

Kaweah Project, FERC Project No. 298

REC 2 – Whitewater Boating Draft Technical Study Report

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List of Acronyms

ADCP	Acoustic Doppler Current Profiler
AVM	Acoustic Velocity Meter
AW	American Whitewater
cfs	cubic feet per second
FERC	Federal Energy Regulatory Commission
RV	Recreational Vehicle
SCE	Southern California Edison Company
TCRMA	Tulare County Resource Management Agency
TSP	Technical Study Plan
TSR	Technical Study Report
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
WBFG	Whitewater Boating Focus Group

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1 INTRODUCTION

This Technical Study Report (TSR) describes the data and findings developed by Southern California Edison Company (SCE) in association with implementation of the REC 2 – Whitewater Boating Technical Study Plan (REC 2 – TSP) for the Kaweah Project (Project). The REC 2 – TSP was included in SCE’s Revised Study Plan (RSP)¹ (SCE 2017a) and was approved by the Federal Energy Regulatory Commission (FERC) on October 24, 2017, as part of its Study Plan Determination for the Project (FERC 2017).

This report provides a description of the methods and results of the study which was conducted in 2017 and 2018 for the bypass reaches² associated with the Project. Specifically, this report: (1) characterizes existing whitewater boating opportunities; (2) summarizes commercial and private whitewater boating use; (3) summarizes flows (hydrology) under impaired and unimpaired conditions as it relates to whitewater boating opportunities; and (4) identifies existing real-time flow dissemination mechanisms. In addition, this report discusses results of the Whitewater Boating Focus Group (WBFG) meeting conducted in April 2018.

2 STUDY OBJECTIVES

The REC 2 – TSP included three study objectives, as follows:

- Characterize commercial and private whitewater boating opportunities and use levels on the bypass reaches;
- Identify the range of flows on the bypass reaches that accommodate whitewater boating; and
- Identify opportunities for disseminating real-time flow information to the public.

3 EXTENT OF STUDY AREA

The REC 2 – TSP identifies three whitewater boating runs located on the bypass reaches as the extent of the Study Area. These whitewater runs are potentially affected by Project operations and include:

- Park Boundary Run: Kaweah River from the Kaweah No. 2 Diversion Dam to the East Fork Kaweah River Confluence;
- Gateway Bridge Run: Kaweah River from the East Fork Kaweah River Confluence to Dinely Bridge; and
- Lower East Fork Run: East Fork Kaweah River from near Oak Grove Bridge to Gateway Bridge at Highway 198.

The locations of the three whitewater runs included in the Study Area are shown on Map REC 2-1. Map REC 2-1 also shows other runs on the Kaweah River for context.

¹ SCE filed a Proposed Study Plan (PSP) on May 24, 2017 (SCE 2017b). Three comments were filed on the PSP; however, they did not result in revisions to any of the study plans. Therefore, SCE filed a Revised Study Plan (RSP) on September 19, 2017, which stated that the PSP, without revision, constituted its RSP. The FERC subsequently issued a Study Plan Determination on October 24, 2017, approving all study plans for the Kaweah Project.

² A bypass reach is a segment of river downstream of a diversion facility where Project operations result in the diversion of a portion of the water from the river.

4 STUDY APPROACH AND METHODS

The study approach generally followed the methods summarized in *Flows and Recreation: A Guide to Studies for River Professionals* (Whittaker et al. 2005). This method is a three-phase approach where the results of the first phase (also referred to as Level 1) are used to determine whether the subsequent phases (referred to as Levels 2 and 3) are warranted. The three phases for the Kaweah Project include:

- Phase 1 – Develop Information about Whitewater Resources and Hydrology
- Phase 2 – Potential Site Visit
- Phase 3 – Potential Whitewater Boating Flow Studies

Phase 1 activities included:

- Characterizing existing whitewater boating opportunities and use on the bypass reaches, based on existing published information sources;
- Summarizing commercial and private whitewater boating use on the bypass reaches;
- Conducting a hydrology assessment;
- Identifying existing flow dissemination mechanisms;
- Preparing and distributing a summary report; and
- Conducting a WBFG meeting.

All Phase 1 activities were completed with the exception of preparing and distributing a summary report. Information was developed and incorporated into the WBFG meeting presentation. This report, herein, serves as the summary report.

After completing Phase 1, it was decided by the WBFG meeting participants that Phase 2 (potential site visit) is deferred at this time and may not be warranted, and Phase 3 (potential whitewater boating flow study) is not warranted. Based on the review and comments by stakeholders on this REC 2 – TSR, the Phase 2 site visit may be conducted in 2019, if warranted.

4.1 Whitewater Boating Focus Group Meeting

A WBFG meeting was conducted to substantiate and develop additional information about whitewater boating opportunities on the bypass reaches. The WBFG meeting was held on April 3, 2018, at the Three Rivers Memorial Building located in Three Rivers, California. The objective of the meeting was twofold: (1) provide whitewater boaters with understanding of the Kaweah Project and Project hydrology; and (2) collect whitewater boating resource information to be used for REC 2 – TSR.

American Whitewater (AW) and the Tulare County Resource Management Agency (TCRMA) were contacted to assist in identifying potential WBFG participants. A total of 17 people were contacted to participate in the WBFG. Of the 17 people contacted, 4 people, not including SCE and Cardno staff, participated in the WBFG meeting: 2 kayakers, 1 commercial outfitter, and 1 representative from AW.

The meeting presentation included an overview of the Kaweah Project and the relicensing process. Information on Kaweah Project hydrology was presented to provide an understanding of how the Project influences flow on the East Fork Kaweah River and the Kaweah River and the relationship to flow below the Kaweah No. 1 Diversion Dam, Kaweah No. 2 Diversion Dam, Gateway Bridge³, and the Three Rivers Gage.

³ The Gateway Bridge is also referred to as the Pumpkin Hollow Bridge.

A whitewater boating resource assessment was conducted with meeting participants that included a presentation summarizing existing information about the three runs on the bypass reaches. Subsequent discussion focused on developing additional details about the boating runs. In addition to general comments regarding the runs, for each run the following factors were assessed:

- Access conditions or constraints
- Difficulty class
- Types of watercraft used
- Existing and potential uses
- Boating season
- Boatable flow ranges

At the conclusion of the meeting, WBFM participants determined that a site visit is deferred at this time and may not be warranted, and a whitewater boating flow study is not warranted to develop additional information. Based on the review and comments by stakeholders on this REC 2 – TSR, the site visit may be conducted in 2019, if warranted. The agenda, list of meeting attendees, and meeting notes from the WBFM meeting are presented in Appendix A: Whitewater Boating Focus Group Meeting.

5 STUDY RESULTS

The following section presents the results of the REC 2 – TSP.

5.1 Whitewater Boating Opportunities and Use on the Bypass Reaches

Information contained in published whitewater guide books (Cassady et al. 1995; Holbeck et al. 1998) and available on the internet⁴ were used to characterize the three whitewater boating runs on the bypass reaches. These data were augmented by information collected through targeted phone interviews with commercial boating outfitters and private boaters with boating experience on the three whitewater runs, and information collected during the WBFM meeting. Information collected in this effort included the identification of access points (put-in and take-out); difficulty class; length of runs; boatable flow ranges; types of watercraft typically used; existing and potential uses; boating season; and access conditions or constraints. Each run is summarized below and in Table REC 2-1.

For contextual purposes, other whitewater runs on the Kaweah River are depicted on Map REC 2-1 and are summarized on Table REC 2-2.

5.1.1 Whitewater Runs on the Bypass Reaches

Park Boundary Run

The 0.6-mile Park Boundary Run is located on the Kaweah River extending from the Kaweah No. 2 Diversion Dam to the East Fork Kaweah River Confluence. The run supports non-commercial rafting and kayaking, and is typically boated in the spring. This run is not considered a “stand-alone” run and is typically run as an extension of the upstream Ash Mountain Run or downstream Gateway Bridge Run. The put-in is located at the Indian Head River Trailhead (within Sequoia National Park) or near SCE’s Kaweah No. 2 Diversion Dam (private property). The take-out is either at the Gateway Bridge (private property) located just downstream of the confluence of the Kaweah River and East Fork Kaweah River, or approximately 0.75 mile downstream of the Gateway Bridge (Pumpkin Hollow Condominiums; private property). The run is rated as Class IV+ to V (advanced/expert). A separate flow range was not

⁴ Available at: www.cacreeks.com; www.americanwhitewater.org; www.c2.com/kaweah; www.kaweah-river.com; and www.awetstate.com

established for the Park Boundary Run since the run is short and typically run in conjunction with upstream and/or downstream runs. The boatable flow range is assumed to be consistent with the downstream Gateway Bridge Run described below.

Gateway Bridge Run

The 3.1-mile Gateway Bridge Run is located on the Kaweah River extending from the East Fork Kaweah River Confluence to Dinely Bridge. The run supports non-commercial rafting and kayaking, and commercial rafting. The Gateway Bridge Run is typically boated in the spring. When boated for commercial activities, the Gateway Bridge Run is most often boated in conjunction with downstream runs to extend the whitewater boating experience. The put-in is either at the Gateway Bridge (private property), or approximately 0.75 mile downstream of the Gateway Bridge (Pumpkin Hollow Condominiums; private property; designated commercial rafting put-in). The take-out is located at Dinely Bridge (private property), or at the Three Rivers Hideaway (private property) located 0.3 mile downstream of Dinely Bridge. The run is rated as Class IV to V (intermediate/advanced). Two boatable flow ranges were identified for the Gateway Bridge Run: a rafting flow range and a kayaking flow range. The rafting flow range was established as 500 cubic feet per second (cfs) to 3,000 cfs. The kayaking flow range was established as 300 cfs to 3,000 cfs.

Lower East Fork Run

This 4.3-mile long Lower East Fork Run is located on the East Fork Kaweah River. The run is boated by non-commercial user, generally in kayaks. The Lower East Fork Run is typically boated in the spring. The put-in for this run is located on private property just downstream of the Kaweah No. 1 Diversion Dam (left bank at approximately River Mile [RM] 4.1). The take-out is at either the Gateway Bridge (private property), or approximately 0.75 mile downstream of the Gateway Bridge (Pumpkin Hollow Condominiums; private property). This run is rated as Class V to V+ (expert) and is described as very difficult requiring expert technical river-running and portaging skills. Given its level of difficulty and remote location with limited access, this run is best suited to highly-skilled boaters that are capable of portaging across difficult terrain, potentially with ropes and other technical equipment. The boatable flow range identified for this run is 80 cfs to 400 cfs with a subset flow range of 160 cfs to 250 cfs considered the optimum. The run requires an average of 6 to 7 hours to complete; however experts with extensive knowledge of the run can complete it in 2.5 to 3 hours.

5.2 Limiting Factors

The primary constraints for non-commercial whitewater boating on the bypass reaches in Kaweah River and East Fork Kaweah River is access to and/or from the river channel, and lack of real-time flow information (refer to Section 5.5).

River access in the Study Area is limited due to extensive private property holdings that border the bypass reaches. Theoretically, any location along the river could serve as a potential access location if agreement is reached with the private property owner. Instead of speculating on potential access sites, this section identifies existing access locations and describes their condition; and characterizes known private access agreements and bridge crossing easements.

Existing whitewater put-in and take-out locations in the Project vicinity occur on private property, at bridge crossings, and on public lands within Sequoia National Park and along the shore of Lake Kaweah, a U.S. Army Corps of Engineers managed facility. Conditions at existing river access locations vary significantly and range from undeveloped, very steep, and overgrown to developed with paved parking and support facilities. Table REC 2-3 identifies existing access along the Kaweah River and East Fork Kaweah River within the Study Area and downstream to Lake Kaweah and summarizes access conditions, parking availability, and public facilities at each location. Photographs of existing access locations are presented

in Appendix B: Access Location Site Photographs (permission to photograph access locations on private property was granted by property owner).

For commercial rafting operations on the Kaweah River, access is authorized through agreements with private property landowners. Commercial outfitter access is identified in Table REC 2-4. However, for private whitewater boaters, permission to use these properties for river access must be obtained from the property owner. Permission to use these properties by private whitewater boaters is at the private property owner's discretion.

There are two bridge crossings over the Kaweah River within the Study Area, including Dinely Bridge and Gateway Bridge. Dinely Bridge is under the jurisdiction of Tulare County and Gateway Bridge is under the jurisdiction of Caltrans. Bridge crossings include a public easement of 30 feet from centerline on either side of the road. According to both Tulare County and Caltrans, the public has the right to access the river within the boundaries of the easement (Anderson, Tulare County Department of Right of Way; Nunez, Caltrans). In addition, for Tulare County easements, the public can park vehicles within the county easement as constrained by topography and safety (Anderson, Tulare County Department of Right of Way). Confirmation as to the public's right to park on Caltrans easement has not yet been determined. In no way is SCE's consultation with Caltrans and Tulare County to be interpreted as authorization for the public to access the river at these bridge crossings. Obtaining permission to park and access the river at bridge crossings is the responsibility of individual parties.

It should be noted that at all bridge crossing locations private property owners have erected fencing and posted signage to keep the public from accessing the river in the vicinity of the bridge crossings. In addition, there is limited space for parking and/or staging of equipment if these areas are used as a put-in or take-out for whitewater boating activities.

5.3 Commercial and Private Whitewater Boating Use on the Bypass Reaches

Commercial whitewater boating use on the Kaweah River is summarized below based on records available from the TCRMA. The TCRMA manages commercial whitewater use on the Kaweah River and issues permits for commercial outfitters to conduct whitewater boating operations on the Kaweah River. Commercial boating is regulated by the TCRMA in accordance with the Kaweah River Management Plan. This plan was originally adopted by the Tulare County Board of Supervisors on December 16, 1997 (Resolution No. 97-1103), and subsequently updated in 2000 and 2005. The current Kaweah River Management Plan (TCRMA 2005) is presented Appendix C: Kaweah River Management Plan.

The Kaweah River Management Plan allows for up to eight commercial licenses per year. Commercial outfitters are required to file a license application annually along with a Commercial River Plan and an application fee to obtain a permit from the TCRMA to operate commercial whitewater boating services on the Kaweah River.

In 2018, seven commercial licenses were issued by the TCRMA. The 2018 licensed outfitters on the Kaweah River are: All-Outdoors California Whitewater Rafting; Kaweah Adventures; Adventure Connection; River Runners; Good Time Adventures; Kaweah Whitewater Adventures; and Sequoia Adventures. Information on each licensed outfitter is presented in Table REC 2-4.

Commercial whitewater boating activities take place on the Kaweah River within, and extending past, the Study Area. The run typically associated with commercial whitewater trips is the Gateway Bridge Run, which starts 0.75 mile downstream of the Gateway Bridge at a private property designated by the TCRMA as the put-in for commercial whitewater boating trips (Pumpkin Hollow Condominiums). There are multiple configuration options (length and difficulty) for commercial whitewater trips. Typically, the commercial run extends through the relatively short Gateway Bridge Run (3.1 miles long) to various downstream locations, and the "full-day" trip extends to Lake Kaweah (refer to Table REC 2-2).

Flows within the Kaweah River and East Fork Kaweah River are primarily dependent on snowmelt. The Project has limited storage capacity and is operated in a “run-of-river” mode. As such, whitewater boating use (private and commercial) on both the Kaweah River and East Fork Kaweah River will correlate to the water-year type and associated runoff.

In 2017 (a “normal” water year), commercial whitewater use on the Kaweah River totaled 674 people. Commercial trips were run in April, May, and June, with May accounting for 65% (434 people) of the total use. Based on discussion with the TCRMA, it was ascertained that there are no existing mechanisms to count private boating use on either the Kaweah or East Fork Kaweah Rivers, and no reliable estimates of private boating use are available (Garcia- LoBue, TCRMA).

5.4 Hydrology Assessment

Hydrologic information was developed to characterize Project hydrology on the bypass reaches and to support the development of boating flow ranges for whitewater runs on the bypass reaches. The following sections describe the results of the hydrology assessment.

5.4.1 Stream Gages

In order to assess the potential availability of stream flow information, stream gages within the Kaweah River Watershed were identified from U.S. Geological Survey (USGS)⁵ and California Department of Fish and Wildlife⁶ websites. There is network of gaging stations to monitor and record water flow throughout the Kaweah River Watershed. The majority of these gages have been installed and are maintained by the USGS. On the Kaweah River and East Fork Kaweah River some gages are joint USGS and SCE, and maintained by SCE while other gages are solely SCE-owned and maintained specially for hydroelectric facility operations and/or Project license requirements. The gages are listed in Table REC 2-5 and a brief description of the gages is provided if maintained/installed by SCE. The gage locations are shown on Map REC 2-2.

5.4.2 Kaweah Project Hydrology

To summarize the hydrology (impaired and unimpaired) on the river reaches associated with the Kaweah Project the following information was developed:

- Exceedance charts showing 10%, 50%, and 90% exceedance flows above and below the Kaweah No. 1 and No. 2 diversions, as well as flows within the Kaweah No. 1 and No. 2 flowlines.
- Hydrographs of the flow below the Kaweah No. 1 and No. 2 diversions.
 - Period of record from 1994 through 2017.
- Hydrographs representing normal and dry water years.
 - 2005, 2016, and 2017 represented normal year flows.
 - 1999, 2007, and 2015 represented dry year flows.

This information graphically portrayed the nature of Project-associated hydrology and the difference between impaired and unimpaired flow within the bypass reaches. The hydrographs of flows below the Kaweah No. 1 and No. 2 diversions were plotted for all years of record (1994 through 2017). These charts are presented in Appendix D: Exceedance Charts, and Appendix E: Hydrographs below the Kaweah No. 1 and No. 2 Diversions.

To simplify the understanding of the differences in hydrology between normal and dry water years, hydrographs representing these year-types were developed using three representative years for each

⁵ Available at: <https://ca.water.usgs.gov/flooding/california-streamgages.html>

⁶ Available at: <https://map.dfg.ca.gov/bios/?ai=Hydrography:0>

water-year type to show “low,” “medium,” and “high” flows. These charts show the range of variability within a water-year type and are presented in Appendix F: Hydrographs Representing Normal and Dry Years.

5.4.3 Whitewater Boating Opportunities

To develop boating flow ranges on the bypass reaches, an understanding of how boaters estimate flow was required as currently there is no publically accessible stream gage data on the bypass reaches. The only stream gage that is publically available, and measures real-time flow, is the U.S. Army Corps of Engineers (USACE) Three Rivers Gage located on the Kaweah River approximately 2.3 miles downstream of the Gateway Bridge Run take-out (near the town of Three Rivers). Real-time flow information for the Kaweah River is collected at this gage and can be accessed through Dreamflows.⁷ This is the gage commonly referred to on the website for information on flows on the bypass reaches. However, the flow measured at this location is a combination of flows on both the Kaweah River and the East Fork Kaweah River.

Whitewater boating flow ranges developed through the WBFG process were applied to Project hydrology to calculate the number of whitewater boating opportunities. For the Gateway Bridge Run on the Kaweah River, two boating flow ranges were identified: a rafting flow range and a kayaking flow range. The rafting flow range was established as 500 cfs to 3,000 cfs. The kayaking flow range was established as 300 cfs to 3,000 cfs. The boating range identified for the Lower East Fork Run on the East Fork Kaweah River is 80 cfs to 400 cfs.

These boating flow ranges were used to calculate boating opportunity days on bypass reaches under impaired and unimpaired conditions. This calculation was applied to both impaired and unimpaired conditions for normal and dry water-year types. The distribution of the water-year types between 1994 and 2017 is presented in Table REC 2-6.

There is a decrease in the number of boating opportunities between unimpaired and impaired conditions, and this difference is more pronounced during dry water-year types. On the Kaweah River, during normal water-year types under impaired conditions, the average decrease in boating opportunity days for rafts and kayaks is about 13% as compared to unimpaired conditions. During dry water-year types this difference is more pronounced with an average decrease in boating opportunities days for rafts of 24% and for kayaks 22%. On the East Fork Kaweah River the decrease in boating opportunity days for kayaks as compared to unimpaired conditions is about 9% in normal water-year types and 14% for dry water-year types.

The boating flow range thresholds are plotted on the hydrographs representing normal and dry water years. These plots graphically show the seasonal distribution of flow suitable for whitewater boating under impaired and unimpaired condition and are presented in Appendix G: Boating Flow Hydrographs – Representative Water-year Types.

On the Kaweah River, during normal water-year types, boating opportunities for rafting and kayaking are associated with spring runoff which typically begins in early April, and ends in mid-June. In a “high-water” year such as 2005, boating opportunities would be available starting in January and continue through late July. During dry water-year types there may be no boating opportunities except during a water year such as 1999, and then for a duration during the month of May. As a result of having a lower flow threshold for boating, kayaking opportunities during a water year such as 1999 would extend from mid-April to mid-June.

On the East Fork Kaweah River, during normal water-year types, boating opportunities for kayaking can start in January and extend to August for a high-water year such as 2005. However, flows can be too high for boating from about May to July. During dry water-year types there is more variability in the availability of boating opportunities; there may be only a few boating opportunities or there can be boating opportunities from April through June, depending on that water year.

⁷ Available at: www.dreamflows.com/graphs/day.103.php

Boating opportunity day summary tables showing the average, minimum, and maximum numbers of boating opportunity days for impaired and unimpaired conditions in dry and normal water-year types are presented in Table REC 2-7 and Table REC 2-8. Annual boating opportunity days under impaired and unimpaired conditions are presented in Table REC 2-9.

5.5 **Existing Flow Dissemination Mechanisms**

The type of flow information that is currently available to the public was identified through the initial information gathering process using published information and existing websites. This information was verified, and augmented, by the WBFM.

