

# **REC 3 WHITEWATER RECREATION ASSESSMENT STUDY**

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## **1.0 EXECUTIVE SUMMARY**

Characterization and evaluation of whitewater boating recreation opportunities in the study area was conducted in 2003 by implementing single flow feasibility studies along three river reaches (two along the San Joaquin River, and one along the South Fork San Joaquin River).

Single flow boating studies were conducted by teams of whitewater boaters along the Tied-for-First Run and Chawanakee Gorge Run of the San Joaquin River and along the Florence Lake Run of the South Fork San Joaquin River to estimate the minimum, optimum and maximum acceptable boating flows, and to characterize difficulty or class level along each run. Results from each of these three flow studies are summarized in the following:

- The Tied-for-First Run is an 8.5-mile-long reach along the San Joaquin River below Mammoth Pool Dam and was studied on May 14, 2003 at a flow of 862 cubic feet per second (cfs). The team of whitewater boaters characterized the run as Class V difficulty and estimated the minimum acceptable flow for the run to be between 700 cfs and 800 cfs; optimal flow was between 1,000 cfs to 1,200 cfs; and the maximum acceptable flow was between 1,400 cfs and 2,000 cfs.
- The Chawanakee Gorge Run is an 8.3-mile-long run along the San Joaquin River and was studied on May 15, 2003 at a flow of 662cfs. The team of whitewater boaters characterized this run as a Class V difficulty and estimated the minimum acceptable flow between 350 cfs and 550 cfs; optimal flow was 600 cfs; and the maximum acceptable flow was between 700 cfs and 1,000 cfs.
- The Florence Run is a 6.5-mile-long section along the South Fork San Joaquin River below Florence Lake and was studied on June 8, 2003 at a flow of 750 cfs. The team of whitewater boaters characterized this run as Class V difficulty for both kayaks and river rafts. The minimum acceptable flow was estimated to be between 350 cfs and 700 cfs for kayaks and between 400 cfs and 700 cfs for rafts; optimal flow was estimated between 650 cfs to 1,000 cfs for kayaks and between 650 cfs to 750 cfs for rafts; and the maximum acceptable flow was estimated to be between 800 cfs and 2,000 cfs for kayaks and between 750 cfs to 1,200 cfs for rafts.

## **2.0 STUDY OBJECTIVES**

Identify and characterize the whitewater recreational resources and opportunities on project waters, as well as potential access problems which could limit whitewater use.

### **3.0 STUDY IMPLEMENTATION**

#### **3.1 STUDY ELEMENTS COMPLETED**

- Assembled a team of experienced boaters to participate in the single flow study on target runs.
- Documented whitewater resources using still photos, video, and participant survey responses, by conducting single-flow studies on:
  - South Fork San Joaquin River - Florence Run
  - San Joaquin River - Tied-for-First Run;
  - San Joaquin River - Chawanakee Gorge Run

#### **3.2 OUTSTANDING STUDY ELEMENTS**

- Use existing and synthesized unimpaired hydrological data and the preliminary flow-range estimates to determine existing boating opportunities on the target whitewater reaches.
- Identify river reaches warranting a controlled flow study.
- Estimate demand level for the identified whitewater runs.
- Evaluate two reaches of Big Creek, a 4.2-mile stretch along upper Big Creek from below Dam 4 to Dam 5 Forebay, and a 1.5-mile stretch along lower Big Creek from below Dam 5 to Dam 6 Forebay, to determine if they may be viable whitewater boating reaches and if additional study is needed.

### **4.0 STUDY METHODOLOGY**

#### **4.1 SINGLE FLOW FEASIBILITY STUDIES**

During 2003, single flow feasibility studies were conducted on three whitewater boating runs: (1) the Florence Lake Run along the South Fork San Joaquin River below Florence Lake between the Jackass Meadows Campground and the Mono Hot Springs Campground; (2) the Tied-for-First Run along the San Joaquin River from below Mammoth Pool Dam to the Dam 6 Forebay; and (3) the Chawanakee Gorge Run along the San Joaquin River from below Dam 6 to Big Creek Powerhouse No. 3 upstream of Redinger Lake. Figure REC 3-1 depicts the location of these runs.

Single flow feasibility studies were conducted using water provided as “pre-spill releases” from study area reservoirs. During the winter of 2002/2003 snow pack and watershed hydrologic conditions in the upper watershed were monitored and evaluated to determine if the spring runoff conditions would result in spills from Florence Lake and Mammoth Pool Reservoir. Based on this forecast, it was determined that Mammoth Pool Reservoir would likely spill at the end of May 2003 and Florence Lake would likely spill in mid-June 2003. Due to the pending reservoir spill conditions, Southern

California Edison (SCE) was able to provide flows for the single flow feasibility studies as controlled pre-spill releases, thereby minimizing the cost of the studies in terms of lost generation.

A standard protocol was used to conduct all three single flow feasibility studies. This protocol required three teams: (1) a logistical team to provide pre-planning, coordination, support, and direction to the boaters; (2) a boating team to evaluate on-water flow conditions; and (3) a documentation team to record (photograph and video) the single flow study activities.

#### 4.1.1 PRE-PLANNING AND COORDINATION

SCE began to coordinate and plan the single flow feasibility studies once it was determined that the hydrological conditions in the watershed would result in spill from Mammoth Pool Reservoir and Florence Lake. Information regarding the forthcoming reservoir spill conditions were communicated with the Recreation Working Group and SCE indicated that the studies could be conducted using pre-spill releases. SCE subsequently consulted and coordinated with American Whitewater (AW) and the San Joaquin Paddlers (SJP) to schedule study dates and plan the logistics for the boating studies. A list of potential whitewater boaters with the appropriate skills needed to complete the studies was developed in consultation with AW, SJP and ENTRIX. An invitation letter which provided information on the purpose, schedule and logistics for the study was sent to the list of potential boaters asking them to participate in the study. Copies of the invitation letters are provided in Appendix A. Accompanying the invitation letter was a Boater Evaluation Form which asked participants about their boating skill level and boating experience. Copies of the completed boater profile forms are provided in Appendix B. The boating team consisted of volunteers with the requisite skill level to boat the reach, the experience and knowledge to evaluate flow conditions at the set single flow, and the ability to make determinations of other flow thresholds based on a single flow. The boating team consisted of kayakers for the Tied-for-First and Chawanakee Gorge runs, and both kayakers and rafters for the Florence Lake Run. The following individuals participated in the single flow studies.

