



# ***Kaweah Project*** ***(FERC Project No. 298)***

## **Project Description - Operations**

June 9, 2015

# Kaweah Project

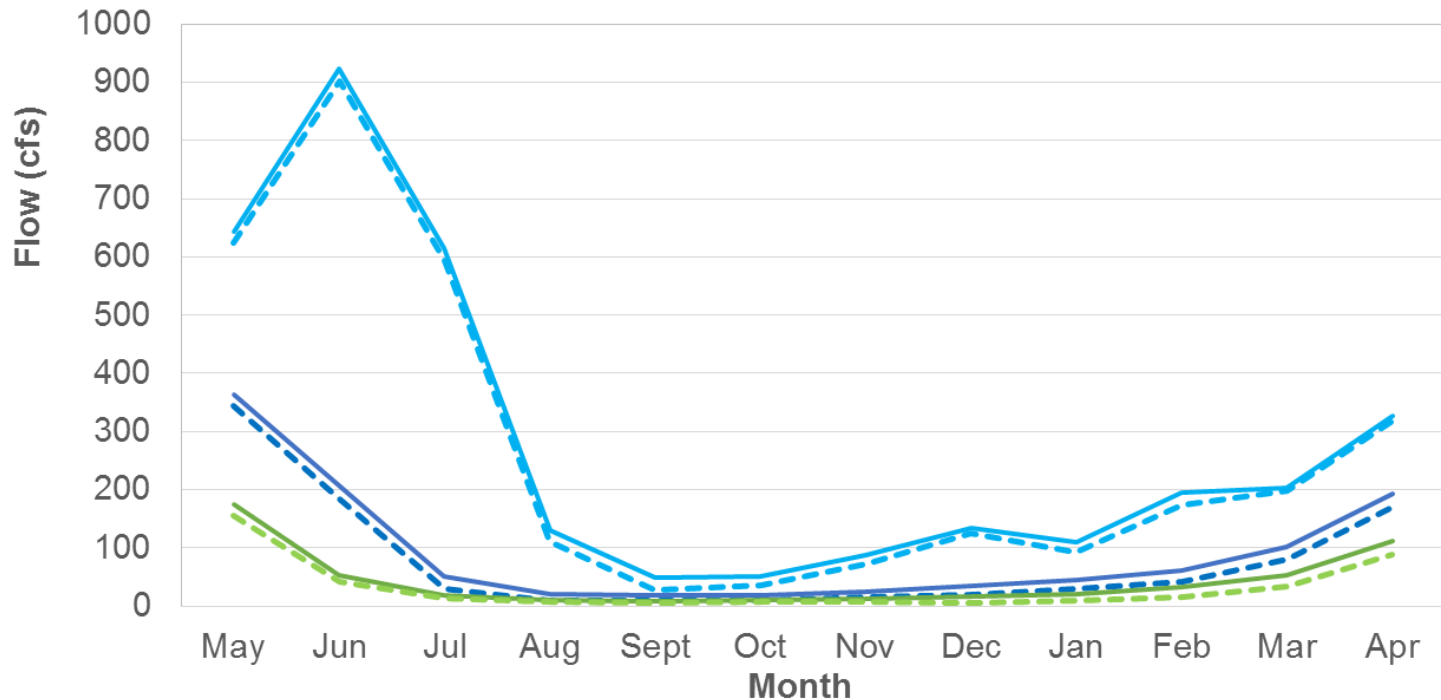
## Project Operations

- Influenced by:
  - Inflow Hydrology
  - Infrastructure Capacities
  - FERC Requirements
  - Domestic Water Supply Obligations

