control	dual 48-inch motor operated slide gates
Tunnel Discharge Pipe:	
Type	steel
Length	42 feet
Diameter	54 inches
Control	manually operated slide gate
Maximum Capacity	100 cfs

Flowline	
Type:	
Segment 1	steel flume
Segment 2	steel pipe
Segment 3	concrete ditch
Length:	
Segment 1	3,822 feet x 7-feet wide
Segment 2	1,047-feet long x 50-inch diameter
Segment 3	16,738-feet long x 12-feet wide
Maximum Capacity	87 cfs
Invert Gradient	11.5 feet/mile
Forebay	
Type	concrete-lined
Dimensions	180-feet long x 13-feet wide x 14-feet deep
Capacity	0.75 ac-ft
Discharge	directly into penstock
Penstock	
Type	buried steel
Length	1,012 feet
Diameter	varies from 60–34 inches
Powerhouse	
Installed Capacity, Generator	1.8 MW
Type of Turbine	Francis
Horsepower	2,900
Design Head	344 feet
RPM	720
Minimum Load	150 kW with 13 cfs
Maximum Hydraulic Capacity	82 cfs
Maximum Tail Water Surface	1,600 square feet
Minimum Tail Water Surface	1,600 square feet
Elevation Runner	978 feet
Tailrace Structure/Length	rectangular flume 20 feet x 80 feet
Kaweah No. 3 Development	
Flowline	
Type	concrete box flume
Length	2,975 feet
Maximum Capacity	97 cfs
Invert Gradient	6.6 feet/mile

Forebay	
Type	embankment
Capacity	11 ac-ft
Discharge	drainage channel leading to penstock
Penstock	
Type	buried steel
Length	3,151 feet
Diameter	varies from 42–36 inches
Powerhouse	
Installed Capacity, Generators:	
Unit 1	2.4 MW
Unit 2	2.4 MW
Type of Turbine:	
Unit 1	Pelton – double impulse turbine
Unit 2	Pelton – double impulse turbine
Horsepower:	
Unit 1	3,000
Unit 2	3,000
Design Head:	
Unit 1	750
Unit 2	750
RPM:	
Unit 1	300
Unit 2	300
Minimum Load:	
Unit 1	150 kW with 4 cfs
Unit 2	150 kW with 5 cfs
Maximum Hydraulic Capacity	92 cfs
Maximum Tail Water Surface	1,500 square feet
Minimum Tail Water Surface	1,500 square feet
Elevation Runner	1,428 feet
Tailrace Structure/Length	rectangular flume 10 feet x 150 feet

Notes:

ac-ft = acre-feet
cfs = cubic feet per second
kW = kilowatt
MW = megawatt
RPM. = rotations per minute

Table A-2. Description of Project Transmission, Power, and Communication Lines

Name	Start	End	Length (approx. miles)	Length (approx. feet)	Voltage	Purpose
Transmission Line						
Kaweah No. 3 Powerhouse to Three Rivers Substation Transmission Line	Kaweah No. 3 Powerhouse	Three Rivers Substation[1]	4.00	21,094	66 kV	• When powerhouse is generating, provide power to Three Rivers Substation • When powerhouse is not generating, provide power for equipment and facility operation
Transmission Tap Lines						
Kaweah No. 1 Powerhouse Transmission Tap Line	Kaweah No. 1 Switchyard	Primary Transmission Line	0.03	147	66 kV	• When powerhouse is generating, provide power to Three Rivers Substation • When powerhouse is not generating, provide power for equipment and facility operation
Kaweah No. 2 Powerhouse Transmission Tap Line	Kaweah No. 2 Switchyard	Primary Transmission Line	0.41	2,159	66 kV	• When powerhouse is generating, provide power to Three Rivers Substation • When powerhouse is not generating, provide power for equipment and facility operation
Power Lines						
Kaweah No. 1 Diversion Solar Panel to Kaweah No. 1 Diversion Dam Power Line	Kaweah No. 1 Diversion Solar Panel	Kaweah No. 1 Diversion Dam	0.10	544	120 V	Power for equipment and facility operation
Kaweah No. 1 Office Building to Kaweah No. 1 Forebay Tank Power Line	Kaweah No. 1 Office Building	Kaweah No. 1 Forebay Tank	0.57	3,008	2.4 kV	Power for equipment and facility operation
Kaweah No. 1 Powerhouse Campus Alternate Power Line	Non-Project Distribution Line (near Hwy 198)	Kaweah No. 1 Switchyard	0.38	2,018	12 kV	Alternate power source for equipment and facility operation
Kaweah No. 1 Switchyard to Kaweah No. 1 Maintenance Building Power Line	Kaweah No. 1 Switchyard	Kaweah No. 1 Maintenance Building	0.05	281	2.4 kV	Power for equipment and facility operation
Kaweah No. 1 Switchyard to Kaweah No. 1 Office Building Power Line	Kaweah No. 1 Switchyard	Kaweah No. 1 Office Building	0.01	64	2.4 kV	Power for equipment and facility operation
Kaweah No. 1 Switchyard to Kaweah No. 1 Operator's Office Power Line	Kaweah No. 1 Switchyard	Kaweah No. 1 Operator's Office	0.01	74	2.4 kV	Power for equipment and facility operation
Kaweah No. 1 Switchyard to Kaweah No. 1 Workshop Power Line	Kaweah No. 1 Switchyard	Kaweah No. 1 Workshop	0.03	150	2.4 kV	Power for equipment and facility operation
Kaweah No. 2 Diversion/Flowline Gage and Kaweah No. 3 Powerhouse Alternate Power Line	Non-Project Distribution Line (near Hwy 198)	SCE Project Pole	0.12	626	12 kV	Alternate power source for equipment and facility operation
Kaweah No. 2 Powerhouse Alternate Power Line	Non-Project Distribution Line (near Hwy 198)	Kaweah No. 2 Switchyard	0.04	206	12 kV	Alternate power source for equipment and facility operation
Kaweah No. 2 Powerhouse to Kaweah No. 2 Forebay Power Line	Kaweah No. 2 Powerhouse	Kaweah No. 2 Forebay	0.22	1,185	2.4 kV	Power for equipment and facility operation
Kaweah No. 3 Powerhouse to Kaweah No. 2 Diversion Power Line	Kaweah No. 3 Powerhouse	Kaweah No. 2 Diversion Dam	0.12	653	2.4 kV	Power for equipment and facility operation
Kaweah No. 3 Powerhouse to Kaweah No. 2 Flowline Gage Power Line	Kaweah No. 3 Powerhouse	Kaweah No. 2 Flowline Gage	0.10	546	2.4 kV	Power for equipment and facility operation
Kaweah No. 3 Powerhouse to Kaweah No. 3 Forebay Power Line	Kaweah No. 3 Powerhouse	Kaweah No. 3 Forebay	0.46	2,439	2.4 kV	Power for equipment and facility operation

Name	Start	End	Length (approx. miles)	Length (approx. feet)	Voltage	Purpose
Communication Lines						
Kaweah No. 1 Office Building to Kaweah No. 1 Forebay Tank Fiber Optic Communication Line	Kaweah No. 1 Office Building	Kaweah No. 1 Forebay Tank	0.56	2,960	–	Communication between Project facilities
Kaweah No. 1 Powerhouse to Kaweah No. 1 Office Building Fiber Optic Communication Line	Kaweah No. 1 Powerhouse	Kaweah No. 1 Office Building	0.03	134	–	Communication between Project facilities
Kaweah No. 2 Diversion Dam to Kaweah No. 3 Powerhouse Fiber Optic Communication Line	Kaweah No. 2 Diversion Dam	Kaweah No. 3 Powerhouse	0.06	295	–	Communication between Project facilities
Kaweah No. 2 Powerhouse to Kaweah No. 2 Forebay Fiber Optic Communication Line	Kaweah No. 2 Powerhouse	Kaweah No. 2 Forebay	0.17	900	–	Communication between Project facilities
Kaweah No. 3 Forebay to Kaweah No. 3 Forebay Inlet Fiber Optic Communication Line	Kaweah No. 3 Forebay	Kaweah No. 3 Forebay Inlet	0.11	592	–	Communication between Project facilities
Kaweah No. 3 Powerhouse to Kaweah No. 3 Forebay Fiber Optic Communication Line	Kaweah No. 3 Powerhouse	Kaweah No. 3 Forebay	0.46	2,445	–	Communication between Project facilities

Source: FERC Order amending license (August 7, 2001); SCE Communication (August 2015); Field Observations (2018)

[1] The Three Rivers Substation is not part of the Kaweah Project.

FIGURES

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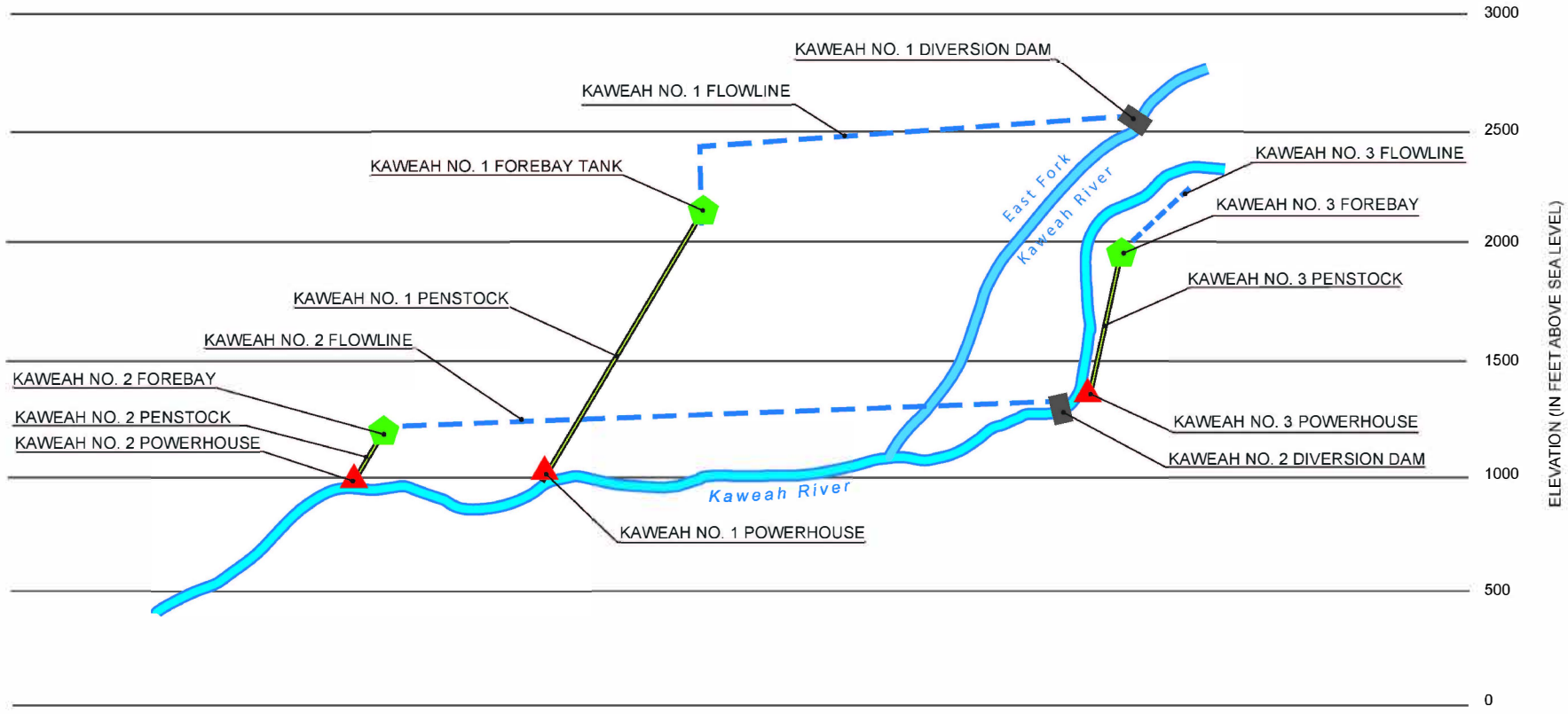
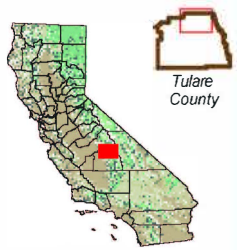


Project Facility	Development		
	Kaweah No. 1	Kaweah No. 2	Kaweah No. 3
Diversion Dam Crest Elevation	2,583 feet	1,365 feet	–
Flowline Diversion Capacity (Max)	24 cfs	87 cfs	97 cfs
Forebay Capacity	0.18 ac-ft	0.75 ac-ft	11 ac-ft
Penstock Length	3,340 feet	1,012 feet	3,151 feet
Powerhouse Installed Capacity	2.25 MW	1.8 MW	Unit 1: 2.4 MW Unit 2: 2.4 MW



Horizontal dimension and size of facilities not to scale

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Figure 2-1

Kaweah Project Facilities Elevation Profile

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MAPS

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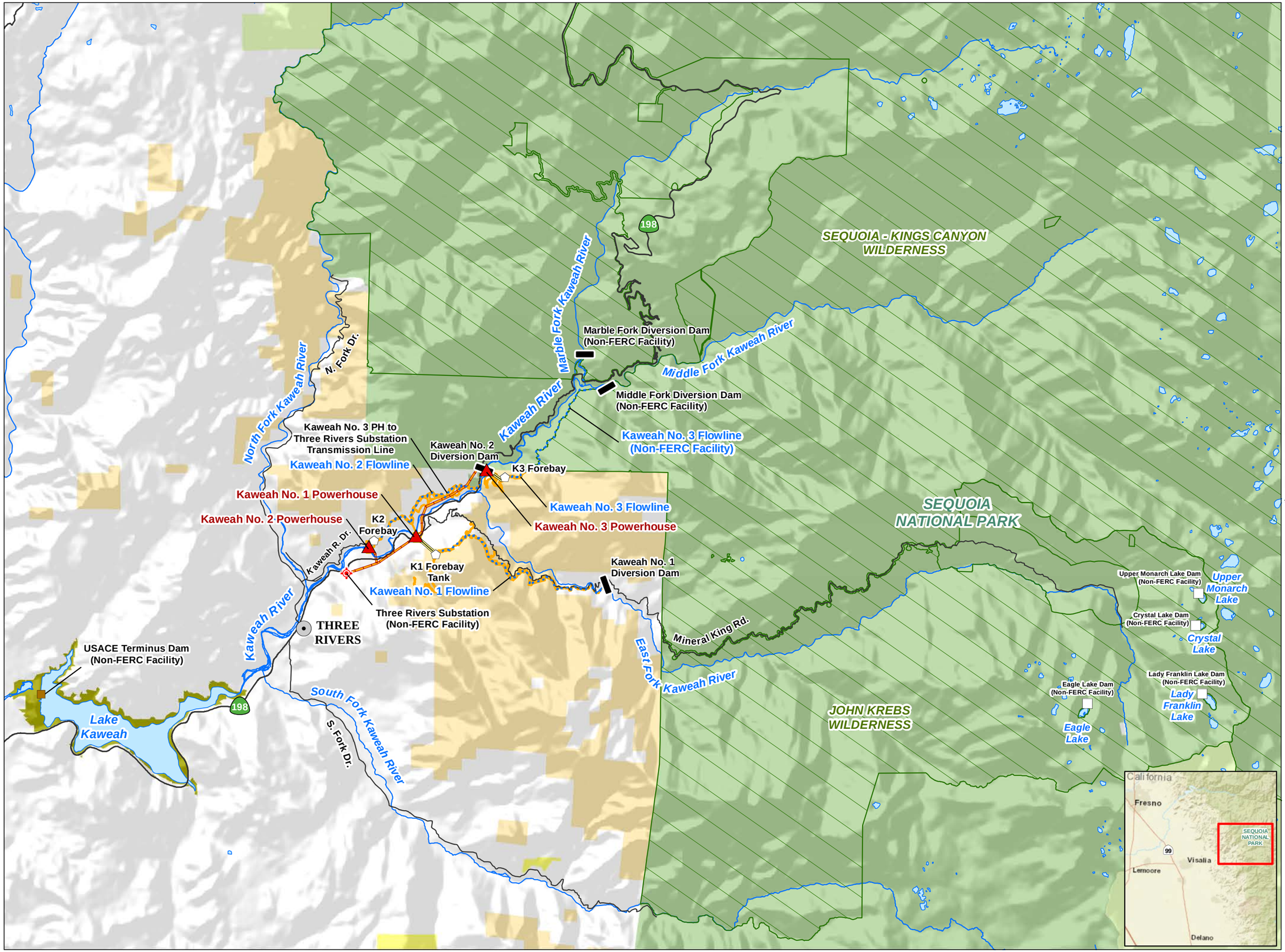

SCE Facilities

- Powerhouse
- Diversion
- Dam
- Utility
- Forebay
- Gage
- Flowline
- Penstock
- Transmission Line
- Project FERC Boundary

NOTE: The Marble and Middle Fork Diversion Dams are not in designated Wilderness

Other Features

- Dam
- City/Town
- Highway/Road
- Watercourse
- Water Body

Land Jurisdiction*

- Bureau of Land Management
- U.S. Army Corps of Engineers
- National Park Service
- U. S. Forest Service
- State Of California
- Private (Blank)

*SOURCE: BLM 2016

Land Management

- National Wilderness Area

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Kaweah Project - FERC Project No. 298

Map A-1

Project Facilities and Land Jurisdictions

Date: 3/28/2019

0 0.5 1 2 Miles

Projection: UTM Zone 11
Datum: NAD 83

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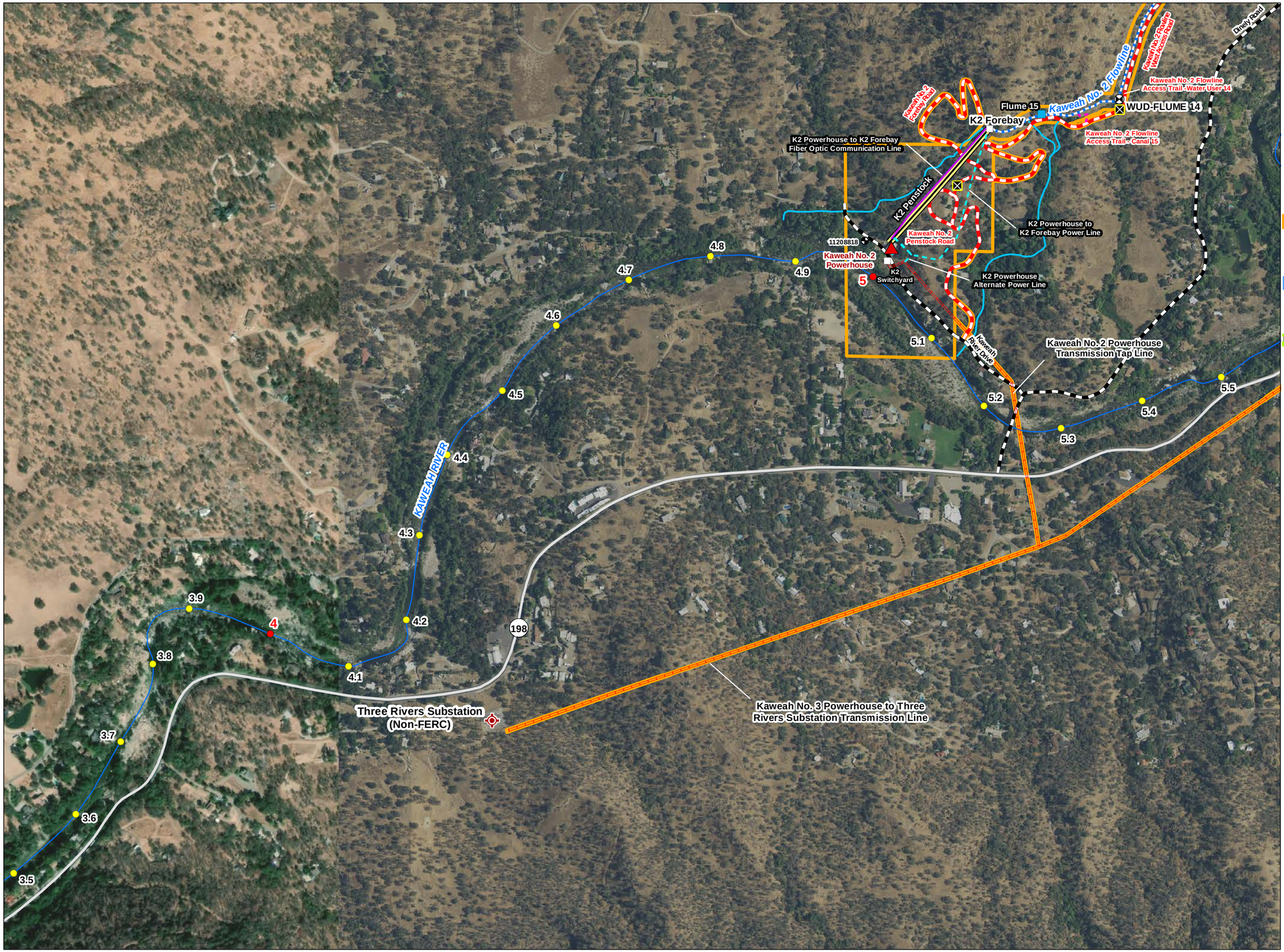


Facilities

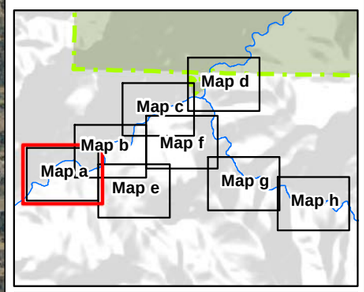
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2a
Project Facilities

0 250 500 Feet

Projection: UTM Zone 11
Datum: NAD 83

Date: 6/28/2019

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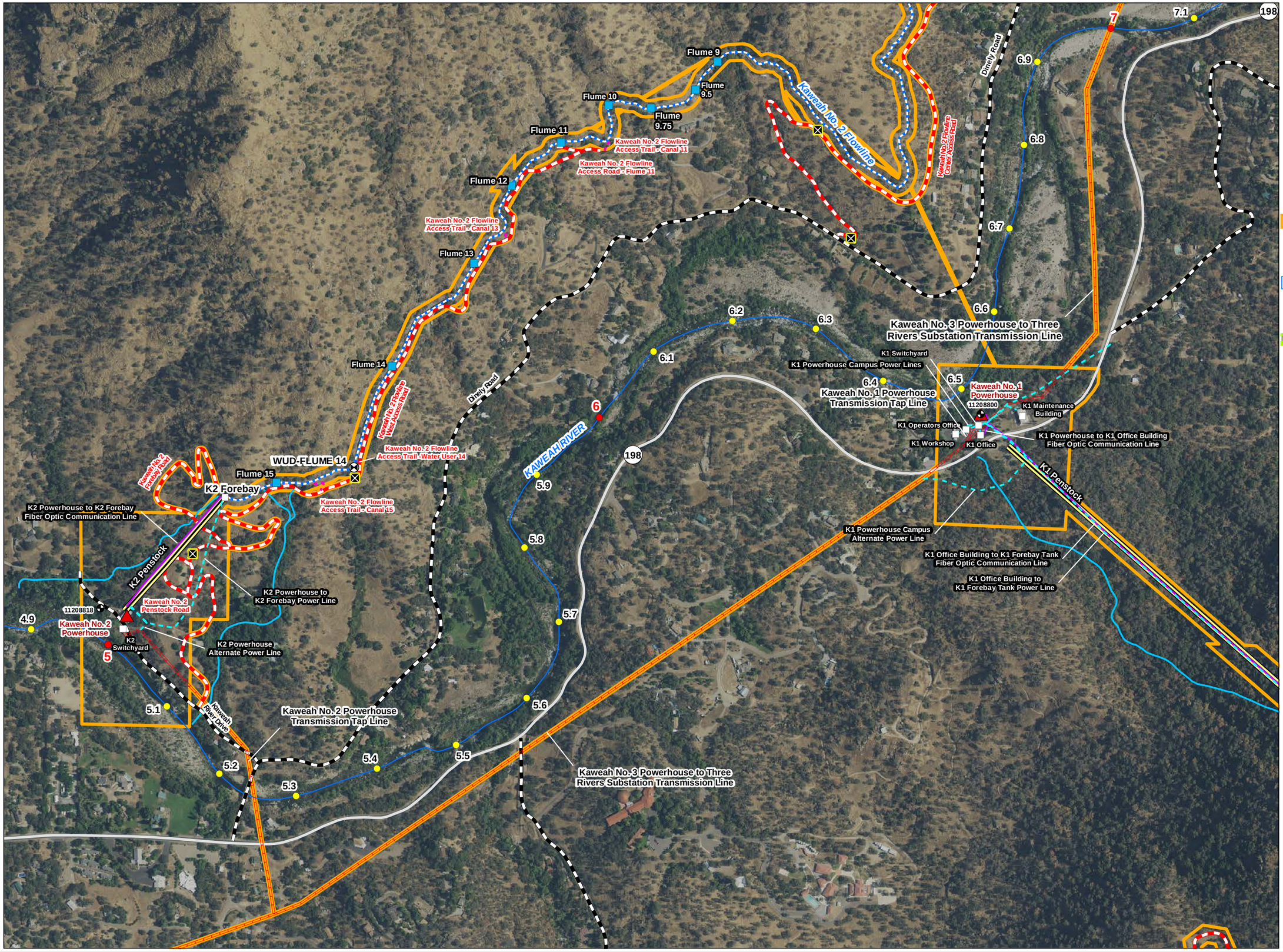