Tied-for-First Run (Kayakers)	Chawanakee Gorge Run (Kayakers)	Florence Lake Run	
		(Kayakers)	(Rafters)
Phil Boyer	Don Beveridge	J.D. Batove	John Barbella
Chris Clark	Phil Boyer	Chris Clark	Olie Brown
John Gangemi	Polk Deters	Randy Calvin	Michael Clifton
Blaine Harmon	John Gangemi	Louis Debret	Windell DeLauo
Tom Meinholz	Tom Meinholz	John Gangemi	Anthony Garcia
Beth Rypins	Jared Nocetti	Paul Martzen	Gary Hal
Rick Smith	Richard Smith	Tom Meinholz	Brendan Riordan
		Russ Patterson	Tim Schiller
		Rick Smith	

#### 4.1.2 STUDY LOGISTICS

Logistical support and study direction was provided by SCE, ENTRIX, and the United States Forest Service (USDA-FS). All study team participants met at the take-outs of each run early in the morning the day of the study and an orientation meeting was conducted. During these meetings the objectives of the study process were reviewed with the boating team, logistics of the day's itinerary were outlined, the single flow survey instrument was reviewed, and emergency protocols were established. After the meetings, boats, equipment, and boating team members were transported (shuttled) to the start (put-in) of the run.

#### 4.1.3 ON-WATER BOATING

Immediately prior to each single flow study a pre-run helicopter flight was made to verify that the flows from the pre-spill release had charged the river channel along the length of the run. The flow conditions in the channel were documented by video during the helicopter overflight. During the boating run, periodic helicopter overflights were made to track the progress of the boating team.

During the study, the boating team identified specific study locations that were used to represent the nature and character of the whitewater boating run. The specific study locations along each run were selected by the boating team to characterize the following conditions:

- Overall nature and character of the resource;
- Types of channel conditions found in the run;
- Difficulty of the whitewater (initial class rating based on the International Scale of River Difficulty Classification System); and
- Flow conditions as related to navigability, safety, and recreational values.

An on-water video team (Boil Line Productions) was retained to document the activities of the boating team and the character of the boating run at the specific study locations. The video team accompanied the boating team and set up video equipment for documentation at the specific study locations downstream of the boating team. The boating team did not proceed down river until the video team was in place and prepared to document the boating team's activities. Documentation of the on-water conditions was the responsibility of both the boating team and video team. In addition, to an on-water video team, an additional video crew was on hand to document the study process and to document flow conditions in the channel from the helicopter.

The location of each photo/video location was documented using a Global Positioning System (GPS) and supporting photographs. A log was maintained to document all on-water video points and video shots. On-water photo-documentation locations are presented in Table REC 3-1.

#### 4.1.4 POST-RUN BOATER MEETING AND FOCUSED DISCUSSION

Following the run, each member of the boating team participated in a post-run boater meeting. During the meeting, boaters completed the single flow study survey questionnaire and participated in a focused discussion regarding their evaluation of the boating run.

The single flow study questionnaire identified as the “Boater Evaluation Form” was developed and approved by the Recreation Working Group and was designed to obtain the following information about the boating run (Appendix C):

- Access problems or limitations;
- Class Rating of the whitewater based on the International Scale of River Difficulty Classification System;
- Identification of whitewater boat types that could potentially use the Study Reach;
- Identification of flow-dependent factors that could influence Minimum Acceptable, Optimum, and Maximum Acceptable flow thresholds;
- Estimates of boatable flow ranges within Minimum Acceptable, Optimum, and Maximum Acceptable for the Study Reaches for each activity-type; and
- Identification of comparable resources to each Study Reach.

After the study team completed their surveys a focus group discussion was initiated. The purpose of the focused group discussion was to gather additional information, and/or impressions in support of the information gathered in the single flow study survey questionnaire. A set of questions was presented to the group to initiate discussion. The questions were:

- What are the advantages of this flow?
- What are the disadvantages of this flow?
- What would you rate the class of whitewater at this flow?
- What are the safety concerns at this flow?
- What are the special attributes at this flow?
- What are your thoughts on a lower flow?
- What are your thoughts on a higher flow?
- Do you think there is commercial potential for this run?
- What is your perception of use patterns with seasonal preference?

Discussion during the post-run boater meeting was documented by video.

#### 4.1.5 DATA ANALYSIS AND REPORTING

Data from the single flow study survey questionnaires completed by the boating team members were reviewed, coded and entered into a database. The data was analyzed and flow range thresholds for Minimum Acceptable, Optimum, and Maximum Acceptable boatable flows were summarized, as well as other factors in physical logistics and experiential values. Video documentation of the focused group discussion was reviewed and information pertaining to the focused group questions was recorded and compiled.

The combined video footage taken from the ground, on-water, and helicopter was used to produce video documentation of the single flow feasibility studies. The documentation includes on-water footage, overhead footage, and footage of the general study process, including a summary of the findings from the survey questionnaires and focused group discussion. A copy of the documentation video of the single flow studies in a digital video disk (DVD) format is available upon request. Requests for a copy of the single flow studies DVDs should be submitted in writing to Ms. Carla Anthony, Relicensing Coordinator, Southern California Edison, Northern Hydro Regional Office, P. O. Box 100, Big Creek, California 93605.

### 5.0 RESULTS

#### 5.1 SINGLE FLOW FEASIBILITY STUDIES

The following sections provide a description by river reach of the whitewater boating characteristics evaluated in the single flow feasibility studies. Results of the boater evaluations of the run, as well as the results of the post run meetings, follow the descriptions of each run. Key features of each run are summarized in Table REC 3-2 (location, length and gradient), Table REC 3-3 (estimate of acceptable flow ranges and difficulty class ratings for kayaks) and Table REC 3-4 (estimation of acceptable flow ranges and difficulty class ratings for rafts). Copies of the Single Flow Feasibility Study Questionnaires and Boater Profile Forms completed by the boating team members are provided in Appendix B.

##### 5.1.1 TIED-FOR-FIRST RUN

The Tied-for-First Run is an 8.5-mile-long run along the San Joaquin River. The put-in is at the Mammoth Pool Dam at an approximate elevation of 2,960 feet and the take-out is at the Mammoth Pool Powerhouse at an approximate elevation of 2,240 feet. The average gradient is 88 feet per mile.

The single-flow study on the San Joaquin River between Mammoth Pool Dam and Mammoth Pool Powerhouse (Tied-for-First) was implemented on May 14, 2003 with a boating team that consisted of seven kayakers as listed in section 4.1.1 above.