# Kaweah Project

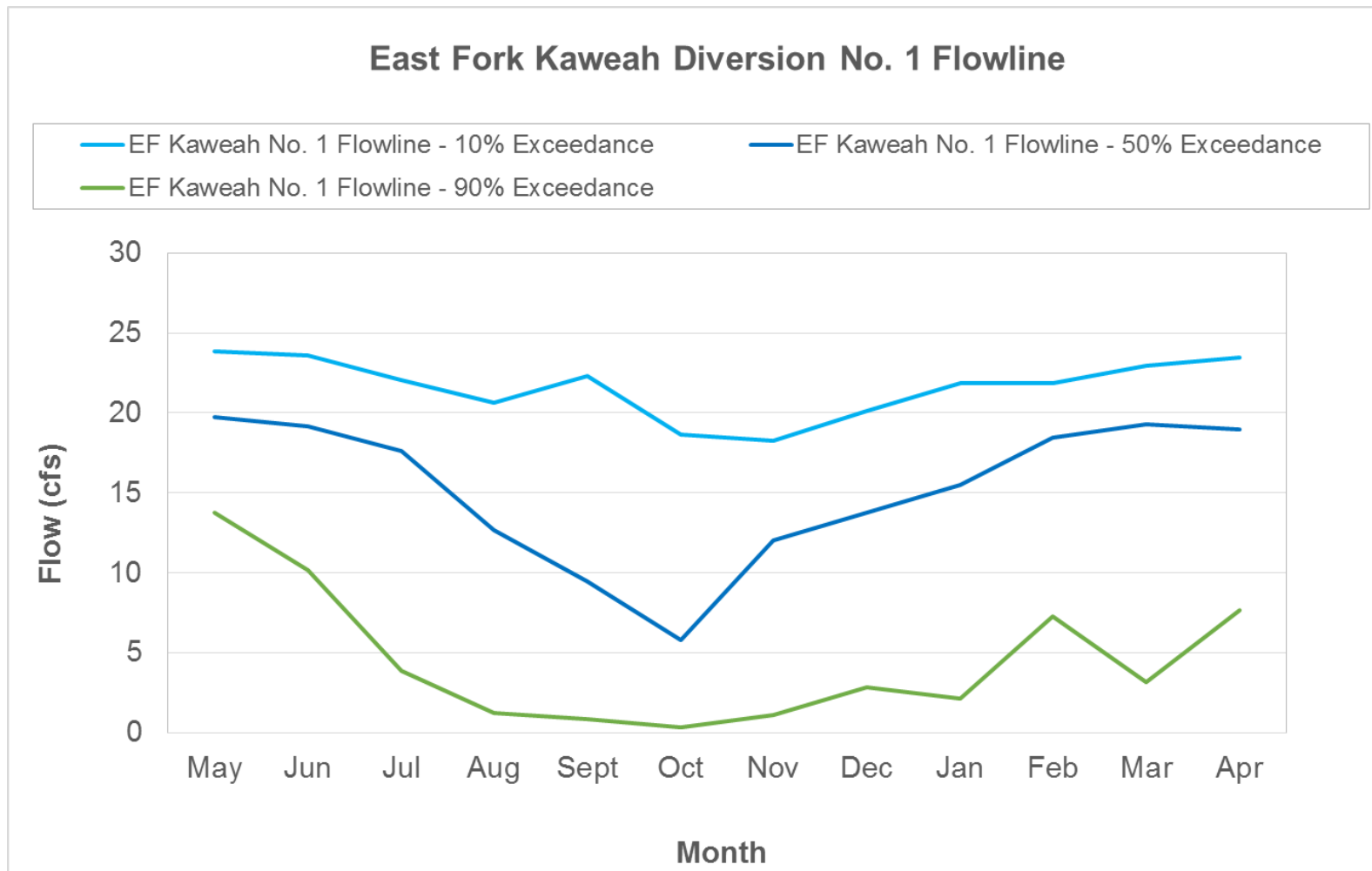
## Project Hydrology

**East Fork Kaweah No. 1 Inflows and Flows blw Kaweah No. 1 