The only real-time flow information for the Kaweah River used by whitewater boaters is collected at a gage located on the Kaweah River, near Three Rivers (USGS Gage No. 11209900, Map REC 2-2). This gage is maintained by the USACE and is referred to as the Kaweah River at Three Rivers Gage. This gage measures and records river stage on an hourly basis.⁸

River stage data collected at the Three Rivers Gage is disseminated through the website Dreamflows⁹, the website commonly used by whitewater boaters to obtain flow information on whitewater boating runs. Dreamflows collects the Three Rivers Gage data and converts the stage data to flow in cfs using a stage-discharge relationship.

It was noted by the WBFM participants that providing additional real-time flow information on the bypass reaches would enhance the ability to take advantage of the existing whitewater boating opportunities within the bypass reaches, as well as other river reaches within the Kaweah River Watershed.

6 **LITERATURE CITED**

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⁸ Available at: <http://rivergages.mvr.usace.army.mil/WaterControl/shefdata2.cfm?sid=TRR&d=7&dt>

⁹ Available at: <http://www.dreamflows.com/graphs/day.103.php>

Tables

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Table REC 2-1. Whitewater Boating Runs on the Bypass Reaches

Run	Put-in	Take-out	Difficulty Class	Run Length	Boatable Flow Ranges	Watercraft used	Existing and Potential Uses	Boating Season	Access Conditions or Constraints	Notes
Kaweah River: <u>Park Boundary</u>	<ul style="list-style-type: none"> Indian Head River Trailhead SCE Kaweah No. 3 Powerhouse 	<ul style="list-style-type: none"> Gateway Bridge¹ Private property on left bank 0.75 mile downstream of Gateway Bridge 	IV+ – V	0.6 mile	<ul style="list-style-type: none"> N/A - Flow range is assumed to be consistent with Gateway Bridge Run 	<ul style="list-style-type: none"> Kayaks Rafts 	<ul style="list-style-type: none"> Non-commercial rafting and kayaking 	Year-round	<ul style="list-style-type: none"> Put-in at Kaweah No. 3 Powerhouse is on SCE property Take-outs are on private property 	<ul style="list-style-type: none"> This run is not considered a “stand-alone” run and is typically run as an extension of the upstream Ash Mountain Run or downstream Gateway Bridge Run.
Kaweah River: <u>Gateway Bridge</u>	<ul style="list-style-type: none"> Gateway Bridge Private property on left bank 0.75 mile downstream of Gateway Bridge – designated commercial rafting put-in (see Table REC 2-4: 2018 Kaweah River Commercial Whitewater Licenses) 	<ul style="list-style-type: none"> Dinely Bridge Three Rivers Hideaway 0.3 mile downstream of Dinely Bridge – take-out is on private property (see Table REC 2-4: 2018 Kaweah River Commercial Whitewater Licenses) 	IV – V	3.1 miles	<ul style="list-style-type: none"> Rafts: 500 to 3,000 cfs Kayaks: 300 to 3,000 cfs Flow range is based on Three Rivers Gage flow measurement 	<ul style="list-style-type: none"> Kayaks Inflatable kayak Rafts 	<ul style="list-style-type: none"> Non-commercial kayaking and rafting Commercial rafting 	Year-round	<ul style="list-style-type: none"> Put-ins and take-outs are on private property 	<ul style="list-style-type: none"> Take-out at Three Rivers Hideaway is on private property and is not normally used due to paying customers filling the lot in the summer when the river is most commonly run. Boaters can continue downstream 6.6 miles to take-out on public lands on Lake Kaweah. Boaters expressed an interest in obtaining access (take-out) to SCE lands at Kaweah No. 1 Powerhouse and Kaweah No. 2 Powerhouse.
East Fork Kaweah River: <u>Lower East Fork</u>	<ul style="list-style-type: none"> The Oak Grove Bridge has historically been used as the put-in for this run, however is no longer used due to a rock slide hazard below the bridge Private property on river left approximately RM 4.1 (SCE could not document any established agreement with the private property owner to use this location as a put-in) 	<ul style="list-style-type: none"> Confluence with East Fork Kaweah (Gateway Bridge) Private property on left bank 0.75 mile downstream of Gateway Bridge 	V – V+	4.3 miles	<ul style="list-style-type: none"> 80 to 400 cfs: boatable flow range 160 to 250 cfs: optimum flow range 	<ul style="list-style-type: none"> Kayaks Note: there have been reports of rafts running this section. Whitewater Boating Focus Group members could not confirm this information. 	<ul style="list-style-type: none"> Non-commercial rafting and kayaking Inflatable kayaks on lower section downstream of RM 1.1 	Year-round	<ul style="list-style-type: none"> Put-ins and take-outs are on private property 	<ul style="list-style-type: none"> Access points at approximately RM 3.45, RM 3, and RM 1.1 were identified by Whitewater Boating Focus Group members. These locations are on private property and would be considered for emergency access. Requires an average of 6 to 7 hours to complete. Experts with extensive knowledge of run can complete it in 2.5 to 3 hours. Boaters expressed interest in establishing a put-in for this run as the current put-in is on private property.

Notes:

1. The Gateway Bridge is also referred to as the Pumpkin Hollow Bridge.

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Table REC 2-2. Description of Other Whitewater Boating Runs in the Kaweah River Watershed

Run	Put-in	Take-out	Difficulty Class	Run Length	Watercraft Used	Notes
Ash Mountain	<ul style="list-style-type: none"> Trailhead at the RV dump station near Potwisha Campground 	<ul style="list-style-type: none"> Sequoia National Park Foothills Visitor Center Indian Head River Trailhead Confluence with East Fork Kaweah (Gateway Bridge¹) Private property on left bank 0.75 mile downstream of Gateway Bridge 	V – V+	3.9 miles	<ul style="list-style-type: none"> Kayaks Rafts 	<ul style="list-style-type: none"> The run is located within the Sequoia National Park. Whitewater Boating Focus Group Meeting attendees say it is legal to boat in the park and have had no access issues with park staff. Boaters typically continue the run to take-outs on the bypassed reach. Boaters expressed an interest in obtaining access (take-out) to SCE lands at Kaweah No. 3 Powerhouse - Kaweah No. 2 Diversion.
Dinely Bridge	<ul style="list-style-type: none"> Dinely Bridge 	<ul style="list-style-type: none"> North Fork Bridge 	III – IV	3.0 miles	<ul style="list-style-type: none"> Kayaks Rafts 	<ul style="list-style-type: none"> Includes a Class V rapid just above the take-out.
Three Rivers	<ul style="list-style-type: none"> North Fork Bridge 	<ul style="list-style-type: none"> Lake Kaweah 	II – III	4.0 miles	<ul style="list-style-type: none"> Kayaks Rafts 	

Notes:

1. The Gateway Bridge is also referred to as the Pumpkin Hollow Bridge.

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Table REC 2-3. Summary of Existing River Access Locations

Existing Access Location	Property Jurisdiction	Parking Availability	Access Conditions	Public Facilities
Kaweah River				
Indian Head River Trailhead	Sequoia National Park	<ul style="list-style-type: none"> • 10 total delineated spaces; paved • 1 disabled parking space • 4 ten-minute-only parking spaces 	<ul style="list-style-type: none"> • Developed river access trail from parking lot • Access trail is 650 feet in length • Approximately 100 feet elevation drop from parking area to river channel 	<ul style="list-style-type: none"> • Trash receptacles
Kaweah No. 2 Diversion Dam / Kaweah No. 3 Powerhouse ¹	SCE	<ul style="list-style-type: none"> • No public parking for river access 	<ul style="list-style-type: none"> • No established public access for river recreation 	<ul style="list-style-type: none"> • None
Gateway Bridge	Caltrans (bridge easement ³ / private property)	<ul style="list-style-type: none"> • Non-delineated roadside parking (<10 cars) 	<ul style="list-style-type: none"> • Public road easement 30 feet from road centerline • Posted "No Parking" • Posted "No Trespassing" • River access is fenced off 	<ul style="list-style-type: none"> • None
Commercial Rafting Put-in (private property on left bank 0.75 mile downstream of Gateway Bridge)	Private	<ul style="list-style-type: none"> • No public parking for river access 	<ul style="list-style-type: none"> • Gated • Public use of property granted by property owner permission on a case-by-case basis 	<ul style="list-style-type: none"> • None
Kaweah No. 1 Powerhouse ¹	SCE	<ul style="list-style-type: none"> • No public parking for river access 	<ul style="list-style-type: none"> • No established public access for river recreation 	<ul style="list-style-type: none"> • None
Dinely Bridge	Tulare County (bridge easement ³ / private property)	<ul style="list-style-type: none"> • Non-delineated roadside parking (<10 cars) 	<ul style="list-style-type: none"> • Public road easement 30 feet from road centerline • Posted "No Trespassing" in some locations • River access is fenced off in some locations 	<ul style="list-style-type: none"> • None
Kaweah No. 2 Powerhouse River Access (Edison Beach)	SCE	<ul style="list-style-type: none"> • 5 total delineated spaces; paved • 1 disabled parking space 	<ul style="list-style-type: none"> • Limited hours; closed on weekends 	<ul style="list-style-type: none"> • Trash receptacles
Three Rivers Hideaway	Private	<ul style="list-style-type: none"> • No public parking for river access 	<ul style="list-style-type: none"> • Controlled access • Public use of property granted by property owner permission on a case-by-case basis 	<ul style="list-style-type: none"> • Restrooms • Trash receptacles
North Fork Bridge ²	Tulare County (bridge easement ³ / private property)	<ul style="list-style-type: none"> • Non-delineated roadside parking (<10 cars) 	<ul style="list-style-type: none"> • Public road easement 30 feet from road centerline • Posted "No Trespassing" in some locations • River access is fenced off in some locations 	<ul style="list-style-type: none"> • None
Slick Rock Recreation Area ²	USACE	<ul style="list-style-type: none"> • 91 delineated spaces; paved 	<ul style="list-style-type: none"> • Paved access to lake at boat ramp • Undeveloped access to lake/river along paved road (approximately 0.8 miles) 	<ul style="list-style-type: none"> • Developed boat ramp facility • Restrooms • Trash receptacles
Lake Kaweah Recreation Area ²	USACE	<ul style="list-style-type: none"> • 63 delineated spaces; paved 	<ul style="list-style-type: none"> • Paved access to lake at boat ramp • Undeveloped access to lake on unpaved road 	<ul style="list-style-type: none"> • Developed boat ramp facility • Restrooms • Trash receptacles
East Fork Kaweah River				
Private property on river left approximately at River Mile 4.1	Private	<ul style="list-style-type: none"> • No public parking for river access 	<ul style="list-style-type: none"> • No established public access for river recreation 	<ul style="list-style-type: none"> • None

Notes:

1. This is not an existing river access location, however, is included in this table at the request of the National Park Service and American Whitewater.

2. This location is outside Study Area.

3. In no way is SCE's consultation with Caltrans and Tulare County to be interpreted as authorization for the public to access the river at these bridge crossings. Obtaining permission to park and access the river at bridge crossings is the responsibility of individual parties.

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Table REC 2-4. Kaweah River Commercial Whitewater License Conditions for 2018

License No.	Applicant	Max. # People/day	Max # Rafts/day	Max # Kayaks/day	Client Parking	Company Parking	Put-in	Meals / Rest Location	Portage Sites	Take-out
CRL 10-001	River Runners Inc.	64	8	2	Three Rivers Hideaway	Three Rivers Hideaway	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums Three Rivers Hideaway 	<ul style="list-style-type: none"> Not permitted to provide meals 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Three Rivers Hideaway Lake Kaweah – Slick Rock Recreation Area
CRL 10-002	All-Outdoors Whitewater Rafting	64	8	2	River View Restaurant and Lodge	Three Rivers Hideaway	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums 	<ul style="list-style-type: none"> River View Restaurant and Lodge 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Lake Kaweah – Slick Rock Recreation Area
CRL 10-003	Sequoia Adventures				Three Rivers Hideaway	Three Rivers Hideaway	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums Three Rivers Hideaway 	<ul style="list-style-type: none"> Not permitted to provide meals 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Three Rivers Hideaway Lake Kaweah – Slick Rock Recreation Area
CRL 10-004	Good Times Adventures LLC	64	8	3	Three Rivers Hideaway	Three Rivers Hideaway	<ul style="list-style-type: none"> Gateway Restaurant and Lodge Three Rivers Hideaway Kaweah River Trading Company 	<ul style="list-style-type: none"> Three Rivers Hideaway – No meals provided 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Three Rivers Hideaway Kaweah River Trading Company Lake Kaweah – Slick Rock Recreation Area
CRL 10-005	Adventure Connection Inc.	64	8	0	Three Rivers Hideaway	Three Rivers Hideaway	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums 	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums – No meals provided 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Three Rivers Hideaway
CRL 10-006	Kaweah River Adventures #1	64	8	4	Kaweah Whitewater Adventures	Kaweah Whitewater Adventures	<ul style="list-style-type: none"> Pumpkin Hollow Condominiums Hearts Desire Gifts 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Lake Kaweah – Slick Rock Recreation Area
CRL 10-007	Kaweah River Adventures #1	64	8	4	Kaweah Whitewater Adventures	Kaweah Whitewater Adventures	<ul style="list-style-type: none"> Gateway Restaurant and Lodge Pumpkin Hollow Condominiums Hearts Desire Gifts 	<ul style="list-style-type: none"> Anne Lang's Emporium 	<ul style="list-style-type: none"> Not expected 	<ul style="list-style-type: none"> Lake Kaweah – Slick Rock Recreation Area

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Table REC 2-5. Kaweah River Watershed Stream Gages

River	Identification	Location	Notes
East Fork Kaweah River	USGS Gage No. 11208730 SCE Gage No. 201	East Fork Kaweah River near Three Rivers	Traditional stage-discharge stream gage located on the southwest bank (left bank) of the East Fork Kaweah River that measures streamflow between the intake dam and the gage pool weir.
	USGS Gage No. 11208800 SCE Gage No. 200a	East Fork Kaweah River Conduit 1 at Kaweah No. 1 Powerhouse near Hammond	Acoustic Velocity Meter (AVM) located on the penstock to the Kaweah No. 1 Powerhouse that measures flow into the powerhouse.
	SCE Gage No. 201a	Kaweah No. 1 release pipe	Operational AVM located on a release pipe that comes out of the Kaweah No. 1 Sandbox and measures minimum instream flow releases.
	SCE Gage No. 202	Downstream from the Kaweah No. 1 Flowline intake	Operational AVM just downstream from the Kaweah No. 1 Flowline intake that measures flow in the flowline.
Middle Fork Kaweah River	USGS Gage No. 11206500	Middle Fork Kaweah River near Potwisha Campground	SCE Gage No. 209 – Minimum Release only. Reviewed by the USGS from 0 to 38 cfs.
	SCE Gage No. 210	Middle Fork Kaweah River Conduit No. 3 near Potwisha Campground	No longer USGS Reviewed or published.
	USGS Gage No. 11208565	Middle Fork Kaweah River Conduit No. 3 at Kaweah No. 3 Powerhouse	AVM located on the penstock to the Kaweah No. 3 Powerhouse that measures flow into the powerhouse.
Marble Fork Kaweah River	SCE Gage No. 208	Marble Fork Kaweah River Conduit No. 3 Potwisha Campground	SCE Operational gage 208. No longer USGS Reviewed or published.
	USGS Gage No. 11208000	Marble Fork Kaweah River at Potwisha Campground	This former full range gage was replaced by a minimum release AVM gage around 2004. Full Marble Fork flows are computed after the fact using downstream and adjacent gages.
	USGS Gage No. 11206820	Marble Fork Kaweah R above Horse Cr near Lodgepole CA	
Kaweah River	USGS Gage No. 11208600	Kaweah River below No. 2 Intake near Hammond	This river gage provides the flow below the No. 2 Diversion, and is the flow for the Park Boundary and Gateway Bridge runs.
	SCE Gage No. 204a	Kaweah No. 2 Canal Argonaut below Intake	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.
	USGS Gage No. 11208818 SCE Gage No. 205a	Kaweah River Conduit No. 2 at Power Plant	AVM located on the penstock to the Kaweah No. 2 Powerhouse that measures flow into the powerhouse.
	USGS Gage No. 11209900	Kaweah River at Three Rivers	This stage gage is operated by USACE and information is uploaded to whitewater boating websites and referenced for whitewater boating activities.

Notes:

ADCP = Acoustic Doppler Current Profiler

AVM = Acoustic Velocity Meter

cfs = cubic feet per second

SCE = Southern California Edison Company

USACE = U.S. Army Corps of Engineers

USGS = U.S. Geological Survey

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Table REC 2-6. Kaweah River Watershed Water-year Type Distribution, 1994 – 2017

Water-year Type	
Normal	Dry
1995	1994
1996	1999
1997	2004
1998	2007
2000	2013
2001	2014
2002	2015
2003	
2005	
2006	
2008	
2009	
2010	
2011	
2012	
2016	
2017	

Note: Period of Record is 1994 – 2017

Table REC 2-7. Gateway Bridge Run, Average, Minimum, Maximum Boating Opportunity Days, 1994 – 2017

Water-year Type	Gateway Bridge Run					
	Rafting (500 to 3,000 cfs)			Kayaking (300 to 3,000 cfs)		
	Impaired	Unimpaired	Difference	Impaired	Unimpaired	Difference
Normal Year						
Average No. Days	90	103	-13	122	139	-18
Minimum No. Days	28	32	-4	52	76	-24
Maximum No. Days	157	181	-24	212	226	-14
Dry Year						
Average No. Days	41	54	-13	73	94	-21
Minimum No. Days	6	11	-5	19	28	-9
Maximum No. Days	86	101	-15	108	134	-26

Note: Period of Record is 1994 – 2017

Table REC 2-8. Lower East Fork Run, Average, Minimum, Maximum Boating Opportunity Days, 1994 – 2017

Water-year Type	Lower East Fork Run Kayaking (80 to 400 cfs)		
	Impaired	Unimpaired	Difference
Normal Year			
Average No. Days	104	115	-11
Minimum No. Days	37	39	-2
Maximum No. Days	183	186	-3
Dry Year			
Average No. Days	76	89	-13
Minimum No. Days	24	27	-3
Maximum No. Days	103	124	-21

Note: Period of Record is 1994 – 2017

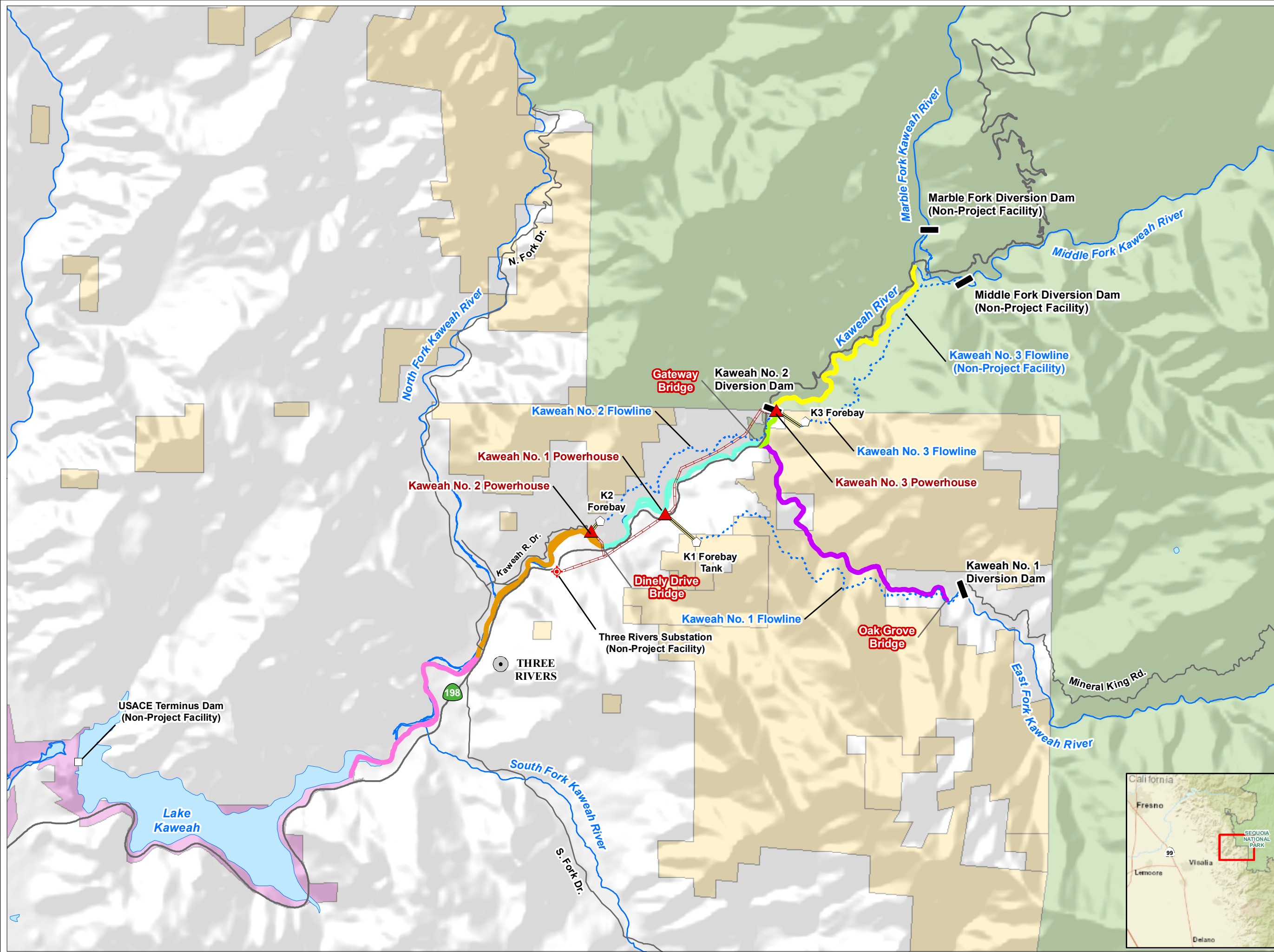
Table REC 2-9. Annual Number of Boating Opportunity Days