The team put-in at the base of Mammoth Pool Dam and boated to the take-out at the access stairway adjacent to the canyon road bridge located immediately down river of the Mammoth Pool Powerhouse. The pre-spill flow release from the Mammoth Pool

Dam into the San Joaquin River was at a rate of 862 cfs. The run was completed without incident by the boating team.

The following summarizes results obtained from the Boater Evaluation Form (single flow feasibility study questionnaire). The results of the information provided by the boating team members for the Tied-for-First Run are summarized in Table REC 3-5a.

- The access to the put-in was considered adequate. It should be noted that the boating team was provided access through the locked gate to the base of the dam. This gate is located approximately 1.5 miles from the put-in location below the dam. This gate is locked by the USDA-FS during the deer migration season from May 1 to June 16 each year to prevent disturbance of the deer during their migration across Mammoth Pool Reservoir and Dam. If access past the locked gate had not been available, boaters would have had to hike their boats about 1.5 miles from the locked gate to the put-in. The boaters indicated that if the gate was always locked, access would be considered inadequate. Take-out access was described as adequate to perfect by the boaters. The take out is an access stairway that is located adjacent to the canyon road bridge downstream of the Mammoth Pool Powerhouse.
- One portage was made by the entire boating team while several other rapids were portaged by various members of the team.
- At the study flow of 862 cfs, six boaters rated the flow as highly acceptable and one boater rated the flow as moderately acceptable. All seven boaters indicated they would prefer a slightly higher flow. Five of the seven boaters stated that they would definitely return for future boating at the study flow of 862 cfs. Six of the seven boaters stated they would definitely return for future boating at their preferred flow of 1,000 to 1,200 cfs.
- The estimated minimum acceptable flow for kayaks ranged between 700 cfs and 800 cfs. The reported Confidence Levels for the boating team ranged from +1 to +2 (the Confidence Level rating scale ranged from -2 Not Confident to +2 Highly Confident with 0 being Neutral). The class rating for the estimated minimum acceptable flow ranged from class IV to V.
- The optimum flow for kayaks ranged between 1,000 cfs and 1,200 cfs. The reported Confidence Levels for the boating team ranged from +0 to +2. The class rating for the optimum flow ranged from class IV to V.
- The estimated maximum acceptable flow for kayaks ranged between 1,400 cfs and 2,000 cfs. The reported Confidence Levels for the boating team ranged from -1 to +2. The class rating for the estimated maximum acceptable flow ranged from class V to V+.
- The run was reported to have “high quality” whitewater wilderness scenery.

The following summarizes the focused discussion that occurred at the post-boater meeting.

- The advantages of this run at a flow of about 800 cfs include boatability, a slower rate of speed in the rapids, and space between the rapids. The disadvantage of this run at a flow of about 800 cfs is that in some of the rapids the water is shallow, which may pose a safety concern if you tip over, or if you are forced to swim.
- The primary special attribute of a flow of 800 cfs was that it was manageable and afforded the ability to “boat-scout” along Class IV rapids. A flow lower than 800 cfs could create more safety problems associated with pinning, boulder sieves, and less navigable routes. A higher flow, around 1,000 cfs is expected to reduce some of these concerns.
- The run was rated at Class V by the boating team due to the potential consequences of a swim, the presence of two Class V rapids, and the remoteness of the run. Class V boating skill would be required to safely lead a trip down this run.
- The run has low potential as a viable commercial rafting operation, though it may be viable for guided kayak trips. The local boating community would utilize boatable flows, regardless of season. Statewide demand would be low for boating opportunities in the spring and high for summer opportunities.

The single flow feasibility study activities are summarized in the video production produced by Boil Line Productions. A copy of the documentation video of the single flow studies in a digital video disk (DVD) format is available upon request. Requests for a copy of the single flow studies DVDs should be submitted in writing to Ms. Carla Anthony, Relicensing Coordinator, Southern California Edison, Northern Hydro Regional Office, P. O. Box 100, Big Creek, California 93605. Also available on DVD upon request is video documentation of a helicopter overflight of the river flow conditions collected immediately prior to the run, and documentation of the post run boater’s meeting including the focused discussion.

#### 5.1.2 CHAWANAKEE GORGE RUN

The Chawanakee Gorge Run is an 8.3-mile-long run along the San Joaquin River. The run starts at the base of Dam 6 at an approximate elevation of 2,160 feet, however, the put-in for the run is upstream of Dam 6 at the access stairway located adjacent to the canyon road bridge downstream of the Mammoth Pool Powerhouse. The take-out is at Italian Bar Bridge at the upstream end of Redinger Lake at an approximate elevation of 1,430 feet. The average gradient is 84 feet per mile.

The single flow feasibility study on the San Joaquin River between Dam 6 and Redinger Lake was implemented on May 15, 2003. The flow rate for the run as measured over Dam 6 into the San Joaquin River was 662 cfs. The boating team consisted of seven kayakers as listed in section 4.1.1, above.



The boating team put in at the access stairway adjacent to the canyon road downstream of the Mammoth Pool Powerhouse. They paddled across the Dam 6 Forebay, exited the forebay on the right dam abutment, and lowered themselves and their boats with the aid of a rope to the base of Dam 6. At the base of the dam, the boating team launched their boats again and boated the reach to the take-out at the head of Redinger Lake. The run was completed without incident by the boating team.

The following summarizes results obtained from the Boater Evaluation Form (Single Flow Study Questionnaire). The results of the information provided by the boating team members for the Chawanakee Gorge Run are summarized in Table REC 3-5b.

- Six of seven boaters said that access to the put-in was adequate. One said it was inadequate because of the portage around the dam. Five of the boaters described the dam portage as a hazard. Take-out access was considered adequate by all boaters.
- Various team members portaged between two to four times during the run. The difficulty of the portages ranged from easy to moderately difficult.
- At the study flow of 662 cfs, all boaters rated the flow as highly acceptable. All boaters indicated they would prefer a flow about the same as this flow and this flow was close to optimum. All of the seven boaters stated that they would definitely return for future boating at the study flow of 662 cfs.
- The estimated minimum acceptable flow for kayaks ranged between 350 and 550 cfs. The reported Confidence Levels for the boating team ranged from +0 to +2. The class rating for the estimated minimum acceptable flow ranged from class V to V+.
- The optimum flow for kayaks ranged between 600 and 700 cfs. The reported Confidence Levels for the boating team was +2. The class rating for the optimum flow was class V.
- The estimated maximum acceptable flow for kayaks ranged between 700 and 1,000 cfs. The reported Confidence Levels for the boating team ranged from +0 to +2. The class rating for the estimated maximum acceptable flow ranged from class V to V+.