Facilities

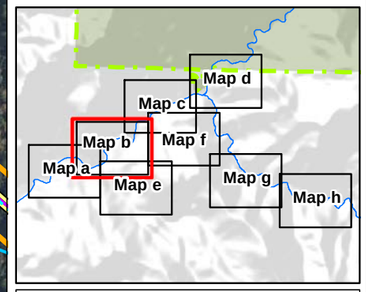
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2b
Project Facilities

0 250 500 Feet

Date: 6/28/2019

Projection: UTM Zone 11
Datum: NAD 83

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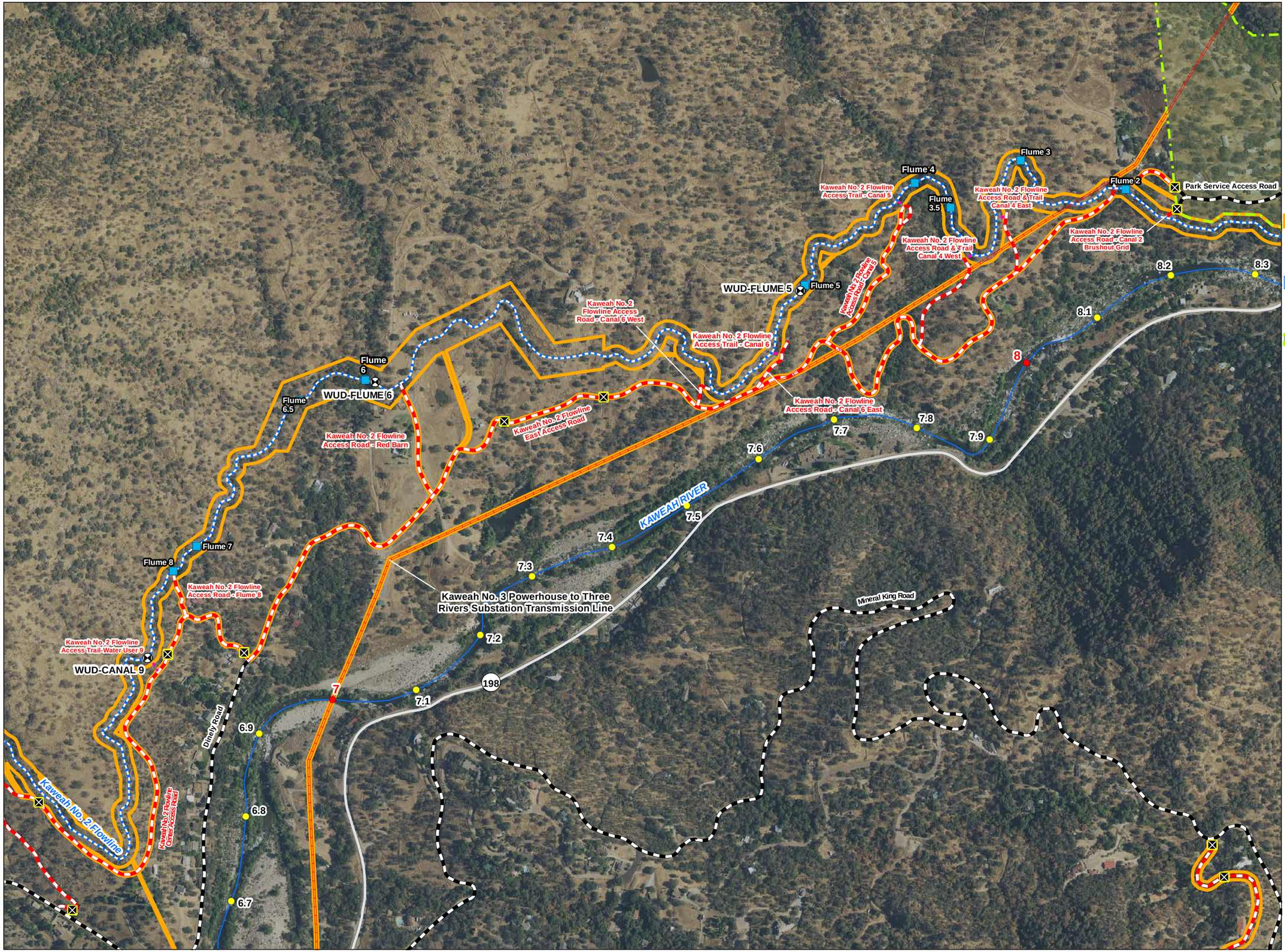


Facilities

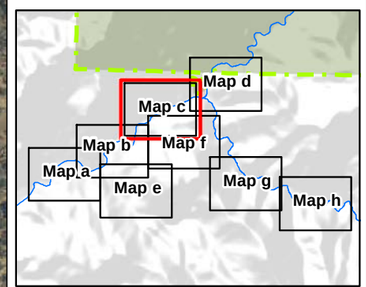
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2c
Project Facilities

0 250 500 Feet

Projection: UTM Zone 11
Datum: NAD 83

Date: 6/28/2019

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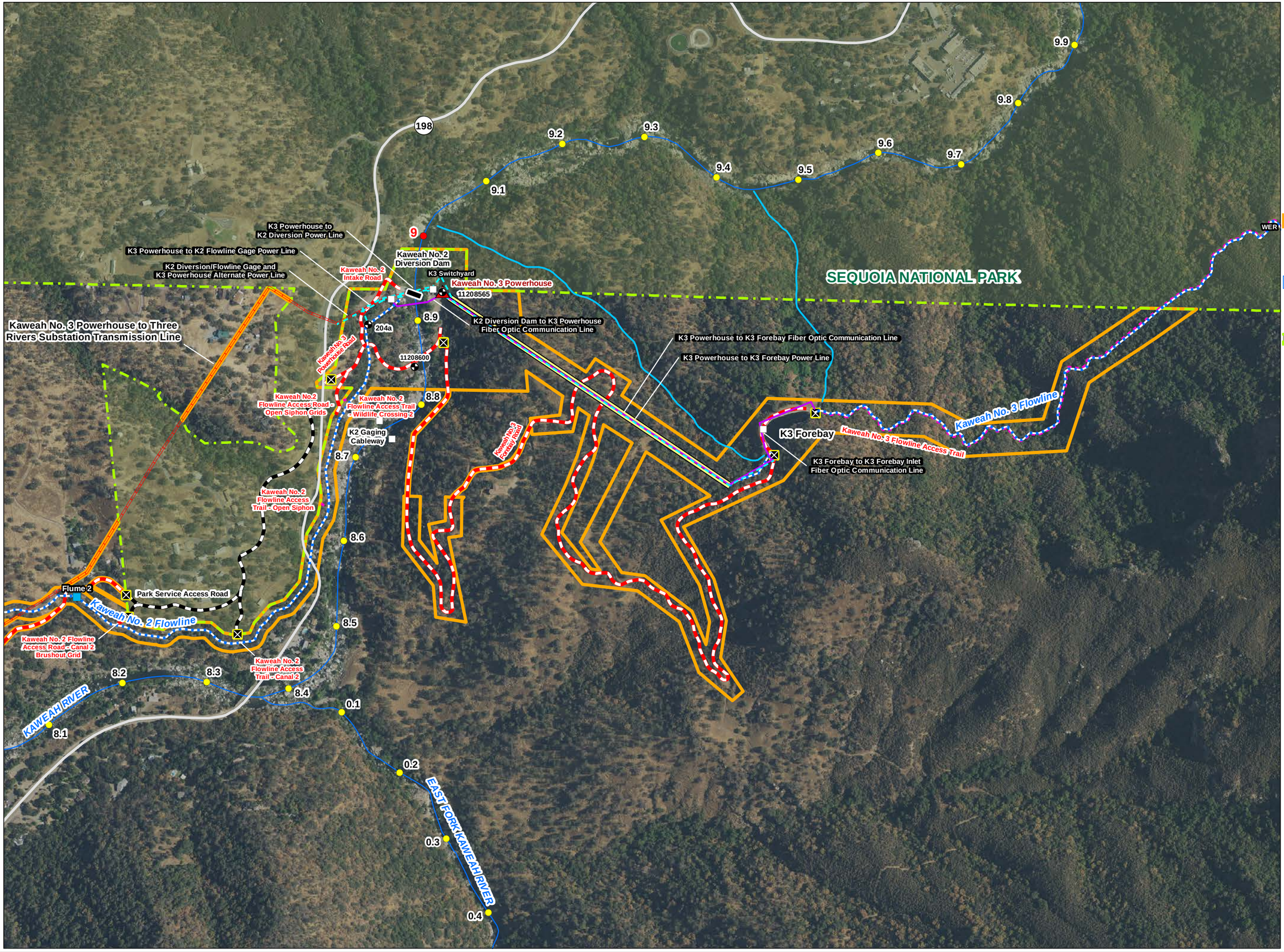


Facilities

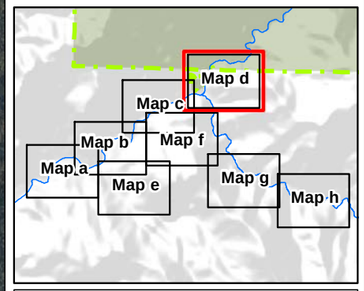
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2d
Project Facilities

0 250 500 Feet

Projection: UTM Zone 11
Datum: NAD 83

Date: 6/28/2019

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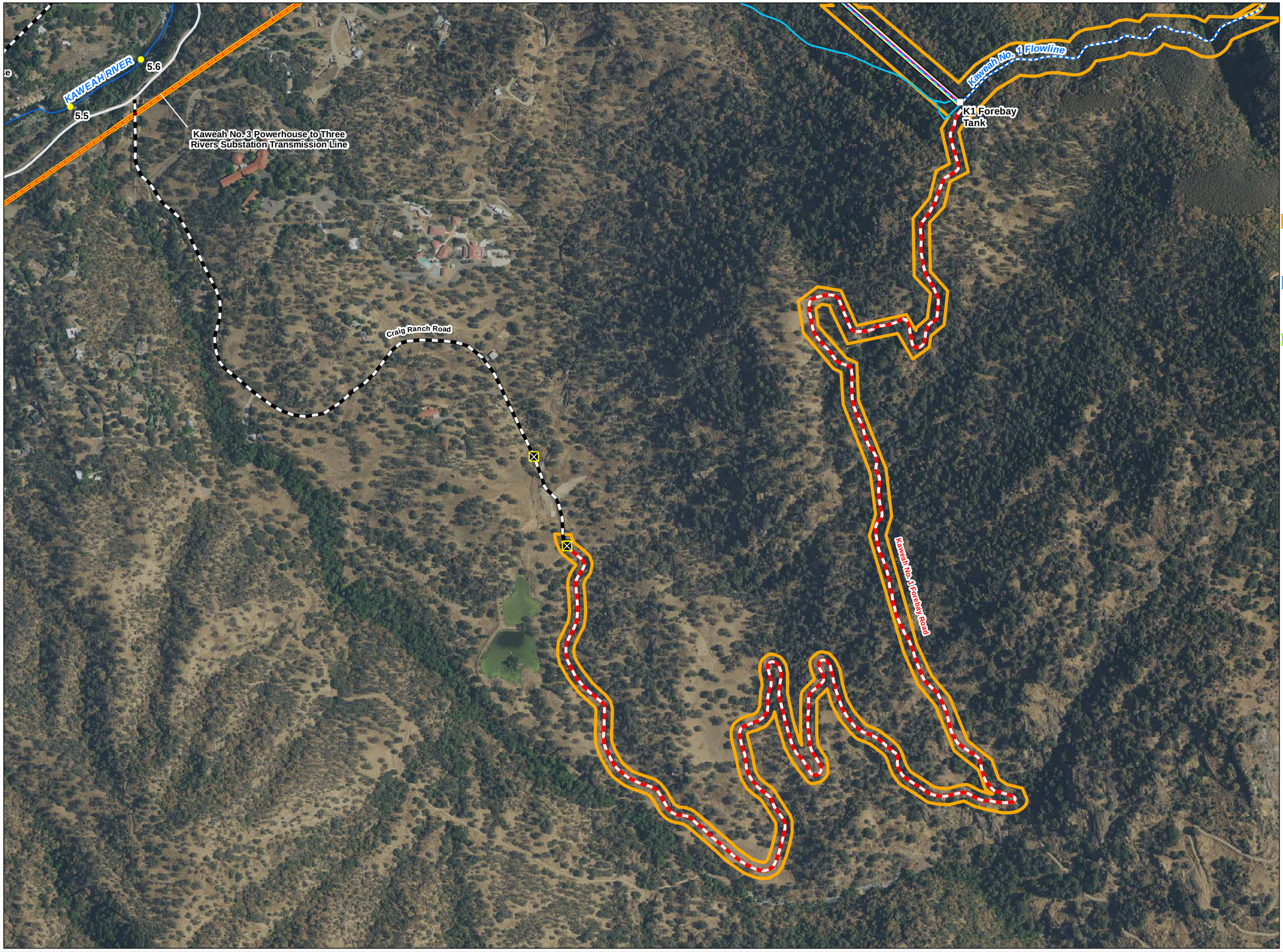


Facilities

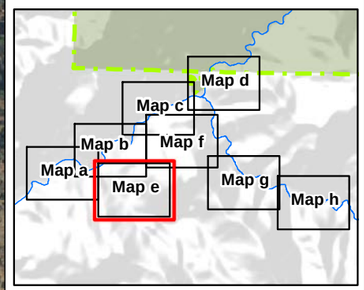
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2e
Project Facilities

N W E S

0 250 500 Feet

Date: 6/28/2019

Projection: UTM Zone 11
Datum: NAD 83

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Facilities

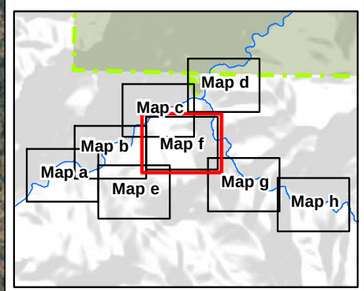
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2f
Project Facilities

0 250 500 Feet

Projection: UTM Zone 11
Datum: NAD 83

Date: 6/28/2019

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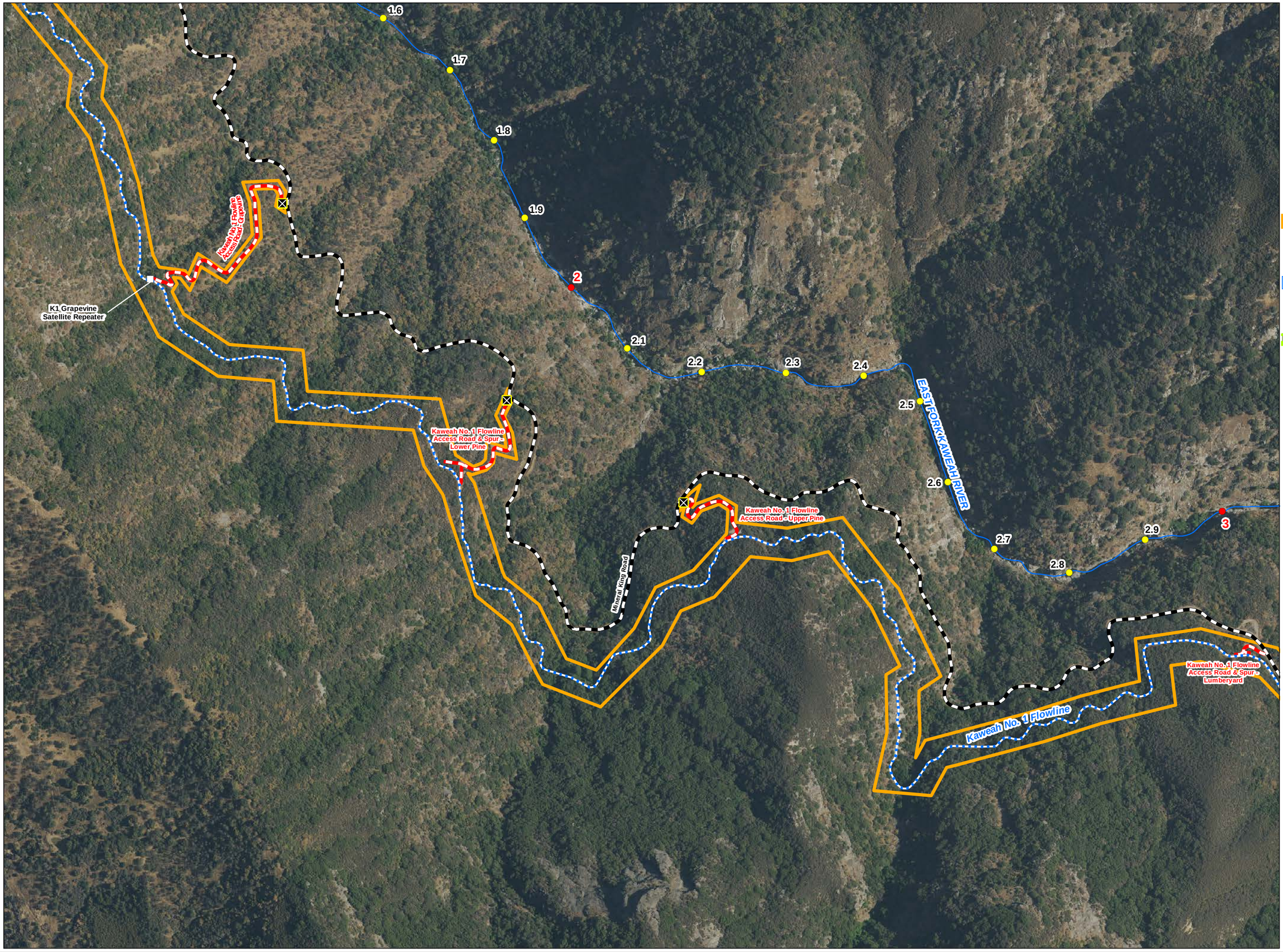


Facilities

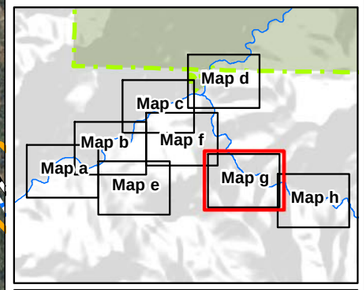
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



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Kaweah Project - FERC Project No. 298

Map A-2g
Project Facilities

0 250 500 Feet

Projection: UTM Zone 11
Datum: NAD 83

Date: 6/28/2019

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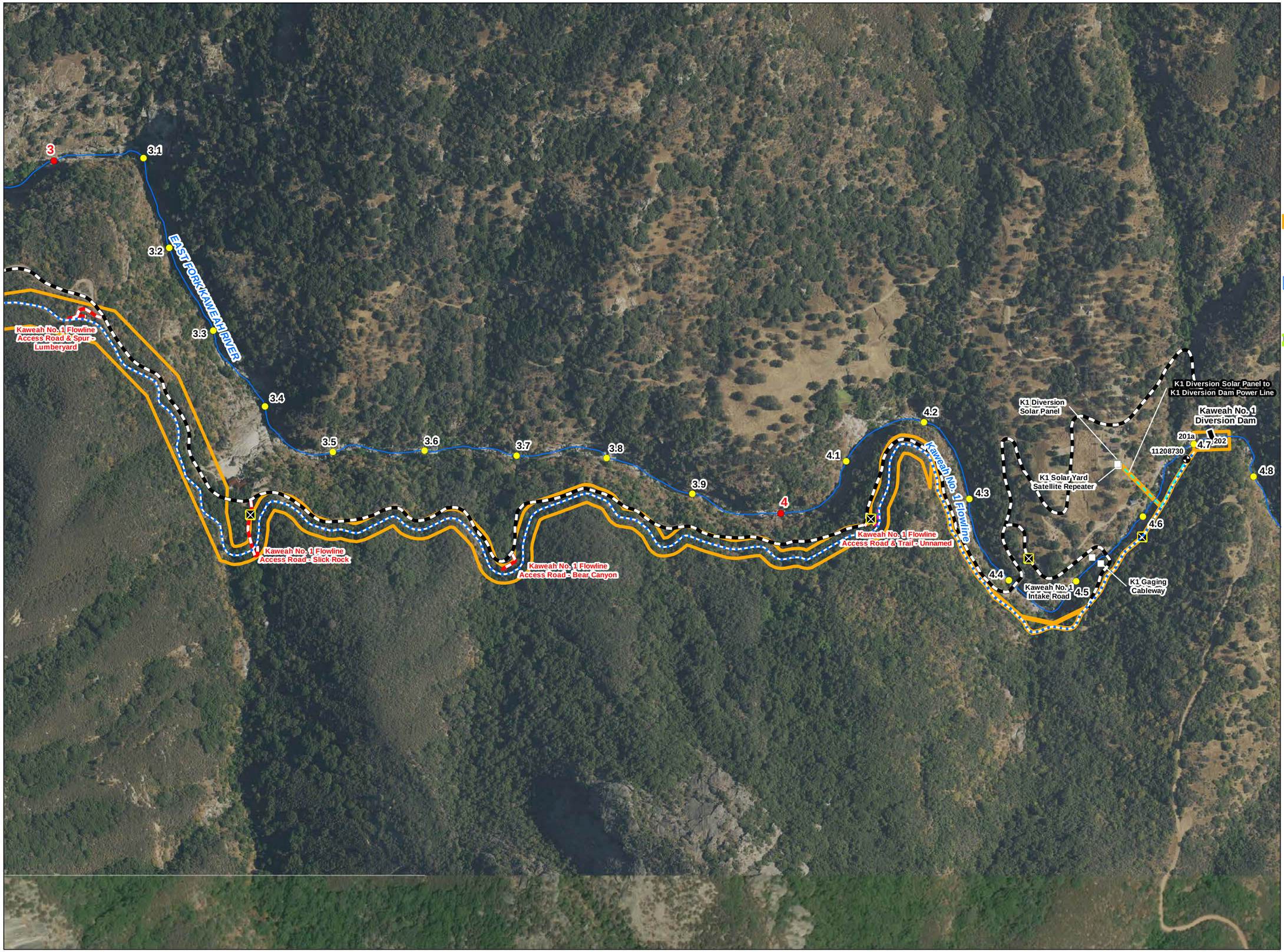


Facilities

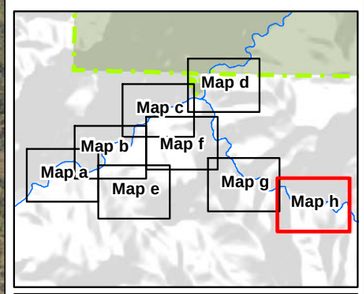
- Powerhouse
- Diversion
- Flowline
- Spillway Channel or Pipe
- Penstock
- Flume Segment
- Ancillary Facility
- Gage
- Transmission Line
- Power Line
- Communication Line
- FERC Boundary

Other Features

- Watercourse
- Water Body
- Water User Diversion
- River Mile / 10th Mile
- National Park Boundary

Transportation

- Project Road
- Project Trail
- Non-Project General Access Road
- Gate



SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Kaweah Project - FERC Project No. 298

Map A-2h
Project Facilities

N W E S

0 250 500 Feet

Date: 6/28/2019

Projection: UTM Zone 11
Datum: NAD 83

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APPENDIX A-1

Description of Non-FERC Facilities

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SCE operates the Kaweah Project (Project) (FERC Project No. 298) which is located on the Kaweah River and East Fork Kaweah River near the community of Three Rivers in Tulare County, California, on the western slope of the Sierra Nevada.

The Project consists of three developments: Kaweah No. 1 Development (East Fork Kaweah River); Kaweah No. 2 Development (Kaweah River); and Kaweah No. 3 Development (Middle and Marble forks of the Kaweah River and the Kaweah River), which commenced operation in June 1899, February 1905, and May 1913, respectively.

The Project makes use of several non-FERC facilities located in SNP that are not subject to the FERC License. All facilities located within SNP are currently operated under an SUP (Permit No. PWR-SEKI-6000-2016-015) issued to SCE by the NPS. The current SUP expires on September 8, 2026. Facilities operated under the SUP include portions of the Kaweah No. 1 and No. 3 developments, as described below and shown on Map 3-1.