Year	Water-year Type	Gateway Bridge Run				Lower East Fork Run	
		Rafting (500 to 3,000 cfs)		Kayaking (300 to 3,000 cfs)		Kayaking (80 to 400 cfs)	
		Impaired	Unimpaired	Impaired	Unimpaired	Impaired	Unimpaired
1994	Dry	86	101	108	134	99	124
1995	Normal	149	163	191	195	131	133
1996	Normal	148	181	212	226	183	186
1997	Normal	107	113	140	166	128	149
1998	Normal	75	85	103	113	75	86
1999	Dry	60	84	103	120	103	111
2000	Normal	62	78	85	100	78	91
2001	Normal	57	70	79	95	80	93
2002	Normal	52	84	105	113	112	118
2003	Normal	78	95	115	123	97	107
2004	Dry	54	77	92	118	98	115
2005	Normal	116	127	139	163	107	114
2006	Normal	72	87	106	138	75	94
2007	Dry	43	51	71	108	88	105
2008	Normal	69	79	103	126	99	112
2009	Normal	56	85	116	133	116	118
2010	Normal	133	140	159	205	145	185
2011	Normal	100	102	118	141	92	101
2012	Normal	28	32	52	76	58	78
2013	Dry	11	16	43	58	46	59
2014	Dry	6	11	19	28	24	27
2015	Dry	29	39	74	93	73	83
2016	Normal	157	163	170	175	147	147
2017	Normal	71	67	79	82	37	39

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Maps


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- Facilities**
- Powerhouse
 - Diversion
 - Dam
 - Utility
 - Flow Gage
 - Forebay
 - Flowline
 - Penstock
 - Transmission Line
- Other Features**
- 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
 - Private (Blank)
- *SOURCE: BLM 2012

- Whitewater Runs on the Bypass Reaches**
- Park Boundary Run
 - Gateway Bridge Run
 - Lower East Fork Run
- Other Whitewater Runs on the Kaweah River**
- Ash Mountain Run
 - Dinely Bridge Run
 - Three Rivers Run




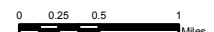
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Eastern Hydro Generation

Map REC 2-1

Whitewater Runs on the Kaweah River and East Fork Kaweah River





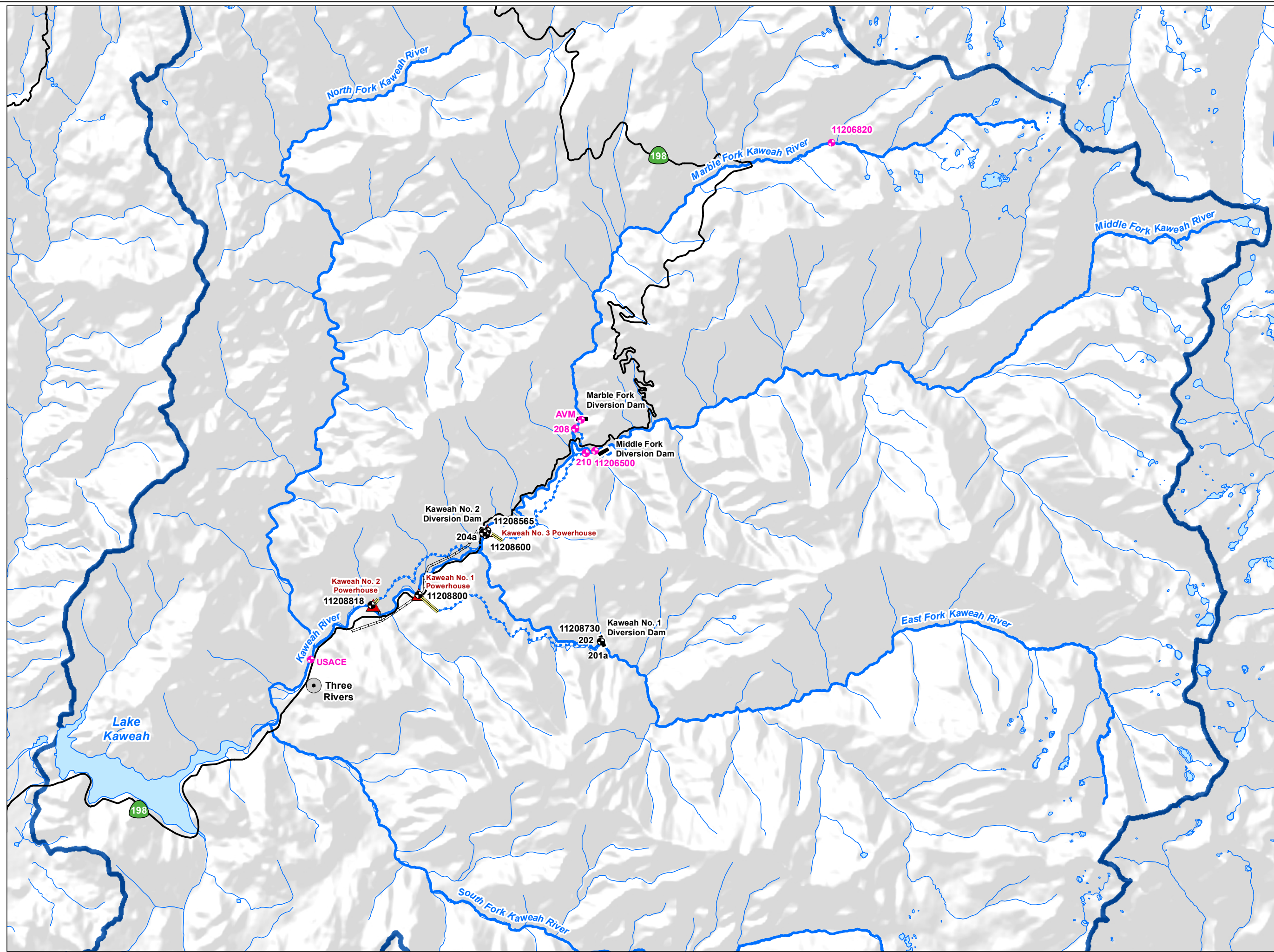
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Datum: NAD 83

Date: 10/24/2018

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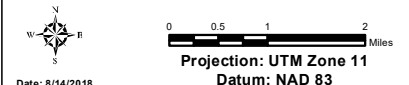


- Facilities**
- Powerhouse
 - Diversion
 - Flowline
 - Penstock
 - Transmission Line
 - Project Gage (current)
 - Non-Project Gage (current)
- Other Features**
- Highway
 - Watercourse
 - Water Body
 - Watershed Boundary



Eastern Hydro Generation
Map REC 2-2

Kaweah River Watershed Stream Gages



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Appendix A

Whitewater Boating Focus Group Meeting

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**Kaweah Project (FERC Project No. 298) Relicensing
REC 2 – Whitewater Boating Technical Study Plan**

Whitewater Boater Focus Group Meeting

**April 3, 2018 7:00 – 9:30
Three Rivers Memorial Building
Three Rivers, Ca.**

GENERATION

Purpose of Meeting & Expected Outcome(s):

- Conduct the REC 2 – Whitewater Boating Technical Study Plan whitewater boater focus group meeting
 - Provide whitewater boaters with understanding of Kaweah Project and project hydrology
 - Collect whitewater boating resource information to be used for REC 2 – Whitewater Boating Technical Study Plan

AGENDA

Time	Topic	Who	Method	Expected Outcome
15 mins. (7:00 - 7:15)	Meeting objectives and introductions	SCE Attendees	Presentation Discussion	Presentation of Information
15 mins. (7:15 - 7:30)	Kaweah Project overview	SCE	Presentation	Presentation of Information
15 mins. (7:30 - 7:45)	Relicensing process overview	SCE	Presentation	Presentation of Information
30 mins. (7:45 - 8:00)	Project hydrology	SCE	Presentation	Presentation of Information
60 mins. (8:00 - 9:00)	Whitewater boating resource assessment	SCE Attendees	Presentation Discussion	Collection of information on whitewater boating
30 mins. (9:00–9:30)	Next steps	SCE Attendees	Discussion	Determination of need for a site visit Determination of need for a flow study
9:30	Adjourn	SCE		

<http://www.sce.com/kaweah>

MEETING NOTES

Kaweah Project (FERC Project No. 298) Relicensing REC 2 – Whitewater Boating Technical Study Plan Whitewater Boater Focus Group Meeting

April 3, 2018 7:00 – 9:30 pm
Three Rivers Memorial Building, Three Rivers, CA

Meeting Notice

Meeting invites were sent to the following contacts with instructions to share the meeting notice with interested parties:

Commercial Outfitters

- Sequoia Adventures
 - Dave Hammond
 - info@sequoiaadventures.com
 - 559 561 4413
- Kaweah Whitewater Adventures
 - Frank Root
 - raft3rivers@gmail.com
 - 559 740 8251
- Good Times Adventures
 - Amicaya Frediani
 - raftgoodtimes@gmail.com
 - 800 250 5227
- All Outdoors
 - Scott Armstrong
 - rivers@aorrafting.com
 - 530 919 1283

Non-Commercial Boaters

- Evan Moore
 - evanmoore32@yahoo.com
 - 760 741 0305
- Johnny Chase
 - chasewhitewater@gmail.com
 - 760 417 0422
- Tom Moore
 - moreinfo@sierrasouth.com
 - 760 376 3745
- Chris Tulley
 - christulley@gmail.com
- Bill Pooley
 - bill.pooley@gmail.com

- Eric Giddens
 - eric@kernriverbrewing.com
- Darin McQuoid
 - d_mcquoid@hotmail.com
- Paul Martzen
 - paul_martzen@yahoo.com
- Derrick Tito
 - Derrick.Tito@sce.com
- Chase Hauber
 - trkayaker@ymail.com

National Park Service

- Steve Bowes
 - Stephen_bowes@nps.gov

American Whitewater

- Theresa L. Simsiman
 - theresa@americanwhitewater.org

Tulare County Resource Management Agency

- Jason Garcia La Blu
 - Out of the office until April 2 – will follow up with a phone call
 - Contacted on April 3rd – will not make the meeting but will follow up with commercial boating numbers

Meeting Attendees

Name	Email	Phone #	Affiliation
Theresa Simsiman	theresa@americanwhitewater.org	916 835 1460	American Whitewater
Eric Giddens	Eric@kernriverbrewing.com		Private Kayaker
Chris Tulley (by phone)	Christulley@gmail.com		Private Kayaker
Amicaya Frediani	raftgoodtimes@gmail.com	831 419 4354	Commercial Outfitter
Derrick Tito	Derrick.tito@sce.com	760 485 5973	SCE
David Moore	David.moore@sce.com	626 302 9494	SCE
Ed Bianchi	Edward.bianchi@cardno.com	916 386 3817	Cardno
Dave Martinez	Dave.martinez@cardno.com	916 502 85236	Cardno

Purpose of Meeting

- Conduct the REC 2 – Whitewater Boating Technical Study Plan whitewater boater focus group meeting.

Expected Outcomes

- Provide whitewater boaters with understanding of Kaweah Project and project hydrology.
- Collect whitewater boating resource information to be used for REC 2 – Whitewater Boating Technical Study Plan.

Meeting Objectives and Introductions

David Moore convened the meeting.

- Start of meeting was delayed until 7:15 to provide the opportunity for additional attendees to call in or show up.
- Meeting attendees introduced themselves and their experience with the whitewater boating runs.
- Primary focus for meeting is on the Ash Mountain Run take-out, the Lower East Fork Run, and the Gateway Bridge Run.
- It was noted that at this point in the process we are at an information gathering stage.
 - Specific proposals regarding whitewater boating opportunities will be addressed later in the process.

Kaweah Project Overview

David Moore provide an overview of the Kaweah Project.

- Federal Energy Regulatory Commission (FERC) – Kaweah Project (FERC Project No. 298)
- FERC Project Developments
 - Current license expires December 31, 2021
 - Generator nameplate capacity of 8.85MW
 - Located in Tulare County (Bureau of Land Management and private land)
 - Project elements
 - Portions of Kaweah No. 1 Development
 - Kaweah No. 2 Development
 - Portions of Kaweah No. 3 Development
- Non-FERC Project Developments
 - Located in Sequoia National Park
 - Operated under Special Use Permit (SUP)
 - SUP expires September 8, 2026
 - No generating facilities
 - Project elements
 - Portions of Kaweah No. 1 Development (Mineral King Dams)
 - Portions of Kaweah No. 3 Development (Marble Fork and Middle Fork Diversions)

Relicensing Process Overview

Ed Bianchi provided a synopsis of the relicensing process and outlined the steps and timeline from application for a new license, to license issuance.

- Pointed out that we are in the “Study Implementation Phase”
 - In addition to recreation studies there are numerous other resource studies associated with the relicensing effort
- This meeting is associated with the REC 2 – Whitewater Boating Study. The REC 2 – Whitewater Boating Study elements are:
 - Compile information regarding commercial and private boating use
 - Develop additional information regarding whitewater boating opportunities and use
 - Conduct site visit (if necessary, as determined in WW Boating Focus Group)
 - Develop WW flow study survey instrument (if necessary, as determined in WW Boating Focus Group)

Project Hydrology

Dave Martinez presented information on Kaweah Project hydrology to provide an understanding of how the project influences instream flow on the East Fork of the Kaweah and Kaweah rivers.

- Presented exceedance charts showing 10%, 50%, 90% exceedance flows above and below Diversions No. 1 and No.2, as well as flows within the No. 1 and No.2 flowlines.
- Presented hydrographs of the flow below Diversions No. 1 and No. 2.
 - Period of recorded is 1994 through 2017
- Presented hydrographs representing Normal and Dry Water Years.
 - 2005, 2016, and 2017 represented Normal Year flows
 - 1999, 2007, and 2015 represented Dry Year flows
 - Both diverted and non-diverted flow are shown on the hydrographs
- The “take-home” from the group is that the project does not have a large influence on instream flow, or the seasonal timing of instream flow.

In order to assess boatable flow range estimates, graphs were presented showing the relationship to flow below Diversion No. 1, Diversion No. 2, and below Pumpkin Hollow Bridge (Gateway Bridge), and the Three Rivers Gage.

- These plots show data from SCE gages and a linear regression line to correlate flow in the specific reach to the Three Rivers gage.
 - East Fork Kaweah below Diversion No. 1 is approximately 26% of the Three Rivers gage
 - Kaweah River below Diversion No. 2 is approximately 53% of the Three Rivers gage
 - Kaweah River below Pumpkin Hollow Bridge is approximately 80% of the Three Rivers gage
- Whitewater boaters commented that the analysis does not accurately reflect the seasonal variability of East Fork Kaweah River contributions to the Kaweah River flow.
 - East Fork contributes more proportionally after the spring runoff – later in the season (SCE will review hydrology data set and develop new regression if appropriate)

- Diurnal flows are typically not taken into consideration when boating the Lower East Fork Run.
 - Early in the season boaters typically put-in between 11:00 am and 12:00 pm to avoid diurnal flow influences

Whitewater Boating Resource Assessment

Dave Martinez facilitated the whitewater boating resource assessment. General comments included:

- The Whitewater boating attendees believe that the Kaweah watershed and the runs being discussed are world class attracting visitors from around the world, region and state.
- All whitewater runs discussed are thought to be boatable year round with sufficient rain and snowmelt
- The main improvement opportunities identified by the focus group were:
 - Access to real time flows.
 - Improved put-in and take out access.
 - These improvements were said to be valuable for most sections of the Kaweah including runs not associated with the Kaweah Project.
- It was explained that the reaches for the assessment were the Ash Mountain Run take-out, the Lower East Fork Run, and the Gateway Bridge Run.
- Factors to be assessed for each run were:
 - Access conditions or constraints
 - Difficulty class
 - Types of watercraft used
 - Existing and potential uses
 - Boating season
 - Boatable flow ranges
- Kaweah River – Ash Mountain Run
 - The run is located within the Sequoia National Park
 - Meeting attendees say it is legal to boat in the park and have had no access issues with park staff
 - Put-in:
 - Trailhead at the RV dump station near Potwisha Campground
 - Take Outs:
 - Sequoia National Park Foothills Visitor Center
 - Take-out will avoid a difficult section of river
 - Indian Head River Trailhead
 - Confluence with East Fork Kaweah (Pumpkin Hollow Bridge¹)
 - Most boaters run Kaweah No. 2 Diversion Dam (not an impediment to the run)

¹ Pumpkin Hollow Bridge is commonly referred to as the “Gateway Bridge”

- Take-out is on private property
 - No authorized access
 - Dave Hammond property on left bank 0.75 mile downstream of Pumpkin Hollow Bridge
 - Take-out is on private property
 - Must get permission to use property
 - This location is used as put-in for commercial rafting for the Gateway Run
- Access:
 - Boaters expressed an interest in obtaining access (take-out) to SCE lands at Kaweah No. 3 Powerhouse/Kaweah No. 2 Diversion
- East Fork Kaweah River – Lower East Fork Run
 - Difficulty class:
 - Class V/V+
 - Types of watercraft used:
 - Hardshell kayak
 - There are reports of rafts boating this run
 - Existing and potential uses:
 - Non-commercial kayaking
 - Late season inflatable kayak
 - Just the “lower section”
 - Hike-in from Bear Ranch (private property)
 - Put-in:
 - Oak Grove Bridge
 - This put-in is no longer used due to rock slide hazard below the bridge
 - Private property on river left approximately RM 4.1 (typically used as the put-in)
 - Private property near Sky Hook Rapid (approx. RM 3.45)
 - Steep access, requiring ropes to lower people or boats (considered emergency access only)
 - River Mile 3
 - BLM Land
 - Near old helipad
 - Long steep hike, requiring ropes to lower people or boats (considered emergency access only)
 - Bear Ranch (approx. RM 1.1)
 - Low flow inflatable kayak run
 - Hike-in
 - Private property, requiring ropes to lower people or boats (considered emergency access only)

- Take Out:
 - Confluence with East Fork Kaweah (Pumpkin Hollow Bridge)
 - Take-out is on private property
 - No authorized access
 - Dave Hammond property on left bank 0.75 mile downstream of Pumpkin Hollow Bridge
 - Take-out is on private property
 - Must get permission to use property
 - This location is used as put-in for commercial rafting for the Gateway Run
- Boating season/timing:
 - Year-round depending on flow
 - Requires an average of 6-7 hours (experts with extensive knowledge of run 2.5 to 3 hours)
- Boatable flow range:
 - 160-250 cfs: optimum flow range
 - 80-400 cfs: boatable flow range
- Access:
 - Boaters expressed interest in establishing a put-in for this run as the current put-in is on private property.
- Kaweah River – Gateway Bridge Run
 - Difficulty class:
 - IV – IV+ (V upstream of Pumpkin Hollow Bridge)
 - Types of watercraft used:
 - Hardshell kayak
 - Inflatable kayak
 - Rafts
 - Existing and potential uses:
 - Non-commercial kayaking and rafting
 - Commercial rafting (eight commercial licenses issued to seven outfitters)
 - Put-in:
 - Non-commercial
 - Indian Head River Trailhead
 - Pumpkin Hollow Bridge (private property)
 - Dave Hammond property on left bank 0.75 mile downstream of Pumpkin Hollow Bridge – private property – by arrangement (designated commercial rafting put-in)

- Commercial
 - Designated commercial rafting put-in on left bank 0.75 mile downstream of Pumpkin Hollow Bridge
 - private property (Dave Hammond) – by arrangement
- Take Out:
 - Dinely Bridge
 - Take-out is on private property
 - No authorized access
 - Three Rivers Hideaway
 - 0.3 mile downstream of Dinely bridge
 - Take-out is on private property
 - Need authorization, not normally used due to paying customers filling the lot in the summer when river is most commonly run.
 - Terminus Reservoir
 - Cobble Knoll Recreation Area (high reservoir storage)
 - Slick Rock Recreation Area (low reservoir storage)
- Boating season/timing:
 - Year-round depending on flow
 - Rafts require 5 hours from commercial put-in to Terminus Reservoir
 - Kayaks require 3-4 hours from Pumpkin Hollow Bridge to Terminus Reservoir
 - Kayaks require 2 hours from Pumpkin Hollow Bridge to Three Rivers Hideaway
- Boatable flow range:
 - Boatable flow range for rafts is 500-3,000 cfs (Three Rivers Gage)
 - Boatable flow range for kayaks is 300-3,000 cfs (Three Rivers Gage)
- Access:
 - Boaters expressed an interest in obtaining access (take-out) to SCE lands at Kaweah No. 1 Powerhouse and Kaweah No. 2 Powerhouse

Determination of need for a site visit

- It was determined that a site visit is not needed at this time.
- Pending review of the technical study report a site visit may be conducted at a later date.

Determination of need for a flow study

- It was determined that a study flow to validate boatable flow range estimates will not be required as a component of the REC 2 – Whitewater Boating TSP.

Other

- Whitewater boating participants indicated the availability of flow data would be highly beneficial to improving the use of existing boating opportunities.
- Whitewater boating participants indicated the availability of flow data on “non-project” reaches would be highly beneficial to improving the use of existing boating opportunities.

Adjourn

- Meeting adjourned at 10:00 pm – no follow-up action item were recorded.