The following summarizes the focused discussion that occurred at the post-boater meeting.

- The advantages of this run at a flow of 662 cfs include boatability, a good speed in the rapids, route options at rapids, and easy portaging. The two primary safety concerns associated with the Chawanakee Gorge Run were portaging around Dam 6, and sieves (sieves are boulder structures with flow through the structures that could entrap a boater or swimmer and are a common cause of drowning and other

adverse incidents for whitewater boaters.) The special attributes of a flow of 662 cfs in Chawanakee Gorge are that it was manageable and had good rapids and slides.

- Lower flows are expected to increase safety risks associated with pinning and sieves. Higher flows are expected to provide more route options in channels but also increase the rate of speed in the rapids and increase the intensity of hydraulics. Portage accessibility may improve with higher flows.
- The run was rated at Class V by the boating team due to the presence of numerous Class V rapids, and the need to boat difficult whitewater to access portage routes. In addition, the potential consequences of a swim in certain sections of river could be very serious. Class V boating skill would be required to boat this run.
- Six of the boaters said that this run has no commercial rafting viability. The portages are too long and difficult for rafts. The run could possibly be viable for guided kayak trips.
- The boaters described Chawanakee Gorge as a high quality run any time of year. Expected use would be greater if flows were timed to coincide with the availability of other runs in the area. The draw might be greater if Tied-for-First was also boatable at the same time. As with all California runs, the Chawanakee Gorge run would have the most demand in the summer or fall.

### 5.1.3 FLORENCE LAKE RUN

The Florence Lake Run is a 6.5-mile-long run along the South Fork San Joaquin River. The put-in for the run is at Jackass Meadow Campground at an elevation of approximately 7,190 feet and the take out is at the Mono Hot Springs Campground at an elevation of approximately 6,560 feet. The gradient varies considerably with sections at 30 feet per mile and other sections at 170 feet per mile. The average gradient is 97 feet per mile.

The single flow feasibility study on the South Fork San Joaquin River between Jackass Meadow Campground and Mono Hot Springs Campground was implemented on June 8, 2003 with a boating team that consisted of nine kayakers and eight rafters in two rafts as listed in section 4.1.1, above.

The pre-spill release flow from Florence Lake Dam into the South Fork San Joaquin River was 750 cfs. The boating team completed the study without incident.

The following summarizes results obtained from the single flow study questionnaire. The results of the information provided by the boating team members for the Florence Lake Run single flow study questionnaires are summarized in Table REC 3-5c (Kayak) and Table REC 3-5c (Raft).

- There are no identified portages due to rapids. However, the rafts did have to line (move the rafts downstream from the shoreline using ropes) to navigate around in-

channel woody debris. Kayaks were able to find in-channel routes around the obstructions. There is a moderate amount of in-channel woody debris that will move and new material can be deposited, resulting in a change in the number and location of in-channel obstructions.

- The access to the put-in and take-out was considered adequate by all but one boater.
- At the study flow of 750 cfs, sixteen boaters rated the flow as highly acceptable and one boater rated the flow as moderately acceptable. Of the seventeen boaters, four kayakers and one rafter indicated they would prefer a slightly higher flow, five kayakers and five rafters indicated that the flow was near optimum flow, and two rafters indicated that they would prefer a slightly lower flow.
- Seven of the seventeen boaters stated that they would definitely return for future boating at the study flow of 750 cfs. The other boaters stated they would return for future boating at their estimated preferred flow.
- The estimated minimum acceptable flow for kayaks ranged between 350 cfs and 700 cfs with a class rating from class IV to V. The reported Confidence Levels for the boating team ranged from +0 to +2.
- For rafts, the estimated minimum acceptable flow ranged between 400 cfs and 700 cfs with a class rating from class IV to V. The reported Confidence Levels for the boating team ranged from -1 to +2.
- Optimum flow for kayaks was estimated at between 650 cfs and 1,000 cfs. The reported Confidence Levels for the boating team ranged from +1 to +2. The class rating ranged from class IV to V.
- The optimum flow for rafts ranged between 650 cfs and 750 cfs with a class rating from class IV+ to V. The reported Confidence Levels for the boating team ranged from +0 to +2.
- For kayaks, the estimated maximum acceptable flow ranged between 800 cfs and 2,000 cfs with a class rating from class IV+ to V. The reported Confidence Levels for the boating team ranged from -1 to +2.
- The estimated maximum acceptable flow for rafts ranged between 750 cfs and 1,200 cfs. The reported Confidence Levels for the boating team ranged from -1 to +2. The class rating ranged from class V to V+.

The following summarizes the focused discussion that occurred at the post-boater meeting.

- The advantages of this run at a flow of about 750 cfs include boatability, moderate hydraulic strength, and a good rate of transit for the run for kayaks. The

disadvantages of this run at a flow of about 750 cfs are shallow water level for rafts, and fast rate of transit in the rapids.

- A flow lower than 750 cfs could create problems associated with wrapping a raft around obstacles, and less navigable routes. A higher flow, around 1,000 cfs, is expected to be difficult with respect to increasingly difficult hydraulics, increased rate of transit in rapids, lack of ability to stop downstream transit, and riparian intrusion along the shoreline.
- The primary special attribute of a flow of 750 cfs was a two mile section of continuous whitewater. This channel structure is somewhat unique to high Sierra whitewater runs in that it is a fairly uniform channel without large boulders or bedrock formed pool-drop rapids. Additional attributes included aesthetics of the surrounding scenery.
- Safety concerns were focused on the potential consequences of a swim in the continuous whitewater section. It was felt that a swimmer in this section of river could have a very difficult time getting out of the river, and on-water rescue would be very difficult and potentially dangerous to the swimmer. This safety concern was expressed for both higher and lower flows. Higher flow safety concerns included the potential inability to control downstream transit and avoid in-channel obstructions.
- The run was rated as Class V due to the potential consequences of a swim. The continuous two mile whitewater section was also factored into the Class V rating.
- The run has low potential as a viable commercial rafting operation or for guided kayak trips. The rafting boaters all noticed the amount of woody debris and noted that the debris is a major concern with regard to commercial use at this flow. This run would be most attractive to local boaters. Demand would be for July or later due to other opportunities for preferred Sierra runs earlier in the season, and the frequent closure until then of Kaiser Pass Road, the only access route, due to snow. Statewide demand is expected to be low.