Kaweah No. 1 – The upper portion of the Kaweah No. 1 Development near the Mineral King Area, including four small reservoirs—Eagle Lake, Lady Franklin Lake, Crystal Lake, and Upper Monarch Lake (collectively referred to as the Mineral King Lakes)—that release water during the late summer and fall months to augment flows in the East Fork Kaweah River and generating capacity of the Kaweah No. 1 Powerhouse during periods of low flow. The Mineral King Lakes were originally constructed between 1903 and 1905 on public lands that were subsequently included in the Sequoia National Forest, and were part of the original license. However in 1978, that portion of Sequoia National Forest was added to the SNP. The enabling legislation empowered the NPS to issue SUPs for the continued use of the reservoirs within SNP.

Kaweah No. 3 – The upper portion of the Kaweah No. 3 Development, including the Middle Fork and Marble Fork diversion dams, and water conveyance system (Kaweah No. 3 Flowline) that diverts water from the river reaches to the Kaweah No. 3 Powerhouse. The Middle Fork and Marble Fork diversion dams are approximately 6-foot high overflow concrete gravity dams, with a crest length of approximately 50 feet. Water diverted at the Marble Fork Diversion Dam enters a 2,800-foot long concrete-lined ditch and joins the water diverted at the Middle Fork Diversion Dam through a 1,085-foot long, 48-inch diameter siphon under the Middle Fork Kaweah River. Water diverted from the Middle Fork Diversion Dam enters a 3,230-foot long concrete box flume and merges with water from the Marble Fork Diversion Flowline. From this juncture, the flowline consists of 5,200 feet of concrete-lined ditch; 15,700 feet of concrete box flume; and three short wooden flume sections. All but the last 2,975 feet of the flowline is located in the SNP and is not part of the FERC License. The Middle Fork and Marble Fork diversions and flowlines were constructed within the SNP by permission of the NPS between 1907 and 1913.

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Exhibit B
Statement of Operation and Resource Utilization

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in Exhibit B of its license application.

Exhibit B is a statement of project operation and resource utilization. If the project includes more than one dam with associated facilities, the information must be provided separately for each such discrete development. The exhibit must contain:

(1) A statement whether operation of the powerplant will be manual or automatic, an estimate of the annual plant factor, and a statement of how the project will be operated during adverse, mean, and high water years;

(2) An estimate of the dependable capacity and average annual energy production in kilowatt-hours (or a mechanical equivalent), supported by the following data:

- (i) The minimum, mean, and maximum recorded flows in cubic feet per second of the stream or other body of water at the powerplant intake or point of diversion, with a specification of any adjustments made for evaporation, leakage, minimum flow releases (including duration of releases), or other reductions in available flow; monthly flow duration curves indicating the period of record and the gauging stations used in deriving the curves; and a specification of the period of critical streamflow used to determine the dependable capacity;
- (ii) An area-capacity curve showing the gross storage capacity and usable storage capacity of the impoundment, with a rule curve showing the proposed operation of the impoundment and how the usable storage capacity is to be utilized;
- (iii) The estimated hydraulic capacity of the powerplant (minimum and maximum flow through the powerplant) in cubic feet per second;
- (iv) A tailwater rating curve; and
- (v) A curve showing powerplant capability versus head and specifying maximum, normal, and minimum heads;

(3) A statement, with load curves and tabular data, if necessary, of the manner in which the power generated at the project is to be utilized, including the amount of power to be used on-site, if any, the amount of power to be sold, and the identity of any proposed purchasers; and

(4) A statement of the applicant's plans, if any, for future development of the project or of any other existing or proposed water power project on the stream or other body of water, indicating the approximate location and estimated installed capacity of the proposed developments.

(1) Type of Operation

Plant Supervision – The three Project powerhouses are operated independently, as follows:

- Kaweah No. 1 Powerhouse – The unit operates automatically and after certain types of relay operations, such as loss of the transmission system, will

resynchronize to the system when plant conditions return to normal. The unit relays and locks out when internal trouble occurs such as machine differential or bearing temperature relay operations.

- Kaweah No. 2 Powerhouse – The unit is manually operated. The unit relays and locks out when internal trouble occurs such as machine differential or bearing temperature relay operations.

- Kaweah No. 3 Powerhouse – The units operate semi-automatically on water control.

For all powerhouses, unit trips are alarmed on loss of generation at the Eastern Hydro Operations Center (non-Project). Returning the units to service requires operator intervention.

Annual Plant Factor – The estimated average annual plant factor for each Project powerhouse since issuance of the current license (1992–2018) is as follows:

Powerhouse	Average Annual Generation (1992–2018) (MWh)	Installed Capacity (MW)	Average Annual Plant Factor
Kaweah No. 1	9,732	2.25	49%
Kaweah No. 2	10,236	1.8	65%
Kaweah No. 3	19,156	4.8	46%
All Powerhouses Combined	39,124	8.85	50%

Operation during Low, Mean, and High Water Years – The Project is operated in a run-of-river mode. The Project diverts water from the East Fork Kaweah River at Kaweah No. 1 Diversion Dam and from the Kaweah River at Kaweah No. 2 Diversion Dam for power generation and to meet contractual obligations with pre-1914 water users. These diversions alter the volume of water in the rivers downstream of the Project diversions (bypass reaches), with minimal to no change in the annual seasonal flow pattern. The bypass reaches associated with the Project include:

- East Fork Kaweah River, from the Kaweah No. 1 Diversion to the confluence with the Kaweah River (4.7 miles); and

- Kaweah River, from the Kaweah No. 2 Diversion to the confluence of the Kaweah No. 2 Powerhouse Tailrace and the Kaweah River (4.1 miles).

The amount and timing of flow diverted is a function of inflow (runoff), FERC License requirements for minimum instream flow (MIF) and ramping rates, flowline and powerhouse capacities, water rights, and the minimum flow required to maintain sufficient head in the flowline to meet water delivery contractual obligations. Total

annual inflow into the Project (combined inflow at the Kaweah No. 1 and No. 2 diversions) between water years 1994–2018 ranged from approximately 78,000 acre-feet (ac-ft) (2015) to more than 668,000 ac-ft (2017). The median total annual inflow was approximately 229,000 ac-ft during this period (Figure B-1).

The Kaweah No. 1 Flowline (East Fork Kaweah River) can divert up to 24 cubic feet per second (cfs), and the Kaweah No. 2 Flowline (Kaweah River) can divert up to 87 cfs. To maintain sufficient head pressure to meet pre-1914 consumptive water delivery contractual obligations along the flowlines, SCE must maintain a continuous flow up to a maximum of 1 cfs in the Kaweah No. 1 Flowline and up to a maximum of 3 cfs in the Kaweah No. 2 Flowline. The flow is diverted along the flowline by pre-1914 consumptive water rights users. Water diverted into the flowlines at Project diversions for power generation passes through Project powerhouses generating electricity prior to returning to the Kaweah River downstream of Project tailraces.

Figures B-2a-c show monthly average flows in the bypass reaches (below the diversions), Project flowlines, and flow into the powerhouses for example water years that are representative of different runoff conditions into the Project diversions. The following example water years were selected to be representative of different water year types:

- Normal Water Year – 2006
- "Drier" Normal Year – 2009
- Dry – 2014

Figures B-3a-c show monthly flow exceedances in the bypass reaches (below the diversions), Project flowlines, and flow into the powerhouses.

SCE typically diverts water throughout the year in wetter years, peaking in the winter, spring, and early summer months (Figure B-2 and B-3). In drier years, low summer and winter flows (e.g., August to January) typically preclude diversion for generation and diversions for generation only occur in spring/early summer (including Normal years with low runoff and Dry years) (Figures B-2 and B-3).

SCE has two conflicting obligations (demands) associated with operation of the Project. These obligations include providing: (1) MIF releases consistent with the flow schedule in License Article 405 (Table B-1); and (2) domestic water to local users through the Project flowlines based on a prior contractual entitlement dating back to 1903. SCE must maintain a continuous flow up to a maximum of 1 cfs from the Kaweah No. 1 Diversion and up to a maximum of 3 cfs from the Kaweah No. 2 Diversion to meet SCE's contractual obligations to local water users consistent with their pre-1914 water rights. During low-runoff periods, consumptive water is diverted and delivered to local water users, but no water is diverted for generation purposes. Figures B-4 and B-5 illustrate actual inflow compared to MIF release requirements

and water supply obligations at the Kaweah No. 1 Diversion and the Kaweah No. 2 Diversion, respectively.

Historically, SCE has requested and obtained approval from resource agencies (California Department of Fish and Wildlife [CDFW] and U.S. Fish and Wildlife Service [USFWS]) to temporarily modify (reduce) MIF releases below the Kaweah No. 1 Diversion and Kaweah No. 2 Diversion when projected inflows were approaching the combined flow necessary to meet both water supply and MIF release requirements. The temporary flow modifications from the resource agencies were necessary to ensure that SCE could comply with the license conditions based on uncertainty in actual runoff (magnitude and/or timing). SCE obtained agency approval for temporary modifications of MIFs below the Kaweah No. 1 Diversion in four Dry years and below Kaweah No. 2 Diversion in eight years (four Dry years and four Normal years) (Table B-2).[1]

Although, SCE obtained agency approval for temporary modifications of MIFs when inflows were projected to not meet both the MIF requirements and the water supply commitments, the approved reductions in MIF were only implemented at the Kaweah No. 2 Diversion in 2002, 2012, 2015, and 2016 (Table B-2). In 2002, SCE implemented the flow modifications, reducing the MIF release by 1.5 cfs on average for 13 days. In 2012, SCE reduced the MIF release by 1 cfs on average for three days. In 2015, SCE reduced the MIF release by 0.35 cfs on average for four days. In 2016, SCE's original request for a temporary flow modification (through August 31) needed to be extended as runoff in the Kaweah Watershed was projected to remain low, due to drought conditions in the region. On August 30, 2016, SCE requested a temporary flow variance through December 31, 2016. SCE's temporary flow variance request was approved by FERC on September 8, 2016. During the entire flow modification period, SCE reduced the MIF release by 2.68 cfs on average for 25 days.

In the East Fork Kaweah River, stream flows were sufficient to meet both the MIF requirements and the water supply commitments in all years despite requests for flow modifications based on projected inflow.

(2) Capacity and Production

The timing and number of hours of generation in a given year is a function of inflow (runoff), FERC License requirements for MIF and ramping rates, flowline and powerhouse capacities, water rights, and the minimum flow required to maintain sufficient head in the flowline to meet water delivery contractual obligations.

Annual net generation for the Project since issuance of the current license (1992–2018) is summarized in Table B-3. During this period, all Project powerhouses

[1] Runoff of Kaweah River at Terminus Reservoir for April 1 through July 31, for the current year, as estimated by the California Department of Water Resources (DWR) on or about May 1 of each such calendar year shall be used to distinguish between a normal water year and a dry water year for the purpose of this article. A "Normal Year" is defined as a forecasted runoff of greater than 172,000 acre-feet. A "Dry Year" is defined as a forecasted runoff of equal to or less than 172,000 acre-feet. The determination of either a normal water year or a dry water year shall then be used in maintaining the appropriate minimum flow release for the period May 10 of each calendar year through May 9 of the succeeding calendar year.

experienced periods of no generation. Lack of generation at a powerhouse is generally the result of: (1) routine maintenance outage; (2) outages caused by the powerhouse tripping; (3) facility repairs necessitating a powerhouse be offline; or (4) periods of low runoff when SCE is required to meet contractual entitlements to deliver water to local water users consistent with their pre-1914 water rights and there is not enough water remaining for generation. From 1992–2018, annual generation ranged from 14,762 megawatt hours (MWh) (2014) to 60,725 MWh (1998). The Project's annual average generation (1992–2018) is 39,124 MWh. The estimated dependable generating capacity of the Project by calendar year is 14,762 MWh based on generation records from 2014 (critical dry year).

(i) Daily Average Available Flows

Daily average available flows (1994–2018) at the Kaweah No. 1 Diversion and the Kaweah No. 2 Diversion are as follows:

Daily Average Inflow	Kaweah No. 1 Diversion (cfs)	Kaweah No. 2 Diversion (cfs)
Minimum	6	10
Mean	125	281
Maximum	4,425	9,829

Available flows are reduced according to: (1) MIF release requirements downstream of the diversions (Table B-1); and (2) contractual obligations to deliver consumptive water to local users from the Kaweah No. 1 Flowline (1 cfs) and the Kaweah No. 2 Flowline (3 cfs).

Table B-4 and B-5 provide monthly flow duration curves (1994–2018) for the Kaweah No. 1 Diversion and Kaweah No. 2 Diversion, respectively.

(ii) Impoundment Capacity

The Project includes one forebay tank and two forebays with a total of 11.93 ac-ft of gross storage as follows:

Impoundment	Capacity (ac-ft)
Kaweah No. 1 Forebay Tank	0.18
Kaweah No. 2 Forebay	0.75
Kaweah No. 3 Forebay	11.0
Project Total	11.93

Due to the negligible storage volume, the use of reservoir capacity curves and rule curves are not applicable in the calculation of dependable capacity.

(iii) Hydraulic Capacity

The estimated operating ranges for each of the Project powerhouses are as follows:

Powerhouse	Minimum Estimated Hydraulic Capacity (cfs)	Maximum Estimated Hydraulic Capacity (cfs)
Kaweah No. 1	2.5	24
Kaweah No. 2	13	82
Kaweah No. 3 (Unit 1)	4	92
Kaweah No. 3 (Unit 2)	5	92

(iv) Tailwater Rating Curves

Turbines in each powerhouse discharge under minimal pressure into a tailrace canal (rectangular flume) which returns diverted water to the Kaweah River. Since the turbines do not discharge under the surface of a stream or reservoir, a tailwater rating curve is not applicable in the calculation of dependable capacity.

(v) The design head of each powerhouse is as follows:

Powerhouse	Design Head (feet)
Kaweah No. 1	1,260
Kaweah No. 2	344
Kaweah No. 3 (Unit 1)	750
Kaweah No. 3 (Unit 2)	750

Virtually all of the Project's head is provided by topographic relief. Nominal fluctuation in forebays/forebay tank elevation occurs over the course of the year in response to water availability changes. However, water availability, rather than minor head changes at the forebays/forebay tank, dictates dependable capacity. Consequently, a capacity versus head curve is not applicable.

(3) Use of Generated Energy

Power generated at the Project is utilized by SCE to meet demand for energy in its service area. A nominal portion of the output provides local power to operate Project facilities.

(4) Plans for Future Development

No future development is proposed for the Project.

TABLES

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Table B-1. Minimum Instream Flow Requirements[1, 2]

Month	Kaweah No. 1 Diversion		Kaweah No. 2 Diversion	
	Normal Year (cfs)	Dry Year (cfs)	Normal Year (cfs)	Dry Year (cfs)
October	5	5	11	5
November	5	5	11	5
December	5	5	11	5
January	5	5	20	10
February	5	5	20	10
March	10	10	30	20
April	10	10	30	30
May	10	10	30	30
June	10	10	30	30
July	10	10	20	10
August	5	5	20	10
September	5	5	11	5

Source: FERC License Article 405, as amended on April 20, 1994.

Notes:

[1] Runoff of Kaweah River at Terminus Reservoir for April 1 through July 31, for the current year, as estimated by the California Department of Water Resources (DWR) on or about May 1 of each such calendar year shall be used to distinguish between a normal water year and a dry water year for the purpose of this article. A "Normal Year" is defined as a forecasted runoff of greater than 172,000 acre-feet. A "Dry Year" is defined as a forecasted runoff of equal to or less than 172,000 acre-feet. The determination of either a normal water year or a dry water year shall then be used in maintaining the appropriate minimum flow release for the period May 10 of each calendar year through May 9 of the succeeding calendar year.

[2] This flow schedule may be temporarily modified if required by operating emergencies beyond the control of the licensee or for short periods on mutual agreement between the licensee, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Table B-2. Recent History of Temporary Flow Modifications Requested by SCE and Approved by Resource Agencies (2002–2018)

SCE Modification Request	Resource Agency Approval	Water Year Type	Modification Implemented (yes/no)	Amount/ Duration of Offset Water (cfs/days)
Kaweah No. 1 Diversion				
June 29, 2015	CDFW: July 16, 2015 USFWS: August 26, 2015	Dry	No	N/A
August 8, 2014	CDFW: August 28, 2014 USFWS: September 2, 2014	Dry	No	N/A
September 5, 2013	CDFW: September 16, 2013 USFWS: September 11, 2013	Dry	No	N/A
September 10, 2007	CDFW: Approved USFWS: October 19, 2007	Dry	No	N/A
Kaweah No. 2 Diversion				
August 11, 2016[1]	CDFW: August 17, 2016 USFWS: August 18, 2016	Normal	Yes	Average 2.68 cfs/25 days
June 29, 2015	CDFW: July 16, 2015 USFWS: August 26, 2015	Dry	Yes	Average 0.35 cfs/4 days
August 25, 2014	CDFW: August 28, 2014 USFWS: September 2, 2014	Dry	No	N/A
August 16, 19, 21, and 22, 2013	CDFW: August 27, 2013 USFWS: August 23, 2013	Dry	No	N/A
August 3, 2012	CDFW: August 8, 2012 USFWS: August 9, 2012	Normal	Yes	Average 1 cfs/3 days
September 25, 2009	CDFW: Approved USFWS: Approved	Normal	No	N/A
September 10, 2007	CDFW: Approved USFWS: October 19, 2007	Dry	No	N/A
August 16, 2002	CDFW: August 16, 2002 USFWS: August 16, 2002	Normal	Yes	Average 1.5 cfs/13 days

[1] In 2016, SCE's original request for a temporary flow modification (through August 31) needed to be extended as runoff in the Kaweah Watershed was projected to remain low, due to drought conditions in the region. On August 30, 2016, SCE requested a temporary flow variance through December 31, 2016. SCE's temporary flow variance request was approved by FERC on September 8, 2016 (156 FERC ¶62,183).

Table B-3. Summary of Kaweah Project Generation (1992–2018)[1]

Year	Net Generation (MWh)			
	Powerhouse			Project Total
	Kaweah No. 1	Kaweah No. 2	Kaweah No. 3	
2018	4,511	5,278	11,819	21,608
2017	7,537	7,158	19,807	34,502
2016	6,987	5,758	18,989	31,734
2015	6,529	6,430	12,275	25,233
2014	3,566	4,436	6,761	14,762
2013	7,221	6,712	11,118	25,051
2012	7,583	9,863	9,510	26,956
2011	10,838	13,849	4,149	28,836
2010	7,925	12,555	27,855	48,336
2009	7,101	11,402	23,298	41,801
2008	8,973	10,969	18,288	38,231
2007	6,626	7,036	15,215	28,877
2006	10,401	11,116	20,620	42,137
2005	11,150	12,870	28,639	52,658
2004	10,212	11,705	22,626	44,543
2003	12,512	11,732	26,434	50,677
2002	11,498	11,686	25,015	48,198
2001	10,400	9,297	20,557	40,254
2000	10,746	10,243	21,447	42,436
1999	11,066	8,974	13,388	33,428
1998	14,696	12,519	33,511	60,725
1997	9,294	12,665	6,362	28,321
1996	12,920	13,063	27,946	53,929
1995	14,912	14,930	30,487	60,329
1994	11,343	11,222	19,302	41,868
1993	13,762	12,966	25,146	51,874
1992	12,461	9,927	16,657	39,044
Total Annual Generation	262,770	276,359	517,221	1,056,350
Average Annual Generation, 1992–2018	9,732	10,236	19,156	39,124

Notes:

MWh = megawatt hours

[1] All Project powerhouses experienced periods of no generation between 1992 and 2018. Lack of generation at a powerhouse is generally the result of: (1) routine maintenance outage; (2) outages caused by the powerhouse tripping; (3) facility repairs necessitating a powerhouse be offline; or (4) periods of low runoff when SCE is required to meet contractual entitlements to deliver water to local water users consistent with their pre-1914 water rights and there is not enough water remaining for generation.

Table B-4. Duration Curves for Natural Incoming Flows to the Kaweah No. 1 Diversion (WY 1994–2018)

Month	Flow Recurrence Interval (percent of time flow equaled or exceeded)[1]																	
	95%	90%	85%	80%	75%	70%	60%	50%	40%	30%	25%	20%	15%	10%	5%	Max	Min	Average
Oct	8	9	10	10	11	12	14	16	20	23	25	26	29	37	47	3915	10	46
Nov	10	11	12	15	17	18	20	21	23	26	29	32	37	42	63	5305	17	73
Dec	12	15	18	19	20	21	23	27	31	35	39	43	47	59	124	2838	18	102
Jan	13	17	20	23	25	28	32	40	51	59	68	80	98	137	261	9829	16	198
Feb	22	25	33	36	38	42	49	54	61	74	82	94	128	175	261	2551	25	221
Mar	32	42	48	54	59	65	81	98	113	135	157	178	200	230	281	1840	58	312
Apr	53	85	103	118	131	143	168	191	216	253	278	304	331	350	374	2686	80	509
May	100	153	176	200	229	257	299	338	370	410	438	477	536	624	903	2548	108	804
Jun	34	46	56	70	86	102	150	197	274	387	480	539	733	923	1184	2658	40	697
Jul	16	19	22	24	26	29	37	52	67	100	135	197	278	355	560	2526	16	303
Aug	9	10	11	12	13	14	17	19	25	34	42	51	62	78	129	689	11	75
Sep	7	8	9	9	10	11	13	16	20	24	27	30	34	40	54	398	10	35
Annual	10	13	16	19	21	24	32	45	64	110	149	194	255	336	461	9829	10	281

[1] 1994–2002: Sum of East Fork Kaweah River downstream of the Kaweah No. 1 Diversion (11208730 [SCE 201]) and the Kaweah No. 1 Flowline (USGS 11208720 [SCE 202]).

2002–2018: Sum of East Fork Kaweah River downstream of the Kaweah No. 1 Diversion (11208730 [SCE 201]) and the Kaweah No. 1 Flowline (SCE 202).

Table B-5. Duration Curves for Natural Incoming Flows to the Kaweah No. 2 Diversion (WY 1994–2018)

Month	Flow Recurrence Interval (percent of time flow equaled or exceeded)[1]																	
	95%	90%	85%	80%	75%	70%	60%	50%	40%	30%	25%	20%	15%	10%	5%	Max	Min	Average
Oct	13	14	16	17	18	19	21	27	31	35	39	46	57	74	113	1061	6	22
Nov	20	22	25	27	29	31	34	45	55	67	75	87	96	107	151	1934	9	32
Dec	24	30	37	42	45	49	57	67	75	93	101	109	126	164	285	1220	7	43
Jan	22	37	44	51	61	70	86	108	131	164	185	220	265	369	580	4425	8	82
Feb	52	66	86	95	103	112	138	158	180	211	228	261	316	403	634	1260	10	84
Mar	105	117	137	164	180	198	235	268	316	357	384	413	477	535	650	1144	23	119
Apr	164	232	270	294	325	360	402	451	508	593	634	689	782	860	996	1247	31	209
May	245	314	371	424	471	533	647	747	852	983	1069	1143	1221	1368	1610	1300	36	373
Jun	70	109	142	171	204	238	337	428	638	936	1104	1238	1451	1705	1978	1504	19	344
Jul	26	34	39	47	53	59	77	108	164	238	331	444	637	844	1389	1342	11	140
Aug	16	18	20	21	22	24	28	33	46	63	82	103	127	174	279	333	7	37
Sep	11	13	14	15	16	16	18	20	25	33	39	43	59	74	95	111	6	21
Annual	10	13	16	19	21	24	32	45	64	110	149	194	255	336	461	4425	6	125

[1] 1994–2005: Sum of the Kaweah River downstream of the Kaweah No. 2 Diversion (USGS 11208600 [SCE 203]) and the Kaweah No. 2 Flowline (USGS 1208570 [SCE 204]).

2005–2018: Sum of the Kaweah River downstream of the Kaweah No. 2 Diversion (USGS 11208600 [SCE 203]) and the Kaweah No. 2 Flowline (SCE 204a).