Appendix B

Access Location Site Photographs

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Indian Head River Trailhead (Sequoia National Park)



Photo B-1. Indian Head River Trailhead, Parking



Photo B-2. Indian Head River Trailhead, Parking



Photo B-3. Indian Head River Trail



Photo B-4. Indian Head River Trail



Photo B-5. Indian Head River Trail



Photo B-6. Indian Head River Trail, River Access

Gateway Bridge (Caltrans / Bridge Easement¹ / Private Property)



Photo B-7. Gateway Bridge, Upstream Left



Photo B-8. Gateway Bridge, Upstream Right

¹ In no way is SCE's consultation with Caltrans and Tulare County to be construed as authorization for the public to access the river at these bridge crossings. Obtaining permission to park and access the river at bridge crossings is the responsibility of individual parties.



Photo B-9. Gateway Bridge, Downstream Left



Photo B-10. Gateway Bridge, Downstream Right



Photo B-11. Gateway Bridge, Roadside Pull-off



Photo B-12. Gateway Bridge, Roadside Pull-off

Commercial Rafting Put-in (Private property on left bank 0.75 mile downstream of Gateway Bridge)



Photo B-13. Commercial Rafting Put-in, Parking



Photo B-14. Commercial Rafting Put-in, Access Road



Photo B-15. Commercial Rafting Put-in, Access Road



Photo B-16. Commercial Rafting Put-in

Dinely Bridge (Tulare County / Bridge Easement² / Private Property)



Photo B-17. Dinely Bridge, Upstream Left



Photo B-18. Dinely Bridge, Upstream Right

² In no way is SCE's consultation with Caltrans and Tulare County to be construed as authorization for the public to access the river at these bridge crossings. Obtaining permission to park and access the river at bridge crossings is the responsibility of individual parties.



Photo B-19. Dinely Bridge, Downstream Left



Photo B-20. Dinely Bridge, Downstream Right



Photo B-21. Dinely Drive, Upstream of Bridge



Photo B-22. Dinely Drive, Upstream of Bridge, River Access

Kaweah No. 2 Powerhouse River Access (Edison Beach) (SCE)



Photo B-23. Kaweah No. 2 Powerhouse, Public Parking



Photo B-24. Kaweah No. 2 Powerhouse, River Access



Photo B-25. Kaweah No. 2 Powerhouse, River Access



Photo B-26. Kaweah No. 2 Powerhouse, River Access

Three Rivers Hideaway (Private Property)



Photo B-27. Three Rivers Hideaway, Parking Area



Photo B-28. Three Rivers Hideaway, River Access Road



Photo B-29. Three Rivers Hideaway, River Access

North Fork Bridge³ (Tulare County / Bridge Easement⁴ / Private Property)



Photo B-30. North Fork Bridge, Upstream Left



Photo B-31. North Fork Bridge, Upstream Right

³ This location is outside Study Area.

⁴ In no way is SCE's consultation with Caltrans and Tulare County to be construed as authorization for the public to access the river at these bridge crossings. Obtaining permission to park and access the river at bridge crossings is the responsibility of individual parties.



Photo B-32. North Fork Bridge, Downstream Left



Photo B-33. North Fork Bridge, Downstream Right



Photo B-34. North Fork Road, Upstream of Bridge

Slick Rock Recreation Area⁵ (USACE)



Photo B-35. Slick Rock Recreation Area, Parking



Photo B-36. Slick Rock Recreation Area, Lake/River Access

⁵ This location is outside Study Area.



Photo B-37. Slick Rock Recreation Area, Lake/River Access



Photo B-38. Slick Rock Recreation Area, Lake/River Access

Lake Kaweah Recreation Area⁶ (USACE)



Photo B-39. Lake Kaweah Recreation Area, Parking



Photo B-40. Lake Kaweah Recreation Area, Lake Access

⁶ This location is outside Study Area.

Appendix C

Kaweah River Management Plan

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AGENDA DATE: December 20, 2005 Public Hearing



RESOURCE MANAGEMENT AGENCY

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VISALIA, CA. 93277
PHONE (559) 733-6291
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Britt L. Fussel	Engineering
Deborah Kruse	Development Services
Jean P. Brou	Transportation
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Deborah West	Support Services
Roger Hunt	Administrative Services

HENRY HASH, DIRECTOR

THOMAS W. SHERRY, ASSOCIATE DIRECTOR

AGENDA ITEM

ITEM NO. _____
District 1

SUBJECT:

Public Hearing to review the proposed 2005 Update to the Kaweah River Management Plan, which implements Tulare County Ordinance Code Chapter 11 of Part VI, pertaining to river rafting.

REQUEST(S):

At the time set for hearing, take the following actions:

- (a) Take testimony from interested parties.
- (b) Adopt the 2005 Update to the Kaweah River Management Plan, including the recommendations set forth on Page 9 of the 2005 Update report, as attached.

SUMMARY:

The Kaweah River Management Plan (KRMP) was adopted by your Board on December 12, 1997, in order to address certain problems that result from use of the Kaweah River in the Three Rivers area by commercial river rafting and to determine the maximum numbers of commercial rafting companies to be permitted on the river. Post-season review of the rafting season and Plan are required in order to evaluate capacity restrictions and other regulations and to secure community input on the preceding season. The 2005 Update to the KRMP provides a review of the rafting season, including the commercial rafting usage numbers (total and per company), comparison with the last seven rafting seasons, complaints received and resolution of any complaints, RMA staff field observations, and staff conclusions and recommendations.

A notice of public hearing is not required by Ordinance or by the KRMP for the annual update; however, to assure input from the community of Three Rivers, a notice of public hearing was published in the local newspaper prior to the hearing, and affidavits of publication will be submitted to the Clerk when received.

2005 UPDATE -- KAWEAH RIVER MANAGEMENT PLAN

I. BACKGROUND

The Kaweah River Management Plan (KRMP) was adopted by the Tulare County Board of Supervisors on December 16, 1997. The KRMP addresses certain problems that result from use of the middle fork of the Kaweah River (in the Three Rivers area, between Sequoia National Park and Kaweah Lake) by commercial rafting operations and determines the maximum numbers of commercial rafting companies to be permitted on the river. Section VII. A, of the Plan allows a maximum of eight commercial rafting companies to utilize the Kaweah (each company is allowed a maximum of 8 rafts and 64 people per day), after approval of a Commercial River License (CRL) for each. Post-season review of the rafting season and KRMP by the County Resource Management Agency (RMA) is required, in order to evaluate capacity restrictions and other regulations and to secure community input on the preceding season.

II. SUMMARY OF THE 2005 RAFTING SEASON

A. 2005 Commercial Rafting Numbers

Unlike the past several years, the 2004-2005 Kaweah watershed snowpack was above normal, so that the 2005 Kaweah River commercial rafting season lasted several weeks longer than previous years' seasons (for approximately eleven weeks). The 2004 season (the shortest season thus far since adoption of the KRMP) lasted for only five weeks, and the previous five rafting seasons (1999 - 2003) all ranged between six and seven weeks. These seasons contrast with the 1998 season, which followed a heavy, extended snow season for Tulare County that resulted in a Kaweah River commercial rafting season lasting for approximately 17 weeks and with correspondingly greater total rafting use. The 1997 rafting season (the first year that commercial rafting numbers were recorded) at approximately 10 weeks was also several weeks longer than the past six seasons.

In 2005, Tulare County issued Commercial River Licenses (CRLs) to seven companies (six of which have been licensed since the first year /1997) - Mariah Adventure Connection, All Outdoors, American River Recreation, Kaweah Whitewater Adventures, Tributary Whitewater Tours, Whitewater Connection, and White-water Voyages, and Wilderness Adventures. An eighth company (Wilderness Adventures) also submitted a CRL application but ultimately was not granted the license because its application was deemed to be incomplete (the required letters of permission from owners of the support sites it was to utilize were not returned to the RMA).

Usage numbers for the 2005 Kaweah River rafting season, based on the monthly river use reports submitted by the licensed commercial rafting companies, are as follows: [NOTE: Numbers of 'Rafters' include clients and guides, and Raft numbers include safety rafts; safety kayak numbers are not included.]

- Total commercial rafting use for the entire year (from April 2 to July 24) was ± 3,182 Rafters & 522 Rafts
- Peak use month was June (1,283 Rafters & 211 Rafts)
- Highest use days were June 4 (180 Rafters & 28 Rafts), May 22 (182 Rafters & 25 Rafts), May 21 (133 Rafters & 21 Rafts), May 29 (123 Rafters & 24 Rafts), May 28 (128 Rafters & 22 Rafts), May 14 (133 Rafters & 21 Rafts), June 25 (128 Rafters & 21 Rafts) = five Saturdays and two Sundays.

[Refer to Appendix 'A' for the year and season rafting totals and tallies of the numbers for each day and each company.]

B. Comparison of 2005 with Previous Commercial Rafting 'Seasons'

For the following, the rafting 'season' is defined as beginning on the first day when at least two licensed companies and eight rafts ran and ending on the last day when at least two companies and eight rafts ran. This definition is necessary in order to eliminate variations between years due to rafting days run by a single company before or after the main season started or stopped; thus, the 'season' rafting numbers are less than the total annual rafting numbers noted elsewhere.

-- Length of rafting season:

1998 and 2005 have had the longest and 2004, 2003, and 2001 have had the shortest commercial rafting seasons thus far, as follows:

2005 season	(4/30 - 7/10)	ran ± 11 weeks
2004 season	(4/24 - 5/30)	ran ± 5 weeks
2003 season	(5/10 - 6/21)	ran ± 6 weeks
2002 season	(5/04 - 6/16)	ran ± 7 weeks
2001 season	(5/05 - 6/09)	ran ± 6 weeks
2000 season	(5/06 - 6/25)	ran ± 7 weeks
1999 season	(5/08 - 6/27)	ran ± 7 weeks
1998 season	(5/02 - 8/22)	ran ± 17 weeks
1997 season	(4/26 - 6/29)	ran ± 10 weeks

-- Numbers of Rafterers and Rafts per Season:

2005 had the third-highest total commercial rafting season numbers thus far, as follows:

2005 season totals = ± 2,930 People and 478 Rafts;
(+ 11 weeks = Average ± 266 People/week & 43 Rafts/week)

2004 season totals = ± 1,064 People & 186 Rafts;
(+ 5 weeks = Average ± 213 People/week & 37 Rafts/week)

2003 season totals = ± 1,630 People & 257 Rafts;
(+ 6 weeks = Average ± 271 People/week & 42 Rafts/week)

2002 season totals = ± 1,981 People & 323 Rafts;
(+ 7 weeks = Average ± 283 People/week & 46 Rafts/week)

2001 season totals = ± 1,986 People & 325 Rafts;
(+ 6 weeks = Average ± 331 People/week & 54 Rafts/week)

2000 season totals = ± 2,122 People & 345 Rafts;
(+ 7 weeks = Average ± 303 People/week & 49 Rafts/week)

1999 season totals = ± 1,730 People & 292 Rafts;
(+ 7 weeks = Average ± 247 People/week & 42 Rafts/week)

1998 season totals = ± 4,375 People & 749 Rafts;
(+ 17 weeks = Average ± 257 People/week & 44 Rafts/week)

1997 season totals = ± 3,052 People & 508 Rafts;
(+ 10 weeks = Average ± 305 People/week & 51 Rafts/week)

-- Biggest individual rafting days:

2005's peak day of 180 Rafterers and 28 Rafts was well below 2001's peak day of 253 Rafterers and 39 Rafts (which is thus far the Kaweah River's biggest single commercial rafting day) and 1997's peak day of 196 Rafterers and 31 Rafts. However, this record peak rafting day so far (in 2001) equals only 49% of the potential maximum of 512 Rafterers/day and 61% of the potential maximum 64 Rafts/day allowed by the KRMP, while 2005's peak day had only 35% of the potential maximum rafterers and 44% of the maximum rafts allowed.

-- Higher use days (with totals ≥ 100 Rafterers & 16 Rafts):

As in previous years, 2005's highest use days were on weekends, as follows:

2005 = 10 days (8 Saturdays, 2 Sundays)
2004 = 4 days (2 Saturdays, 2 Sundays)
2003 = 5 days (3 Saturdays, 2 Sundays)
2002 = 6 days (5 Saturdays, 1 Sunday)
2001 = 9 days (6 Saturdays, 2 Sundays, 1 Monday)
2000 = 9 days (7 Saturdays, 2 Sundays)
1999 = 5 days (3 Saturdays, 2 Sundays)
1998 = 13 days (11 Saturdays, 2 Sundays)
1997 = 14 days (7 Saturdays, 5 Sundays, 1 Monday, 1 Friday)

III. COMPLAINTS

As required by the Kaweah River Management Plan, the Resource Management Agency (RMA) implemented a monitoring program for commercial rafting that includes a public input and complaint system. Any rafting-related complaints received by the RMA are referred to the RMA's Code Compliance Division staff, who maintains a complaint log and is to contact the rafting companies identified in complaints as soon as possible (generally by the following day) to notify them of reported problems and determine if there are reasonable explanations or if a warning should be issued. To be considered as an investigable complaint, the name and/or logo of the suspect rafting company, date, time, and location of the incident, and the nature of the offense must be cited by the complainant. Complaints about rafting in general or about private rafting-related uses on or near the River are noted but not pursued.

During the 2005 rafting season, the RMA received no investigable complaints regarding the commercial rafting operations from either the public or from other departments or agencies (see attached correspondence from RMA Code Compliance Division).

At the start of the 2005 commercial rafting season, a Notice (containing information on the allowed commercial rafting on the Kaweah River, the procedure to make complaints about the rafting, and the names and logos of the licensed rafting companies) was mailed to all owners of property within 400' of the Middle Fork of the Kaweah and to other interested individuals and public agencies and was posted in Three Rivers. Previously, in 2003, since there had been no investigable commercial rafting complaints received in the preceding two seasons, the Board of Supervisors adopted the 2003 KRMP Update's recommendation that "the Notice will be sent out every other year unless complains are received in the preceding year". Since no investigable complaints were received during the 2005 season, the Notice will not be mailed out in 2006 (but will be available from the Resource Management Agency upon request).

IV. RMA STAFF FIELD OBSERVATIONS

In order to check the rafting companies' compliance with commercial river license conditions, the KRMP requires that Resource Management Agency staff make on-site inspections to the commercially-rafted area, during the potentially peak part of the rafting season, so as to count actual numbers of rafts /rafters and observe raft put-ins, take-outs, and rapid-running activities, particularly to note any noise and crowding conditions on the river. Due to the lack of rafting complaints received, only one RMA inspection visit was made in 2005.

RMA staff observed the commercial rafting on the Kaweah River on Saturday June 11, 2005, when four companies ran (in a total of 17 rafts). RMA staff's general conclusion of that day's observations was that the commercial rafting seemed to have a very low impact. At least 15 minutes between put-in times of different rafting groups was observed, and once the rafts put in, they moved along quickly and generally did not linger in any spot (which is allowed if there were an emergency-type situation or if rafts that were ahead of the other rafts in a company's group were waiting for the others), and no crowding of the rafts from different companies after put-in was seen.

A. RMA staff field observations of the specific licensed rafting support uses/sites are as follows:

- Client Parking -- Clients do not travel to/from the rafting put-in or take-out sites in their individual vehicles, as they are required to park at specific parking areas set forth in the CRLs. Most of these licensed client parking sites are not visible from or are set back from Highway 198. Only one parking area is next to Highway 198 (just west of the Chevron station), where one rafting company had its headquarters this season and which has good site distance for traffic access. All licensed parking sites are zoned for commercial-type uses (C-1, C-2, or 'O').
- Transport of clients to put-in sites and from take-out sites -- Is done by rafting company shuttle bus or van and not by individual client vehicles (which remain in licensed client parking areas); was observed as being orderly and having a low impact on the highway and traffic (no more than ± four such vehicles per hour).
- Put-Ins (of rafts into the river) -- Are primarily done at two locations (most companies put in at the condo site (now owned by Hammond) just downstream of the Gateway Bridge, and several are also licensed to put in at the Gateway Restaurant, while one company also puts in at several locations further down-stream, between the Dinely Bridge and the North Fork Bridge). On the observation day, put-ins were viewed from the Condo site and from the Gateway Restaurant site - these were observed to be done orderly, with the rafts from different companies adequately spaced (the required minimum 15 minutes between put-ins at the Condo site by different companies is facilitated by coordination of the shuttle bus or van arrival times).
- Lunch -- Was observed at two sites -- the River View and Anne Lang's restaurants (where the restaurants prepared food that had been pre-ordered and so was ready when the rafters arrived). Lunch-related operations (beaching of rafts, movement by rafters, and coordination of food service) at both sites observed appeared orderly and non-obtrusive to nearby properties.

- Take-Outs (of rafts from the river, at the end of the trip /day) -- In the past several years, the end of the trip/day take-outs for most of the companies were done at a private site (owned by Haley) located just upriver from 'Slick Rock' and adjacent lands managed by the U.S. Army Corps of Engineers. However, due to the Federal project to raise Terminus Dam and enlarge Lake Kaweah, the Haley site is now government owned (and becomes part of Lake Kaweah during the lake's high water periods) and is thus no longer available as a take-out site. However, the rafting companies with agreements with the Army Corps were able in 2005 to take out upstream from the Haley site at the 'Cobble Knoll Dike' (which is adjacent to the southwestern side of the Holiday Lodge parcel). Staff observed rafts from one company take out at the Cobble Knoll Dike site. This take-out was accomplished quickly and orderly, and the rafters afterward boarded the shuttle bus to return to their parking area.

 - B. RMA staff field observations and comments regarding the potential impacts from commercial rafting as cited in the KRMP are as follows:
 - Noise -- The River itself was very noisy (especially when standing in close proximity); generally, rafting-related noise was most noticed where the river canyon is deep (where the main rafter noise generated was the shouting of guide directions and, after rapids, outcries from clients - such noise was of short duration).
 - Parking and traffic congestion -- No rafting-related congestion was noticed; clients were shuttled to put-in sites in rafting company buses or vans, having previously parked their vehicles in commercially-zoned licensed sites, outside of any State or County right-of-way.
 - Raft access to and from the river -- Observed doing so only only at the licensed sites and in an orderly manner.
 - Trespassing of rafters -- None noticed; the only observations of rafters out of the river channel were at licensed support sites.
 - Food handling and sanitation -- Lunch sites are all at commercially-zoned locations specified in each CRL that are under permit with the County Environmental Health Services Division. Environmental Health staff noted (in a 11/29/05 telephone conversation) that, regarding the commercial rafting operations, no problems had been noted, and no no complaints had been received.
 - Adverse impacts on the riparian environment (from disturbance by rafting-related operations) -- Viewed all 2005 put-in and take-out sites and noticed very little impact to riparian areas (all were either rocky or sandy, with little vegetation removal or trampling evident) or were previously developed.
-

- Use of public safety services -- The RMA has not been made aware, by the public or through the news media, of excessive use of these services by rafting companies. The Tulare County Sheriff's Department Resident Deputy for the Three Rivers area noted (in a 11/29/05 telephone conversation) that there were no commercial rafting-related complaints reported to him or problems observed by him this year.

V. CONSULTATION INPUT

Letters requesting comments on the 2005 rafting season and/or suggestions for future rafting seasons were sent to agencies previously notified during the consultation process for the 1997 KRMP and the subsequent Updates to the KRMP. Written comments were received only from the Tulare County RMA Code Compliance Division and the U.S. Army Corps of Engineers (see attached), and telephone calls were received from the County Sheriffs Department and County Environmental Health Services (see comment summaries above), and the California Highway Patrol and CalTrans (the latter two noted no problems with the commercial rafters). The full list of agencies consulted is as follows:

Tulare County HHS Environmental Health Services Division
Tulare County RMA - Code Compliance; Roads/Bridges
Tulare Co. Sheriff's Department (Resident Deputy Jim Fansett)
Tulare County Fire Warden
Tulare County Counsel - Risk Management
CalTrans District 06
California Highway Patrol
California Department of Fish and Game, District 4
U.S. Army Corps of Engineers (Phil Deffenbaugh)

VI. KRMP UPDATE HISTORY AND 2005 ANALYSIS

The requirement for a River Management Plan was established by County Ordinance No. 3179 (which added Chapter 11 to Part VI of the Ordinance Code of Tulare County, pertaining to river rafting, and was adopted by the Tulare County Board of Supervisors on March 11, 1997), under which commercial river rafting is regulated and the requirements for obtaining a Commercial River License (CRL) are established. Based on recommendations of past Updates to the KRMP, several minor revisions to the Plan have been made since its adoption in 1997. In a previous (Year 2000) Update, the Board revised the KRMP by adopting standards to determine the 'inactivity' that would cause a commercial rafting company to lose its spot on the list of eight companies eligible to apply for/ receive CRLs for the Kaweah River, which reads as follows:

"A commercial rafting company is determined to be 'inactive' and is not allowed to apply for a Commercial Rafting License (unless another rafting company does not request to apply to fill one of the eight allocated positions) if it: (1) did not apply for or applied for but was not issued a CRL the previous rafting season; and/or (2) was issued CRLs but, for the past two consecutive rafting seasons, either ran no commercial trips or ran fewer than four commercial rafting trips. For the purposes of #2, to be counted as a 'commercial rafting trip', said trip must be: (a) used for commercial/client trips (guide-training trips do not count); (b) run in the company-labeled rafts staffed by its own personnel (referred clients that run with another company do not count); and (c) not be a shared allocation (overflow rafts from another company that needs to run more than eight rafts in one day do not count)."

These standards were to commence with the 2001 rafting season, so evaluation of the licensed companies for 'inactivity' (standard Section No. 2) commenced with the 2002 season. In 2005, five of the licensed companies ran at least four commercial rafting trips (and had no violations) and so will automatically be allowed to apply for CRLs in 2006.