## **TABLES**

**Table REC 3-1. Photo Documentation Locations.**

Tied for First Run	Chawanakee Gorge Run	Florence Lake Run
RM 1.3	RM 1.2	RM 2.7
RM 1.5	RM 1.8	RM 2.9
RM 2.9	RM 2.7	RM 3.2
RM 3.3	RM 2.9	RM 4.4
RM 3.6	RM 3.0	RM 5.4
RM 6.0	RM 3.4	RM 6.5
RM 7.2	RM 3.8	RM 7.0
RM 8.2		

Note: River mile (RM) downstream from the start of the run.

**Table REC 3-2. Single Flow Study Reaches.**

Run	Put-In	Take-Out	Length	Gradient
Tied for First	Base of Mammoth Pool Reservoir Dam	River access stairway adjacent to the canyon bridge downstream of Mammoth Pool Powerhouse	8.5 miles	88ft/mi
Chawanakee Gorge	River access stairway adjacent to the canyon bridge downstream of Mammoth Pool Powerhouse	Redinger Lake Italian Bar Bridge	8.3 miles	84ft/mile
Florence Lake	Jackass Meadows Campground	Mono Hot Springs Campground	6.5 miles	97ft/mile

**Table REC 3-3. Single Flow Study Estimated Flow Ranges and Class Rating – Kayaks.**

Run	Min. Acceptable Flow (cfs)		Optimal Flow (cfs)		Max. Acceptable Flow (cfs)	
	Flow	Class	Flow	Class	Flow	Class
Tied for First	700-800	IV V	1000-1200	IV V	1400-2000	V V+
Chawanakee Gorge	350-550	V V+	600-700	V	700-1000	V+
Florence Lake	350 -700	IV V	650-1000	IV+ V	800-2000	IV+ V

Note: Class evaluated according to International Scale of River Difficulty Classification System.

**Table REC 3-4. Single Flow Study Estimated Flow Ranges and Class Rating – Rafts.**

Run	Min. Acceptable Flow (cfs)		Optimal Flow (cfs)		Max. Acceptable Flow (cfs)	
	Flow	Class	Flow	Class	Flow	Class
Florence Lake	400 -700	IV V	650-750	IV+ V	800-1200	V V+

Note: Class evaluated according to International Scale of River Difficulty Classification System.

**Table REC 3-5a. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Tied-For-First Run, San Joaquin River May 14, 2003**

Study Flow: 862 cfs

Put-in: Mammoth Pool dam Take-out: Mammoth Pool Powerhouse

		Flow Assessment										Flow Assessment							
	#1	#2: Evaluate today's flow <sup>1</sup>										#3: Suitable watercraft at today's flow						#4	
Name	Craft Type	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Kayak	Closed Deck Canoe	Raft	Open Canoe	Cataract	Inflatable Kayak	Other	Overall quality at today's flow
Phil Boyer	Hard shell Kayak	2	1	0	0	1	2	2	2	2	2	X	X						highly acceptable
Chris Clark	Hard shell Kayak	2	1	0	-1	1	2	2	2	2	2	X	X						highly acceptable
John Gangemi	Hard shell Kayak	1	1	1	0	2	2	2	2	2	2	X	X		X		X		moderately acceptable
Blaine Harmon	Hard shell Kayak	2	1	0	1	1	1	2	1	2	2	X	X						highly acceptable
Tom Meinholz	Hard shell Kayak	2	2	2	1	1	2	2	2	2	2	X	X		X				highly acceptable
Beth Rypin	Hard shell Kayak	2	2	2	2	2	2	2	2	2	2	X	X	X		X			highly acceptable
Rick Smith	Hard shell Kayak	2	1	0	0	1	0	2	2	2	2	X	X						highly acceptable



**Table 3-5a. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Tied-For-First Run, San Joaquin River May 14, 2003**

Study Flow: 862 cfs

Put-in: Mammoth Pool dam Take-out: Mammoth Pool Powerhouse

		Flow Assessment										Flow Assessment					Flow Assessment			
#5		#6 How would you expect the characteristics of the run to change at your preferred flow? <sup>2</sup>										#7: Personal Preference -flow rate (confidence level) <sup>3</sup>					#8: General Paddling Public- flow rate			
Name	Prefer a higher or lower flow?	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow	Craft Type	Min. acceptable flow	Optimum Flow	
Phil Boyer	slightly higher flow (+200 cfs)	2	1	1	0	1	0	0	0	0	0	Kayak	700 cfs (2)	1062 cfs (2)	1400 cfs (1)		Kayak	800 cfs (2)	1000 cfs (2)	
												Open Canoe						Open Canoe		
												Closed Canoe	700 cfs (2)	1062 cfs (2)	1400 cfs (1)		Closed Canoe	800 cfs (2)	1000 cfs (2)	
												Cataract	1062 cfs (1)	1200 cfs (1)	1400 cfs (1)		Cataract			
												Raft	1062 cfs (1)	1200 cfs (1)	1400 cfs (0)		Raft	1000cfs (-1)	1200 cfs (-1)	
												Infl. Kayak				X	Infl. Kayak			
Chris Clark	slightly higher flow	2	2	2	-2	2	2	2	2	2	2	Kayak	800 cfs (1)	1000 cfs (2)	2000 cfs (0)		Kayak	700 cfs (1)	900 cfs (2)	
												Open Canoe					Open Canoe			
												Closed Canoe	800 cfs (1)	1000 cfs (1)	2000 cfs (-1)		Closed Canoe			
												Cataract					Cataract			
												Raft					Raft			
												Infl. Kayak					Infl. Kayak			
John Gangemi	slightly higher flow	2	2	2	0	2	2	2	2	2	2	Kayak	800 cfs (2)	1000-1200cfs (0)	2000 cfs (-1)		Kayak	800 cfs (2)	1000-1200 cfs (0)	
												Open Canoe					Open Canoe			
												Closed Canoe					Closed Canoe			
												Cataract					Cataract			
												Raft					Raft			
												Infl. Kayak					Infl. Kayak			
Blaine Harmon	slightly higher flow	1	1	0	1	2	0	1	1	1	1	Kayak	550 cfs (1)	1000 cfs (1)	1500 cfs (1)		Kayak	550 cfs (1)	850 cfs (1)	
												Open Canoe					Open Canoe			
												Closed Canoe					Closed Canoe			
												Cataract					Cataract			
												Raft					Raft			
												Infl. Kayak					Infl. Kayak			
Tom Meinholz	slightly higher flow (1000 - 1200 cfs)	improve	neutral	neutral	neutral	neutral	improve	neutral	neutral	improve	improve (less portages)	Kayak	700 cfs (1)	1100 cfs (2)	1500 cfs (1)		Kayak	700 cfs (1)	1100 cfs (1)	
												Open Canoe					Open Canoe			
												Closed Canoe					Closed Canoe			
												Cataract					Cataract			
												Raft					Raft			
												Infl. Kayak					Infl. Kayak			
Beth Rypin	slightly higher flow	2	2	2	2	2	2	2	2	2	2	Kayak	800 cfs (2)	1000 cfs (2)	2000 cfs (2)		Kayak	800 cfs (2)	1000 cfs (2)	
												Open Canoe					Open Canoe			
												Closed Canoe					Closed Canoe			
												Cataract					Cataract			
												Raft	800 cfs (2)	1000 cfs (2)	1500 cfs (2)		Raft	800 cfs (2)	1000 cfs (2)	
												Infl. Kayak					Infl. Kayak			
Rick Smith	slightly higher flow	1	0	0	0	0	2	0	0	1	0	Kayak	800cfs (2)	1100 cfs (2)	2000 cfs (1)		Kayak	800 cfs (2)	1100 cfs (2)	
												Open Canoe				not suitable	Open Canoe			
												Closed Canoe	800 cfs (1)	1100 cfs (1)	2000 cfs (0)		Closed Canoe	800 cfs (1)	1100 cfs (1)	
												Cataract				not suitable	Cataract			
												Raft				not suitable	Raft			
												Infl. Kayak	800 cfs (-1)	900 cfs (-2)	1500 cfs (-2)		Infl. Kayak			
Other: Shredder 2-man inflatable kayak	800 cfs	1100 cfs	1500 cfs		Other															