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FIGURES

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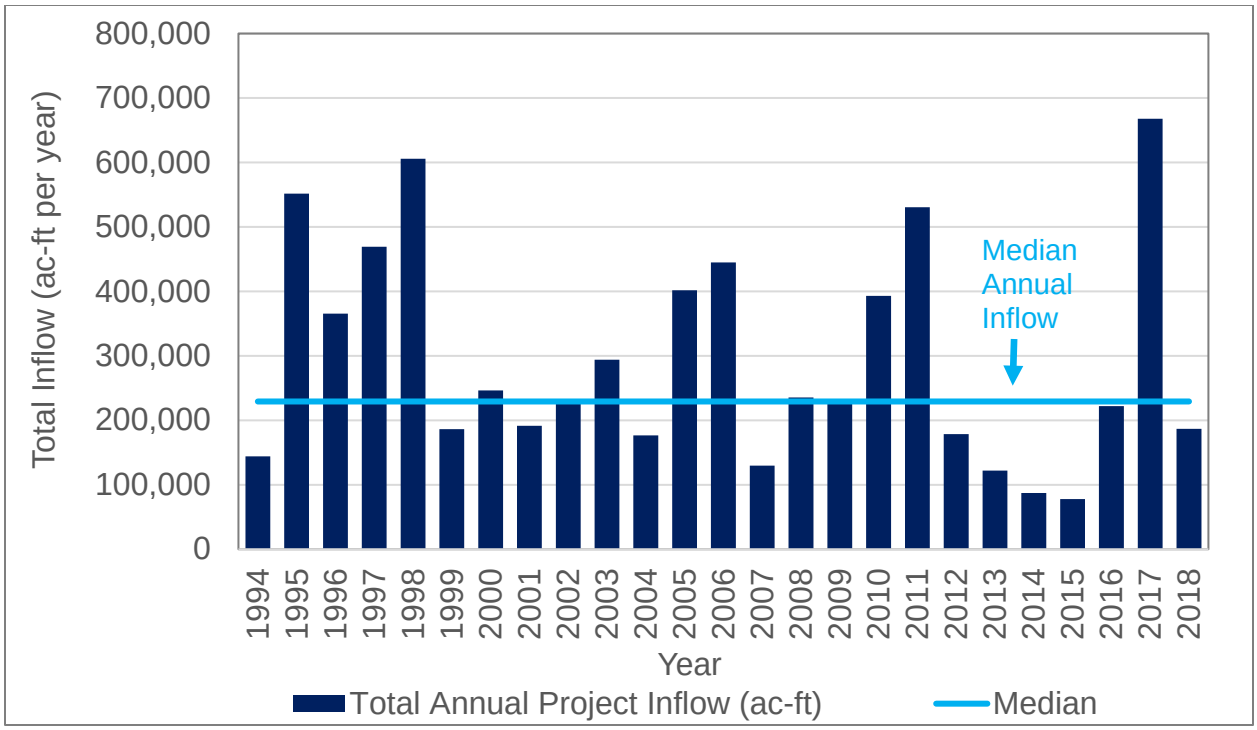


Figure B-1. Annual Inflow to the Kaweah Project (WY 1994–2018)[2]

[2] The period of record (POR) used to characterize recent historical flows in the Kaweah River and East Fork Kaweah River extends from water year 1994 through 2018. This time period best represents Project operations since issuance of the FERC license and recent climatic conditions.

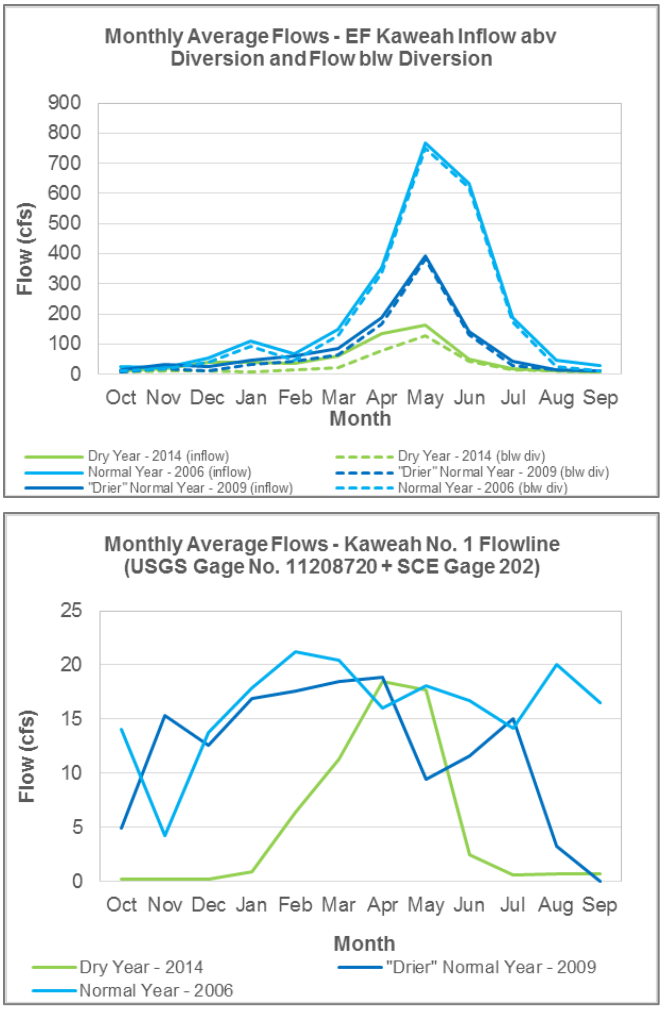


Figure B-2a. **Monthly Average Flows in a Representative Dry Year (2014), Normal Year (2006), and "Drier" Normal Year (2009) in the East Fork Kaweah River Bypass Reach and Kaweah No. 1 Flowline/ Kaweah No. 1 Powerhouse**

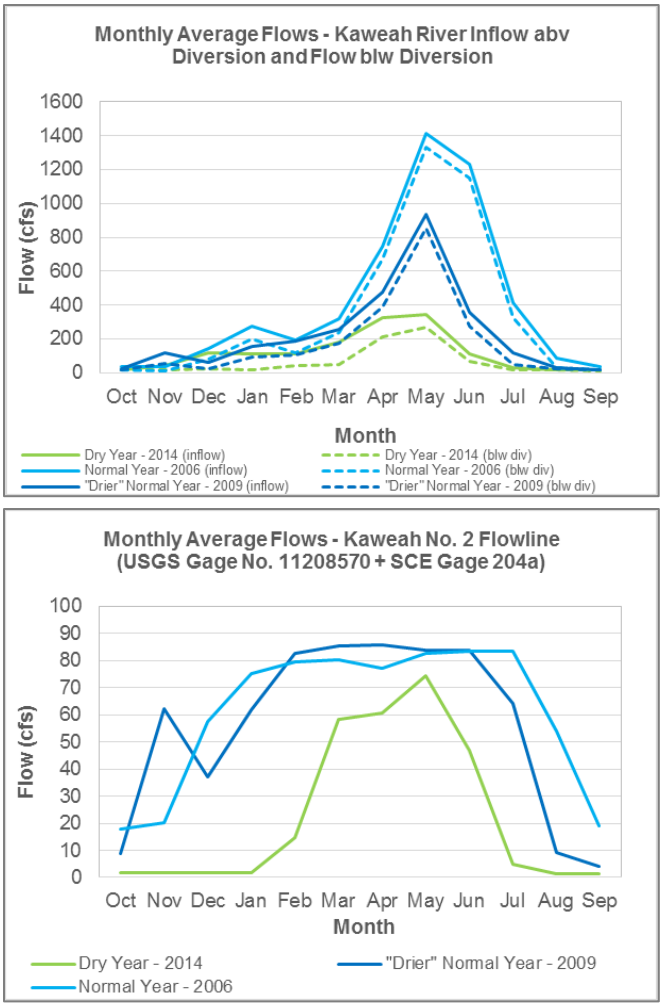


Figure B-2b. **Monthly Average Flows in a Representative Dry Year (2014), Normal Year (2006), and "Drier" Normal Year (2009) in the Kaweah River Bypass Reach and Kaweah No. 2 Flowline/Kaweah No. 2 Powerhouse**

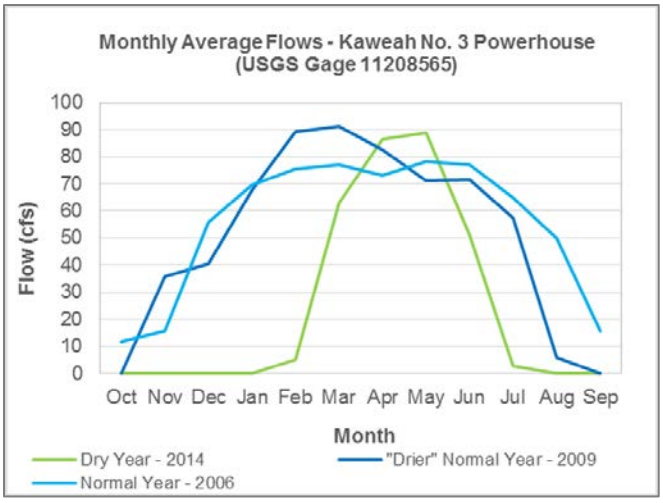


Figure B-2c. Monthly Average Flows in a Representative Dry Year (2014), Normal Year (2006), and "Drier" Normal Year (2009) at the Kaweah No. 3 Powerhouse

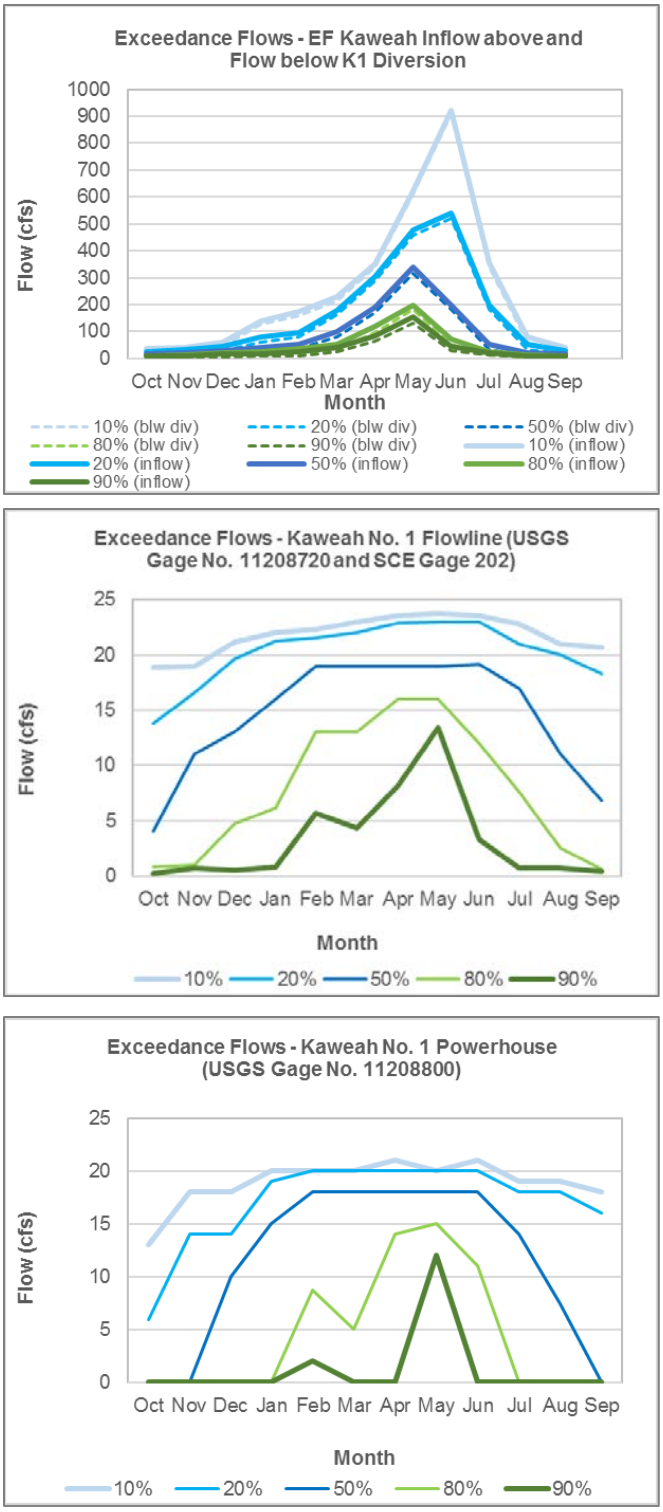


Figure B-3a. **Monthly Exceedance Flows (10%, 20%, 50%, 80%, and 90%) in the East Fork Kaweah River Bypass Reach and Kaweah No. 1 Flowline, and at the Kaweah No. 1 Powerhouse (WY 1994–2018)[3]**

[3] Kaweah No. 1 Powerhouse period of record is from 2002–2018.

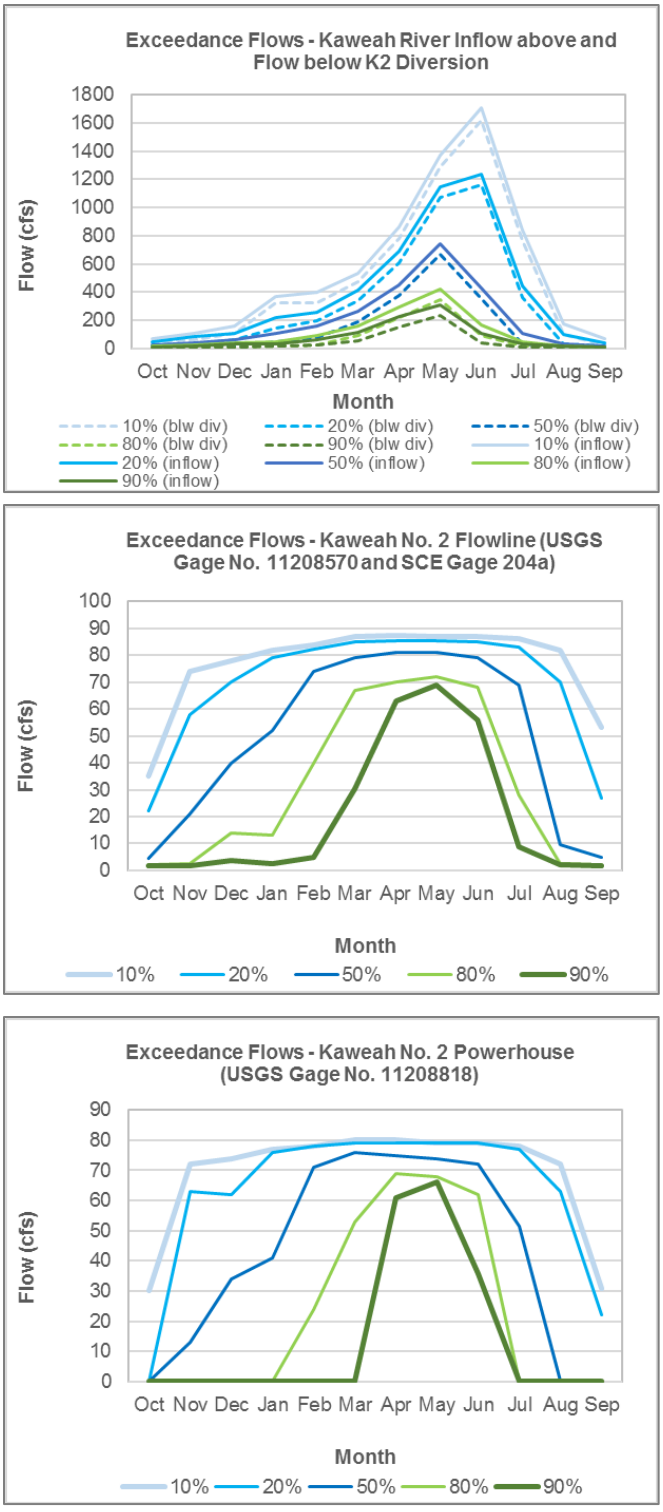


Figure B-3b. Monthly Exceedance Flows (10%, 20%, 50%, 80%, and 90%) in the Kaweah River Bypass Reach and Kaweah No. 2 Flowline, and at the Kaweah No. 2 Powerhouse (WY 1994–2018)[4]

[4] Kaweah No. 2 Powerhouse period of record is from 2002–2018.

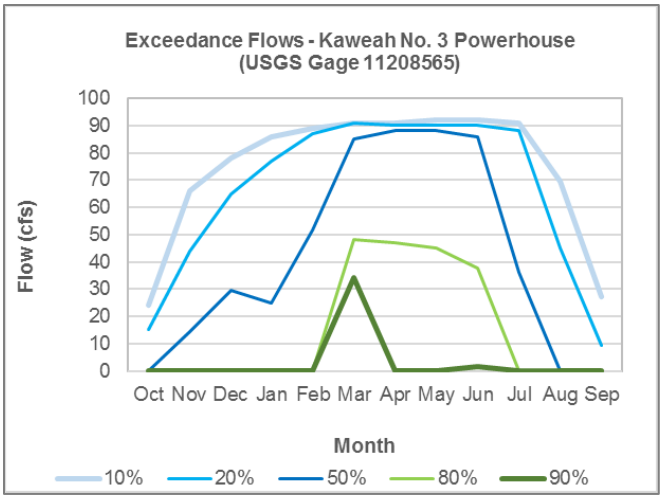


Figure B-3c. Monthly Exceedance Flows (10%, 20%, 50%, 80%, and 90%) at the Kaweah No. 3 Powerhouse (WY 2002–2018)[5]

[5] Kaweah No. 3 Powerhouse period of record is from 2002–2018. Extended outages at the powerhouse occurred in April–July 2011 and April–May 2012. These months were not included in the analysis.

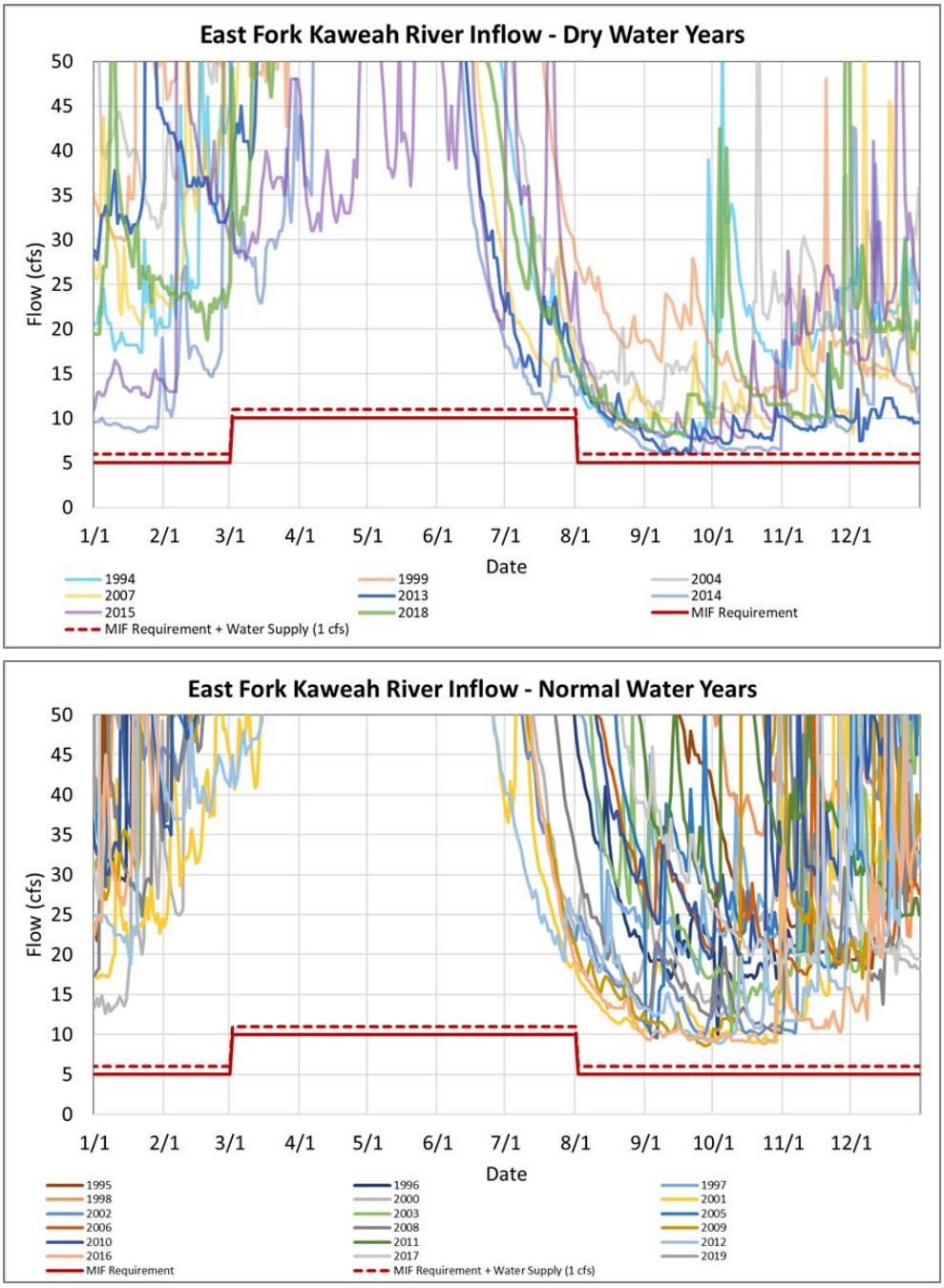
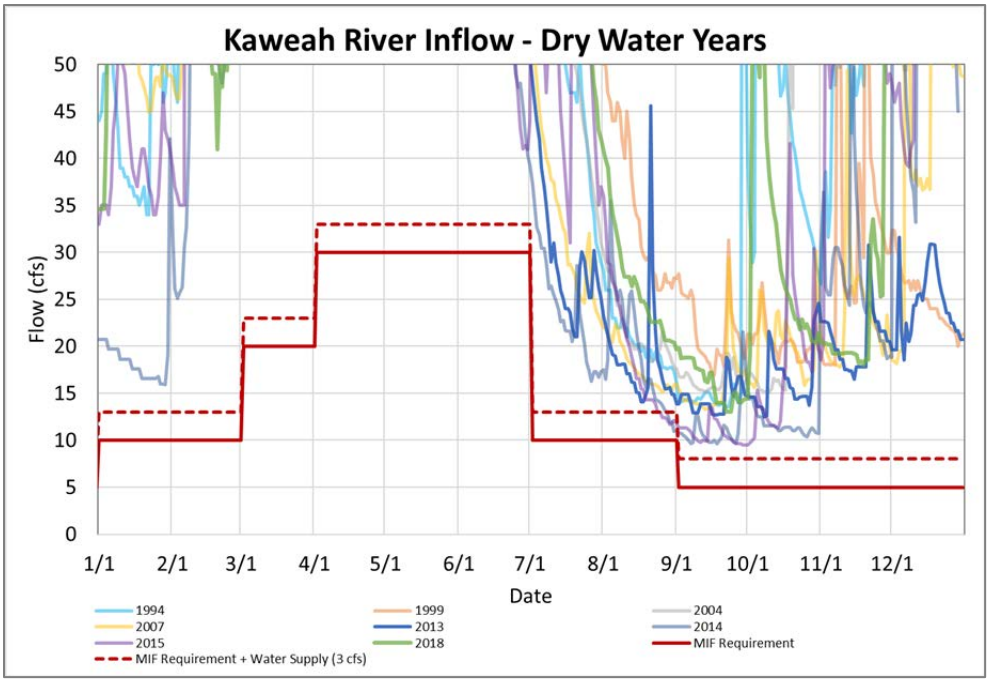


Figure B-4. **East Fork Kaweah River Inflow and Kaweah No. 1 Diversion Dam in Relation to Minimum Instream Flow Requirements and Water Supply Commitments in Dry (top) and Normal (bottom) Years (May 1994–February 2019)**



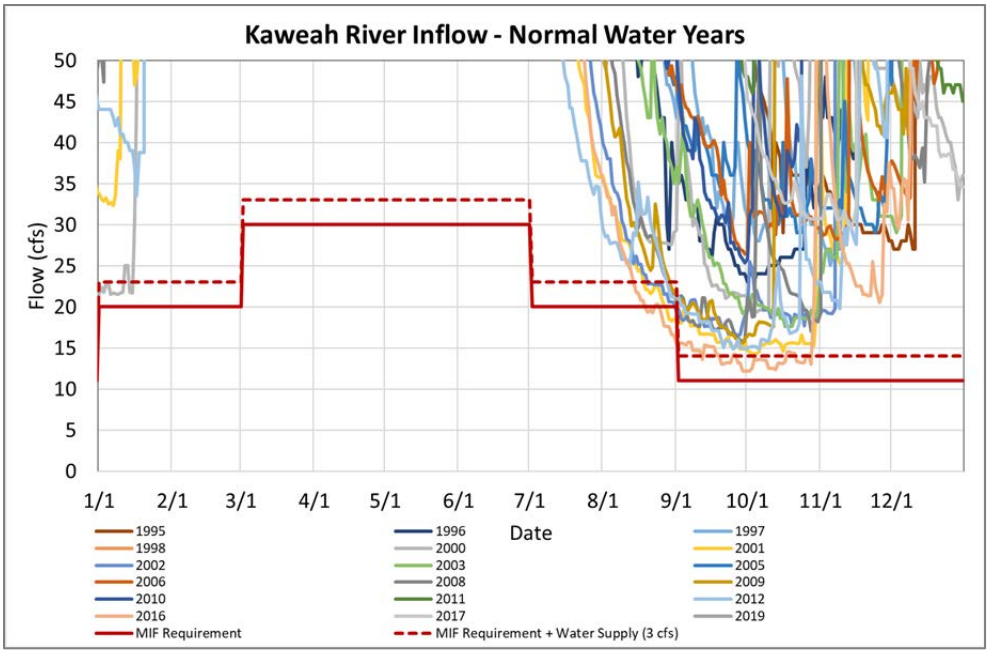


Figure B-5. **Kaweah River Inflow at Kaweah No. 2 Diversion Dam in Relation to Minimum Instream Flow Requirements and Water Supply Commitments in Dry (top) and Normal (bottom) Years (May 1994–February 2019)**

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Exhibit C
Construction History and Proposed Construction Schedule

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in Exhibit C of its license application.