Diversion Dam**



# Kaweah Project

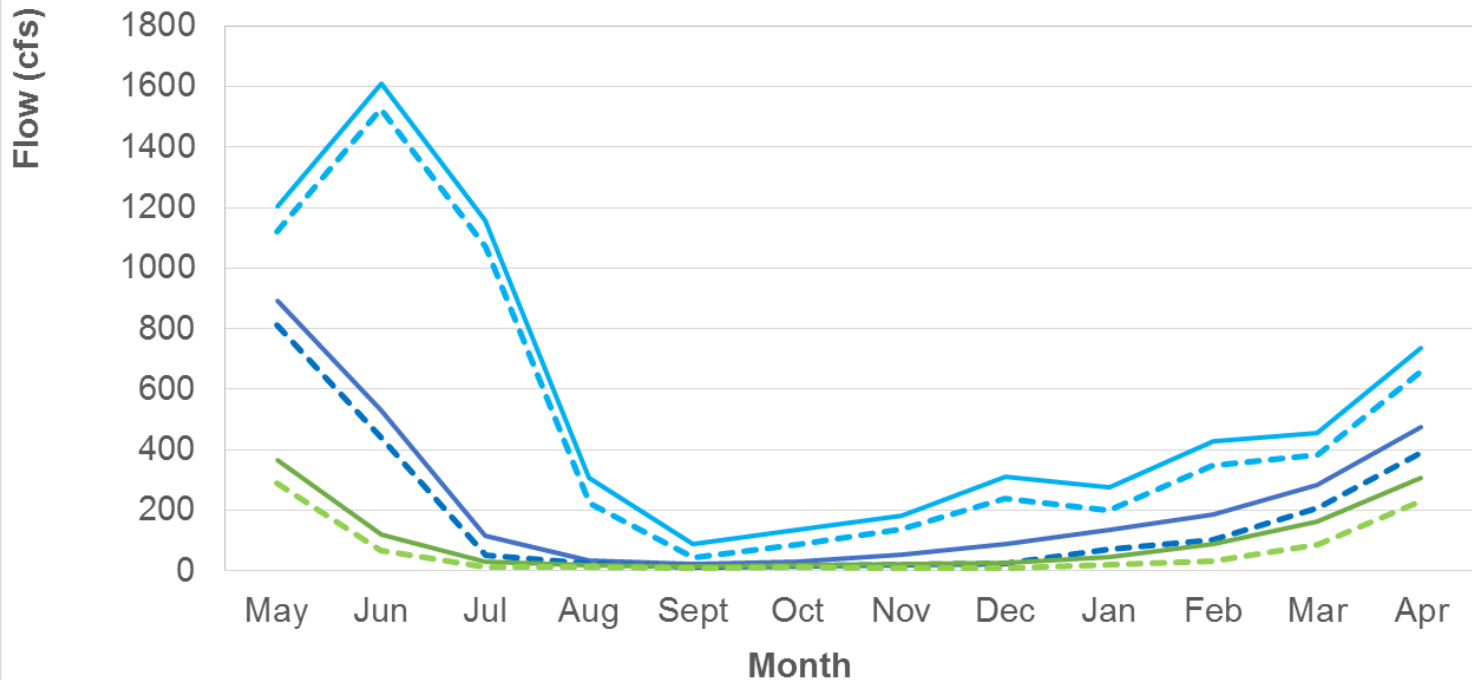
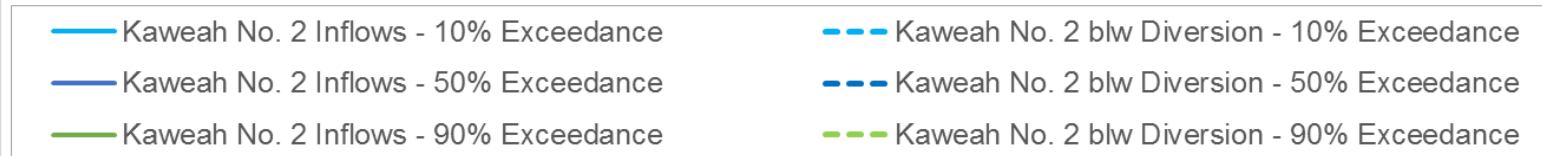
## Project Hydrology