**Table 3-5a. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Tied-For-First Run, San Joaquin River May 14, 2003**

Study Flow: 862 cfs

Put-in: Mammoth Pool dam Take-out: Mammoth Pool Powerhouse

			Flow Assessment					Flow Assessment				Difficulty						
(confidence level) <sup>3</sup>			#9:			#10: Outstanding boating features			#11: Return for future boating		#12: How far would you travel for this run		#13: Suitability for general paddling public <sup>4</sup>					
Name	Max. acceptable flow	Not suitable at any flow	Min. acceptable flow/whitewater class	Optimum Flow/whitewater class	Max. acceptable flow/whitewater class	Location	GPS coord.	Description	At preferred flow	At today's flow	At minimum acceptable flows	At optimum flow	Class I	Class II	Class III	Class IV	Class V	
Phil Boyer	1100 cfs (2)		700 cfs/class IV	1062 cfs/class IV/V	1400 cfs/class IV/V			Entire run had numerous features including rock boofs, pourover drops, long dynamic class IV rapids, fun playholes, excellent eddy hopping, and several fun class V drops. 2nd half of run was much more continuous and faster paced. A classic Sierra run.	Definitely yes	Definitely yes	225 miles	225 miles (from Coloma California)	n/a	n/a	n/a	1	2	
	1100 cfs (2)																	
	1400 cfs (-1)																	
Chris Clark	1100 cfs (2)		800 cfs/Class V	1000 cfs/Class V+	2000 cfs/Class V+	2nd half of reach		Great continuous sections of whitewater. Boat scoutable highly visible rapids.	Definitely yes	Definitely yes	50 miles	150 miles	-2	-2	-2	-1	2	
						Entire Run		Excellent eddy hopping rapids were all scoutable and portagable. All rapids are manageable.										
John Gangemi	2000 cfs (-1)		800 cfs/Class IV to V	1000-1200 cfs/IV to V	2000 cfs/class V	Entire Reach		Overall aesthetics in the reach- walls, domes, waterfalls, and large boulders.	possibly	possibly	100 miles	200 miles	-2	-2	-2	-1	2	
						Below Rock ? Confluence.		Continuous class IV rapids for 1.5 miles.										
						Bad information (last big rapid about 1 mile from takeout)		Class V drop originally portaged by 1st decent party at river L.										
Blaine Harmon	1500 cfs (0)		550 cfs/class IV-V	1000 cfs/class IV-V	1500 cfs/Class V	stretches in first half of run		Long high quality class IV rapids of moderately continuous nature	Definitely yes	Definitely yes	50 miles (if nothing else was running)	300 miles	-2	-2	-2	-1	2	
Tom Meinholz	1500 cfs (-1)		700 cfs/Class V	1000 cfs/Class IV+	1500 cfs/Class V	1 mile from takeout		Last big rapid is challenging with lots of	Definitely yes	Definitely yes	150 miles	200 miles	-2	-2	-2	1	2	
						2nd half of the day		Lots of continuous class IV boat scouting										
Beth Rypin	2000 cfs (2)		800 cfs/class -IV +V	1000 cfs IV+ +V	2000 cfs V			Very high quality whitewater from put in to take out. This river has the pool-drop character that is typical to CA.	Definitely yes	Probably	150 miles	200 miles	-2	-2	-2	-1	2	
	1500 cfs (2)																	
Rick Smith	1800 cfs (1)		800 cfs/Class V	1100 cfs/Class V	2000 cfs/Class V+	Bottom half of run		Many fantastic long stretches of continuous class 3+ and 4 rapids. Technical slalom, boofs, melt downs, hydraulics, scenic beauty. Big smiles.	Definitely yes	Definitely yes	150 miles	500 miles	-2	-2	-2	-1	2	
		not suitable																
	2000 cfs (0)																	
		not suitable																
		not suitable																