Exhibit C is a construction history and proposed construction schedule for the project. The construction history and schedules must contain:

(1) If the application is for an initial license, a tabulated chronology of construction for the existing projects structures and facilities described under paragraph (b) of this section (Exhibit A), specifying for each structure or facility, to the extent possible, the actual or approximate dates (approximate dates must be identified as such) of:

  (i) Commencement and completion of construction or installation;

  (ii) Commencement of commercial operation;

  (iii) Any additions or modifications other than routine maintenance; and

(2) If any new development is proposed, a proposed schedule describing the necessary work and specifying the intervals following issuance of a license when the work would be commenced and completed.

(1) Construction History

Southern California Edison Company (SCE or Licensee) is applying to the Federal Energy Regulatory Commission (FERC or Commission) for a new license, not an initial license for the Kaweah Project (Project). Therefore, the requirement of 18 CFR §4.51(d)(1) regarding a tabulated chronology of construction of the existing structures and facilities does not apply. In spite of this, the Licensee has provided a brief summary of the: (i) commencement and completion of construction or installation; (ii) commencement of commercial operation; and (iii) additions and modifications to the Project.

(i) The Project developments were constructed during the following timeframes:

1898–1899	Construction of the Kaweah No. 1 Development
1904–1905	Construction of the Kaweah No. 2 Development
1909–1913	Construction of the Kaweah No. 3 Development

(ii) The Project powerhouses commenced operations as follows:

June 1899	Kaweah No. 1 Powerhouse commenced operation
February 1905	Kaweah No. 2 Powerhouse commenced operation
May 1913	Kaweah No. 3 Powerhouse commenced operation

(iii) The Project has undergone the following upgrades and modifications since start-up (not including routine maintenance):

1920s	Upgrades to all powerhouses that allowed for semi-automatic operation, thus allowing for generation without full-time station operators at each powerhouse.
1929	Demolition of original 1899 Kaweah No. 1 Powerhouse and appurtenances, and relocation/upgrade of the powerhouse several hundred feet upstream.
1930s	All powerhouses were fully automated, with all functions centrally managed.
1930s	Removal of the original wood pole transmission lines, with the entire system upgraded to 66 kV lines and much of it carried by new steel cross-arm structures.
1947	Entirety of the 6-mile Kaweah No. 1 Flowline was dismantled and reconstructed.
1948	Wood portions of the Kaweah No. 2 Flowline replaced.
1986	Handrails added to the Kaweah No. 1 Flowline. The handrails have been serviced and replaced over time.
1989–1991	Much of the wood framing along the Kaweah No. 1 Flowline was rebuilt along the entirety of the alignment, with new stringers, legs, bracing, and pony bents.
2012–2013	Kaweah No. 2 Diversion Dam Intake structure rebuilt with new concrete and new intake structure.

(2) New Development

No new development is proposed for the Project.

Exhibit D
Project Costs and Financing

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in Exhibit D of its license application.

Exhibit D is a statement of costs and financing. The statement must contain:

(1) If the application is for an initial license, a tabulated statement providing the actual or approximate original cost (approximate costs must be identified as such) of:

- (i) Any land or water right necessary to the existing project; and
- (ii) Each existing structure and facility described under paragraph (b) of this section (Exhibit A).

(2) If the Applicant is a licensee applying for a new license, and is not a municipality or a state, an estimate of the amount which would be payable if the project were to be taken over pursuant to section 14 of the Federal Power Act upon expiration of the license in effect [see 16 U.S.C. 807], including:

- (i) Fair value;
- (ii) Net investment; and
- (iii) Severance damages.

(3) If the application includes proposals for any new development, a statement of estimated costs, including:

- (i) The cost of any land or water rights necessary to the new development; and
- (ii) The cost of the new development work, with a specification of:
  - (A) Total cost of each major item;
  - (B) Indirect construction costs such as costs of construction equipment, camps, and commissaries;
  - (C) Interest during construction; and
  - (D) Overhead, construction, legal expenses, taxes, administrative and general expenses, and contingencies.

(4) A statement of the estimated average annual cost of the total project as proposed specifying any projected changes in the costs (life-cycle costs) over the estimated financing or licensing period if the applicant takes such changes into account, including:

- (i) Cost of capital (equity and debt);
- (ii) Local, state, and Federal taxes;
- (iii) Depreciation and amortization;
- (iv) Operation and maintenance expenses, including interim replacements, insurance, administrative and general expenses, and contingencies; and
- (v) The estimated capital cost and estimated annual operation and maintenance expense of each proposed environmental measure.

(5) A statement of the estimated annual value of project power, based on a showing of the contract price for sale of power or the estimated average annual cost of obtaining an equivalent amount of power (capacity and energy) from the lowest cost alternative source, specifying any projected changes in the cost of power from that source over the estimated financing or licensing period if the applicant takes such changes into account.

(6) A statement specifying the sources and extent of financing and annual revenues available to the applicant to meet the costs identified in paragraphs (e) (3) and (4) of this section.

(7) An estimate of the cost to develop the license application;

(8) The on-peak and off-peak values of project power, and the basis for estimating the values, for projects which are proposed to operate in a mode other than run-of-river; and

(9) The estimated average annual increase or decrease in project generation, and the estimated average annual increase or decrease of the value of project power, due to a change in project operations (i.e., minimum bypass flows; limits on reservoir fluctuations).

(1) Original Cost

This is not an application for an initial license. Therefore, a statement of the original cost of Project land or water rights, structures, or facilities is not applicable.

(2) Takeover Cost

It is the intent of SCE to continue to operate the Project upon receipt of a new license. However, if the Project were to be taken over at the expiration of the existing license, pursuant to Section 14 of the Federal Power Act, the amount payable to the Licensee includes the net investment, not to exceed the fair value. Some of the principles bearing upon the final determination of fair value are yet to be ascertained. In addition, SCE considers net investment to equal net book value; therefore, SCE is using net book value as a proxy for fair value. SCE estimates the Project's net book value to be $17,278,538.

(3) Cost of New Development

SCE does not propose any new development as part of this application, therefore a statement of estimated cost of new development is not applicable.

(4) Cost of Financing

The annual costs for this Project include expenses for operations and maintenance (O&M) as well as capital improvement work.

(i) The current SCE Cost of Capital is listed below:

Long-Term Debt	2.14%
Preferred Equity	0.52%
Common Equity	4.94%
Total Cost of Capital	7.61%

(ii) Property taxes associated with this Project for 2018 were $241,900. State and Federal income taxes are computed for all of the SCE Hydro assets combined and no amount is specifically designated for this individual Project.

(iii) Depreciation for the Project for 2018 was $1,384,730.

(iv) The average operation and maintenance expenses for the five-year period 2014–2018 are $1,663,455. Additional Administrative and General (A&G) expenses totaled $2,353,337 in 2018.

(v) The estimated capital cost and estimated annual operation and maintenance expense of each proposed environmental measure will be included in the Final License Application.

(5) Value of Project Power

The value of Project power is quantified through three market products: energy value, capacity value, and renewable energy credits (RECs). Energy produced by the plant is valued based on CAISO wholesale market prices. Capacity value is based on expected future capacity prices. REC prices are based on the expected price to buy or sell RECs in the future.

The Project's projected value is determined by first estimating the production of the plants. The estimated annual amount of energy produced from the Project was derived from a 20-year annual average of historical production from 1998 to 2017.

The forecasted production (MWh's) for the Project was multiplied by the marginal energy cost forecast and the REC price forecast, and the expected capacity of the Project was multiplied by the marginal capacity cost forecast. The sum of the three products is the total value that SCE would expect from the power being provided by this Project.

(6) Sources of Financing and Revenues

As previously discussed in Exhibit D(3), there is no major new development planned for this Project. As such, there is no need to acquire special financing for any major capital work.

SCE previously filed a 2018 GRC with the California Public Utilities Commission (CPUC) in September 2016, which was preliminarily approved in May of 2019. Included in that Rate Case filing were the generation-related O&M expenses as well as A&G expenses. The 2018 GRC filings included the expected costs for the years of 2019–2020, which are associated with the operation and maintenance of all the SCE Hydro assets, as well as the costs associated with any anticipated incremental capital additions. SCE is preparing to file a 2021 GRC Notice of Intent (NOI) with the CPUC in 2019. Assuming that the 2018 Rate case is approved, the capital and O&M expenses necessary for continued operation of the Projects will be collected through those approved rates. Those approved rates will include costs associated with

license condition requirements that might be imposed upon the Projects in this license application in the years 2019–2020.

This Project is operated as a component of the entire Hydro Generation Division, which is part of the Power Supply Department of SCE. The O&M expenses for this Project are therefore not wholly estimated at the division or department level, as the departmental costs are usually extrapolated from historical costs. Any financing charges required for individual projects would normally be included in the overall department budget and would not be directly attributable to the individual Project.

(7) License Application Development Cost

The Licensee's estimated cost through issuance of a new license is $5,000,000.

(8) Value of On-Peak and Off-Peak Project Power

The Kaweah Project is operated in a run-of-river mode. Therefore, a statement of the on-peak and off-peak values of project power is not applicable.

(9) Effects of Change in Project Operations

Due to changes in Project operations under the Proposed Action, it is estimated that the average annual project generation will decrease by 664 MWh, resulting in a net reduction in the value of project power of approximately $50,000 per year.

Exhibit G
Project Maps

Section 5.18(a)(5)(iii) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) refers to Section 4.51 (License for Major Project – Existing Dam) for a description of information that an applicant must include in Exhibit G of its license application.

Exhibit G is a map of the project that must conform to the specifications of 18 CFR §4.39. In addition, to the other components of Exhibit G, the Applicant must provide the project boundary data in a geo-referenced electronic format—such as ArcView shape files, GeoMedia files, MapInfo files, or any similar format. The electronic boundary data must be positionally accurate to ±40 feet, in order to comply with the National Map Accuracy Standards for maps at a 1:24,000 scale (the scale of United States Geological Survey [USGS]) quadrangle maps). The electronic exhibit G data must include a text file describing the map projection used (i.e., Universal Transverse Mercator [UTM], State Plane, Decimal Degrees, etc.), the map datum (i.e., feet, meters, miles, etc.). Three sets of the maps must be submitted on compact disk or other appropriate electronic media. If more than one sheet is used for the paper maps, the sheets must be numbered consecutively, and each sheet must bear a small insert sketch showing the entire project and indicate that portion of the project depicted on that sheet. Each sheet must contain a minimum of three known reference points. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown. If at any time after the application is filed there is any change in the project boundary, the applicant must submit, within 90 days following the completion of project construction, a final Exhibit G showing the extent of such changes. The map must show:

(1) *Location of the project and principal features*. The map must show the location of the project as a whole with reference to the affected stream or other body of water and, if possible, to a nearby town or any other permanent monuments or objects, such as roads, transmission lines or other structures, that can be noted on the map and recognized in the field. The map must also show the relative locations and physical interrelationships of the principal project works and other features described under paragraph (b) of this section (Exhibit A).

(2) *Project boundary*. The map must show a project boundary enclosing all project works and other features described under paragraph (b) of this section (Exhibit A) that are to be licensed. If accurate survey information is not available at the time the application is filed, the applicant must so state, and a tentative boundary may be submitted. The boundary must enclose only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (see paragraph (f) of this section (Exhibit E)). Existing residential, commercial, or other structures may be included within the boundary only to the extent that underlying lands are needed for project purposes (e.g., for flowage, public recreation, shoreline control, or protection of environmental resources). If the boundary is on land covered by a public survey, ties must be shown on the map at sufficient points to permit accurate platting of the position of the boundary relative to the lines of the public land survey. If the lands are not covered by a public land survey, the best available legal description of the position of the boundary must be provided, including distances and directions from fixed monuments or physical features. The boundary must be described as follows:

(i) *Impoundments*.

(A) The boundary around a project impoundment must be described by one of the following:

(1) Contour lines, including the contour elevation (preferred method);

(2) Specified courses and distances (metes and bounds);

(3) If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or

(4) Any combination of the above methods.

(B) The boundary must be located no more than 200 feet (horizontal measurement) from the exterior margin of the reservoir, defined by the normal maximum surface elevation, except where deviations may be necessary in describing the boundary according to the above methods or where additional lands are necessary for project purposes, such as public recreation, shoreline control, or protection of environmental resources.

(ii) *Continuous features*. The boundary around linear (continuous) project features such as access roads, transmission lines, and conduits may be described by specified distances from center lines or offset lines of survey. The width of such corridors must not exceed 200 feet unless good cause is shown for a greater width. Several sections of a continuous feature may be shown on a single sheet with information showing the sequence of contiguous sections.

(iii) *Noncontinuous features*.

(A) The boundary around noncontinuous project works such as dams, spillways, and powerhouses must be described by one of the following:

(1) Contour lines;

(2) Specified courses and distances;

(3) If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or

(4) Any combination of the above methods.

(B) The boundary must enclose only those lands that are necessary for safe and efficient operation and maintenance of the project or for other specified project purposes, such as public recreation or protection of environmental resources.

(3) *Federal lands.* Any public lands and reservations of the United States (Federal lands) [see 16 U.S.C. 796 (1) and (2)] that are within the project boundary, such as lands administered by the U.S. Forest Service, Bureau of Land Management, or National Park Service, or Indian tribal lands, and the boundaries of those Federal lands, must be identified as such on the map by:

(i) Legal subdivisions of a public land survey of the affected area (a protraction of identified township and section lines is sufficient for this purpose); and

(ii) The Federal agency, identified by symbol or legend, that maintains or manages each identified subdivision of the public land survey within the project boundary; or

(iii) In the absence of a public land survey, the location of the Federal lands according to the distances and directions from fixed monuments or physical features. When a Federal survey monument or a Federal bench mark will be destroyed or rendered unusable by the construction of project works, at least two permanent, marked witness monuments or bench marks must be established at accessible points. The maps show the location (and elevation, for bench marks) of the survey monument or bench mark which will be destroyed or rendered

unusable, as well as of the witness monuments or bench marks. Connecting courses and distances from the witness monuments or bench marks to the original must also be shown.

(iv) The project location must include the most current information pertaining to affected Federal lands as described under 18CFR §4.81(b)(5).

(4) *Non-Federal lands.* For those lands within the project boundary not identified under paragraph (h)(3) of this section, the map must identify by legal subdivision:

(i) Lands owned in fee by the applicant and lands that the applicant plans to acquire in fee; and

(ii) Lands over which the applicant has acquired or plans to acquire rights to occupancy and use other than fee title, including rights acquired or to be acquired by easement or lease.

The Exhibit G drawings for the Project on file with the Federal Energy Regulatory Commission (Exhibits G-1 through G-11) are being fully updated. The revised Exhibit G drawings will be included in the Final License Application.

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Exhibit H

Section 5.18(c) of Title 18 of the Code of Federal Regulations (CFR) (revised 4/1/18) describes information that an applicant for a new license (License for Major Project – Existing Dam) must include in Exhibit H of its license application.

The information required to be provided by this paragraph (c) must be included in the application as a separate exhibit labeled "Exhibit H."

(1) *Information to be provided by an applicant for new license: Filing requirements*

(i) *Information to be supplied by all applicants.* All Applicants for a new license under this part must file the following information with the Commission:

(A) A discussion of the plans and ability of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service, including efforts and plans to:

(1) Increase capacity or generation at the project;

(2) Coordinate the operation of the project with any upstream or downstream water resource projects; and;

(3) Coordinate the operation of the project with the applicant's or other electrical systems to minimize the cost of production.

(B) A discussion of the need of the applicant over the short and long term for the electricity generated by the project, including:

(1) The reasonable costs and reasonable availability of alternative sources of power that would be needed by the applicant or its customers, including wholesale customers, if the applicant is not granted a license for the project;

(2) A discussion of the increase in fuel, capital, and any other costs that would be incurred by the applicant or its customers to purchase or generate power necessary to replace the output of the licensed project, if the applicant is not granted a license for the project;

(3) The effect of each alternative source of power on:

(i) The applicant's customers, including wholesale customers;

(ii) The applicant's operating and load characteristics; and

(iii) The communities served or to be served, including any reallocation of costs associated with the transfer of a license from the existing licensee.

(C) The following data showing need and the reasonable cost and availability of alternative sources of power:

(1) The average annual cost of the power produced by the project, including the basis for that calculation;

(2) The projected resources required by the applicant to meet the applicant's capacity and energy requirements over the short and long term including:

(i) Energy and capacity resources, including the contributions from the applicant's generation, purchases, and load modification measures (such as conservation, if considered as a resource), as separate components of the total resources required;

(ii) A resource analysis, including a statement of system reserve margins to be maintained for energy and capacity; and

(iii) If load management measures are not viewed as resources, the effects of such measures on the projected capacity and energy requirements indicated separately;

(iv) For alternative sources of power, including generation of additional power at existing facilities, restarting deactivated units, the purchase of power off-system, the construction or purchase and operation of a new power plant, and load management measures such as conservation: The total annual cost of each alternative source of power to replace project power; the basis for the determination of projected annual cost; and a discussion of the relative merits of each alternative, including the issues of the period of availability and dependability of purchased power, average life of alternatives, relative equivalent availability of generating alternatives, and relative impacts on the applicant's power system reliability and other system operating characteristics; and the effect on the direct providers (and their immediate customers) of alternate sources of power.

(D) If an applicant uses power for its own industrial facility and related operations, the effect of obtaining or losing electricity from the project on the operation and efficiency of such facility or related operations, its workers, and the related community.

(E) If an applicant is an Indian tribe applying for a license for a project located on the tribal reservation, a statement of the need of such Indian tribe for electricity generated by the project to foster the purposes of the reservation.

(F) A comparison of the impact on the operations and planning of the applicant's transmission system of receiving or not receiving the project license, including:

(1) An analysis of the effects of any resulting redistribution of power flows on line loading (with respect to applicable thermal, voltage, or stability limits), line losses, and necessary new construction of transmission facilities or upgrading of existing facilities, together with the cost impact of these effects;

(2) An analysis of the advantages that the applicant's transmission system would provide in the distribution of the project's power; and

(3) Detailed single-line diagrams, including existing system facilities identified by name and circuit number, that show system transmission elements in relation to the project and other principal interconnected system elements. Power flow and loss data that represent system operating conditions may be appended if applicants believe such data would be useful to show that the operating impacts described would be beneficial.

(G) If the applicant has plans to modify existing project facilities or operations, a statement of the need for, or usefulness of, the modifications, including at least a reconnaissance-level study of the effect and projected costs of the proposed plans and any alternate plans, which in conjunction with other developments in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in Section 10(a)(1) of the Federal Power Act.

(H) If the applicant has no plans to modify existing project facilities or operations, at least a reconnaissance-level study to show that the project facilities or operations in conjunction with other developments in the area would conform with a comprehensive plan for improving or developing the waterway and for other beneficial public uses as defined in Section 10(a) (1) of the Federal Power Act.

(I) A statement describing the applicant's financial and personnel resources to meet its obligations under a new license, including specific information to demonstrate that the applicant's personnel are adequate in number and training to operate and maintain the project in accordance with the provisions of the license.

(J) If an applicant proposes to expand the project to encompass additional lands, a statement that the applicant has notified, by certified mail, property owners on the additional lands to be encompassed by the project and governmental agencies and subdivisions likely to be interested in or affected by the proposed expansion.

(K) The applicant's electricity consumption efficiency improvement program, as defined under Section 10(a)(2)(C) of the Federal Power Act, including:

(1) A statement of the applicant's record of encouraging or assisting its customers to conserve electricity and a description of its plans and capabilities for promoting electricity conservation by its customers; and

(2) A statement describing the compliance of the applicant's energy conservation programs with any applicable regulatory requirements.

(L) The names and mailing addresses of every Indian tribe with land on which any part of the proposed project would be located or which the applicant reasonably believes would otherwise be affected by the proposed project.

(ii) *Information to be provided by an applicant licensee.* An existing licensee that applies for a new license must provide:

(A) The information specified in paragraph (c)(1) of this section.

(B) A statement of measures taken or planned by the licensee to ensure safe management, operation, and maintenance of the project, including:

(1) A description of existing and planned operation of the project during flood conditions;

(2) A discussion of any warning devices used to ensure downstream public safety;

(3) A discussion of any proposed changes to the operation of the project or downstream development that might affect the existing Emergency Action Plan, as described in subpart C of part 12 of this chapter, on file with the Commission;

(4) A description of existing and planned monitoring devices to detect structural movement or stress, seepage, uplift, equipment failure, or water conduit failure, including a description of the maintenance and monitoring programs used or planned in conjunction with the devices; and

(5) A discussion of the project's employee safety and public safety record, including the number of lost-time accidents involving employees and the record of injury or death to the public within the project boundary.

(C) A description of the current operation of the project, including any constraints that might affect the manner in which the project is operated.

(D) A discussion of the history of the project and record of programs to upgrade the operation and maintenance of the project.

(E) A summary of any generation lost at the project over the last five years because of unscheduled outages, including the cause, duration, and corrective action taken.

(F) A discussion of the licensee's record of compliance with the terms and conditions of the existing license, including a list of all incidents of noncompliance, their disposition, and any documentation relating to each incident.

(G) A discussion of any actions taken by the existing licensee related to the project which affect the public.

(H) A summary of the ownership and operating expenses that would be reduced if the project license were transferred from the existing licensee.

(I) A statement of annual fees paid under part I of the Federal Power Act for the use of any Federal or Indian lands included within the project boundary.

(iii) *Information to be provided by an applicant who is not an existing licensee.* An applicant that is not an existing licensee must provide:

(A) The information specified in paragraph (c)(1) of this section.

(B) A statement of the applicant's plans to manage, operate, and maintain the project safely, including:

(1) A description of the differences between the operation and maintenance procedures planned by the applicant and the operation and maintenance procedures of the existing licensee;

(2) A discussion of any measures proposed by the applicant to implement the existing licensee's Emergency Action Plan, as described in subpart C of part 12 of this chapter, and any proposed changes;

(3) A description of the applicant's plans to continue safety monitoring of existing project instrumentation and any proposed changes; and

(4) A statement indicating whether or not the applicant is requesting the licensee to provide transmission services under section 15(d) of the Federal Power Act.

(1) Information to be provided by an applicant for new license: Filing requirements

(i) *Information to be supplied by all applicants.* All Applicants for a new license under this part must file the following information with the Commission:

(A) Efficiency and Reliability

Southern California Edison Company (SCE) has extensive experience operating and maintaining its vast hydroelectric systems in an efficient and reliable manner. SCE has the responsibility for generating, purchasing, transmitting, and distributing electricity to its customers. The Kaweah Project is operated in conjunction with SCE's other generating resources to meet electricity demand of its customers throughout the state.

(1) Increased Capacity or Generation at the Project

SCE currently has no plans to increase capacity or generation at the Project.

(2) Coordinate the Operation of the Project with any Upstream or Downstream Water Resource Projects

Flows in the Kaweah River Basin upstream of the Project are influenced by several SCE-owned and operated non-FERC Project facilities located in the Sequoia National Park (SNP) that store and/or divert water. All facilities located within SNP are currently operated under a Special Use Permit (SUP) (Permit No. PWR-SEKI-6000-2016-015) issued to SCE by the National Park Service (NPS). SCE operates two non-FERC

Project diversions on the Middle and Marble forks of the Kaweah River (Kaweah No. 3 diversions) that divert flow via the Kaweah No. 3 Flowline to the Kaweah No. 3 Powerhouse. The Kaweah No. 3 diversions (Marble and Middle Fork diversions) were constructed in 1907 and 1913, respectively. Both Kaweah No. 3 diversions are operated in run-of-the-river mode and have limited storage (less than one acre-foot [ac-ft] total combined storage).

SCE also stores water in four small non-FERC Project lakes near Mineral King in the upper East Fork Kaweah River watershed (Eagle Lake, Lady Franklin Lake, Crystal Lake, and Upper Monarch Lake) (up to 1,152 ac-ft). The lakes were originally constructed in 1903 and 1905 and are operated under a SUP with the NPS. SCE releases water from these reservoirs in the late summer and fall months to augment low flows in the East Fork Kaweah River. Flows are diverted from the East Fork Kaweah River to the Kaweah No. 1 Flowline via the Kaweah No. 1 Diversion Dam (FERC Project facilities).

Approximately 10 miles downstream of the FERC Project, the Kaweah River is impounded by the U.S. Army Corps of Engineers' (USACE) Terminus Dam that forms Lake Kaweah. The Terminus Dam was constructed in 1962 for flood management and to provide river control for irrigation purposes. During the spring runoff season the reservoir stores up to 185,000 ac-ft of water. Water is released from the dam at the direction of the USACE for flood control and to meet irrigation needs. The Terminus Power Plant, completed in 1992 by the Kaweah River Power Authority, generates hydroelectricity at the dam. The power plant is jointly managed by Tulare Irrigation District and the Kaweah Delta Water Conservation District, and the electricity is distributed by SCE. The power plant has a capacity of 20.09 megawatts.