# Kaweah Project

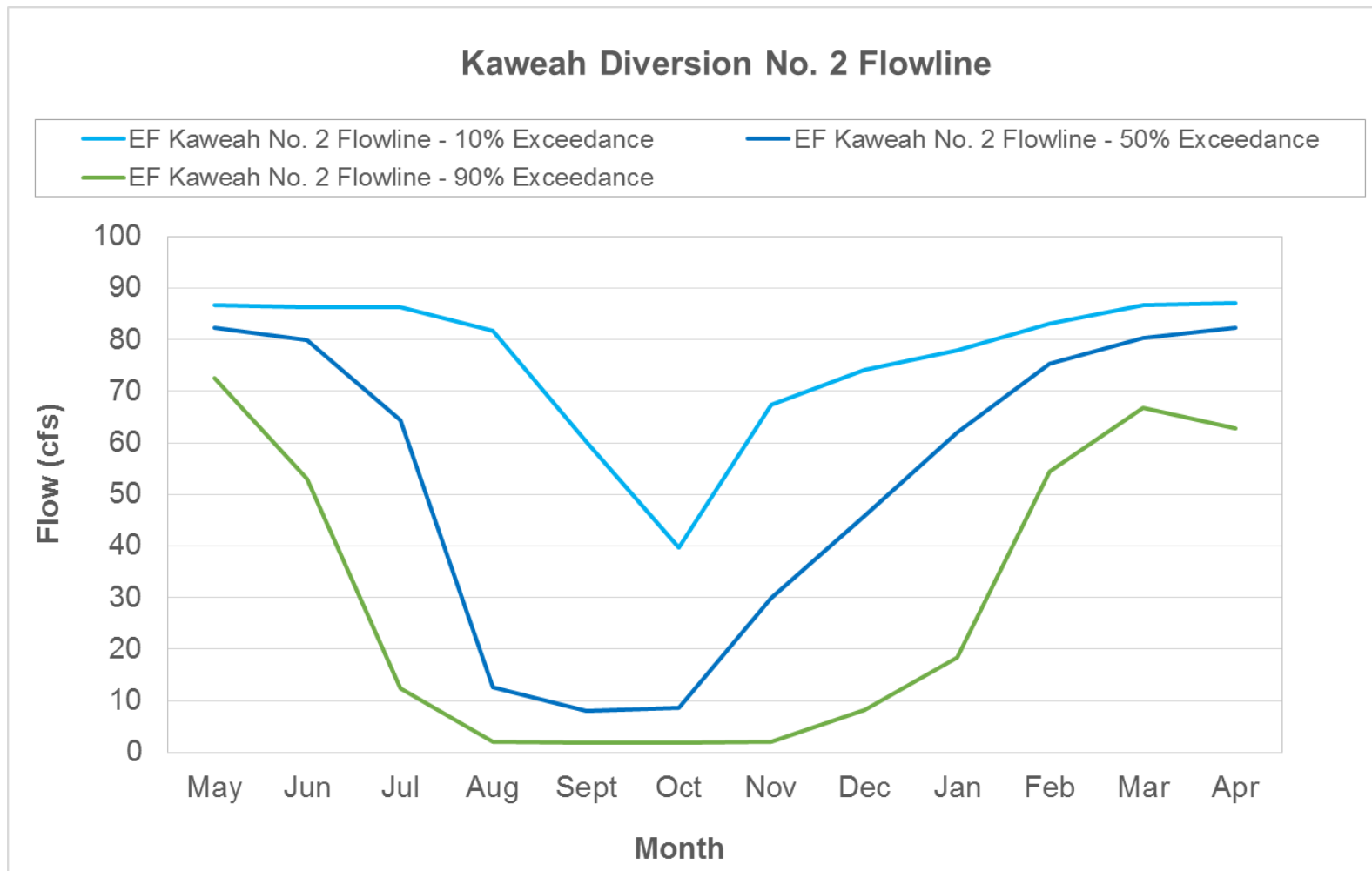
## Project Hydrology

**Kaweah River Inflows and Flows blw Kaweah No. 2 Diversion Dam**



# Kaweah Project

## Project Hydrology



# Kaweah Project

## FERC Requirement – Minimum Instream Inflows

**Article 405.** The licensee shall release from the Kaweah River Project the following continuous minimum flows measured at diversion structures Nos. 1 and 2 or inflows to the diversions, whichever are less, for the enhancement of fish resources in the bypass reach of the East Fork Kaweah River and the main-stem Kaweah River, respectively:

### Kaweah No. 1 Diversion

<u>Month</u>	<u>Normal Year Runoff</u>	<u>Dry Year Runoff</u>
Oct	5	5
Nov	5	5
Dec	5	5
Jan	5	5
Feb	5	5
Mar	10	10
Apr	10	10
May	10	10
Jun	10	10
Jul	10	10
Aug	5	5
Sep	5	5

### Kaweah No. 2 Diversion

<u>Month</u>	<u>Normal Year Runoff</u>	<u>Dry Year Runoff</u>
Oct	11	5
Nov	11	5
Dec	11	5
Jan	20	10
Feb	20	10
Mar	30	20
Apr	30	30
May	30	30
Jun	30	30
Jul	20	10
Aug	20	10
Sep	11	5

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.

# Kaweah Project

## FERC Requirements – Ramping Rates

### **Article 404.**

The licensee shall operate the project such that flows below Diversion Dams and Powerhouses Nos. 1 and 2 are not altered at a rate greater than 30 percent of the existing streamflow per hour.



# Kaweah Project

## Domestic Water Supply

- Contractual Entitlement Dating Back to 1903
- Necessary Flow to Convey Water Supply
  - Up to 1 cfs in Kaweah No. 1 Flowline
  - Up to 3 cfs in Kaweah No. 2 Flowline