Of the three companies that ran fewer than four trips, one of these (American River Recreation) was a new company in 2004 and did not receive authorization to apply for its 2004 CRL until after the first part of the year and so was not issued its license until later than the other companies; thus, as noted in the 2004 KRMP Update Report, American River Recreation was not to start being evaluated for potential 'inactivity' until the 2005 rafting season. If it does not run at least four commercial rafting trips during the 2006 season, American River Recreation could lose its license spot after next season. The other company that did not run at least four commercial trips (Tributary Whitewater) also did not run at least four trips during the 2004 season, and so should lose its license spot for next year (NOTE: Tributary Whitewater's potential 'probationary' status was noted in last years/the 2004 KRMP Update Report). Finally, one rafting company (Wilderness Adventures) was ultimately not issued its CRL from Tulare County because it submitted an incomplete license application (did not return to the RMA the required letters of permission from owners of the support sites it was to utilize) and thus automatically loses its CRL spot for 2006. There are several companies on the waiting list for potential open Kaweah River Commercial River License spots. The procedure to determine what companies would obtain any open CRL spots vacated by rafting companies determined to be 'inactive' in 2005 (Tributary Whitewater Tours and Wilderness Adventures) is for the Resource Management Agency to hold a lottery and draw names.

VII. CONCLUSIONS AND STAFF-RECOMMENDED REVISIONS

Staff recommends that the Board determine, based on the information set forth in the last paragraph under Section VI above, that the rafting companies Tributary Whitewater Tours and Wilderness Adventures be considered 'inactive' for the year 2005 and not be allowed to apply for a Commercial Rafting License for the 2006 season (unless no other rafting companies request to apply for the vacant CRL positions) and that the RMA hold a lottery to determine which other rafting companies will obtain the two CRL spots.

Due to the lack of complaints or negative comments received from river property owners, community members, and/or local or state agencies and to the relatively low commercial rafting usage in 2005 (when compared with the potential maximum usage allowed under the KRMP), RMA staff is not recommending any revisions to the amended 1997 *Kaweah River Management Plan*, thus reaffirming that for future seasons on the Middle Fork Kaweah River, the maximum number of commercial rafting companies allowed continue to be eight licensed companies and the maximum numbers of commercial rafters and rafts per company continue to be restricted to eight rafts per day and eight persons per raft maximum.

An Update report has been prepared annually for the Board since the 1998 rafting season. No investigable complaints regarding the Kaweah River commercial rafting operations have been received by the RMA since 2000. Therefore, Staff is also recommending that, in the future, formal Updates to the KRMP for future rafting seasons not be prepared for Board of Supervisors hearing unless requested by a Board member or recommended by RMA staff (due to the receipt of investigable complaints or to the occurrence of other/unforeseen issues or problems). The RMA would continue to annually monitor the commercial rafting operations as required by the KRMP and conduct a year-end review internally.

VIII. CEQA

Since the 2005 Update to the *Kaweah River Management Plan* is only a review of the 1997 Plan (for which a Negative Declaration was prepared and adopted) and since no action or change is recommended, no CEQA review is required for the Update.

This report was prepared by Jennifer Munn, Resource Management Agency Countywide Planning Division, on November 29, 2005.

Appendix 'A'

2005 KAWEAH RIVER TOTAL RAFTING NUMBERS - PER COMMERCIAL RAFTING LICENSE # / COMPANY

[Rafts & People and Days Run per Month]

	#05-01,WV (Raft-Folk)	#05-02,AR (Raft-Folk)	#05-03,KW (Raft-Folk)	#05-04,AO (Raft-Folk)	#05-05,AC (Raft-Folk)	#05-06,WC (Raft-Folk)	#05-07,TW (Raft-Folk)	#05-08,WA (Raft-Folk)	TOTAL/Month Rafts - Folks
APRIL	7 ~ 45 [1 Day]	0	5 ~ 30 [5 Days]	5 ~ 27 [2 Days]	3 ~ 20 [1 day]	0	6 ~ 32 [2 Days]	0	= 26 ~ 154
MAY	27 ~ 173 [8 Days]	0	48 ~ 306 [18 Days]	63 ~ 323 [10 Days]	25 ~ 157 [9 Days]	20 ~ 155 [5 Days]	0	0	= 183 ~ 1,114
JUNE	68 ~ 444 [16 Days]	2 ~ 14 [1 Day]	59 ~ 362 [24 Days]	53 ~ 296 [11 Days]	20 ~ 108 [9 Days]	7 ~ 45 [4 Days]	2 ~ 14 [1 Day]	0	= 211 ~ 1,283
JULY	3 ~ 22 [2 Days]	4 ~ 22 [1 Day]	76 ~ 477 [24 Days]	15 ~ 88 [6 Days]	4 ~ 22 [2 Days]	0	0	0	= 102 ~ 631

TOTAL / Co.	105- 684	6 ~ 36	188 ~ 1175	136 ~ 734	52 ~ 307	27 ~ 200	8 ~ 46	0	= <u>522 ~ 3,182</u>
(% All)	(20%)	(1%)	(36%)	(26%)	(10%)	(5%)	(2%)	(0%)	
DAYS RUN: (Commercial Trips)	[27 Days]	[2 Days]	[71 Days]	[29 Days]	[21 Days]	[9 Days]	[3 Days]	[0 Days]	

YEAR 2005 TOTAL YEAR (4/2 - 7/24) NUMBERS = ± 522 Rafts and 3,182 People
(Clients & Guides)

[YEAR 2005 "SEASON" (4/30 - 5/10) TOTALS = ± 478 Rafts and 2,930 People]

APRIL 2005 -- NUMBERS OF COMMERCIAL RAFTS AND RAFTERS

DATE	DAY	# 05-01, WV Rafts~Folks	# 05-02, AR Rafts~Folks	# 05-03, KW Rafts~Folks	# 05-04, AO Rafts~Folks	# 05-05, AC Rafts~Folks	# 05-06, WC Rafts~Folks	# 05-07, TW Rafts~Folks	# 05-08, WA Rafts~Folks	Totals / DAY Rafts~Folks
<i>April</i>										
1	Fri									
2	Sat			1 ~ 7						1 ~ 7
3	Sun									
4	Mon									
5	Tues									
6	Wed									
7	Thurs									
8	Fri									
9	Sat									
10	Sun									
11	Mon									
12	Tues									
13	Wed									
14	Thurs									
15	Fri									
16	Sat									
17	Sun			1 ~ 3						1 ~ 3
18	Mon									
19	Tues									
20	Wed									
21	Thurs									
22	Fri									
23	Sat			1 ~ 6	3 ~ 17					4 ~ 23
24	Sun									
25	Mon									
26	Tues									
27	Wed									
28	Thurs									
29	Fri			1 ~ 6				3 ~ 16		4 ~ 22
30	Sat	7 ~ 45		1 ~ 8	2 ~ 10	3 ~ 20		3 ~ 16		16 ~ 99
<hr/>										
Totals / CRL =		7 ~ 45	NONE	5 ~ 30	5 ~ 27	3 ~ 20	NONE	6 ~ 32	NONE	-----
Total APRIL =										26 ~ 154

NOTE: "Folks" includes both Customer and Guide Numbers

* Ran boats in excess of eight under another Company's ^ logo and CRL numbers and at staggered put-in times

MAY 2005 -- NUMBERS OF COMMERCIAL RAFTS AND RAFTERS

		# 05-01, WV	# 05-02, AR	# 05-03, KW	# 05-04, AO	# 05-05, AC	# 05-06, WC	# 05-07, TW	# 05-08, WA	Totals / DAY
DATE	DAY	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks
May										
1	Sun	2 ~ 7		1 ~ 4	2 ~ 9	3 ~ 20				8 ~ 40
2	Mon									
3	Tues									
4	Wed									
5	Thurs									
6	Fri					2 ~ 13				2 ~ 13
7	Sat	1 ~ 5		4 ~ 28		2 ~ 13				7 ~ 46
8	Sun			1 ~ 5		3 ~ 19				4 ~ 24
9	Mon									
10	Tues									
11	Wed									
12	Thurs	2 ~ 12		1 ~ 7						3 ~ 19
13	Fri	2 ~ 11		2 ~ 13	4 ~ 18					8 ~ 42
14	Sat	6 ~ 38		3 ~ 19	10 ~ 63	2 ~ 13				21 ~ 133
15	Sun			3 ~ 18	3 ~ 16					6 ~ 34
16	Mon									
17	Tues									
18	Wed									
19	Thurs			1 ~ 4						1 ~ 4
20	Fri	2 ~ 14					2 ~ 15			4 ~ 29
21	Sat	4 ~ 32		4 ~ 27	6 ~ 38	3 ~ 18	6 ~ 46			23 ~ 161
22	Sun	8 ~ 54		7 ~ 47	4 ~ 25		6 ~ 56			25 ~ 182
23	Mon			2 ~ 14						2 ~ 14
24	Tues			2 ~ 14						2 ~ 14
25	Wed			1 ~ 8						1 ~ 8
26	Thurs									
27	Fri			1 ~ 6	3 ~ 17					4 ~ 23
28	Sat			5 ~ 32	11 ~ 56	3 ~ 19	3 ~ 21			22 ~ 128
29	Sun			6 ~ 38	11 ~ 44	4 ~ 24	3 ~ 17			24 ~ 123
30	Mon			3 ~ 18	9 ~ 37	3 ~ 18				15 ~ 73
31	Tues			1 ~ 4						1 ~ 4
Totals / CRL =		27 ~ 173	NONE	48 ~ 306	63 ~ 323	25 ~ 157	20 ~ 155	NONE	NONE	
Total MAY =										183 ~ 1,114

NOTE: "Folks" includes both Customer and Guide Numbers

* Ran boats in excess of eight under another Company's ^ logo and CRL numbers and at staggered put-in times

JUNE 2005 -- NUMBERS OF COMMERCIAL RAFTS AND RAFTERS

DATE	DAY	# 05-01, WV Rafts~Folks	# 05-02, AR Rafts~Folks	# 05-03, KW Rafts~Folks	# 05-04, AO Rafts~Folks	# 05-05, AC Rafts~Folks	# 05-06, WC Rafts~Folks	# 05-07, TW Rafts~Folks	# 05-08, WA Rafts~Folks	Totals / DAY Rafts~Folks
June 1	Wed			2 ~ 10						2 ~ 10
2	Thurs			1 ~ 3						1 ~ 3
3	Fri	6 ~ 24								6 ~ 24
4	Sat	9 ~ 60		4 ~ 25	11 ~ 64	2 ~ 12	2 ~ 19			28 ~ 180
5	Sun	6 ~ 40			6 ~ 38	2 ~ 12	1 ~ 6			15 ~ 96
6	Mon			1 ~ 5		2 ~ 11				3 ~ 16
7	Tues									
8	Wed			1 ~ 3						1 ~ 3
9	Thurs									
10	Fri	3 ~ 16		2 ~ 11						5 ~ 27
11	Sat	5 ~ 37		7 ~ 52	3 ~ 19	2 ~ 12				17 ~ 120
12	Sun	7 ~ 56		2 ~ 10	2 ~ 9	4 ~ 23				15 ~ 98
13	Mon									
14	Tues	3 ~ 19								3 ~ 19
15	Wed	3 ~ 17		1 ~ 6	3 ~ 15					7 ~ 38
16	Thurs			3 ~ 18						3 ~ 18
17	Fri	2 ~ 14		2 ~ 15	5 ~ 25					9 ~ 54
18	Sat	5 ~ 30		6 ~ 38	5 ~ 27	2 ~ 10				18 ~ 105
19	Sun	2 ~ 15		6 ~ 39	5 ~ 31	2 ~ 10				15 ~ 95
20	Mon			1 ~ 7						1 ~ 7
21	Tues	2 ~ 10		1 ~ 6						3 ~ 16
22	Wed			1 ~ 7						1 ~ 7
23	Thurs			3 ~ 19						3 ~ 19
24	Fri	3 ~ 18	2 ~ 14	2 ~ 12						7 ~ 44
25	Sat	6 ~ 47		4 ~ 21	7 ~ 36		2 ~ 10	2 ~ 14		21 ~ 128
26	Sun	3 ~ 19		3 ~ 21	4 ~ 20	2 ~ 9	2 ~ 10			14 ~ 79
27	Mon	3 ~ 22		1 ~ 4		2 ~ 9				6 ~ 35
28	Tues			2 ~ 10						2 ~ 10
29	Wed			1 ~ 8						1 ~ 8
30	Thurs			2 ~ 12	2 ~ 12					4 ~ 24
<hr/>										
Totals / CRL =		68 ~ 444	2 ~ 14	59 ~ 362	53 ~ 296	20 ~ 108	7 ~ 45	2 ~ 14	NONE	
Total	JUNE =									211 ~ 1,283

NOTE: "Folks" includes both Customer and Guide Numbers

* Ran boats in excess of eight under another Company's ^ logo and CRL numbers and at staggered put-in times

JULY 2005 -- NUMBERS OF COMMERCIAL RAFTS AND RAFTERS

		# 05-01, WV	# 05-02, AR	# 05-03, KW	# 05-04, AO	# 05-05, AC	# 05-06, WC	# 05-07, TW	# 05-08, WA	Totals / DAY
DATE	DAY	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks	Rafts~Folks
July										
1	Fri			5 ~ 35	2 ~ 8					7 ~ 43
2	Sat	2 ~ 15	4 ~ 22	6 ~ 41	2 ~ 11					14 ~ 89
3	Sun			5 ~ 37	3 ~ 21					8 ~ 58
4	Mon			5 ~ 36	2 ~ 7					7 ~ 43
5	Tues	1 ~ 7		1 ~ 6						2 ~ 13
6	Wed			1 ~ 7						1 ~ 7
7	Thurs			5 ~ 27						5 ~ 27
8	Fri			4 ~ 28						4 ~ 28
9	Sat			5 ~ 33	3 ~ 20	2 ~ 11				10 ~ 64
10	Sun			5 ~ 30	3 ~ 21	2 ~ 11				10 ~ 62
11	Mon			1 ~ 8						1 ~ 8
12	Tues			2 ~ 11						2 ~ 11
13	Wed			2 ~ 10						2 ~ 10
14	Thurs			4 ~ 24						4 ~ 24
15	Fri			2 ~ 11						2 ~ 11
16	Sat			4 ~ 27						4 ~ 27
17	Sun			1 ~ 5						1 ~ 5
18	Mon			1 ~ 7						1 ~ 7
19	Tues			4 ~ 26						4 ~ 26
20	Wed			1 ~ 4						1 ~ 4
21	Thurs			1 ~ 4						1 ~ 4
22	Fri			5 ~ 26						5 ~ 26
23	Sat			4 ~ 24						4 ~ 24
24	Sun			2 ~ 10						2 ~ 10
25	Mon									
26	Tues									
27	Wed									
28	Thurs									
29	Fri									
30	Sat									
31	Sun									
Totals	/ CRL =	3 ~ 22	4 ~ 22	76 ~ 477	15 ~ 88	4 ~ 22	NONE	NONE	NONE	
Total	JULY =									102 ~ 631

NOTE: "Folks" includes both Customer and Guide Numbers

* Ran boats in excess of eight under another Company's ^ logo and CRL numbers and at staggered put-in times

RESOURCE MANAGEMENT AGENCY



INTEROFFICE MEMORANDUM

November 14, 2005

To: Jennifer Munn, Long Range Planning

From: Cindy Wynalda, Code Compliance Division

Subject: Kaweah River Management Plan 2005 Update

The RMA Code Compliance division did not receive any complaints during the 2005 rafting season.

**RECEIVED
TULARE COUNTY**

NOV 14 2005

**RESOURCE
MANAGEMENT
AGENCY**



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
LAKE KAWEAH
P.O. BOX 44270, LEMONCOVE, CA 93244-4270
Tel: (559) 597-2301 Fax: (559) 559-2468

November 21, 2005

Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Dear Ms. Munn,

This letter is sent in response to your request for comments for the 2005 Update of the Kaweah River Management Plan.

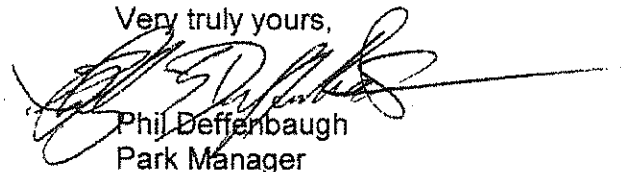
Our agency received no complaints related to the rafting companies.

At our new higher lake level the rafters were taking out at the Cobble Knoll Dike. We allowed them to stage a couple of vehicles to haul rafts and they had plenty of room for their vans.

This winter and spring we will start construction of a new boat launching facility at Slick Rock. We will ask for the rafting companies to be flexible to work around any construction. We will also ask them to work with us, to find the best take out area/procedure at the new facility.

We appreciate you including the Corps of Engineers in your planning process. If you have any questions please give me a call.

Very truly yours,



Phil Deffenbaugh
Park Manager

RECEIVED
TULARE COUNTY

NOV 21 2005

RESOURCE
MANAGEMENT
AGENCY

NOTICE

RE: COMMERCIAL RAFTING ON THE KAWEAH RIVER, THREE RIVERS AREA

Commercial river rafting (for profit/exchange of money) is allowed on the middle fork of the Kaweah River in the Three Rivers area only by rafting companies that are licensed by the County of Tulare (per Tulare County Ordinance Nos. 3179 and 3199 and the Kaweah River Management Plan, which regulates the portion of the Kaweah River located between Sequoia National Park and Lake Kaweah). The following eight rafting companies are permitted to run commercial rafting trips on the Kaweah River in 2005 (the logos that appear on the permitted companies' rafts are shown on the back of this page):

All-Outdoors Whitewater Rafting	Tributary Whitewater Tours
American River Recreation	Whitewater Connection
Kaweah White Water Adventures	Whitewater Voyages
Mariah Adventure Connection	Wilderness Adventures

The licensed rafting companies are subject to certain operating rules and conditions that address parking and river access (which are allowed at locations specified in each license); trespassing; littering; unhealthy sanitation practices; illegal camping; adverse impacts on the riparian environment; and excessive noise during the raft trips.

If you believe that a licensed rafting company has violated the rules, or if you are aware of an unlicensed company (one not listed above) running illegal commercial rafting trips in the Three Rivers area, please report any such activity to the Tulare County Resource Management Agency Code Compliance Coordinator, by calling (559) 733-6291 or by writing or visiting the Tulare County Resource Management Agency, 5961 South Mooney Blvd., Visalia, CA 93277. In your report, be sure to include the following information:

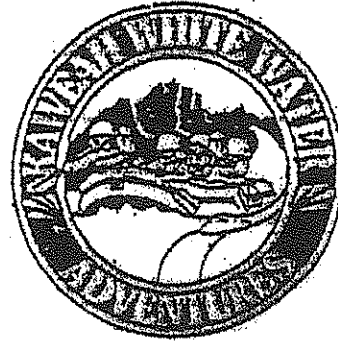
The name and/or logo of the rafting company involved, the date and time and location of the incident, and the nature of the offense.
Photographic evidence would be helpful, but is not required.

FINAL NOTE: Private river rafting does not require a license from Tulare County but is subject to all trespass and traffic control laws of the State of California and the County of Tulare.