(3) Coordinate the Operation of the Project with Other Electrical Systems to Minimize the Cost of Production

SCE optimizes the use of the Project to provide maximum generation during run-off and peak demand periods. The entire set of SCE generation facilities is coordinated through the SCE Energy Control Center to maximize generation while minimizing economic and environmental costs. SCE bids power from its retained generation facilities into markets governed by the Independent System Operator (ISO). Thus, electrical generation from the Kaweah Project is coordinated with other generation throughout California.

(B) Need for Project

(1) Costs and Availability of Alternative Sources of Power

SCE's generation resources, including the Kaweah Project, are operated in the California ISO market. As such, all energy delivered by the Kaweah Project is sold into this central market and SCE separately purchases energy from this market to meet customer demand. This market is liquid and alternative sources of supply are available. These purchases would be at current wholesale market prices.

(2) Increase in Fuel, Capital, and Other Costs

If the Kaweah Project was to cease operations SCE would anticipate reduced energy and renewable energy credit sales resulting in a small increase in overall power procurement costs, offset by reduced operations and maintenance costs at the Kaweah Project.

(3) Effect of Alternative Sources of Power

i. Customers, including wholesale customers

Alternative sources of power would have a negligible impact on customers.

ii. Operating and load characteristics

Alternative sources of power would have a negligible impact on operating and load characteristics.

iii. Communities served or to be served

Alternative sources of power would have no impact on communities served or to be served.

(C) Need, Reasonable Cost, and Availability of Alternative Sources of Power

(1) Average Annual Cost of Power Produced by the Project

The Project has an installed capacity of 8.85 MW. Annual net generation for the Project since issuance of the current license (1992–2018) is summarized in Table H-1. From 1992–2018, annual generation ranged from 14,762 megawatt hours (MWh) (2014) to 60,725 MWh (1998). The Project's annual average generation is 39,124 MWh. The estimated

dependable generating capacity of the Project by calendar year is 14,762 MWh based on generation records from 2014 (critical dry year).

The Project's Net Investment as of 2018 was $17,278,538 and the direct (O&M) expenses for this Project are $1,663,455 (based on 5-year average, 2014–2018). Additional Project operating expenses and capital costs are discussed in Exhibit D.

(2) The Projected Resources Required by SCE to Meet Capacity and Energy Requirements

i. Energy & Capacity Resources as Separate Components of Total Resources Required

In 2017, the SCE system had a 27.12 GW capacity procurement requirement and a 99.69 TWh energy procurement requirement. Of the 27.12 GW capacity procurement requirement 3,537 MW was due to required planning reserve margin. Kaweah provided 0 MW "net qualifying capacity" during the 2017 peak. The actual capacity and energy requirement were met by a variety of resources.

ii. Resources Analysis and System Reserve Margins

California maintains a 15% capacity planning reserve margin. SCE meets its capacity and energy requirements through a relatively small "Utility Owned" portfolio and the rest of the need is filled through various procurement processes including demand response and energy efficiency procurement. Of the power delivered to customers in 2017, 32% was from eligible renewables, 8% large hydro, 20% natural gas, 6% nuclear, and 34% from unspecified market transactions.

iii. Effects of Efficiency and Load Management Measures

SCE has robust demand response, energy efficiency, and customer self-generation programs. Some of these programs are considered to be "load modifiers" and others are supply resources.

iv. Cost and Merits of Project Alternatives

If the Kaweah Project was to cease operations SCE anticipates reduced energy and renewable energy credit sales resulting in a small increases in overall power procurement costs, offset by reduced operations and maintenance costs at the Kaweah Project. SCE would not expect to make any material changes to the overall portfolio. The actual impact will depend on current wholesale market prices.

(D) Effect on Industrial Facilities

SCE does not use the power associated with the Project for its own industrial facility or related operations, with the exception of support buildings located at each powerhouse (station service).

(E) Tribal Need for the Project on a Reservation

Applicant is not an Indian tribe nor is the Project on a Tribal reservation.

(F) Effect on Transmission System

There are three transmission lines associated with the Project—the primary line and two tap lines. The primary Project transmission line extends approximately 4.09 miles from the Kaweah No. 3 Powerhouse to the Three Rivers Substation.[1] The line is a 66 kV, 3-phase, single circuit line construction on a combination of wooden and steel poles with suspension-type insulators. The primary transmission line connects to the Kaweah No. 1 Switchyard via a 66 kV, 120-foot long tap line, and to the Kaweah No. 2 Switchyard via a 66 kV, 0.4-mile long tap line.

(1) Redistribution of Power Flows and Cost Impacts

The Licensee conducted an assessment of generation losses as a result of not receiving a new license to operate the Kaweah Project. The results indicate that due to the small size of the Project and the limited amount of generation, impacts would be minimal. During off-peak and peak conditions there is enough generation and capacity on the lines to feed load in the area. No voltage or loading issues were identified. No new construction of transmission facilities or upgrading of existing facilities would be needed.

[1] The Three Rivers Substation is not part of the Kaweah Project.

(2) Advantages of Transmission System

The Licensee's transmission system is adequate to accommodate the Project's power output; no transmission line upgrades are necessary to continue to operate the Project if the Licensee is granted a new FERC license.

(3) Single-Line Diagrams

A single-line diagram of the Kaweah Project showing system transmission elements in relation to Project and other principal interconnected system elements is considered Critical Energy Infrastructure Information (CEII) under FERC's CEII regulations at 18 CFR §388.113. This document was filed as a component of Exhibit F and SCE requests it be maintained in a non-public file and withheld from public disclosure in accordance with applicable regulations.

(G) Statement of the Need for Modifications

SCE has no plans at this time to modify existing Project facilities or operations to increase generation capacity.

(H) Conformance with Comprehensive Plans

The Project facilities and operations, including mitigation measures proposed in Exhibit E, are best adapted to a comprehensive plan for the Kaweah River based on a balance between environmental protection, water supply, recreation, and the commerce and utilization of a low-cost, non-polluting source of energy. The Project, as proposed in this Application for New License, takes into account all existing and potential uses of the Kaweah River, including recreation, economically viable hydroelectric generation, energy conservation in the context of the national interests in non-polluting and non-fossil fuel alternatives, public safety, and various aspects of environmental protection, including the prevention of significant detrimental impacts to fish and wildlife resources.

In addition, identification and review of the potentially relevant comprehensive plans indicate that relicensing of the Project will not conflict with the goals or objectives of any such plans. Accordingly, the Project adopts measures to ensure public safety, protect the environment, enhance recreation opportunities, and operate for maximum efficiency and reliability, and thus provide the best possible overall mix of benefits.

(I) Financial and Personnel Resources

SCE's source and extent of financing and annual revenues are sufficient to meet the continuing operation and maintenance needs of the Project. For specific financial information, refer to FERC Form No. 1, which is provided to the Commission annually.

SCE has personnel resources necessary to meet license obligations for the Project. A variety of training resources and approaches are used, including classroom training, workshops, textbooks, on-the-job training, and safety training to all personnel. Safety training is conducted through a combination of regularly scheduled monthly meetings, crew meetings, on-the-job training, and special programs, as needed. The training covers SCE's Occupational Safety, Health, and Fire Prevention rules and hazardous materials handling, as well as, programs mandated by governmental agencies such as the California Occupational Safety and Health Division, as well as training related to compliance with Commission license articles, and environmental and cultural protection programs.

Job knowledge and skills training programs are available for management, supervisor/administrative, clerical, and craft employees with apprenticeship training programs established for selected job classifications. Individual training needs are evaluated continually and employees are subsequently scheduled into existing programs offered within SCE or into appropriate outside training programs.

Employees are also encouraged to further their education through the educational assistance program, which provides financial assistance for eligible employees who participate in job related courses, correspondence programs, and degree and/or certificate programs sponsored by accredited institutions.

(J) Notification of Proposed Expansion of Project Lands

SCE proposes to expand the Project to encompass additional lands. Prior to filing the Final License Application, SCE will notify, by certified mail, all of the property owners and government agencies of these changes. No subdivisions will be affected by expansion of the Project.

(K) Electricity Consumption Efficiency Improvement Program

(1) Energy and Electrical Conservation

SCE is actively engaged in energy efficiency, conservation and environmentally beneficial programs. Successful program offerings include customer incentives, online tools, information and education, and cooperative effort with third-party contractors and other utilities.

In 2017, the Statewide Program for Residential Energy Efficiency effectively reached both single-family and multifamily customers by providing audits, incentives and rebates, new construction assistance, and comprehensive whole home upgrades (including building envelope; heating, ventilation, and air conditioning (HVAC), and plug load measures) to over 180,000 residential customers. Specific programs include: Energy Upgrade California Home Upgrade Program, Home Energy Advisor Program, and Multi-family Energy Efficiency Rebate Program (SCE 2018).

SCE's Business Core (nonresidential and statewide) programs include the Commercial, Industrial, and Agricultural Energy Efficiency Programs, and the Commercial Midstream Point of Purchase Program. These programs provide nonresidential audits and related advisory services, incentives for deemed and calculated ("customized") measures, new construction support, direct installation, HVAC programs, and continuous energy improvement offerings to customers. These programs delivered energy efficiency measures to over 20,000 nonresidential customer service accounts in 2017 (SCE 2018).

SCE's website describes a variety of products to help customers manage energy use via the web, mobile app, or sensors. A suite of online tools gives customers the ability to track energy costs and analyze usage. In addition, other information is disseminated to customers and energy classes and workshops are offered at Energy Education Centers in Irwindale and Tulare, California. Detailed information regarding energy efficiency and conservation programs is provided on SCE's website at www.sce.com.

(2) Compliance of Energy Conservation Programs

Regulatory compliance and reporting of SCE's energy efficiency programs is tracked through collection, reporting, and verification of information on the programs' performance. The results of the performance of the programs are filed annually with the California Public Utilities Commission.

(L) List of Indian Tribes and Addresses

The following Indian tribal contacts are believed by SCE to potentially have an interest in the Project; although, no Project facilities are located on any tribal lands:

California Indian Basketweavers Association
428 Main Street
Woodland, CA 95695

Cold Springs Tribe
P.O. Box 209
Tollhouse, CA 93667

Dunlap Band of Mono Indians
5509 East McKenzie Avenue
Fresno, CA 93727

Dunlap Band of Mono-Indians - Historical Preservation Society
P.O. Box 18
Dunlap, CA 93621

Kern Valley Indian Community
P.O. Box 1010
Lake Isabella, CA 93240

Mono Elder, Keith Turner
P.O. Box 306
Auberry, CA 93602

North Fork Mono Tribe
13396 Tollhouse Road
Clovis, CA 93619

Northern Band of Mono Yokuts
P.O. Box 234
Dunlap, CA 93621

Picayune Rancheria of Chukchansi Indians
P.O. Box 2226
Oakhurst, CA 93644

Santa Rosa Indian Community of the Santa Rosa Rancheria
P.O. Box 8
Lemoore, CA 93245

Tachi-Yokut Tribe
P.O. Box 8
Lemoore, CA 93245

Tubatulabas of Kern Valley
P.O. Box 226
Lake Isabella, CA 93240

Tule River Indian Tribe
P.O. Box 589
Porterville, CA 93258

Wukchumni Tribal Council
4737 West Concord Avenue
Visalia, CA 93277

Wuksache Indian Tribe / Eshom Valley Band
1179 Rock Haven Court
Salinas, CA 93906

(ii) *Information to be provided by an applicant licensee.* An existing licensee that applies for a new license must provide:

(A) Information specified in paragraph (c)(1) of this section.

See above.

(B) Safe Management, Operation, and Maintenance

(1) Operation during Flood Conditions

To ensure safe management, operation, and maintenance of the Project during flood and high-flow events Station Order Binders are maintained for each powerhouse. This document includes individual site-specific plans (Station Orders) outlining actions and considerations for high water flow events at each station and/or its associated head and tail works. The Station Orders provide for contingency planning and response to both planned and unplanned project high water flow events. This includes the potential for a single event or, when considered in aggregate, for multiple Powerhouse high water and/or flooding circumstances.

During periods of high flow, various measures are implemented to prevent water damage to infrastructure and equipment, including:

- Intakes are turned out
- Powerhouses are taken offline
- Areas prone to flooding are sand bagged
- Storm doors are closed

- Sump pumps are checked/installed
- Tailraces are blocked

(2) Warning Devices for Downstream Public Safety

The Project has limited storage capacity and is operated in a "run-of-river" mode. The Project is classified as a "low hazard" since no reasonably foreseeable project emergency would endanger, life, health, or property. Without reservoirs to create a flooding threat as a result of a dam break, public safety measures for the Project include:

- Signage to warn the public of hazardous areas and potentially dangerous conditions.
- Physical restraining devices to restrict public access to hazardous areas (e.g., fences around powerhouses and switchyards; gates limiting access onto Project facilities; grates and debris catchers on intake structures; and hand rails in elevated areas, including along bridges and flowline walkways).
- Flowline safety measures that allow both animals and people to safely cross the flowlines and other features that provide a mechanism for escape, should an animal or person fall into the flowline (e.g., footbridges; wildlife crossings; escape ramps; log and cable booms; escape fencing; flashers/hazers; and ropes).
- River safety measures, including a horizontal safety cable (grab line) strung across the Kaweah River, just upstream of the Kaweah No. 2 Intake.

These public safety features are graphically depicted in Appendix H-1.

(3) Changes Affecting the Emergency Action Plan

Pursuant to 18 CFR §12.20(a), FERC requires licensees to develop and file an Emergency Action Plan (EAP) with the Regional Engineer, unless granted a written exemption in accordance with §12.21(a) of the regulations. Since April 1981, SCE has been exempted from filing an EAP for the Project diversions since it demonstrated that no reasonably foreseeable Project emergency would endanger life, health, or property. As required in 18 CFR §12.21(c)(1), SCE

continues to review the conditions that allow them the exemption by conducting field reconnaissance of areas downstream of all exempt diversions to confirm that no new downstream development has occurred. During the current license term, SCE has filed annual requests with FERC for a continuation of the exemption from EAP requirements for the Project since no downstream hazard exists should any of the diversions fail. To date, FERC has agreed with SCE's annual requests and determined that an EAP is not required for the Project. Per 18 CFR §12.21(c)(2), if there are any changes to the Project that might cause an emergency endangering life, health, or property, SCE would promptly notify FERC to determine the necessity to prepare an EAP.

(4) Monitoring Devices

The Project includes the following monitoring devices to detect equipment failure and water conduit failure, including:

- Vibration monitoring: Vibration monitoring devices will cause alarms and a powerhouse unit trip depending on the severity of the vibration. A seismic event could trip the unit.

- Flow differential monitoring: Differential in flow will cause alarms and a powerhouse unit trip depending on the amount of flow differential.

- Line protection monitoring: Line protection electrically protects the powerhouse unit from the grid and the grid from the unit. Differentials will open a breaker and trip the unit offline.

Operators are dispatched to investigate and respond to alarms, as needed. SCE inspects all monitoring devices as part of routine operation and maintenance activities. If issues are identified, they are corrected as soon as discovered to ensure safe and reliable operation.

(5) Employee and Public Safety

Five lost-time accidents have been recorded at the Project in the last 10 years. These accidents consist of the following:

Date	Type of Lost Time Injury
5/2/2017	Strain/Sprain – right shoulder
1/2014	Strain/Sprain – left shoulder
12/2010	Unknown
8/2009	Unknown
3/2008	Unknown

There are no known records of injury or death to the public within the Project boundary.

(C) Current Operations and Constraints

The Project is operated in a run-of-river mode. The Project diverts water from the East Fork Kaweah River at Kaweah No. 1 Diversion Dam and from the Kaweah River at Kaweah No. 2 Diversion Dam for power generation and to meet contractual obligations with pre-1914 water users. These diversions alter the volume of water in the rivers downstream of the Project diversions, with minimal to no change in the annual seasonal flow pattern. Refer to Exhibit B for a complete description of current Project operations.

(D) Project History and Upgrades

The Project developments were constructed during the following timeframes:

1898–1899	Construction of the Kaweah No. 1 Development
1904–1905	Construction of the Kaweah No. 2 Development
1909–1913	Construction of the Kaweah No. 3 Development

The Project powerhouses commenced operations as follows:

June 1899	Kaweah No. 1 Powerhouse commenced operation
February 1905	Kaweah No. 2 Powerhouse commenced operation
May 1913	Kaweah No. 3 Powerhouse commenced operation

The Project has undergone the following upgrades and modifications since start-up (not including routine maintenance):

1920s	Upgrades to all powerhouses that allowed for semi-automatic operation, thus allowing for generation without full-time station operators at each powerhouse.
1929	Demolition of original 1899 Kaweah No. 1 Powerhouse and appurtenances, and relocation/upgrade of the powerhouse several hundred feet upstream.
1930s	All powerhouses were fully automated, with all functions centrally managed.
1930s	Removal of the original wood pole transmission lines, with the entire system upgraded to 66 kV lines and much of it carried by new steel cross-arm structures.
1947	Entirety of the 6-mile Kaweah No. 1 Flowline was dismantled and reconstructed.
1948	Wood portions of the Kaweah No. 2 Flowline replaced.
1986	Handrails added to the Kaweah No. 1 Flowline. The handrails have been serviced and replaced over time.
1989–1991	Much of the wood framing along the Kaweah No. 1 Flowline was rebuilt along the entirety of the alignment, with new stringers, legs, bracing, and pony bents.
2012–2013	Kaweah No. 2 Diversion Dam Intake structure rebuilt with new concrete and new intake structure.

(E) Unscheduled Outages

Five years of unscheduled (forced) outages, 2014 to 2018 inclusive, are listed below by year and powerhouse in Table H-2.

(F) Record of Compliance with Terms and Conditions of Existing License

SCE is responsible for complying with all requirements of the FERC license, all subsequent orders and amendments issued to-date, findings of FERC inspections, findings of other inspections under 18 CFR §12, as well as other FERC directives, information requests, or inquiries. SCE has not been cited for a license violation during the current license term, and has never received a Notice of Violation from FERC related to the Project. SCE's compliance history related to inspections, incident reports, and temporary flow modifications is summarized below.

(1) Inspections

Over the term of the existing license, SCE has participated in FERC environmental inspections, operations inspections, and dam safety/operation inspections. Any subsequent FERC directives and items identified during the inspections as requiring attention have been timely addressed by SCE and written documentation filed with FERC.

(2) Incident Reporting

SCE has filed seven incident reports with FERC over the term of the existing license all related to flume failures as summarized below. In all cases, SCE timely notified FERC of the incident and filed a written incident report. FERC subsequently issued letter orders concurring that the incident reports filed by SCE satisfy the requirements of 18 CFR §12.10. None of these incidents resulted in injuries or deaths, nor did they cause serious damage to public or private property.

Date	Location	Incident	Cause of Incident
03/12/2003	Kaweah No. 1	Flume Failure	Rockslide
06/09/2008	Kaweah No. 1	Flume Failure	Large rock dislodged from the hill above the flume
05/16/2009	Kaweah No. 1	Flume Failure	Large oak tree fell into the flume from the hill above
06/06/2014	Kaweah No. 1	Flume Failure	Flume collapse (2 segments)
04/06/2017	Kaweah No. 1	Flume Failure	Flume overtopping
06/20/2018	Kaweah No. 3	Flume Overtopping	Flume Overtopping
07/05/2018	Kaweah No. 1	Flume Failure	Rockslide

(3) Temporary Flow Modifications

Refer to item H(1)(ii)(C) for a discussion of temporary minimum instream flow modification requests.

(G) Actions Related to the Project that may Affect the Public

SCE has various public safety programs and measures, including signage, physical restraining devices, flowline safety measures, and river safety measures (as described in (ii)(B) above).

(H) Summary of Ownership and Operating Expenses

If the Project license were transferred, annual ownership and operating costs that would be reduced include:

Operation and Maintenance Costs (Based on 5-year Average, 2014-2018)	$1,663,455
Depreciation (2018)	$1,384,730
Property Taxes (2018)	$ 241,900
Administrative & General Expenses (Calculated from 2018 Net Book Value)	$2,353,337
Total	**$5,643,422**

(I) Annual Fees for Federal or Native American Lands

The annual fees for FERC Bill Year 2018, paid under part I of the Federal Power Act, are as follows:

Water for Power	$17,308
Federal Land Rents	$ 8,973
Total	**$26,281**

Water for Power – charges for the purpose of reimbursing the United States for the costs of the administration of Part I of the Federal Power Act.

Federal Land Rents – annual fees paid for the occupancy of federal lands for flowlines, forebay and forebay tank and associated spillway channels, penstocks, power and communication lines.

No Indian lands are included within the Project boundary.

(iii) *Information to be provided by an applicant who is not an existing licensee.* An applicant that is not an existing licensee must provide.

SCE is an existing licensee; therefore, this section is not applicable.

(2) Literature Cited

SCE (Southern California Edison Company). 2018. Southern California Edison Company's (U 338-E) 2018 Annual Report for Energy Efficiency Programs. May 1.

TABLES

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Table H-1. Summary of Kaweah Project Generation (1992–2018)[1]

Year	Net Generation (MWh)			
	Powerhouse			
	Kaweah No. 1	Kaweah No. 2	Kaweah No. 3	Project Total
2018	4,511	5,278	11,819	21,608
2017	7,537	7,158	19,807	34,502
2016	6,987	5,758	18,989	31,734
2015	6,529	6,430	12,275	25,233
2014	3,566	4,436	6,761	14,762
2013	7,221	6,712	11,118	25,051
2012	7,583	9,863	9,510	26,956
2011	10,838	13,849	4,149	28,836
2010	7,925	12,555	27,855	48,336
2009	7,101	11,402	23,298	41,801
2008	8,973	10,969	18,288	38,231
2007	6,626	7,036	15,215	28,877
2006	10,401	11,116	20,620	42,137
2005	11,150	12,870	28,639	52,658
2004	10,212	11,705	22,626	44,543
2003	12,512	11,732	26,434	50,677
2002	11,498	11,686	25,015	48,198
2001	10,400	9,297	20,557	40,254
2000	10,746	10,243	21,447	42,436
1999	11,066	8,974	13,388	33,428
1998	14,696	12,519	33,511	60,725

Year	Net Generation (MWh)			
	Powerhouse			
	Kaweah No. 1	Kaweah No. 2	Kaweah No. 3	Project Total
1997	9,294	12,665	6,362	28,321
1996	12,920	13,063	27,946	53,929
1995	14,912	14,930	30,487	60,329
1994	11,343	11,222	19,302	41,868
1993	13,762	12,966	25,146	51,874
1992	12,461	9,927	16,657	39,044
Total Annual Generation	**262,770**	**276,359**	**517,221**	**1,056,350**
Average Annual Generation, 1992–2018	**9,732**	**10,236**	**19,156**	**39,124**

Notes:

MWh = megawatt hours

[1] All Project powerhouses experienced periods of no generation between 1992 and 2018. Lack of generation at a powerhouse is generally the result of: (1) routine maintenance outage; (2) outages caused by the powerhouse tripping; (3) facility repairs necessitating a powerhouse be offline; or (4) periods of low runoff when SCE is required to meet contractual entitlements to deliver water to local water users consistent with their pre-1914 water rights and there is not enough water remaining for generation.