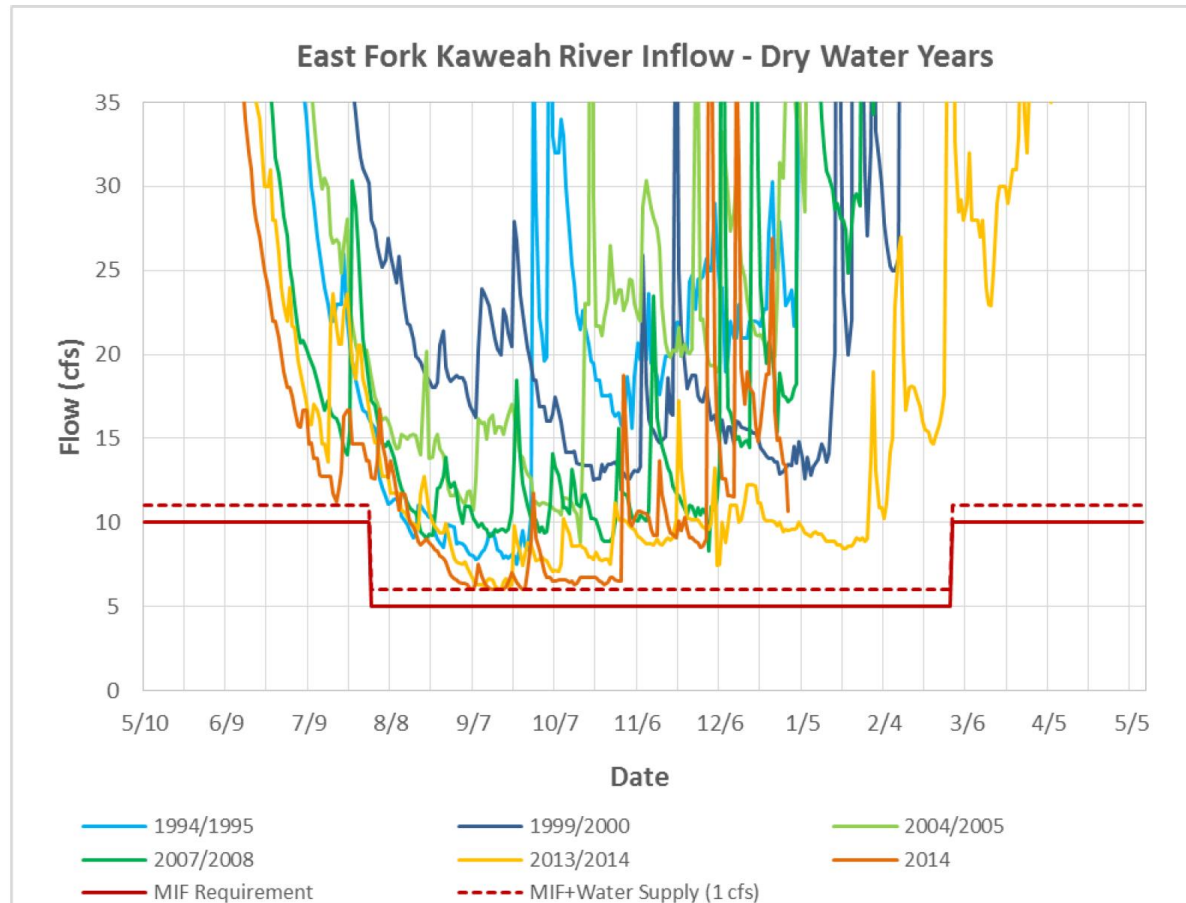
# Kaweah Project

## Project Operations

- **Conflicting Obligations:**
  - Convey Domestic Water to Local Users
  - Comply with Minimum Instream Flow Consistent with FERC License Article 405