**Table 3-5a. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Tied-For-First Run, San Joaquin River May 14, 2003**

Study Flow: 862 cfs

Put-in: Mammoth Pool dam Take-out: Mammoth Pool Powerhouse

		Difficulty									Time				Hazards			
		#14: Identify challenging rapids			#15: Difficulty of portages						#16:	#17: Number of stops/time out of boat			#18: Specific hazards			
Name	If unsuitable, was the flow too low or too high?	Location description	GPS coord.	Class rating	Location	Portage difficulty	Requires portage rope	Portage route (river right or left)	Estimated portage time	Difficulty of rapid portaged	Time to complete run	Number of stops for breaks	Number of stops for scouting	Number of stops for portaging	Location description	GPS coord.	Safety Hazard	
Phil Boyer		Line drive. Long class IV to narrow exit between house size boulders.		IV	Rock Chalk/2 doors.	easy		Right	5 min.	V+ Trees or Sieves	7-9 hours	2 stops/1 hour	20 stops/1.5 to 2 hours	3 stops/1 hour			No	
		Paddle or rap/bad info last big drop run on right with 10' boof in middle.		V														
Chris Clark	Run exceeds ability of paddler. Both.	1st portage		V	1/8 mile from put-in.	easy	no	R	1 min.	V-	6-8	1-2 stops/30 min.	20 stops/2.5 hr.	4 stops/45 min.	Mega sieve		2/3 river pours through sieve	
		Mega sieve "sieve from another planet"		VI		slightly difficult	no	R	5 min.	VI								
		"Bad Information"		V		Bad info	mod. diff.	yes	L	15 min.								V
John Gangemi	n/a for class I to class IV,	1st rapid		V	1st rapid	easy		R	3 min.	V	5 hours	2 stops/30-45 min.	6 stops/30-40 min.	3 stops/45 min.				
		see camera gps about middle of run everyone portaged			middle rapid	easy		R	10 min.	VI								
		"Bad Information" about 1 mile from take-out		V	Bad information	slightly difficult	yes	R	20 min.	V								
Blaine Harmon	n/a for class I to class IV,	~1 mile above take-out: 10'-12' ledge drop with technical runnout. All on river right.		V	Lege hole ~ 1/2 mile below P.J.	easy	no	right	2 min.	IV + to V	8+ hours	1-2 stops/30 min. to 1 hour	20+ stops/2 hours	5-6 stops/~60 min.				
					3 door sieved ~ 1/2 way	slightly difficult	no	right	5 min.	V								
					~ 1/2 mile above takeout	moderately difficult	yes	left	110-15 min/	V								
Tom Meinholz					1st ledge	easy		RT	5 min.	IV+	4-6 hrs.	2 stops/1 hour	10-15 stops/1hour	3 stops/0.5 hour	n/a			
					Boulder sieve	slight. diff.	no		5 min.	V+								
					bad info	mod. diff.	yes	LT	15 min.	IV+								
Beth Rypin	n/a for class I to class III. Flow isn't the issue, skill level is.				Just below put-in	easy					4 hours	1 stop/20 min.	5 stops/25 min.	3 stops/1 hour				
					rock shock	slightly difficult												
					paddle or rap		X											
Rick Smith	n/a	Big "B.J." Huge Sieve portage		V++	1st 1/8 mile ledge	easy		RT	1 min.	IV +	7+	3 stops/10 min.	18 stops/4 min.	3 stops/25 min.	halfway		major sieve	
		"Bad information" Last big drop of the day. Rappel on river left		V++	Main portage sieve	easy		RT	5-15 min.	V++								
					"Bad Info"	moderately difficult	rappel	Left	15 min.	V								

**Table 3-5a. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Tied-For-First Run, San Joaquin River May 14, 2003**

Study Flow: 862 cfs

Put-in: Mammoth Pool dam Take-out: Mammoth Pool Powerhouse

Hazards		Access											Regional comparison			
Name	Recommendation	#19	#20: If no to #19, why?					#21	#22: If no to #21, Why?					#23	#24	#25
		Adequate put-in	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Adequate take-out	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Similar runs	Additional comments	Commercial viability rating
Phil Boyer		yes						yes. Perfect.						South Yuba Purdons to 49 Middle Feather (Devils Canyon)	The overall experience was awesome. The scenery, rapids, side creeks falling into canyon granite domes and whitewater were all classic Sierra runs.	possibly
Chris Clark	Portage	yes						yes						S. Yuba (Purdons to 49) Kings (Garlic Falls Run) Middle Feather (Devils Canyon)	Great level, never felt boring but would with more water. Great reading and running. Excellent day on the river which others would also enjoy.	Definitely no
John Gangemi		yes- gate was opened for us, otherwise no.						yes						Forks of the Kern	Good entry flow level but likely the bottom threshold for min. acceptable. Starts to get difficult to navigate some rapids.	Not my arena.
Blaine Harmon		yes. Need gate to be opened						yes						Kings Canyon run-Garlic Falls Run Cherry Creek (This was easier) Similar to easier parts of S. Fork Kings with a couple of IV rapids.	This run was excellent at this flow. There were a few rapids that would have cleaned up with more water. A real time gauge reporting on the internet would certainly bring more boaters to the area during periods of spill.	Definitely not
Tom Meinholz		yes						yes						Bald Rock Canyon (Feather River) S.F. Yuba (Hwy 49 to Bridgeport) N.F. Feather River Cherry Creek Giant Gap	This is a stellar Run. Providing releases for 2 consecutive days would draw a larger crowd because people would drive farther to boat for 2 days.	Probably
Beth Rypin		yes						yes						Cherry Creek Middle Fork Feather Slab Creek Giant Gap		
Rick Smith	portage river right	no	yes	yes				yes						S.F. Kings, above Bear Creek Kings, Garlic Falls Cherry Creek Dinky Creek, Balch Camp to Main Kings Confluence.	A known release of optimal flows for at least two consecutive days would make this a <u>very</u> worthy destination for recreational kayaking trips.	Definitely no

<sup>1</sup> 2= highly acceptable, 1= moderately acceptable, 0= neutral, -1= moderately unacceptable, -2= highly unacceptable.

<sup>2</sup> 2= improve, 0= neutral, -2= decline

<sup>3</sup> rating scale: high confidence=2, neutral= 0, and low confidence= -2

**Table REC 3-5b. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Chawanakee Gorge Run, San Joaquin River May 15, 2003**

Study Flow: 662 cfs

Put-in: Mammoth Pool Powerhouse Take-out: Italian Bar Road Bridge

		Flow Assessment										Flow Assessment								
	#1	#2: Evaluate today's flow <sup>1</sup>										#3: Suitable watercraft at today's flow							#4	#5
Name	Craft Type	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall white-water challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Kayak	Closed Deck Canoe	Raft	Open Canoe	Cataract	Inflatable Kayak	Other	Overall quality at today's flow	Prefer a higher or lower flow?
Don Beveridge	hard shell kayak	2	2	1	0	2	1	2	1	1	1	X	X						highly acceptable	About the same; this was close to an optimum flow
Phil Boyer	hard shell kayak	2	2	2	0	2	0	2	2	2	2	X	X						highly acceptable	About the same; this was close to an optimum flow
Polk Deters	hard shell kayak	2	2	0	-1	2	0	2	2	2	1	X	X		X				highly acceptable	About the same; this was close to an optimum flow
John Gangemi	hard shell kayak	2	2	2	1	2	2	2	2	2	2	X							highly acceptable	About the same; this was close to an optimum flow
Tom Meinholz	hard shell kayak	2	2	2	2	2	2	2	2	2	2	X	X						highly acceptable	About the same; this was close to an optimum flow
Jared Nocoti	hard shell kayak	2	2	2	1	2	1	2	2	1	2	X							highly acceptable	About the same; this was close to an optimum flow
Richard Smith	hard shell kayak	2	2	2	-1	2	1	2	2	2	2	X	X						highly acceptable	About the same; this was close to an optimum flow