Table H-2. Unscheduled Outages (2014–2018)

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
2014						
Kaweah 1	1/1/2014	0:01	1/30/2014	10:00	Flume rebuild	Flume repaired
	2/28/2014	13:08	3/2/2014	7:25	66kv line relay	Line returned to service
	6/4/2014	9:14	6/4/2014	15:40	Unit inspection	Returned to service
	6/6/2014	17:22	12/31/2014	0:00	Flume damage	Flume repaired
Kaweah 2	1/1/2014	0:01	2/15/2014	15:18	Low water	Returned when river levels increased
	2/28/2014	18:08	3/1/2014	14:50	66kv line relay	Line returned to service
	3/6/2014	16:30	3/6/2014	17:00	Unknown trip	Unit checked, returned to service
	4/5/2014	20:41	4/9/2014	16:00	Controller failure	Repaired asset
	4/9/2014	21:30	4/11/2014	17:55	Unknown trip	Returned to service
	6/25/2014	11:30	12/31/2014	0:00	Low water	Returned when river levels increased
Kaweah 3, Unit 1	1/1/2014	0:01	2/22/2014	14:40	Low water	Returned when river levels increased
	2/28/2014	13:08	3/1/2014	18:30	66kv line relay	Line returned to service
	6/18/2014	13:30	7/17/2014	8:43	Low water	Returned when river levels increased
Kaweah 3, Unit 2	1/1/2014	0:01	2/27/2014	13:55	Low water	Returned when river levels increased
	2/28/2014	13:08	3/1/2014	12:52	66kv line relay	Line returned to service
	3/1/2014	18:10	3/1/2014	18:55	B phase timed over current	Line returned to service
	7/9/2014	8:12	7/17/2014	8:43	Low water	Returned when river levels increased

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
2015						
Kaweah 1	1/1/2015	0:00	1/7/2015		Flume damage	Flume repaired
	2/7/2015	15:15	2/9/2015		Dirty Water	Returned when river water was clean
	4/7/2015	18:27	4/7/2015	19:50	66kV line relay	Line returned to service
	5/29/2015	7:29	5/29/2015	10:36	66kV line relay	Line returned to service
	8/22/2015	12:46	11/3/2015	11:11	Low water	Returned when river levels increased
	12/24/2015	6:52	12/24/2015	7:35	66kV line relay	Line returned to service
	12/24/2015	20:06	12/27/2015	14:33	66kV line relay	Line returned to service
Kaweah 2	1/1/2015	0:00	1/2/2015	16:54	Low water	Returned when river levels increased
	2/7/2015	13:58	2/9/2015	16:54	Low water	Returned when river levels increased
	4/7/2015	18:27	4/7/2015	20:19	66kv line relay	Line returned to service
	5/29/2015	7:29	5/29/2015	9:51	66kv line relay	Line returned to service
	6/24/2015	14:26	7/2/2015	10:47	Low water	Returned when river levels increased
	7/18/2015	9:46	7/26/2015	8:15	Low water	Returned when river levels increased
	8/3/2015	9:14	11/6/2015	11:00	Low water	Returned when river levels increased
	12/24/2015	6:52	12/24/2015	9:04	66kV line relay	Line returned to service
	12/24/2015	20:06	12/27/2015	15:10	66kV line relay	Line returned to service
Kaweah 3, Unit 1	1/7/2015	7:30	1/9/2015	11:50	66kv Bank outage	Line returned to service
	2/7/2015	12:53	2/10/2015	11:26	Dirty water	Returned when river water was clean
	3/10/2015	7:42	3/10/2015	11:26	66kv line relay	Line returned to service
	4/7/2015	18:27	4/7/2015	20:20	66kv line relay	Line returned to service
	5/29/2015	7:29	5/29/2015	11:34	66kv line relay	Line returned to service
	6/5/2015	16:46	6/5/2015	17:25	66kv line relay	Line returned to service

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
	6/13/2015	18:08	6/13/2015	20:10	66kv line relay	Line returned to service
	6/14/2015	14:35	6/16/2015	10:21	Unknown	Returned to service
	6/25/2015	15:06	7/3/2015	10:54	Low water	Returned when river levels increased
	7/7/2015	12:58	7/26/2015	13:57	Low water	Returned when river levels increased
	8/3/2015	13:07	11/14/2015	12:55	Low water	Returned when river levels increased
	12/17/2015	17:38	12/19/2015	9:05	Flowline- rockslide	Repaired flowline
	12/24/2015	6:52	12/24/2015	8:17	66kV line relay	Line returned to service
	12/24/2015	20:06	12/27/2015	12:30	66kV line relay	Line returned to service
Kaweah 3, Unit 2	1/7/2015	7:30	1/9/2015	11:50	66kv Bank outage	Line returned to service
	1/9/2015	11:50	2/10/2015	11:43	Low water	Returned when river levels increased
	3/10/2015	7:42	3/10/2015	8:06	66kv line relay	Line returned to service
	3/27/2015	23:53	6/25/2015	15:05	High bearing temp	Repaired Bearing issue
	7/8/2015	11:04	11/5/2015	12:45	Low water	Returned when river levels increased
	12/17/2015	17:40	12/19/2015	9:26	Flowline - rockslide	Repaired flowline
	12/24/2015	6:52	12/24/2015	8:07	66kv line relay	Line returned to service
	12/24/2015	20:06	12/28/2015	12:22	66kV line relay	Line returned to service
2016						
Kaweah 1	1/16/2016	16:10	1/14/2016	11:28	Flume damage	Flume repaired
	2/13/2016	6:14	2/13/2016	17:10	66kv line relay	Line returned to service
	3/29/2016	6:11	3/29/2016	11:05	T&D line outage	Line returned to service
	4/6/2016	11:37	4/6/2016	14:12	66kv line relay	Line returned to service
	5/23/2016	7:45	5/23/2016	11:23	Unit thrusting	Repaired asset
	5/24/2016	15:20	5/28/2016	9:15	Flume damage	Flume repaired

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
	8/11/2016	9:30	8/15/2016	8:00	Low water	Returned when river levels increased
	10/6/2016	15:22	12/10/2016	14:00	Low water	Returned when river levels increased
	12/16/2016	4:23	12/29/2016	6:00	Dirty water	Returned when river water was clean
	12/29/2016	6:00	12/30/2016	10:09	Scada down	Repaired asset
Kaweah 2	1/6/2016	10:06	3/14/2016	11:05	Flume damage	Flume repaired
	3/29/2016	6:23	3/29/2016	10:43	T&D line outage	Line returned to service
	4/6/2016	11:37	4/6/2016	12:33	66kv line relay	Line returned to service
	5/13/2016	9:28	5/16/2016	15:43	Forebay rake issue	Repaired asset
	7/5/2016	10:13	9/5/2016	8:00	Low water	Returned when river levels increased
	10/13/2016	14:40	12/14/2016	10:15	Low water	Returned when river levels increased
Kaweah 3, Unit 1	2/13/2016	6:14	2/13/2016	16:09	Line relay	Line returned to service
	3/29/2016	6:58	3/29/2016	16:09	Line relay	Line returned to service
	4/6/2016	11:37	4/16/2016	13:27	Line relay	Line returned to service
	6/1/2016	16:44	6/7/2016	13:16	Excitation issue	Repaired excitation issue
	6/22/2016	17:08	6/22/2016	18:54	Excitation issue	Repaired excitation issue
	8/4/2016	15:45	8/8/2016	8:00	Low water	Returned when river levels increased
	8/29/2016	14:30	12/6/2016	12:32	Low water	Returned when river levels increased
	12/15/2016	22:27	12/31/2016	24:00:00	Excitation issue	Repaired excitation issue
Kaweah 3, Unit 2	2/13/2016	6:14	3/13/2016	16:21	Line relay	Line returned to service
	3/29/2016	6:50	3/29/2016	16:21	Line relay	Line returned to service
	4/6/2016	11:37	4/6/2016	9:23	Line relay	Line returned to service
	6/22/2016	17:19	6/22/2016	18:40	Excitation issues	Repaired excitation issue
	7/8/2016	10:09	8/8/2016	8:00	Low water	Returned when river levels increased

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
	8/29/2016	14:30	11/30/2016	14:30	Low water	Returned when river levels increased
	12/2/2016	14:34	12/6/2016	12:32	Excitation issues	Repaired excitation issue
	12/6/2016	12:32	12/15/2016	22:27	Low water	Returned when river levels increased
	12/15/2016	22:27	12/31/2016	24:00	Excitation issues	Repaired excitation issue
2017						
Kaweah 1	1/4/2017	11:32	1/17/2017	15:55	Dirty water	Returned when river water was clean
	1/19/2017	14:12	1/24/2017	14:25	Dirty water	Returned when river water was clean
	2/6/2017	13:04	2/13/2017	15:38	Dirty water	Returned when river water was clean
	2/16/2017	14:55	2/22/2017	15:14	Dirty water	Returned when river water was clean
	4/6/2017	10:57	4/17/2017	14:49	Flume damage	Flume repaired
	5/25/2017	18:44	5/25/2017	21:54	Line relay	Line returned to service
	6/5/2017	12:25	6/5/2017	16:47	Flume damage	Flume repaired
	6/13/2017	9:34	6/14/2017	12:38	Flowline purge sediment	Returned to service
	6/17/2017	12:33	6/17/2017	14:28	Bearing issue	Repaired bearing issue
	6/18/2017	7:29	6/25/2017	14:38	Bearing issue	Repaired bearing issue
Kaweah 2	1/4/2017	15:56	2/1/2017	7:00	Dirty water	Returned when river water was clean
	2/1/2017	7:00	3/31/2017	11:06	Intake damage	Repaired asset
	4/6/2017	17:36	4/10/2017	12:27	Line relay	Line returned to service
	4/19/2017	13:42	4/20/2017	14:17	Forebay rake issue	Repaired asset
	5/25/2017	18:44	5/25/2017	21:10	Line relay	Line returned to service
	6/7/2017	11:56	6/8/2017	16:00	Fire	Returned to service after fire
	6/13/2017	16:00	6/15/2017	12:32	Bearing oil leak	Repaired Bearing issue

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
	10/25/2017	14:30	11/27/2017	12:58	Low water	Returned when river levels increased
	12/21/2017	14:52	12/31/2017	24:00:00	Low water	Returned when river levels increased
Kaweah 3, Unit 1	1/1/2017	0:00	1/1/2017	12:47	Excitation issue	Repaired excitation issue
	1/4/2017	14:24	1/18/2017	12:25	Dirty water	Returned when river water was clean
	1/19/2017	15:44	1/25/2017	14:12	Dirty water	Returned when river water was clean
	2/6/2017	14:49	2/13/2017	12:34	Dirty water	Returned when river water was clean
	2/16/2017	9:35	2/22/2017	12:32	Storm	Returned to service after fire
	4/6/2017	12:00	4/10/2017	12:20	Storm	Returned to service after fire
	4/12/2017	8:00	4/12/2017	15:13	Excitation issue	Repaired excitation issue
	5/25/2017	18:44	5/25/2017	23:03	Line relay	Line returned to service
	6/18/2017	14:22	6/18/2017	16:04	Line relay	Line returned to service
	8/1/2017	19:32	8/3/2017	14:30	SL&P issue	Repaired asset
	10/25/2017	14:30	12/7/2017	8:06	Low water	Returned when river levels increased
Kaweah 3, Unit 2	1/1/2017	0:00	1/1/2017	12:27	Excitation issue	Repaired excitation issue
	1/4/2017	14:22	1/25/2017	14:44	Dirty water	Returned when river water was clean
	2/6/2017	14:52	2/27/2017	8:33	Dirty water	Returned when river water was clean
	3/2/2017	16:00	3/10/2017	13:30	Load controller issues	Repaired asset
	4/6/2017	12:00	4/10/2017	12:36	Storm	Returned to service after fire
	5/2/2017	19:04	5/12/2017	9:47	Excitation issue	Repaired excitation issue
	5/25/2017	18:44	5/25/2017	23:08	Line relay	Line returned to service
	6/18/2017	14:22	6/18/2017	15:53	Line relay	Line returned to service
	8/1/2017	19:34	8/3/2017	14:25	SL&P issue	Repaired asset
	9/18/2017	11:55	10/1/2017	8:53	Low water	Returned when river levels increased

Powerhouse / Unit	Outage Start		Outage End		Outage Type / Reason	Corrective Action
	Date	Time	Date	Time		
	10/25/2017	14:30	11/22/2017	12:41	Low water	Returned when river levels increased
	12/1/2017	6:30	12/1/2017	8:07	Line relay	Line returned to service
	12/7/2017	8:09	12/31/2017	24:00:00	Low water	Returned when river levels increased
2018						
Kaweah 1	3/8/2018	16:19	3/10/2018	9:11	Flume damage	Flume repaired
	3/22/2018	9:15	3/26/2018	13:07	Dirty water	Returned when river water was clean
	5/21/2018	15:00	7/1/2018	9:33	Flume damage	Flume repaired
Kaweah 2	1/1/2018	0:00	1/11/2018	10:42	Low water	Returned when river levels increased
	2/20/2018	10:05	3/6/2018	10:42	Low water	Returned when river levels increased
	3/22/2018	15:22	3/27/2018	8:55	Dirty water	Returned when river water was clean
	7/5/2018	8:30	7/7/2018	11:21	Line relay	Line returned to service
	8/1/2018	8:13	9/17/2018	12:16	Low water	Returned when river levels increased
	10/29/2018	8:00	12/4/2018	8:15	Low water	Returned when river levels increased
	12/4/2018	16:29	12/6/2018	8:29	Bearing vibration	Repaired bearing issue
Kaweah 3, Unit 1	2/20/2018	15:24	3/5/2018	11:45	Low water	Returned when river levels increased
	3/22/2018	11:04	3/26/2018	14:58	Dirty water	Returned when river water was clean
	6/20/2018	16:11	7/30/2018	13:30	Flowline damage	Repaired flowline
Kaweah 3, Unit 2	1/1/2018	0:00	1/8/2018	10:55	Low water	Returned when river levels increased
	1/20/2018	7:10	1/23/2018	9:22	Low water	Returned when river levels increased
	2/15/2018	8:33	3/6/2018	9:25	Low water	Returned when river levels increased
	3/22/2018	11:07	3/26/2018	15:17	Dirty water	Returned when river water was clean
	6/20/2018	16:33	7/30/2018	13:40	Flowline overtopping	Returned to service after repair

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APPENDIX H-1

Public Safety Features

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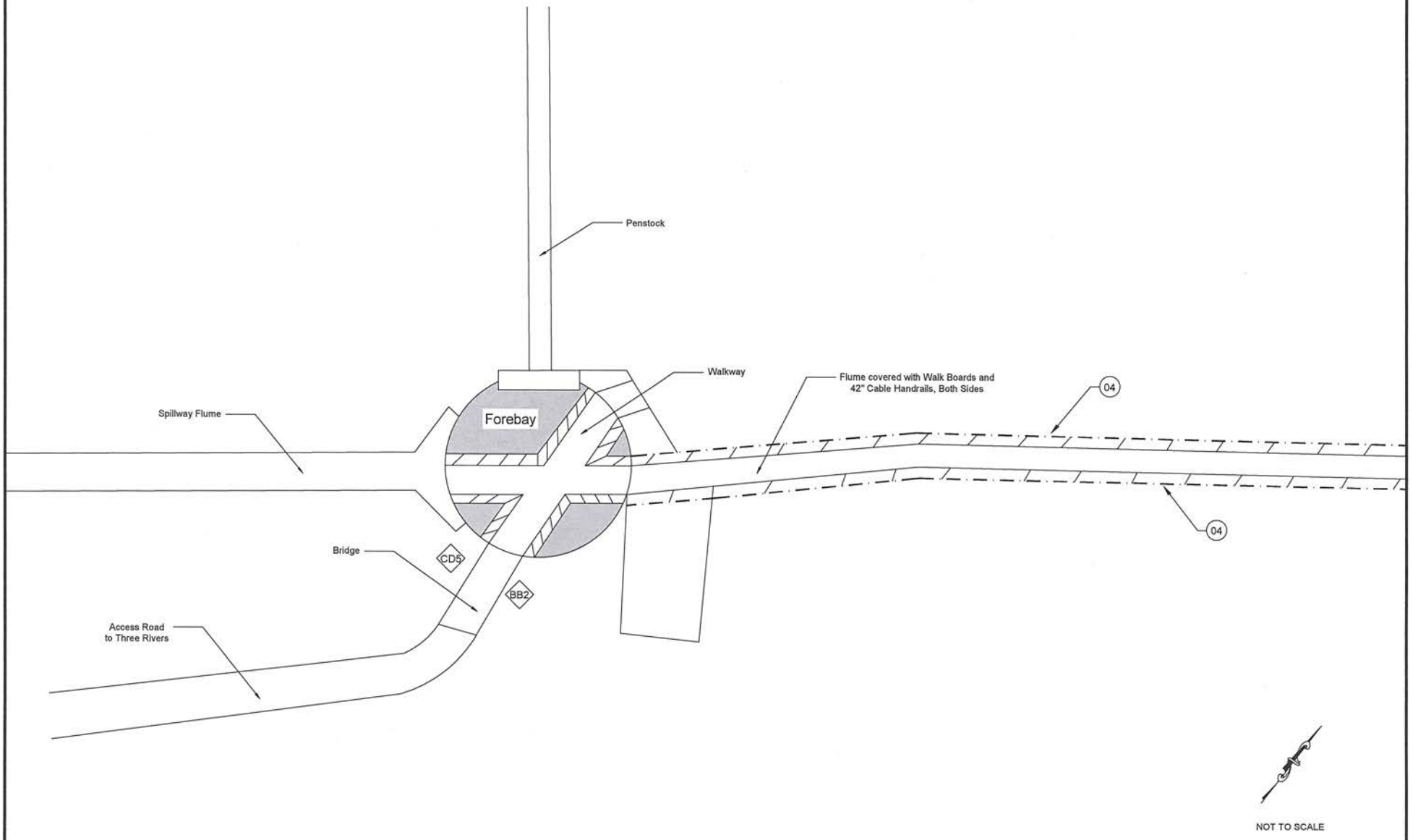


NOT TO SCALE

A	**SIGNS**
BB2	Conduit Warning 2
CD5	Hazardous Water Warning 5

1	**SAFETY FEATURES**
04	Handrail

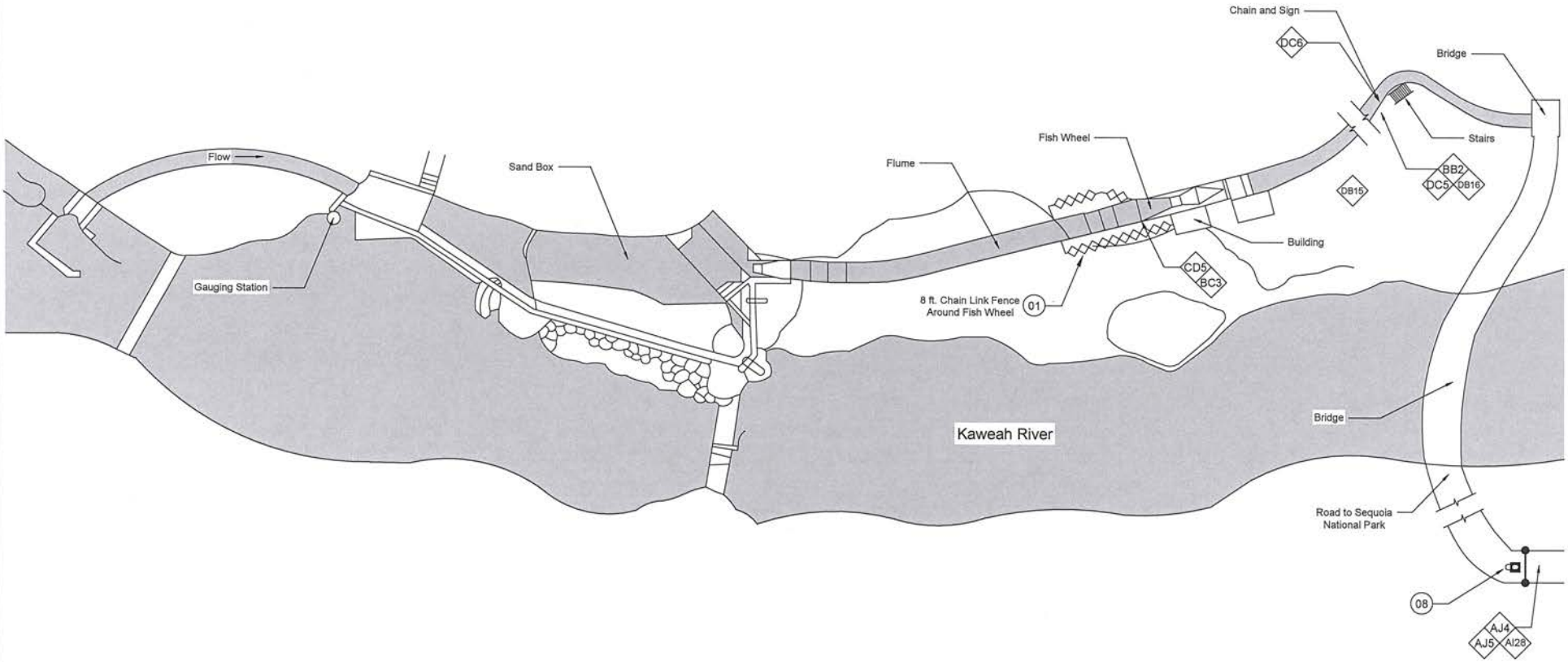
SOUTHERN CALIFORNIA EDISON®
An *EDISON INTERNATIONAL®* Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-03-2015

Kaweah No. 1
Forebay



NOT TO SCALE

◇A	**SIGNS**	CD5	Hazardous Water Warning 5
AI28	Kaweah 1 Intake Road	DB15	Trespassing Warning 15
AJ4	Road Notice 4	DB16	Trespassing Warning 16
AJ5	Road Notice 5	DC5	Trespassing - Danger Warning 5
BB2	Conduit Warning 2	DC6	Trespassing - Danger Warning 6
BC3	Dam Warning 3		

(1)	**SAFETY FEATURES**
01	Fence
08	Locked Gate

SOUTHERN CALIFORNIA EDISON®
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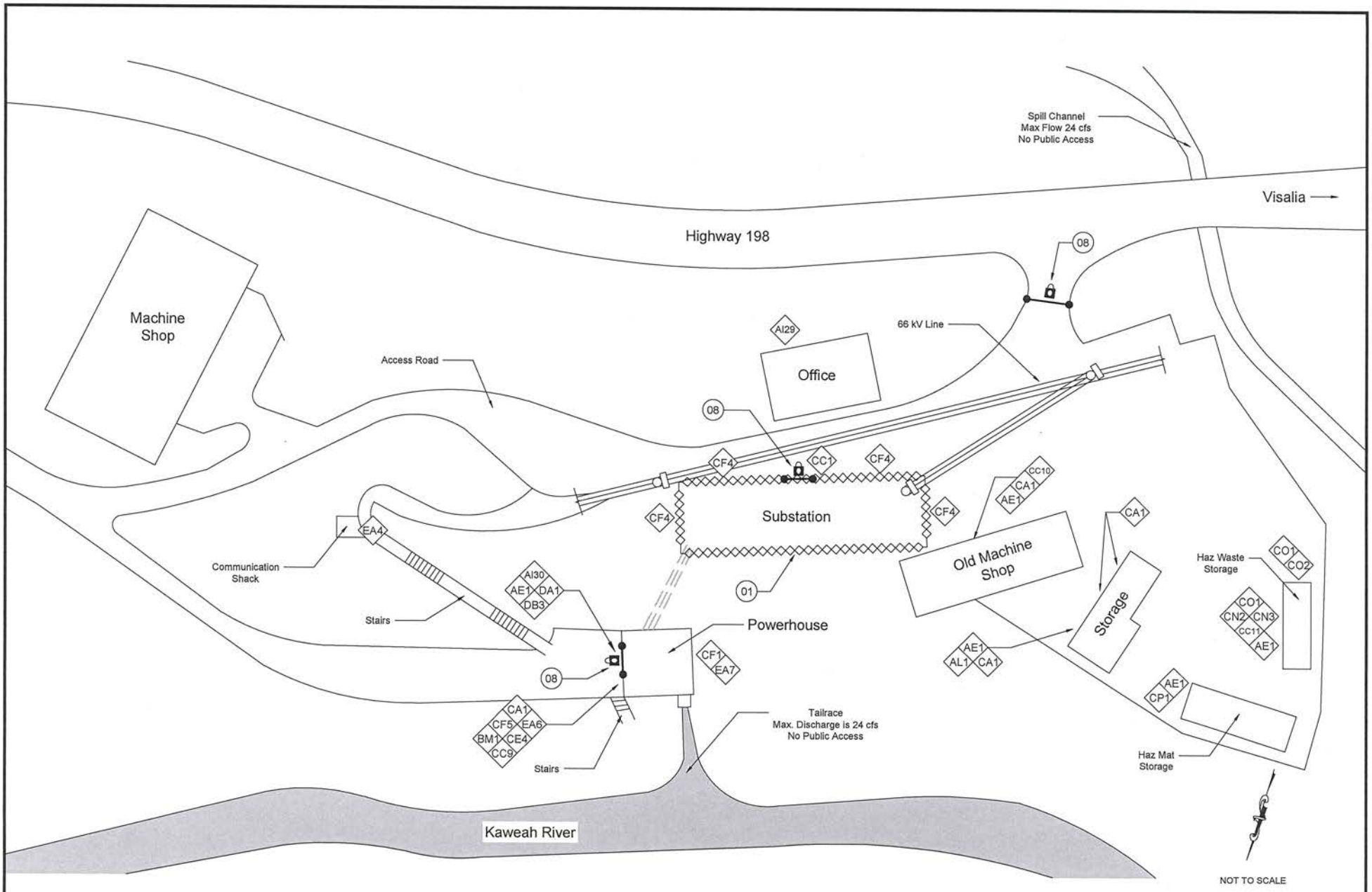
Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-03-2015