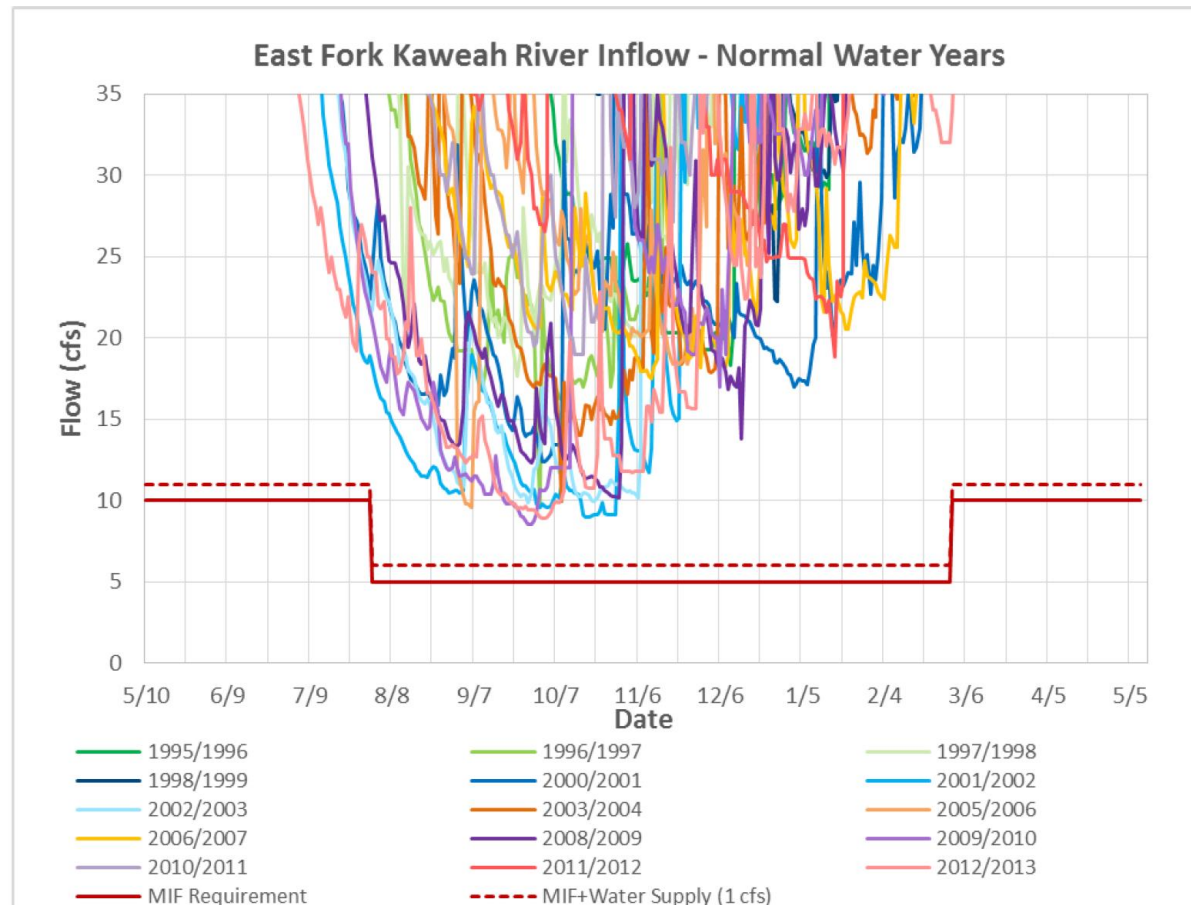
# Kaweah Project

## Project Hydrology/Obligations Kaweah No. 1 Diversion



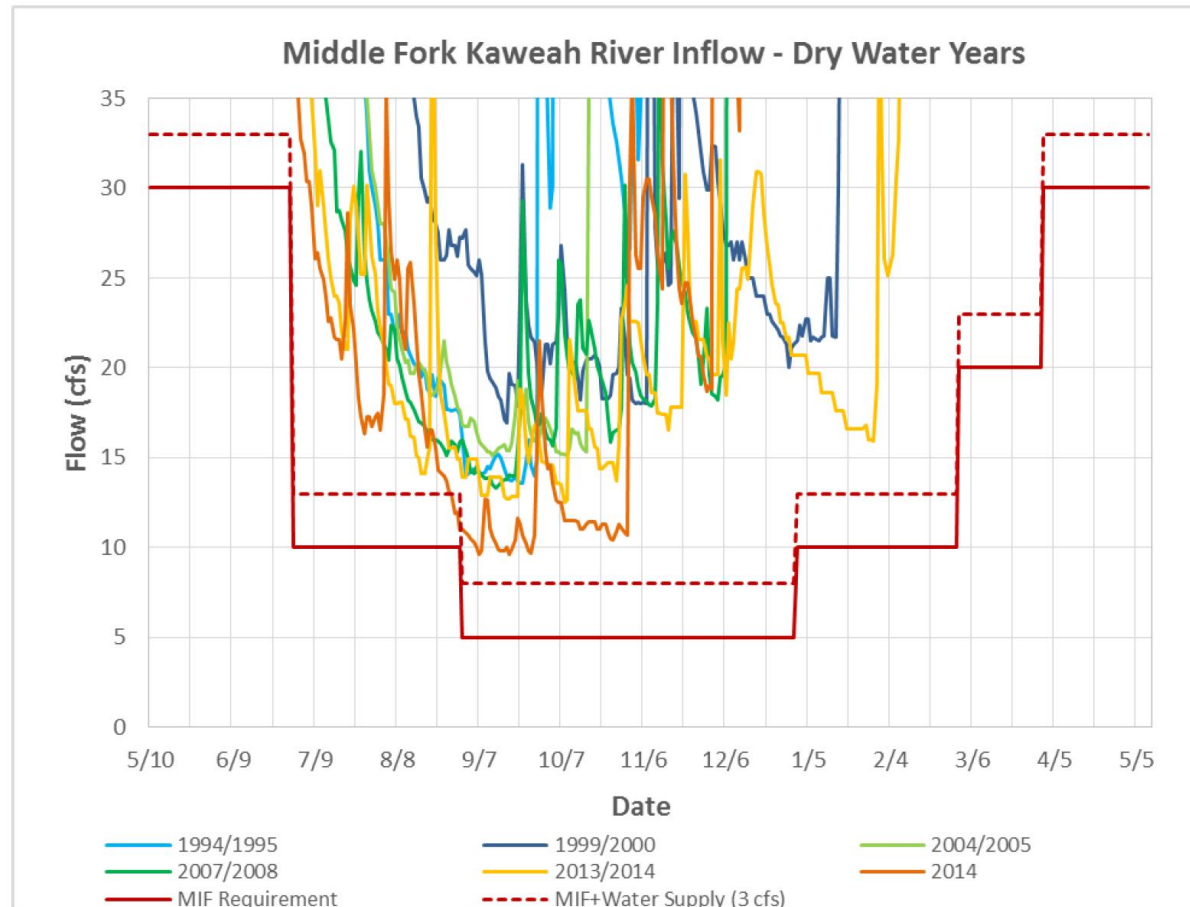
# Kaweah Project

## Project Hydrology/Obligations Kaweah No. 1 Diversion



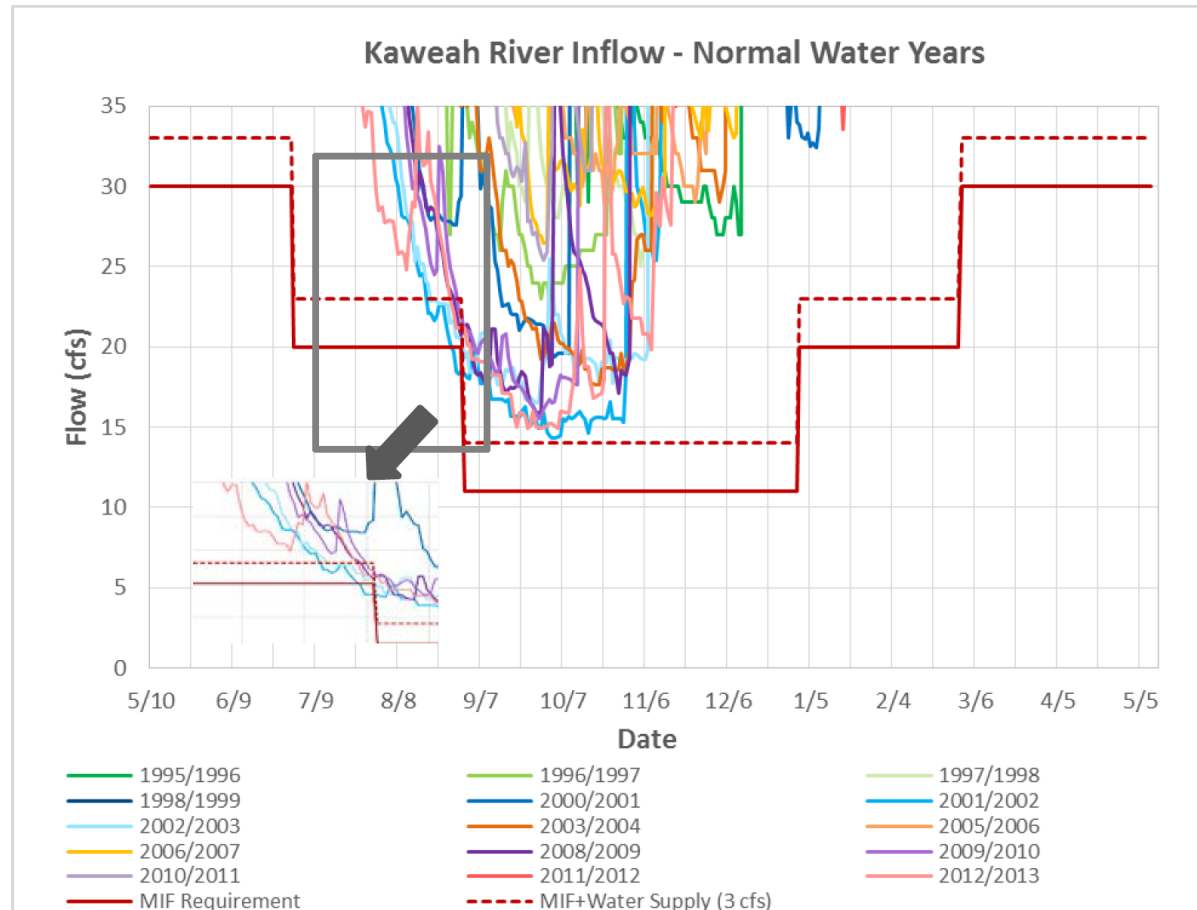
# Kaweah Project

## Project Hydrology/Obligations Kaweah No. 2 Diversion



# Kaweah Project

## Project Hydrology/Obligations Kaweah No. 2 Diversion



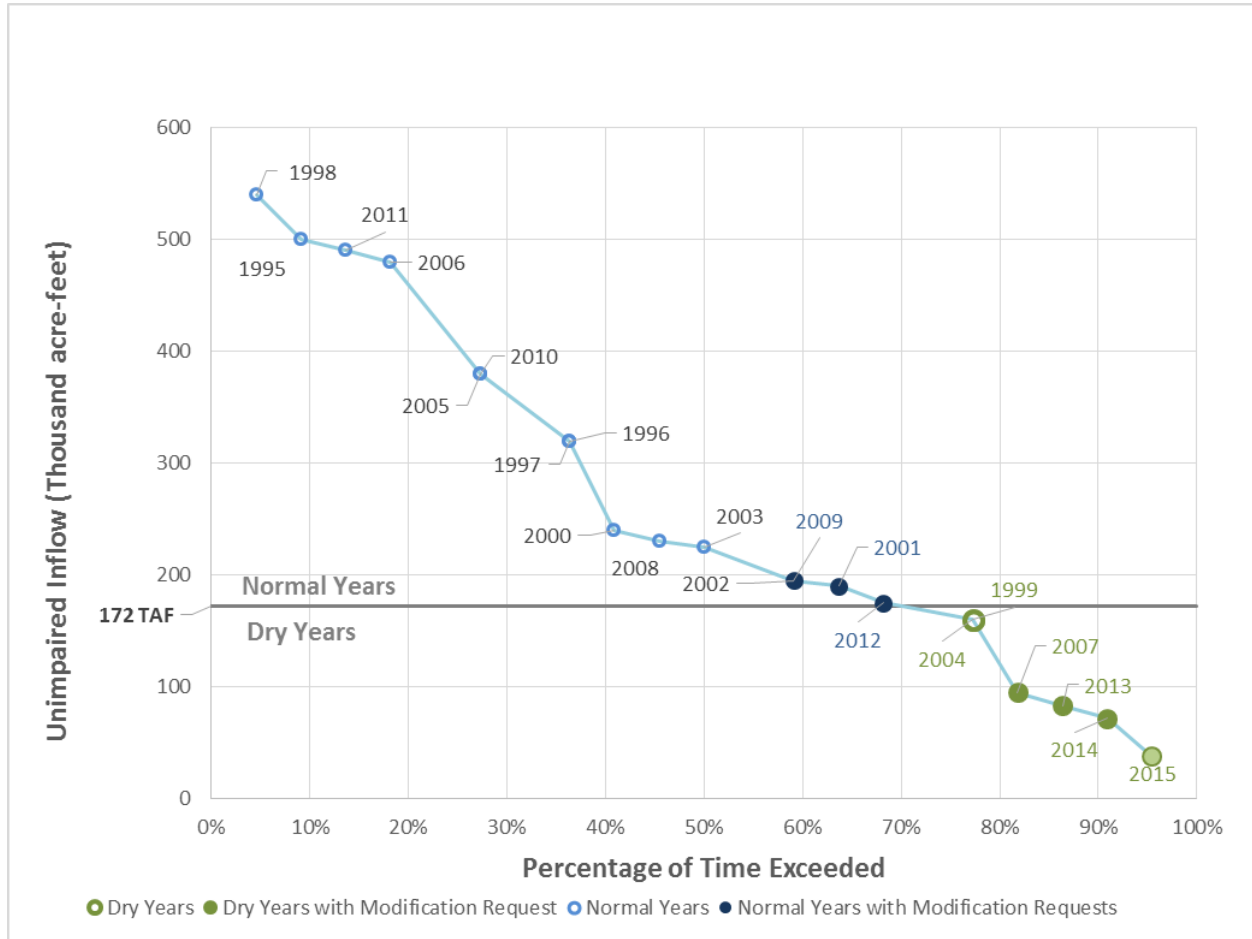
# Kaweah Project

## Temporary Flow Modifications (2002–2014)

SCE Modification Request	Resource Agency Approval	Water Year Type	Modification Implemented (Yes/No)	Amount/Duration of Offset Water (cfs/Days)
<b>Kaweah No. 1 Diversion</b>				
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
<b>Kaweah No. 2 Diversion</b>				
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	1 cfs/3 days
September 25, 2009	CDFW & 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

# Kaweah Project

## Runoff Forecast in the Kaweah Watershed (1995–2015)





# Kaweah Project

## Potential Long-term Solution – License Amendment

### Purpose

- Reduce Required Instream Flow Release Requirements during Dry Years to Accommodate Domestic Water Deliveries
- Eliminate the Need for Requesting Temporary Modifications

# Kaweah Project

## Potential Long-term Solution – License Amendment

- Submitted to CDFW, USFWS, and State Water Board for Review and Comment on March 5, 2015 (60-day review)
- CDFW Comments
  - Support approach for establishing longer-term procedure
  - Concern about the license amendment (impact analysis, water supply use, and monitoring)
  - Advocate evaluation of conditions during relicensing
- State Water Board Comments
  - 401 Certification under the CWA would be required
  - CEQA analysis will be necessary
  - Limited availability to support amendment over the next 2 years

# Kaweah Project

## License Amendment

### SCE Approach:

- Not File License Amendment with FERC
- Continue to Request Temporary Flow Modifications
- Address the Need for Long-term Flow Modifications within the Relicensing Process