All Outdoors

All-Outdoors

Kaweah White Water Adventures



American River Recreation



Whitewater Connection

WWC

Mariah Adventure Connection

**AC or
MAC**

Whitewater Voyages



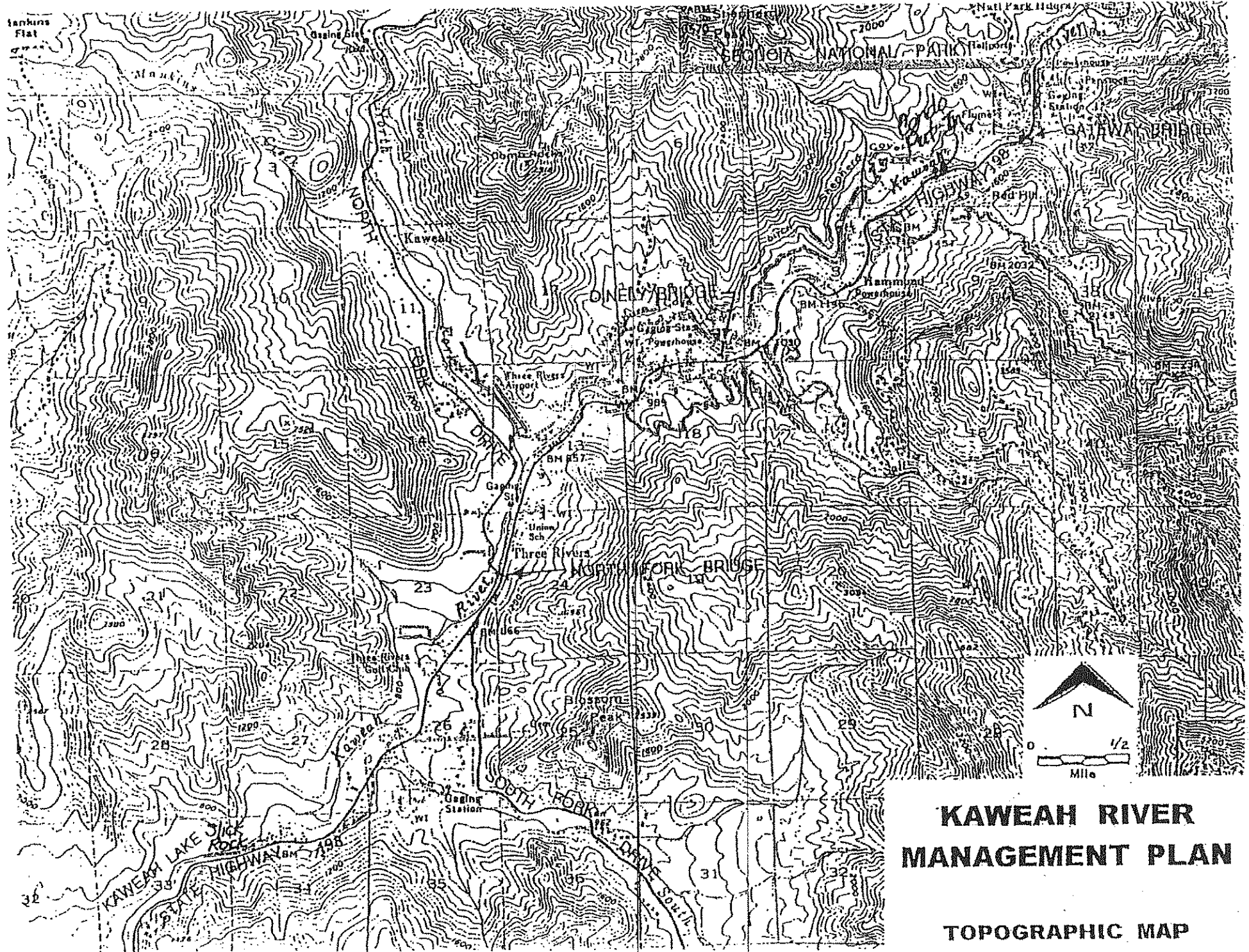
**Whitewater
Voyages**

Tributary Whitewater Tours

Tributary

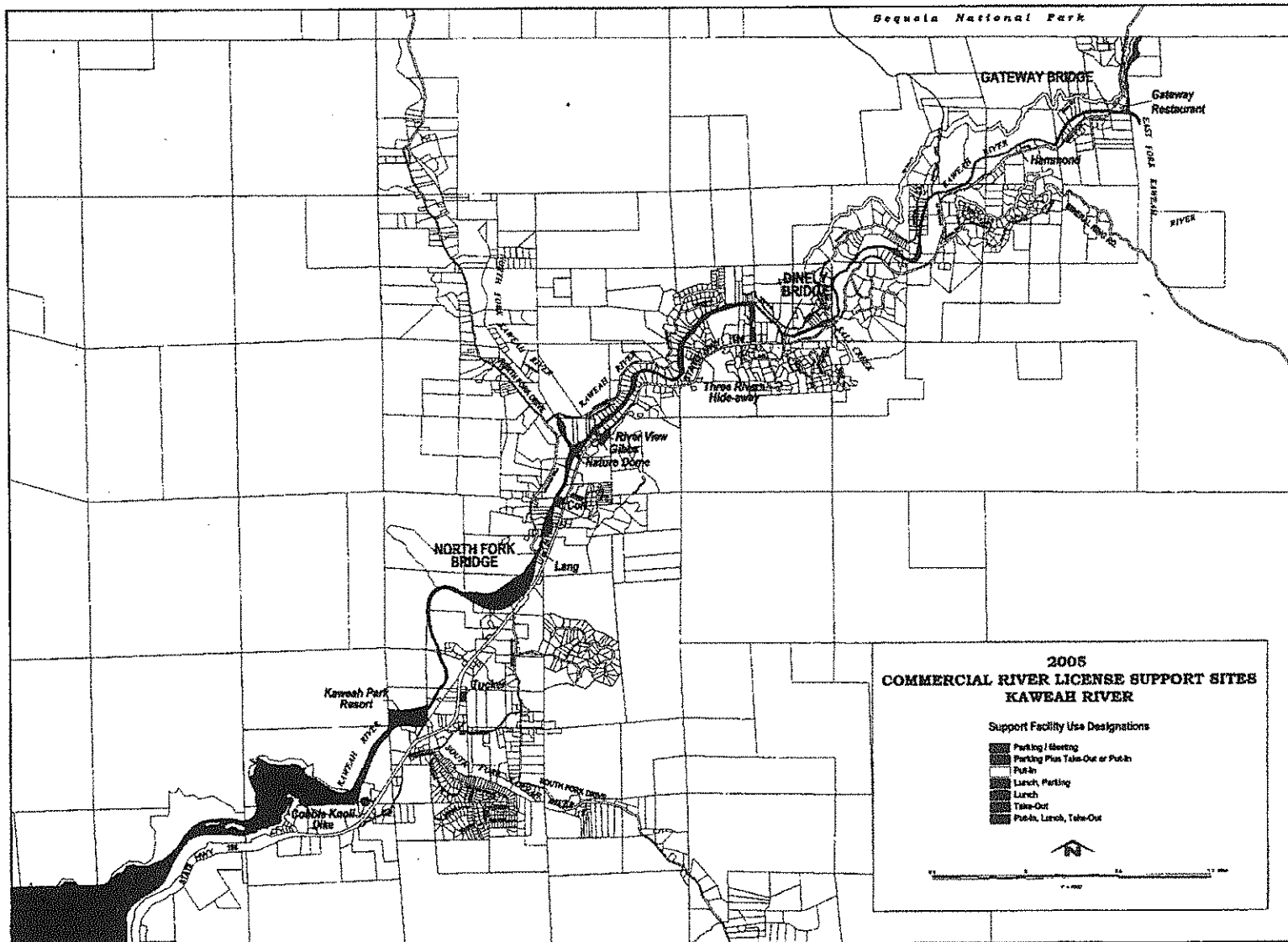
Wilderness Adventures





KAWEAH RIVER MANAGEMENT PLAN

TOPOGRAPHIC MAP



Sequoia National Park

GATEWAY BRIDGE

Gateway Restaurant

Hammond

RIVER

DINE BRIDGE

Three Rivers Hide-away

Ribot View
Cafe
Hidiro Dome

NORTH FORK BRIDGE

Lang

Kaweah Park
Resort

Mucke

Goble Knoll
Lodge

SOUTH FORK BRIDGE

FINANCING:

Not applicable.

ALTERNATIVES:

Your Board may wish to make other recommendations for the 2005 Update or consider changes to the Kaweah River Management Plan or decline to make any changes at this time.

INVOLVEMENT OF OTHER DEPARTMENTS OR AGENCIES:

Tulare County Counsel provided input to the Kaweah River Management Plan.

SIGNATURE REQUIREMENTS:

County Administrative Officer/Clerk of the Board of Supervisors or authorized Deputy to attest to the Resolution.

ADMINISTRATIVE SIGN OFF:

RESOURCE MANAGEMENT AGENCY


George E. Finney
Assistant Director – Long Range Planning


Henry Hash, Director

JM

Submittal Date: December 7, 2005

December 20, 2005

Item #3

PUBLIC HEARING: Request from Resource Management Agency to review the proposed 2005 Update to the Kaweah River Management Plan, which implements Tulare County Ordinance Code Chapter 11 of Part VI pertaining to river rafting.

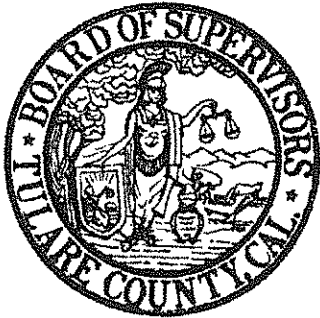
Resolution No. 2005-0814

**BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA**

IN THE MATTER OF ADOPTION OF)
THE 2005 UPDATE TO THE KAWEAH) RESOLUTION NO. 2005-0814
RIVER MANAGEMENT PLAN)

UPON MOTION OF SUPERVISOR Cox, SECONDED BY
SUPERVISOR Worthley, THE FOLLOWING WAS ADOPTED BY THE
BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD DECEMBER 20,
2005, BY THE FOLLOWING VOTE:

AYES: Supervisors Ishida, Conway, Cox, Worthley and Maples
NOES: None
ABSTAIN: None
ABSENT: None



ATTEST: C. Brian Haddix
County Administrative Officer/
Clerk, Board of Supervisors

BY: Mickie Baldwin
Chief Clerk

Adopted the 2005 Update to the Kaweah River Management Plan, which implements Tulare County Ordinance Code Chapter 11 of Part VI, pertaining to river rafting including the recommendations set forth on Page 9 of the 2005 Update Report, as attached.

Cc: RMA
County Counsel
CAO
Auditor

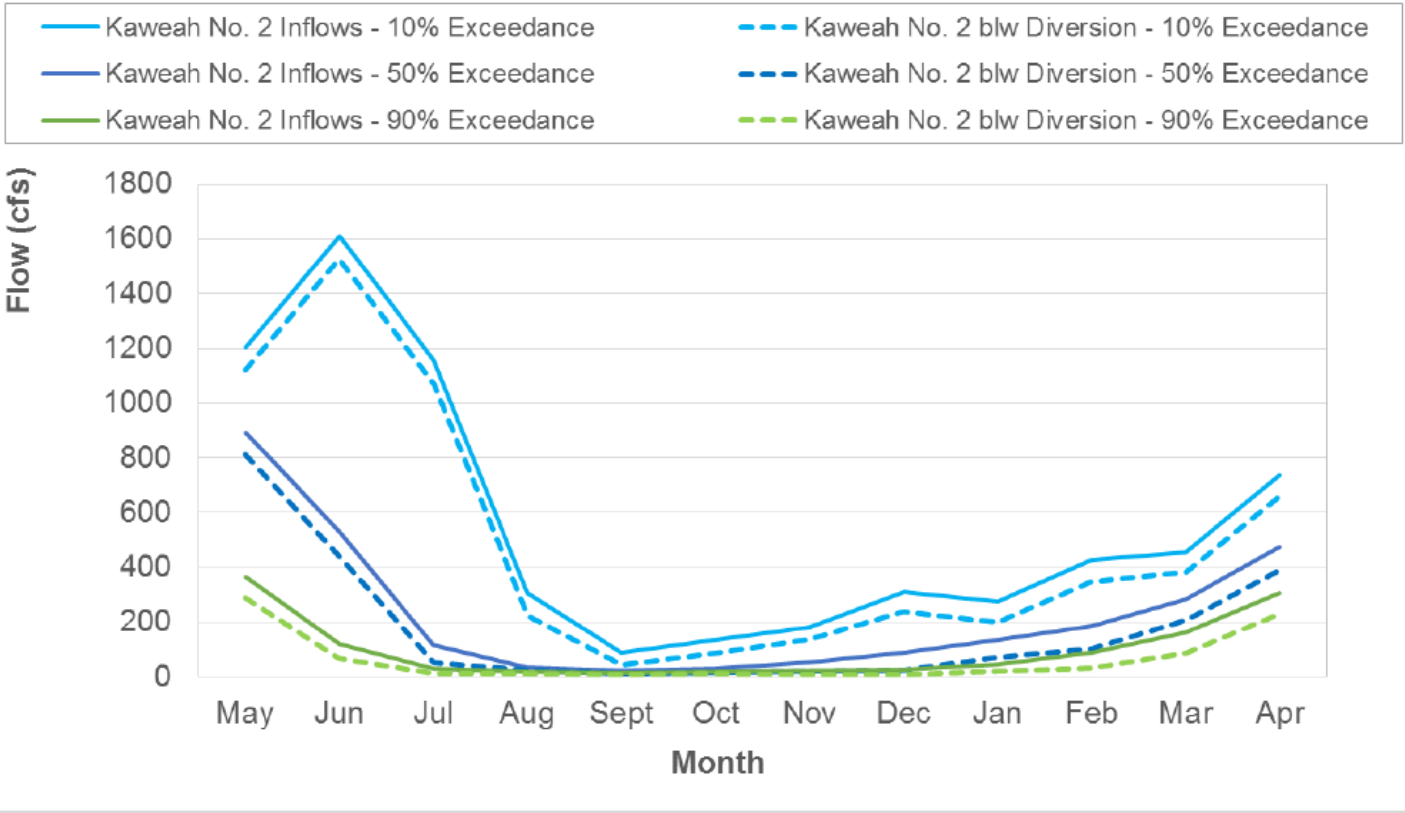
12/21/05
mb

Appendix D

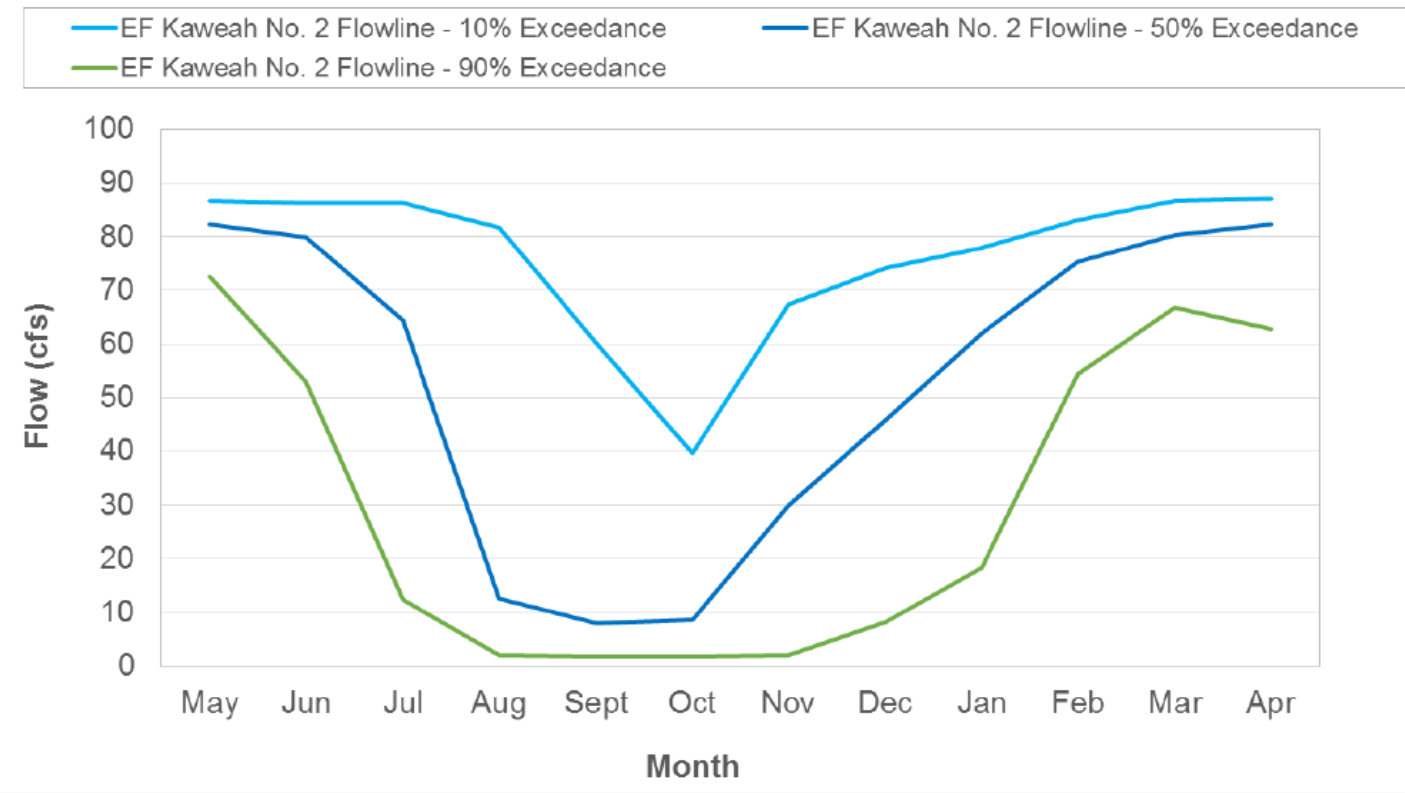
Exceedance Charts

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

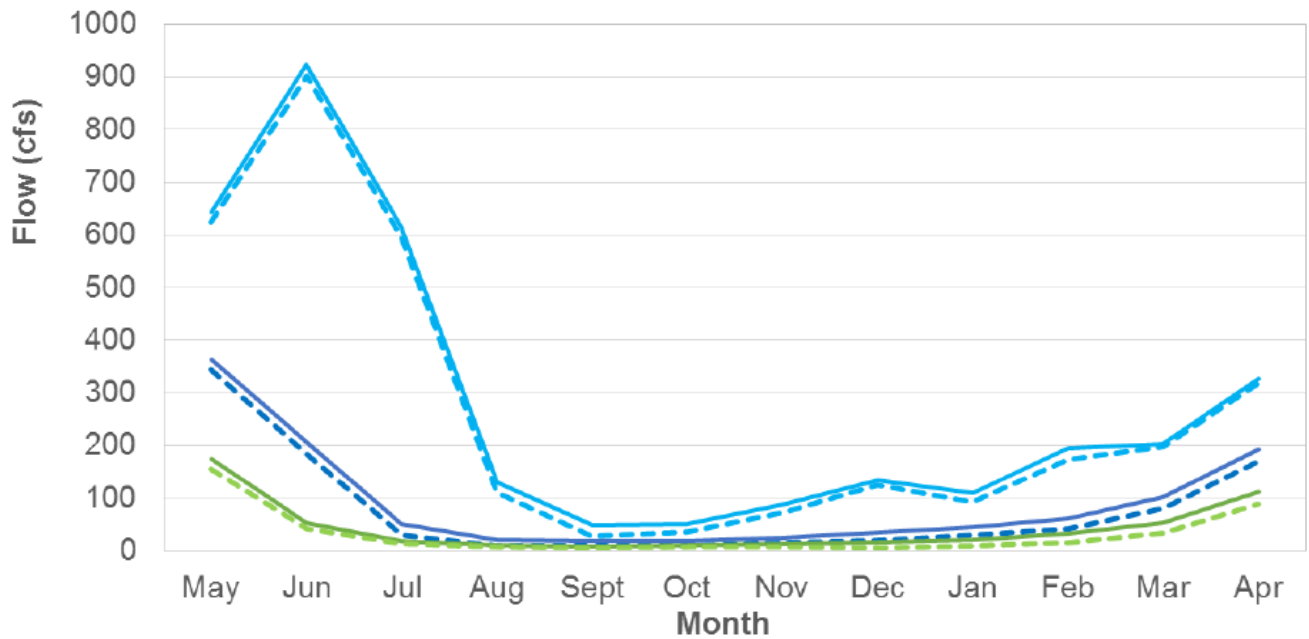


Kaweah Diversion No. 2 Flowline



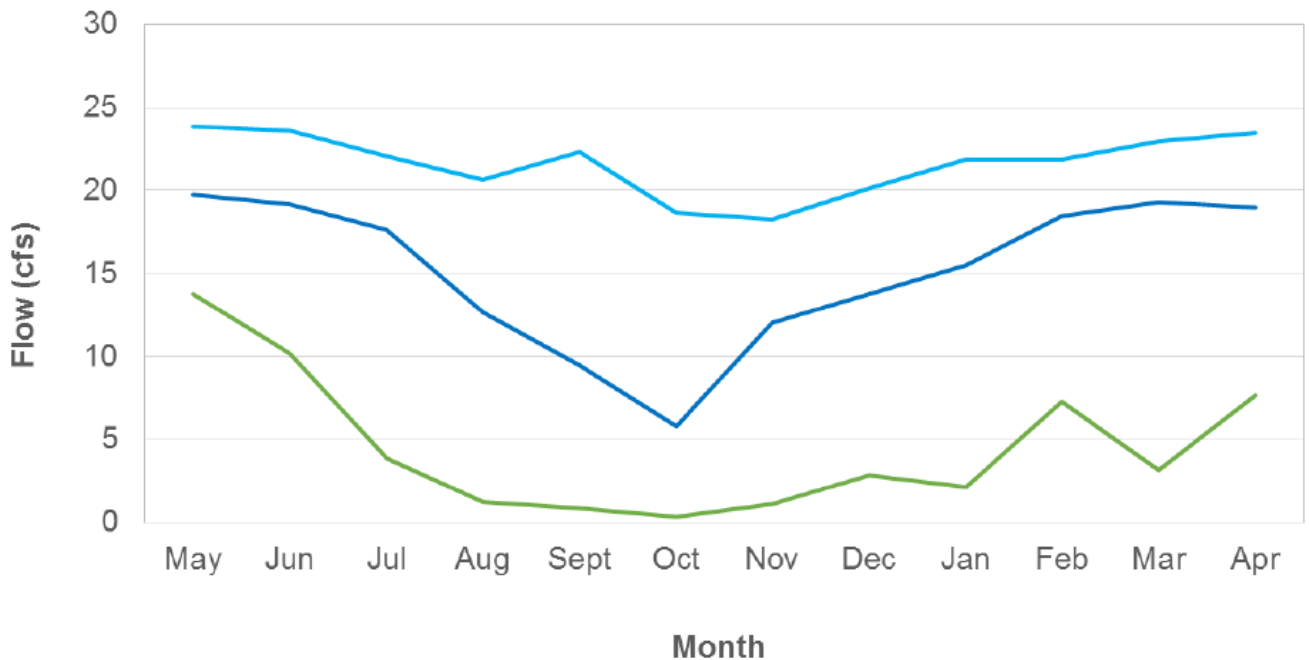
East Fork Kaweah No. 1 Inflows and Flows blw Kaweah No. 1 Diversion Dam

- EF Kaweah No. 1 Inflows - 10% Exceedance
- EF Kaweah No. 1 Inflows - 50% Exceedance
- EF Kaweah No. 1 Inflows - 90% Exceedance
- - EF Kaweah No. 1 blw Diversion - 10% Exceedance
- - EF Kaweah No. 1 blw Diversion - 50% Exceedance
- - EF Kaweah No. 1 blw Diversion - 90% Exceedance



East Fork Kaweah Diversion No. 1 Flowline

- EF Kaweah No. 1 Flowline - 10% Exceedance
- EF Kaweah No. 1 Flowline - 50% Exceedance
- EF Kaweah No. 1 Flowline - 90% Exceedance