Kaweah No. 1 Intake



A	SIGNS									
AE1	No Smoking Warning 1	CA1	Cancer Warning 1	CF1	High Voltage Warning 1	CO2	Hazardous Waste Warning 2	EA7	Alarm Warning 7	
AI29	Kaweah No. 1 Hydroelectric Project	CC1	PPE Warning 1	CF4	High Voltage Warning 4	CP1	Pesticide Warning 1			
AI30	Kaweah No. 1 Hydro Plant	CC9	PPE Warning 9	CF5	High Voltage Warning 5	DA1	Emergency Instructions 1	1	SAFETY FEATURES	
AL1	Equipment Location 1	CC10	PPE Warning 10	CN2	Flammable Warning 2	DB3	Trespassing Warning 3	01	Fence	
BM1	Powerhouse Warning 1	CC11	PPE Warning 11	CN3	Flammable Warning 3	EA4	Alarm Warning 4	08	Locked Gate	
		CE4	Ear Protection Warning 4	CO1	Hazardous Waste Warning 1	EA6	Alarm Warning 6			

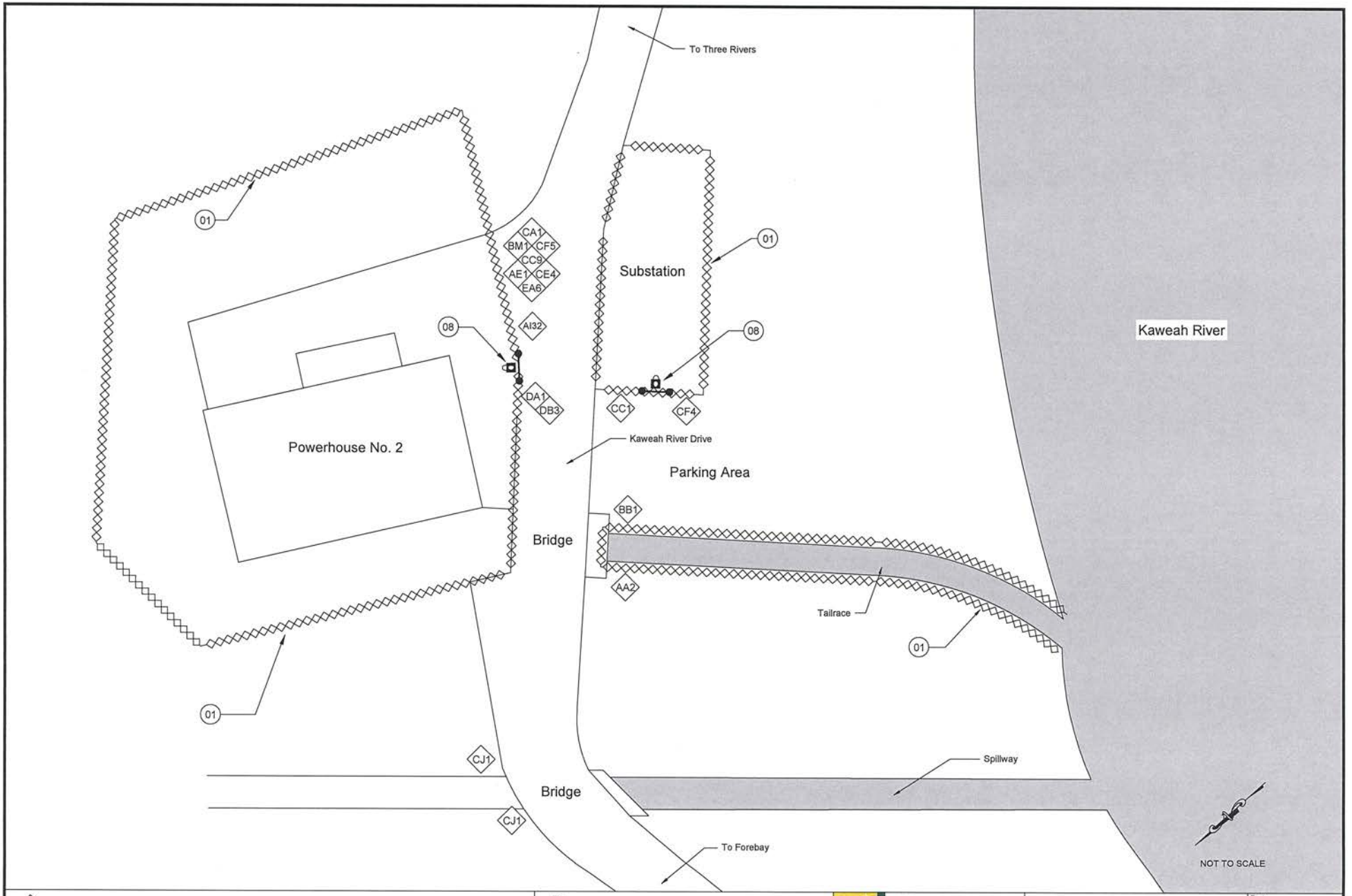
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-03-2015

Kaweah No. 1 Powerhouse/Substation



A	SIGNS				
AA2	SCE Sign 2	CA1	Cancer Warning 1	CJ1	Water Release Warning 1
AE1	No Smoking Warning 1	CC1	PPE Warning 1	DA1	Emergency Instructions 1
AI32	Kaweah No. 2 Hydroelectric Project	CC9	PPE Warning 9	DB3	Trespassing Warning 3
BB1	Conduit Warning 1	CE4	Ear Protection Warning 4	EA6	Alarm Warning 6
BM1	Powerhouse Warning 1	CF4	High Voltage Warning 4		
		CF5	High Voltage Warning 5		

1	SAFETY FEATURES
01	Fence
08	Locked Gate

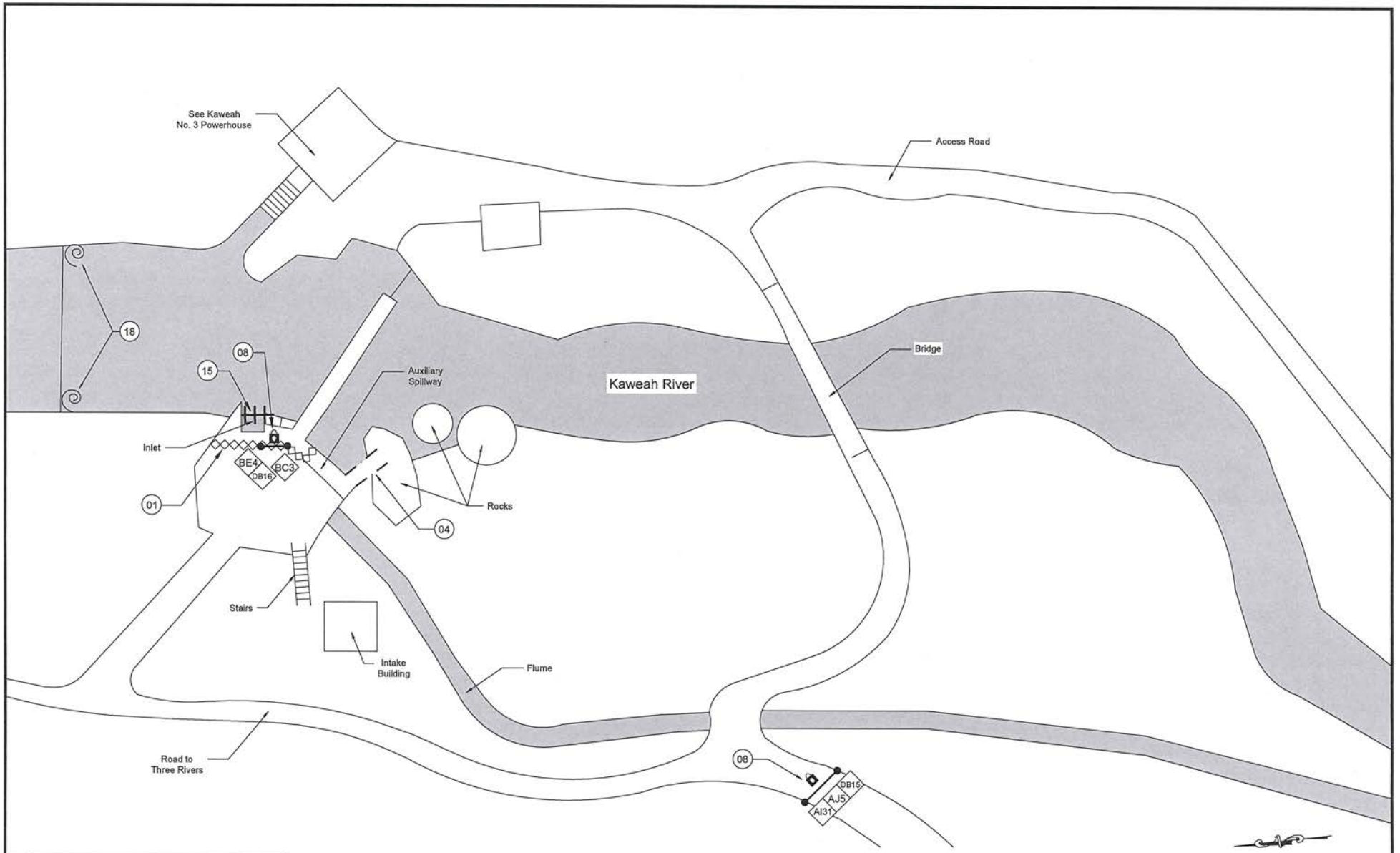
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-04-2015

Kaweah No. 2 Powerhouse



NO.	REVISIONS	DATE
1	Added Trash Rack & Safety Grab Line	07/08/16

NOT TO SCALE

(A) SIGNS

AI31	Kaweah No. 3 Hydroelectric Project
AJ5	Road Notice 5
BC3	Dams Warning 3
BE4	Equipment Warning 4
DB15	Trespassing Warning 15
DB16	Trespassing Warning 16

(1) SAFETY FEATURES

01	Fence
04	Handrail
08	Locked Gate
15	Trash Rack
18	Safety Drop Line

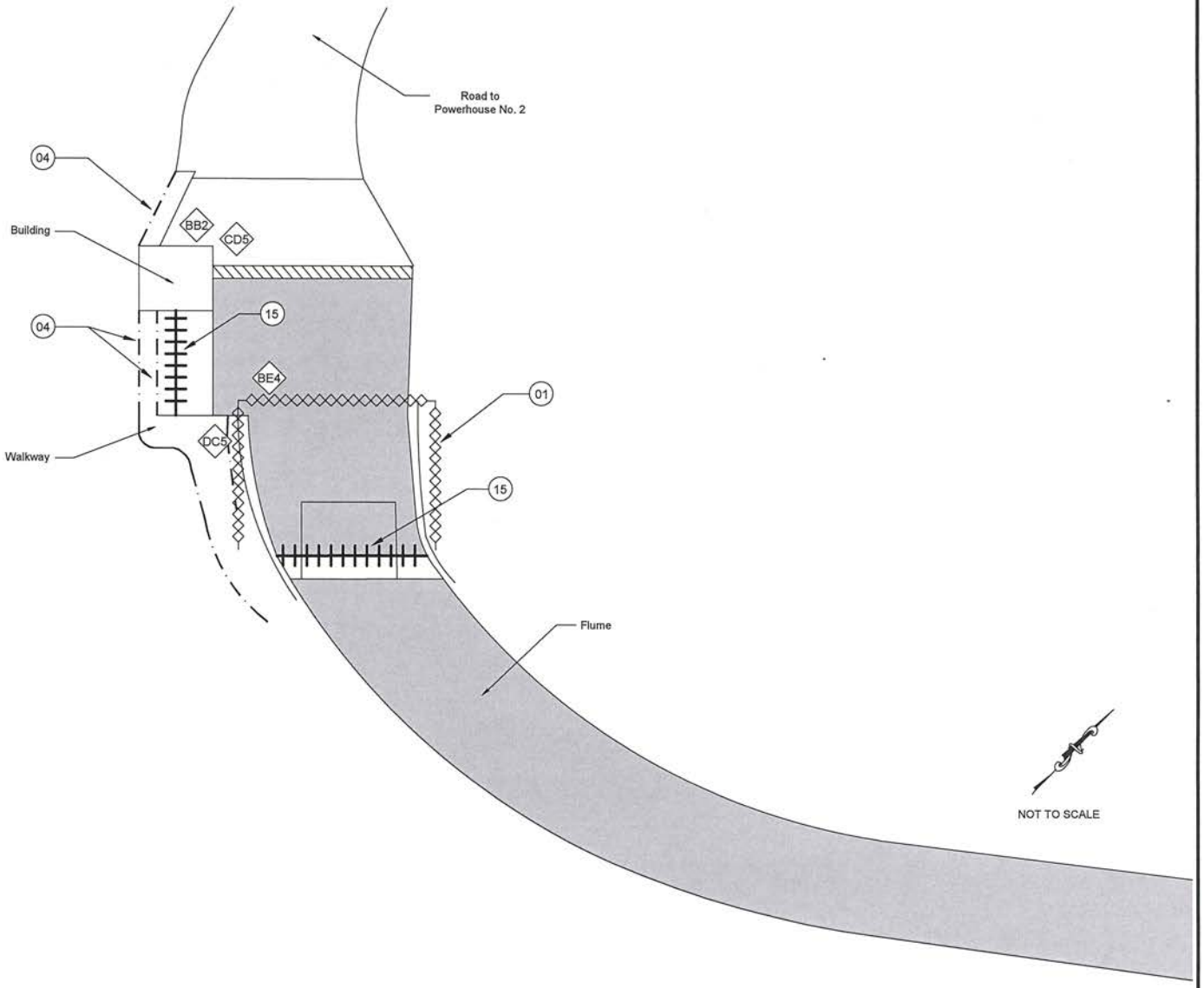
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 07-08-2016 R.

Kaweah No. 2 Intake



A	SIGNS
BB2	Conduit Warning 2
BE4	Equipment Warning 4
CD5	Hazardous Water Warning 5
DC5	Trespassing - Danger Warning 5

1	SAFETY FEATURES
01	Fence
04	Handrail
15	Trash Rack

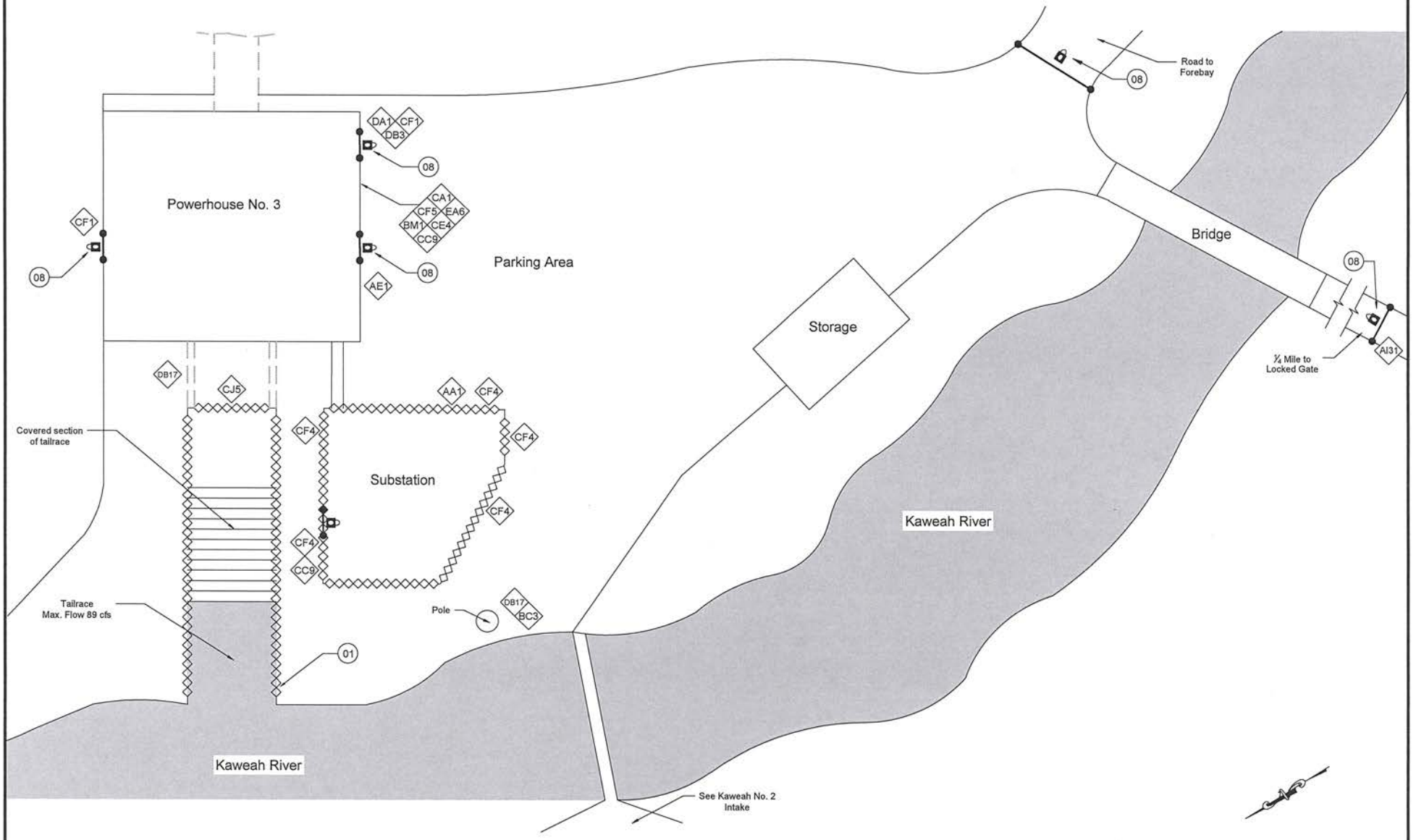
SOUTHERN CALIFORNIA EDISON®
An *EDISON INTERNATIONAL*® Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-04-2015

Kaweah No. 2 Forebay



A	SIGNS				
AA1	Southern California Edison Sign 1	CA1	Cancer Warning 1	CJ5	Water Release Warning 5
AE1	No Smoking Warning 1	CC9	PPE Warning 9	DA1	Emergency Instructions 1
AI31	Kaweah No. 3 Hydroelectric Project	CE4	Ear Protection Warning 4	DB3	Trespassing Warning 3
BC3	Dams Warning 3	CF1	High Voltage Warning 1	DB17	Trespassing Warning 17
BM1	Powerhouse Warning 1	CF4	High Voltage Warning 4	EA6	Alarm Warning 6
		CF5	High Voltage Warning 5		

1	SAFETY FEATURES
01	Fence
08	Locked Gate

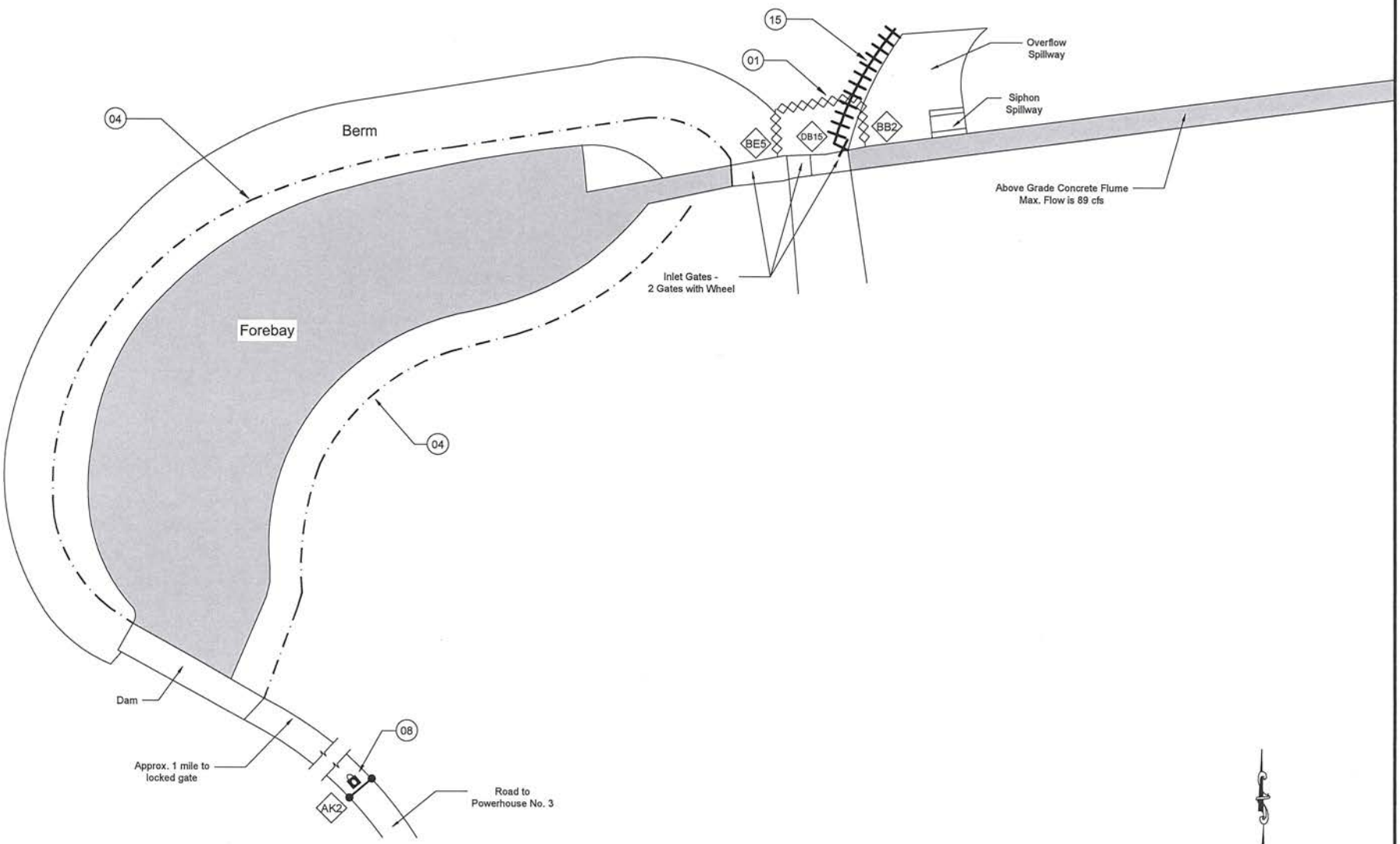
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 08-13-2015

Kaweah No. 3 Powerhouse



NOT TO SCALE

A	SIGNS
AK2	No Swimming Warning 2
BB2	Conduit Warning 2
BE5	Equipment Warning 5
DB15	Trespassing Warning 15

1	SAFETY FEATURES
01	Fence
04	Handrail
08	Locked Gate
15	Trash Rack

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL®* Company

Region	Kaweah/Tule
Proj Name	Kaweah
Proj Number	298

PUBLIC SAFETY MEASURES

Date 11-04-2015

Kaweah No. 3
Forebay

Current Symbols

Bishop	NHID	Kaweah-Tule	East End	Borel-Kern		Sample Symbol	Standard Text	Current Text	Descriptions
x	x	x	x	x	1		Fence	Fences / Mesh Fence	Barrier fences of chain link or other design to prevent unauthorized access.
	x				2		Barbed Wire	Barbed Wire	
x	x		x	x	3		Guard Rail	Guard Rail / Guard Cable / Metal Guard / Pipe Rail	Device designed to enhance vehicle safety at road side.
x	x	x	x	x	4		Handrail	Handrail	A 42" minimum rail that is designed to prevent inadvertent falling from elevated point.
x					5		Pedestrian Bridge	Pedestrian Bridge with Handrails	
		x			6		Walk Boards	Walk boards	
				x	7		Wall	Wall	The northwest walls of the flume sections and the sandbox are 10 to 15 feet above ground level and the flume and sandbox are inaccessible to the public from the river side.
x	x			x	8		Gate	Gates:	
	x				9		Locked Door	Locked Door with Entry Alarm	Device designed to control vehicle access.
			x		10		Metal Coverings	Expanding metal coverings	
x	x		x	x	11		Boat Barrier	Boat Barrier, Log Booms or Rope Buoys:	All windows and doors of the powerhouse building are covered with expanding metal coverings
		x			12		Water Guard	Protective Guards	This is an alert device to divert inadvertant approach to spillway or other point of danger.
			x		13		Grate	Grates	on either side of the fish wheel
		x	x		14		Grid	Grid covering inlet to tunnel/flowline/penstock/forebay	Covering vent on the tailrace
x					15		Trash Rack	Trash Rack:	
x	x			x	16		Life Ring	Life Ring / Life Preserver	A device installed over the water intake of flow lines and penstocks that will prevent entry.
				x	17		Safety Flotation Buoy	Safety Flotation Buoys	
				x	18		Safety Drop Line	Safety Drop Lines / Egress Safety Lines	
				x	19		Ladder	Ladder	12" x 48" ORANGE IDENTIFICATION STRIPES HAVE BEEN PAINTED BY EACH EGRESS SAFETY LINE.
	x				20		Ladder Cover	Ladder Cover	
	x			x	21		Light	Lights	Borel-Kern: Light post mercury vapor on photo cell.
				x	22		Flashing Light	Flashing Lights	
	x				23		Siren	Sirens	
				x	24		Alarm	Alarms	High and low water alarms are installed at the ogee section and at the alarm station directly upstream of Bodfish flume and are transmitted to a manned station.