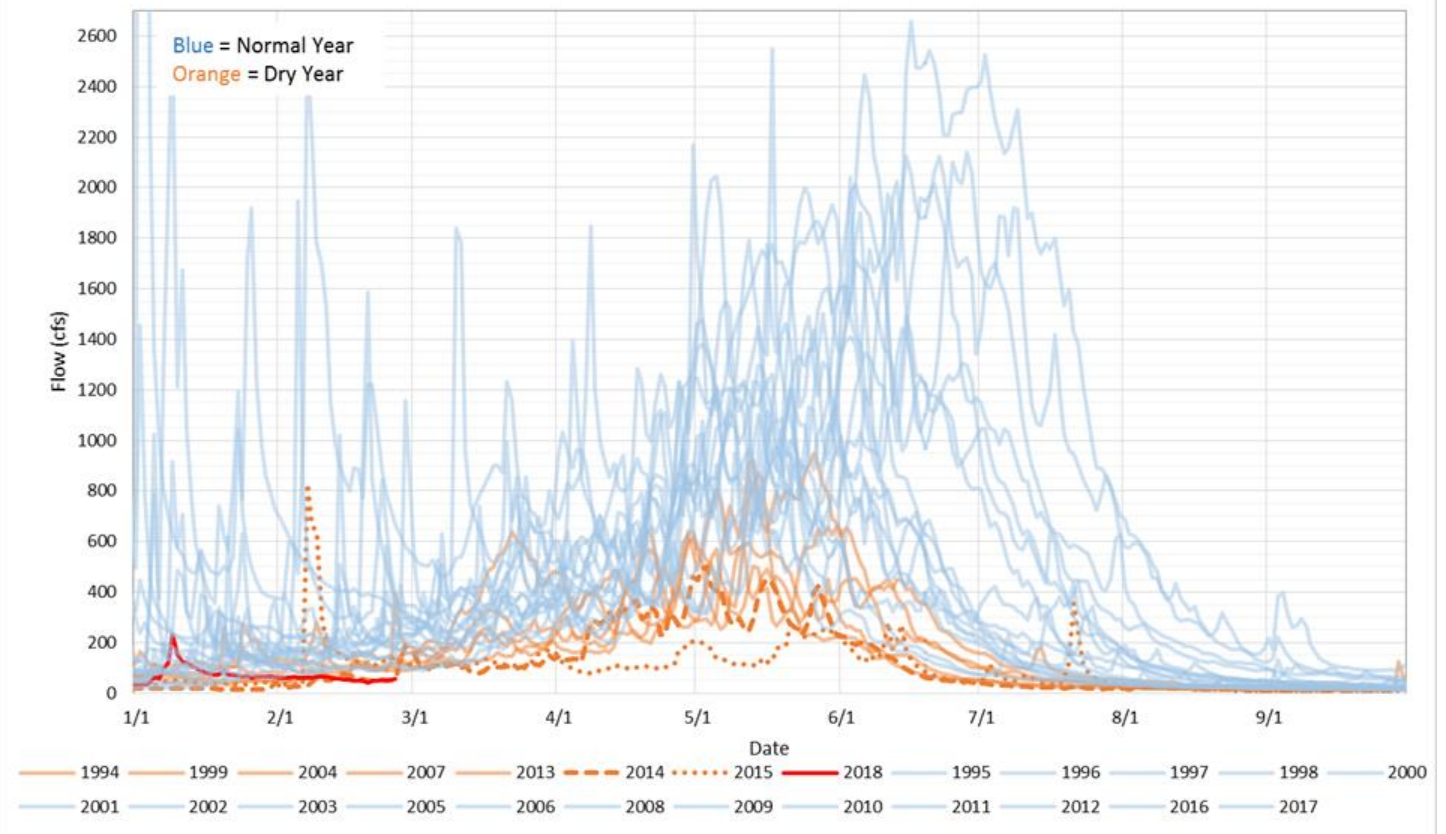


Appendix E

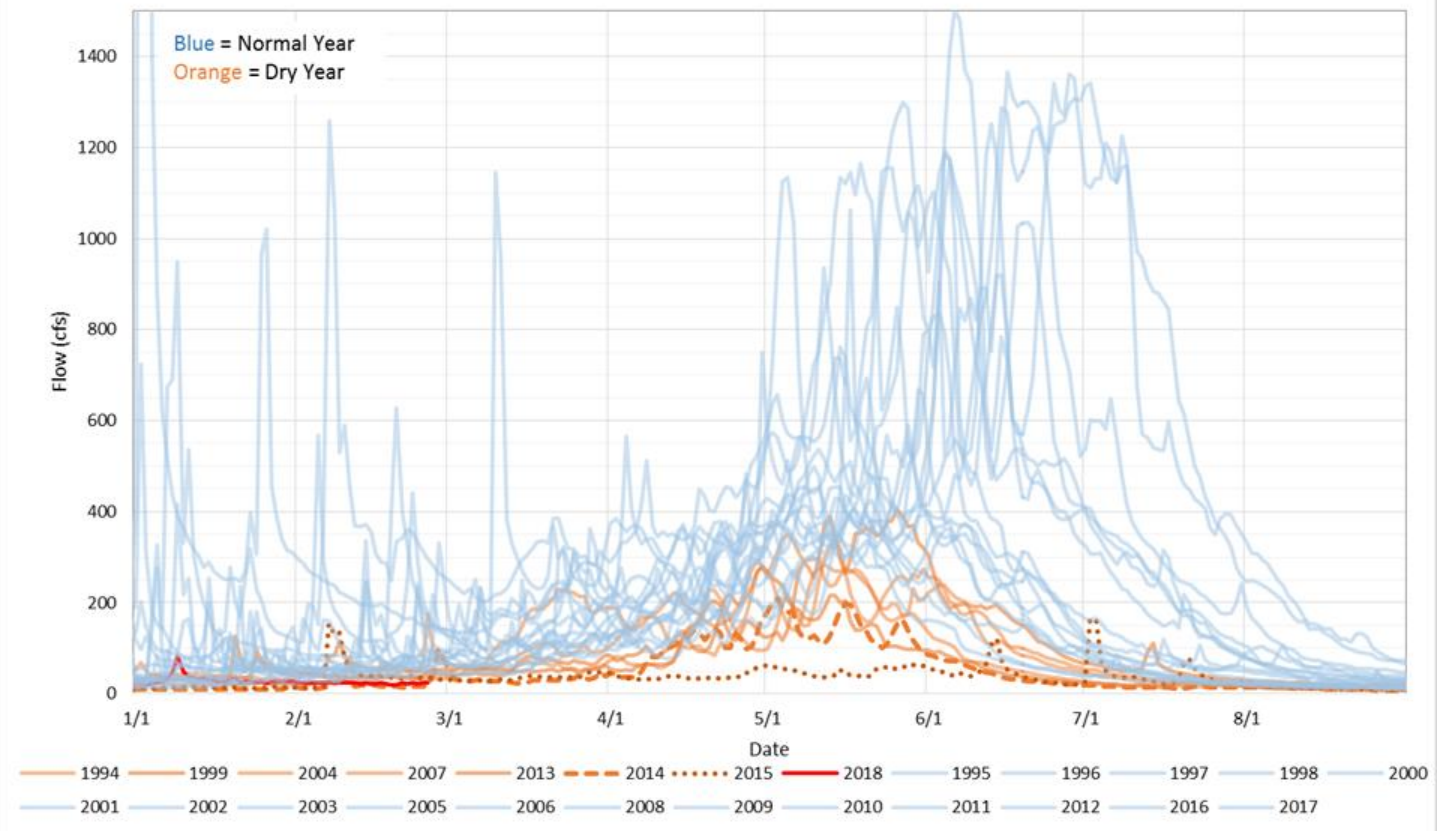
Hydrographs below the Kaweah No. 1 and No. 2 Diversions

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Kaweah No. 2 Diversion Normal and Dry Year Flows



Kaweah No. 1 Diversion Normal and Dry Year Flows

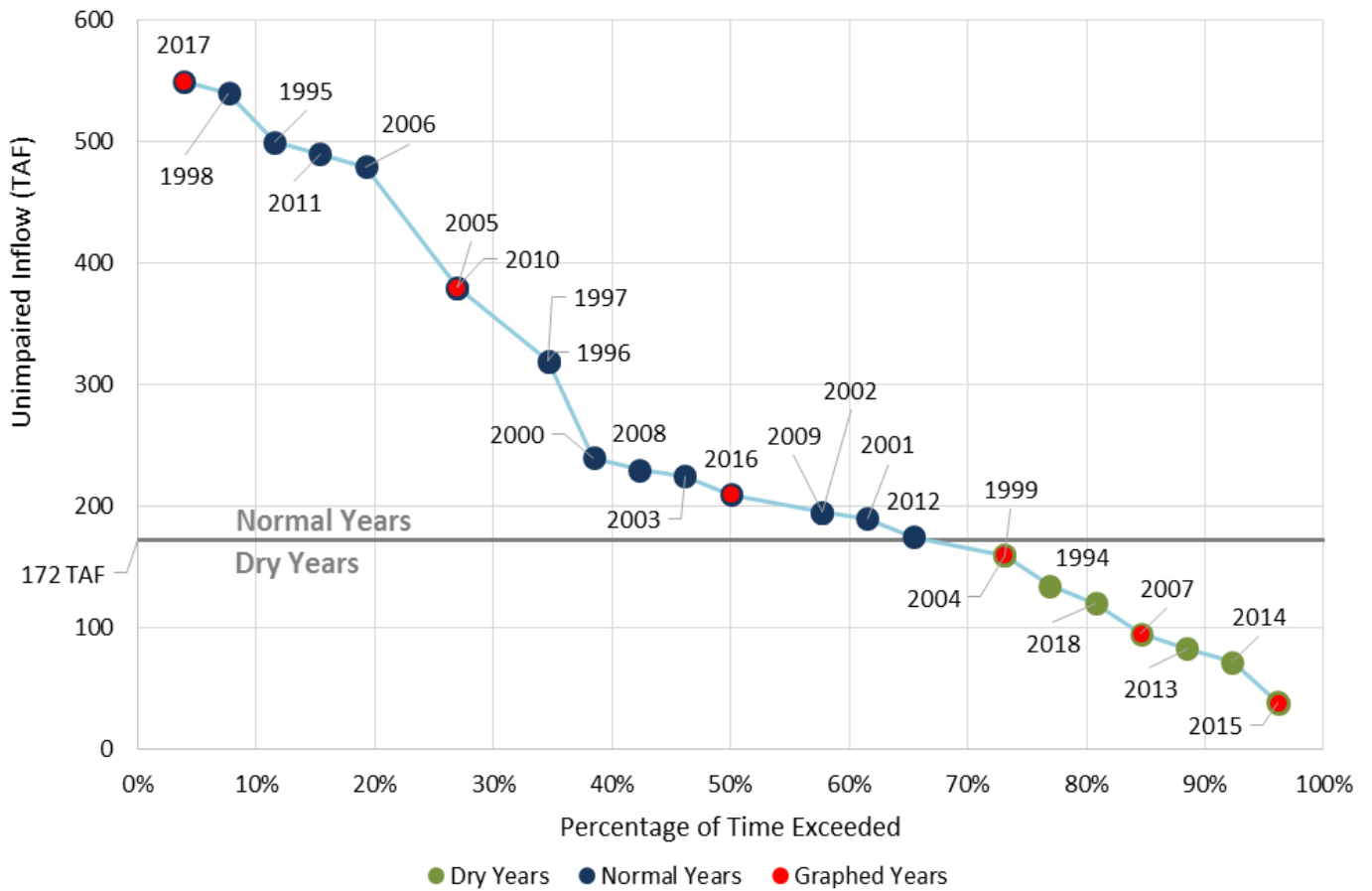


Appendix F

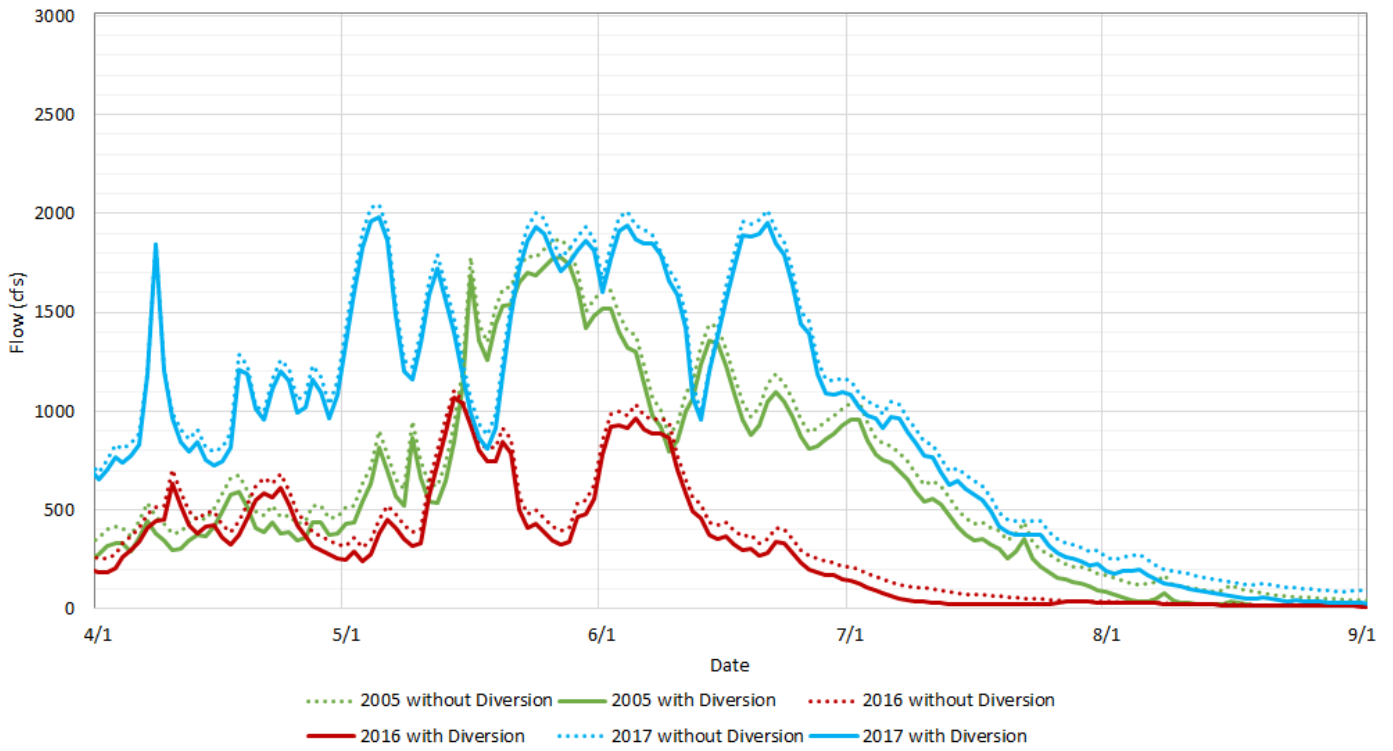
Hydrographs Representing Normal and Dry Years

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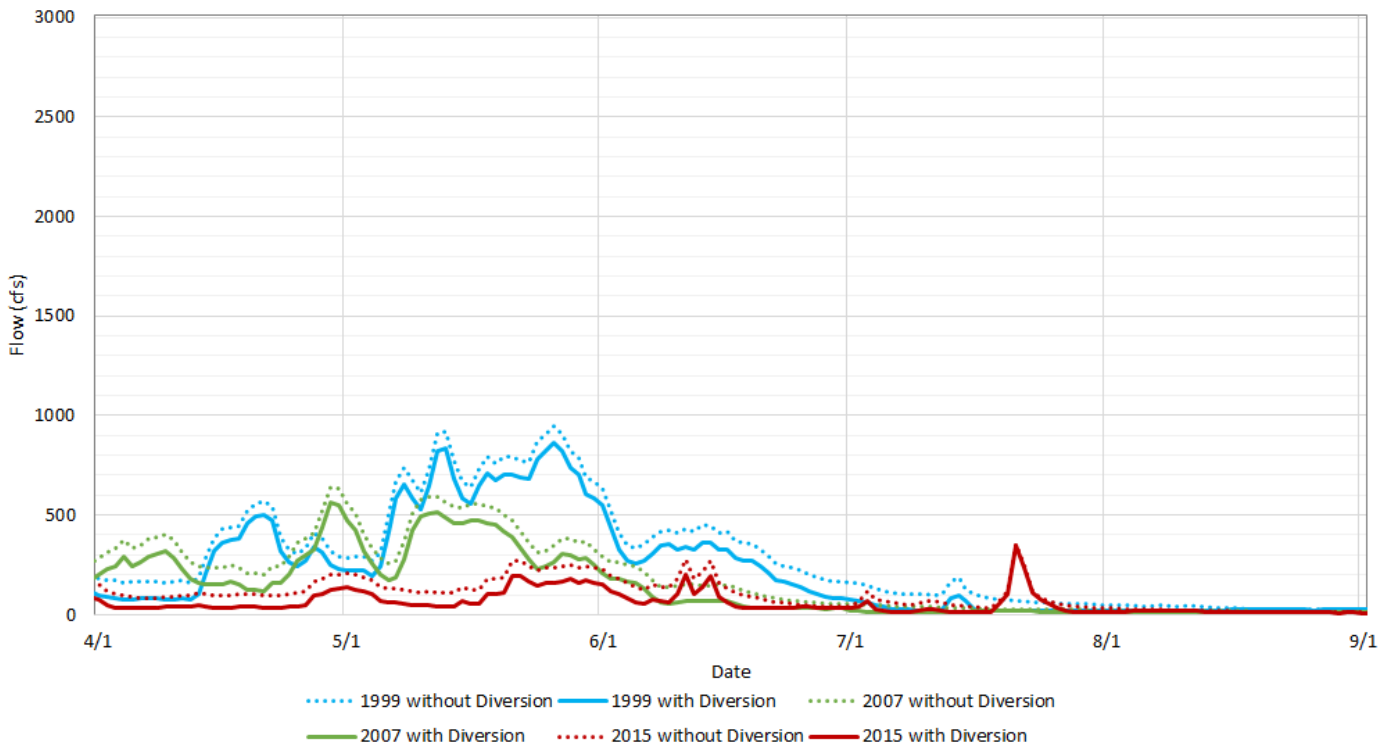
Apr 1 - Jul 1 Forecast of Runoff in the Kaweah River at Terminus Reservoir based on Bulletin 120 May 1 Forecast (1995-2018)



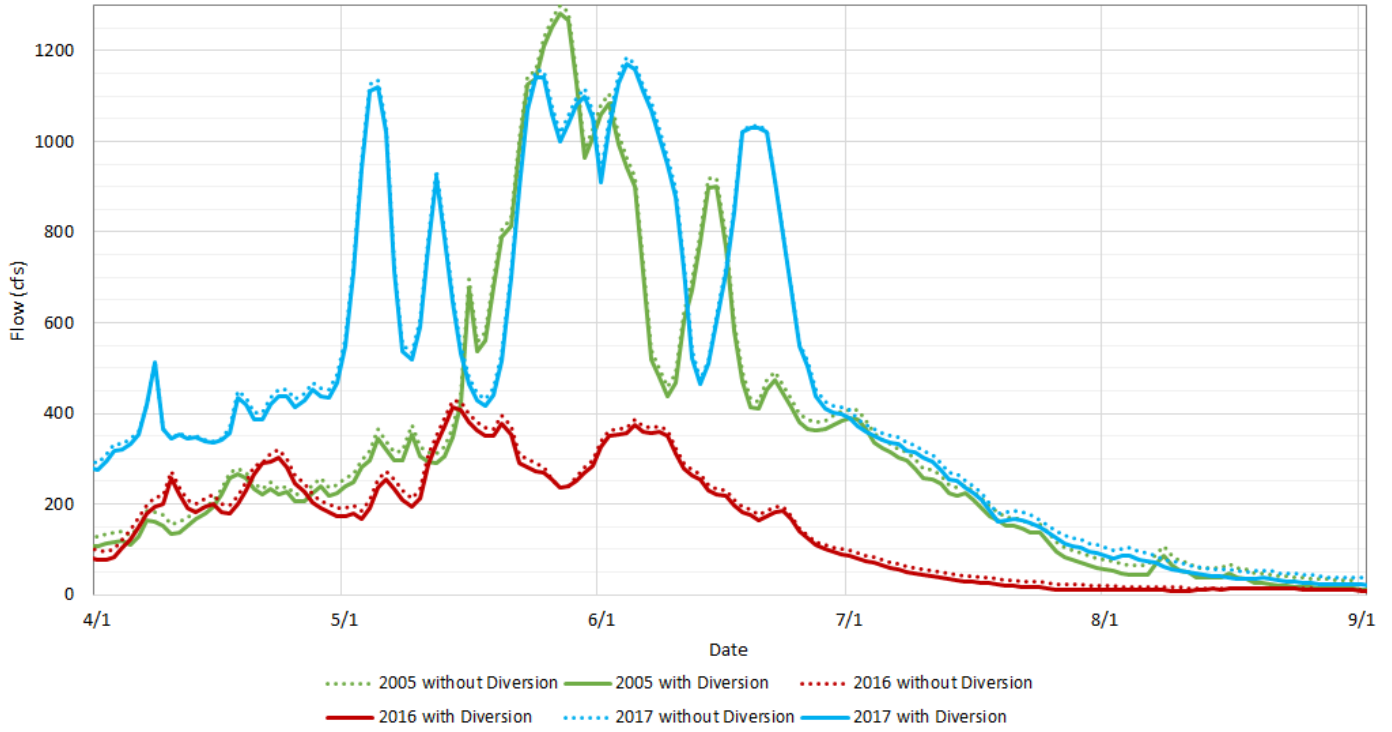
Kaweah River - No. 2 Diversion Representative Normal Year Flows



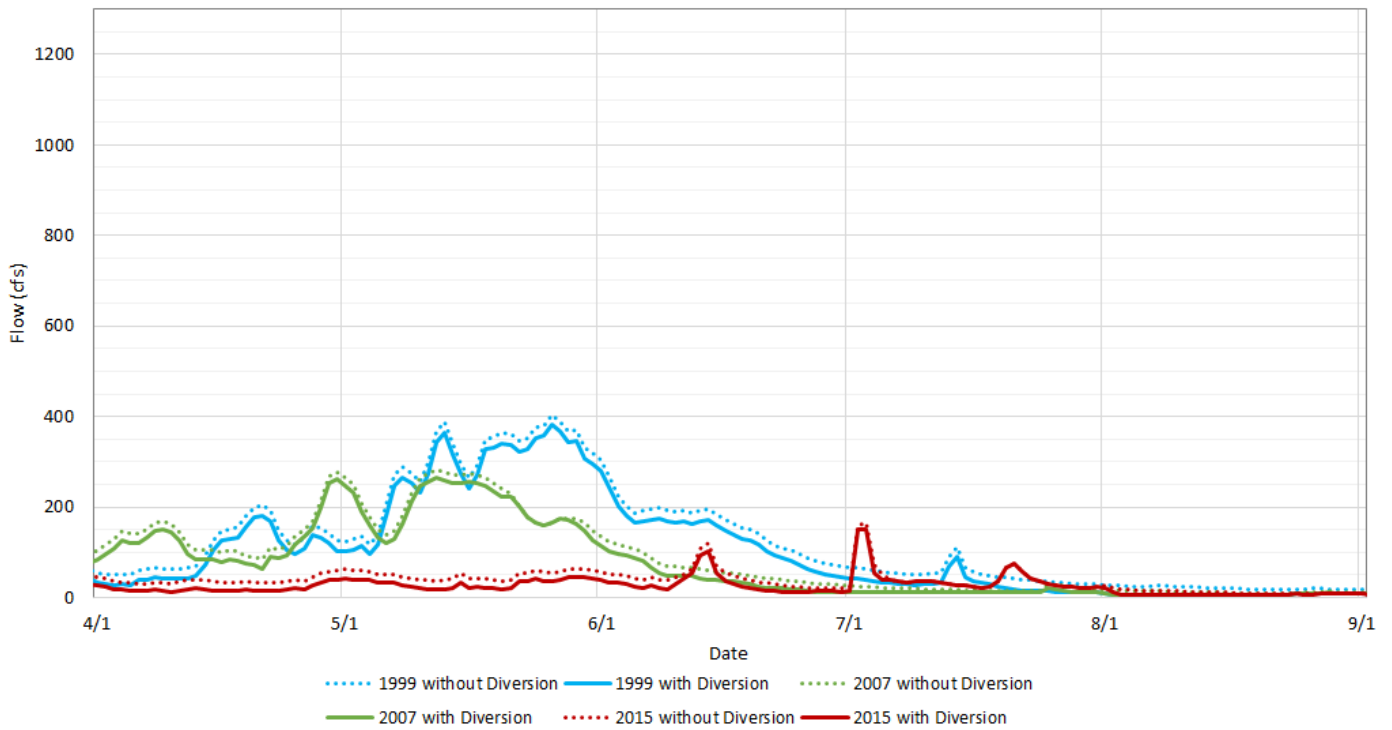
Kaweah River - No. 2 Diversion Representative Dry Year Flows



East Fork Kaweah River - No. 1 Diversion Representative Normal Year Flows



East Fork Kaweah River - No. 1 Diversion Representative Dry Year Flows

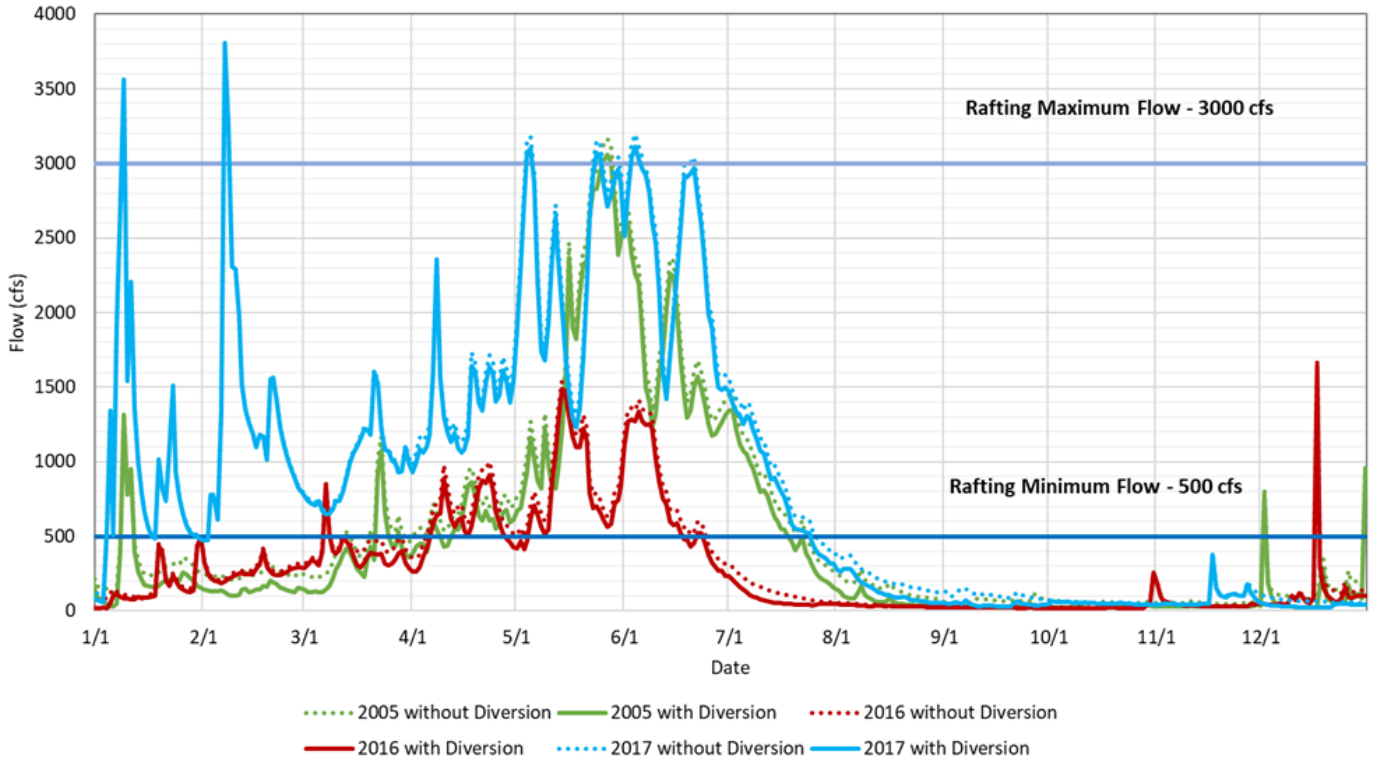


Appendix G

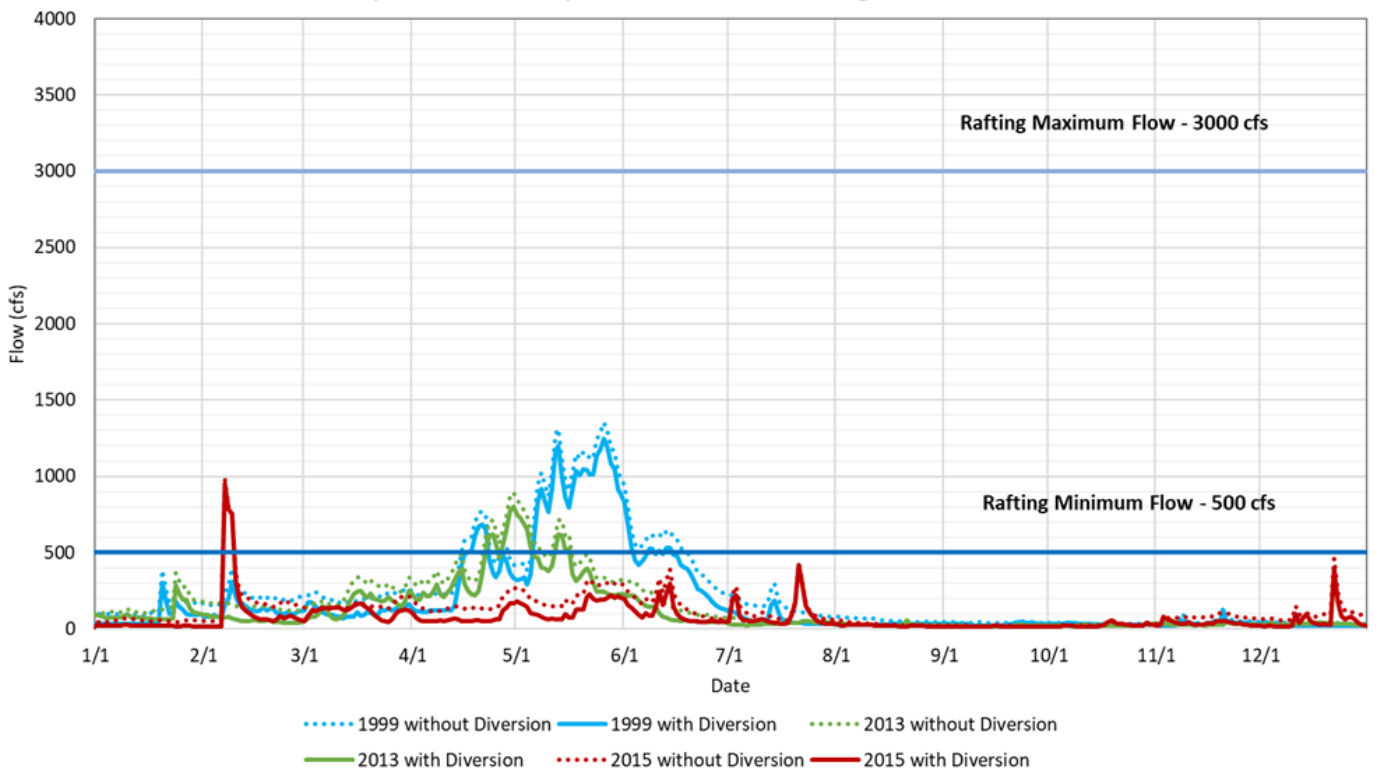
Boating Flow Hydrographs – Representative Water-year Types

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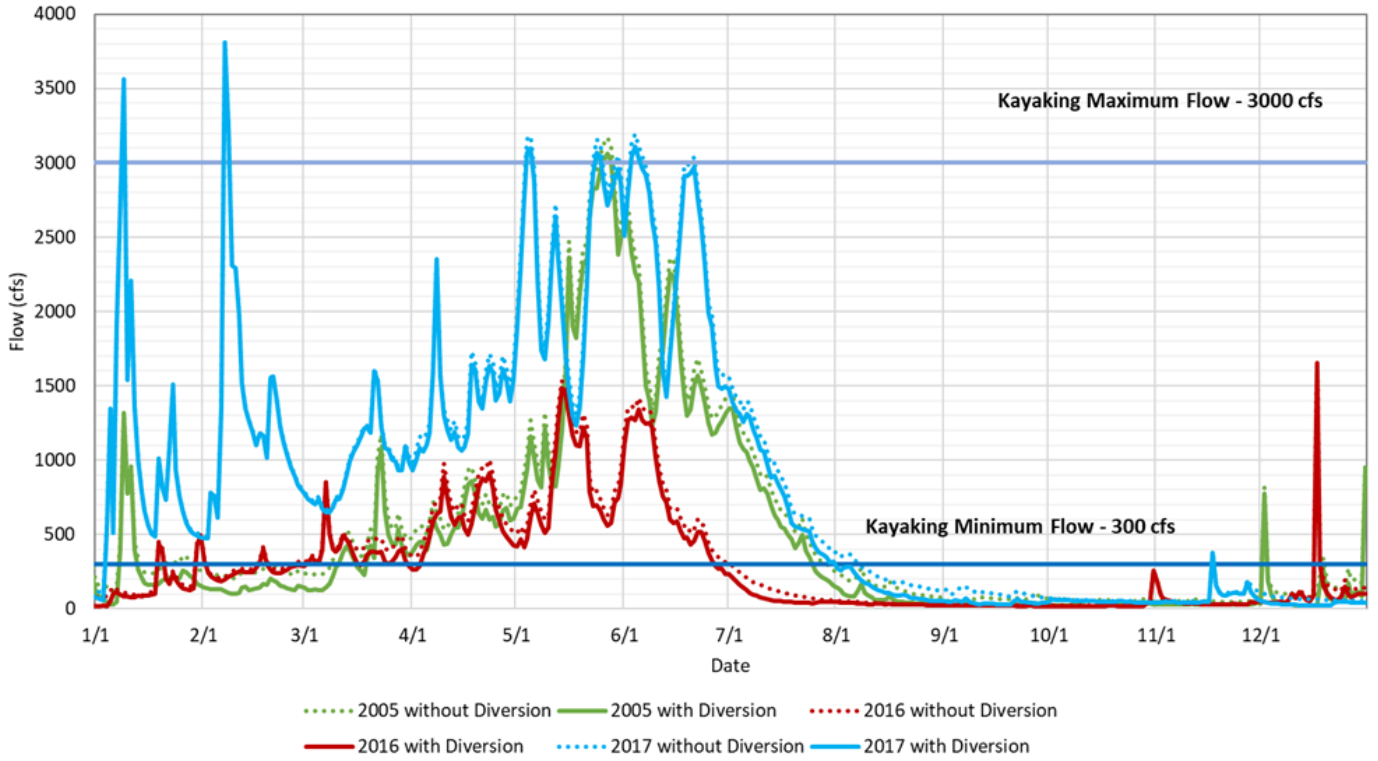
**Kaweah River below confluence with East Fork Kaweah
Representative Normal Year Flows with Rafting Flow Limits**



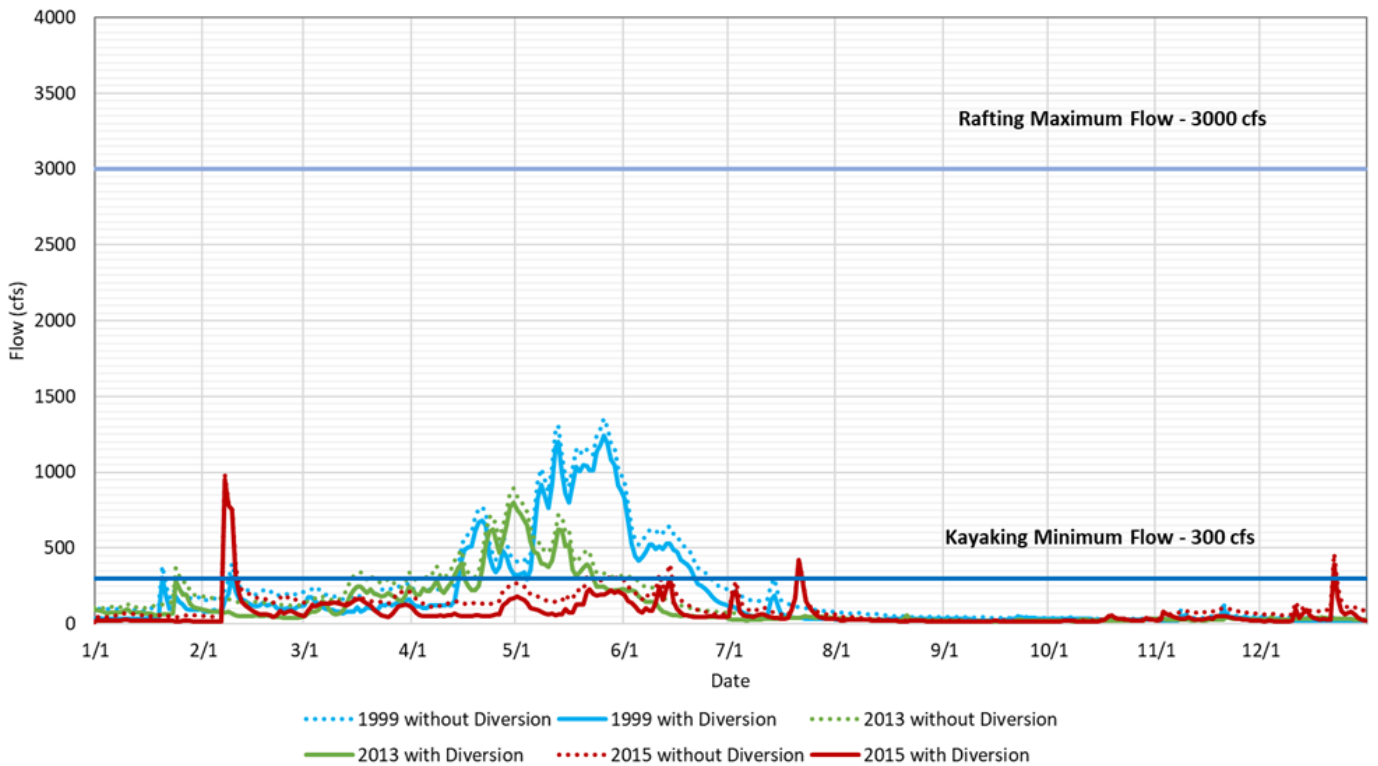
**Kaweah River below confluence with East Fork Kaweah
Representative Dry Year Flows with Rafting Flow Limits**



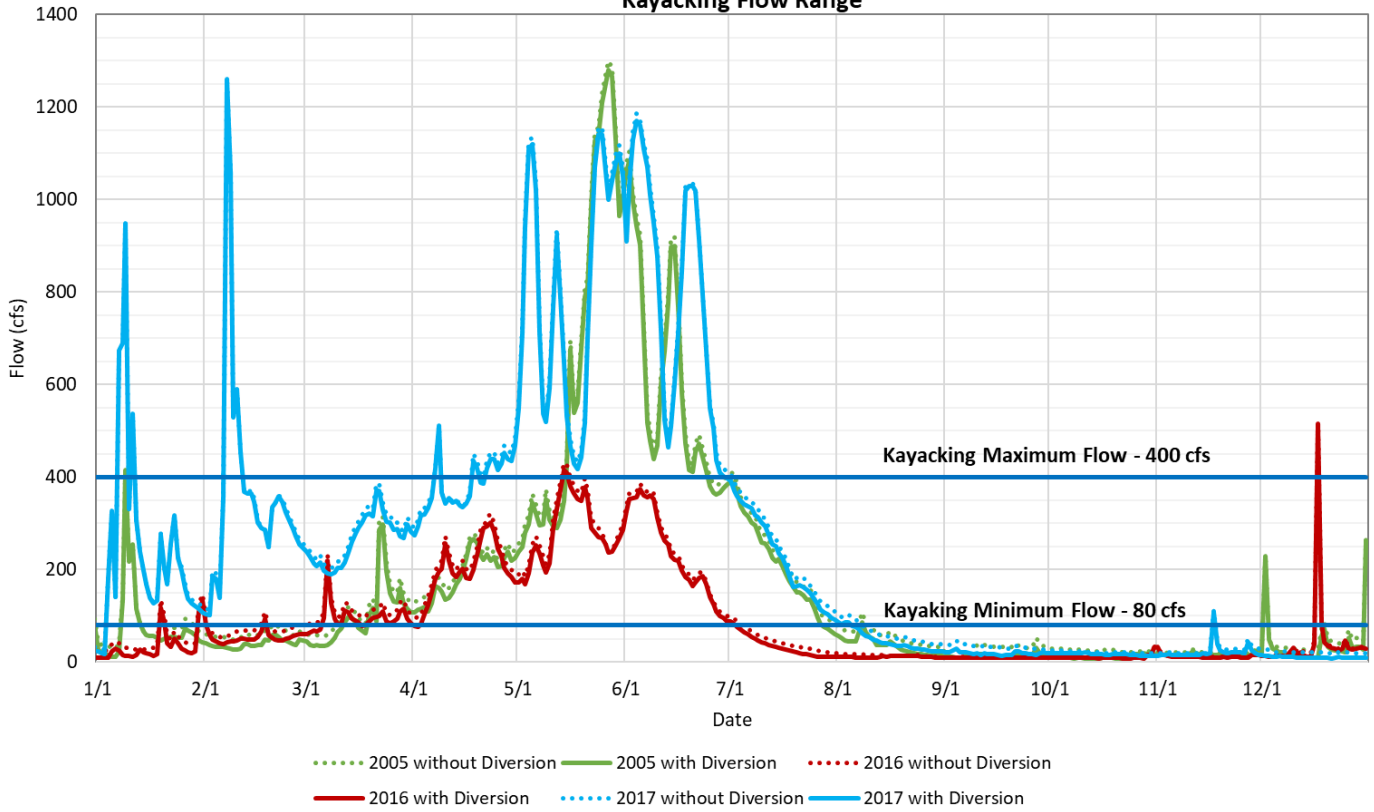
**Kaweah River below confluence with East Fork Kaweah
Representative Normal Year Flows with Kayaking Flow Limits**



**Kaweah River below confluence with East Fork Kaweah
Representative Dry Year Flows with Kayaking Flow Limits**



**East Fork Kaweah River - No. 1 Diversion Representative Normal Year Flows
Kayaking Flow Range**



**East Fork Kaweah River - No. 1 Diversion Representative Dry Year Flows
Kayaking Flow Range**