**Table 3-5b. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Chawanakee Gorge Run, San Joaquin River May 15, 2003 (continued)**

Study Flow: 662 cfs

Put-in: Mammoth Pool Powerhouse Take-out: Italian Bar Road Bridge

Flow Assessment											Flow Assessment					Flow Assessment				
#6 How would you expect the characteristics of the run to change at your preferred flow? <sup>2</sup>											#7: Personal Preference -flow rate (confidence level) <sup>3</sup>					#8: General Paddling Public- flow rate (confidence level) <sup>3</sup>				
Name	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow
Don Beveridge	2	2	1	0	2	1	2	1	1	1	Kayak	400 cfs (2)	700 cfs (2)	1000 cfs (1)		Kayak	400 cfs (2)	700 cfs (2)	900 cfs (2)	
											Open Canoe				X	Open Canoe	500 cfs (1)	650 cfs (2)	700 cfs (1)	
											Closed Canoe	400 cfs (2)	700 cfs (2)	900 cfs (1)		Closed Canoe	400 cfs (1)	700 cfs (2)	900 cfs (2)	
											Cataract					Cataract				
											Raft				X	Raft	500 cfs (0)	700 cfs (1)	800 cfs (1)	
											Infl. Kayak					Infl. Kayak				
Phil Boyer	2 (we had the preferred flow. No changes)	2	2	0	2	0	2	2	2	2	Kayak	500 cfs (1)	662 cfs (2)	900 cfs (1)		Kayak	662 cfs (0)	662 cfs (0)	662 cfs (0)	
											Open Canoe					Open Canoe				
											Closed Canoe	500 cfs (-1)	662 cfs (0)	900 cfs (-1)		Closed Canoe	662 cfs (-1)	662 cfs (-1)	662 cfs (-1)	
											Cataract				X	Cataract				X
											Raft				X	Raft				X
											Infl. Kayak				X	Infl. Kayak				X
Polk Deters	2	2	0	-1	2	0	2	2	2	1	Kayak	500 cfs (0)	662 cfs (2)	1000 cfs (1)		Kayak	500 cfs (0)	662 (0)	1000 cfs (0)	
											Open Canoe	662 cfs (0)	662 cfs (0)	662 cfs (0)		Open Canoe	662 (0)	662 (0)	662 (0)	
											Closed Canoe	500 cfs (0)	662 cfs(0)	1000 cfs (0)		Closed Canoe	500 cfs (0)	662 (0)	1000 cfs (0)	
											Cataract				X	Cataract				X
											Raft				X	Raft				X
											Infl. Kayak				X	Infl. Kayak				X
John Gangemi	2 (no change in flow)	2	2	1	2	2	2	2	2	2	Kayak	400 cfs (0)	600 cfs (2)	800 cfs (0)		Kayak	400 cfs (0)	600 cfs (2)	800 cfs (0)	
											Open Canoe				X	Open Canoe				X
											Closed Canoe				X	Closed Canoe				X
											Cataract				X	Cataract				X
											Raft				X	Raft				X
											Infl. Kayak				X	Infl. Kayak				X
Tom Meinholz	see question 2										Kayak	500 cfs (2)	700 cfs (2)	900 cfs (1)		Kayak	500 cfs (2)	700 cfs (2)	900 cfs (2)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataract					Cataract				
											Raft					Raft				
											Infl. Kayak					Infl. Kayak				
Jared Nocoti	2	2	2	1	2	1	2	2	1	1	Kayak	350 cfs (2)	600 cfs	800 cfs		Kayak	350 (1)	600 cfs (2)	800 cfs (1)	
											Open Canoe				X	Open Canoe				X
											Closed Canoe	350 cfs (-1)	600 cfs (-1)	800 cfs (-1)		Closed Canoe	350 cfs (1)	600 cfs (2)	800 cfs (1)	
											Cataract				X	Cataract				X
											Raft				X	Raft				X
											Infl. Kayak				X	Infl. Kayak				X
Richard Smith	2 (We had perfect flow)	2	2	-1	2	1	2	2	2	2	Kayak	550 cfs (2)	660 cfs (2)	700 cfs (2)		Kayak	550 cfs (2)	662 cfs (2)	700 cfs (2)	
											Open Canoe				No	Open Canoe				No
											Closed Canoe	550 cfs (2)	660 cfs (2)	700 cfs (2)		Closed Canoe	550 cfs (2)	662 cfs (2)	700 cfs (2)	
											Cataract				No	Cataract				No
											Raft				No	Raft				No
											Infl. Kayak				No	Infl. Kayak				No

**Table 3-5b. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Chawanakee Gorge Run, San Joaquin River May 15, 2003 (continued)**

Study Flow: 662 cfs

Put-in: Mammoth Pool Powerhouse Take-out: Italian Bar Road Bridge

Name	Flow Assessment			Flow Assessment				Difficulty					Difficulty						
	#9: Min. acceptable flow/whitewater class	Optimum Flow/whitewater class	Max. acceptable flow/whitewater class	#10: Outstanding boating features	#11: Return for future boating	#12: How far would you travel for this run	#13: Suitability for general paddling public <sup>4</sup>						#14: Identify challenging rapids						
				Location	GPS coord.	Description	At preferred flow	At today's flow	At minimum acceptable flows	At optimum flow	Class I	Class II	Class III	Class IV	Class V	If unsuitable, was the flow too low/too high?	Location description	GPS coord.	Class rating
Don Beveridge	400 cfs/V+	700 cfs/V	1000 cfs/V+	Outstanding run from top to bottom		One of the best in California	definitely yes	definitely yes	200 miles	200 miles	n/a	n/a	n/a	-1	2	unsuitable at any flow for class 1 to class III.	Below stairway		V+
				4 (or more) great 5+ rapids													gotta want it canyon		V+
																	whole darn river		V
Phil Boyer	500 cfs/V	662 cfs/V	900 cfs/V			Entire run had incredible boof moves nice pur over drops dynamic rapids long and short fantastic eddy hopping within rapids.	definitely yes	definitely yes	hundreds of miles	hundreds of miles	n/a	n/a	n/a	n/a	2 to 1	Class I to Class IV marked with "n/a" in too low column.	stairway to heaven 1/3 down long consecutive drop each one gets bigger	By staircase on river left	V
																	you gotta want it 1/2 down big boof on left to smaller boof then to a		V
Polk Deters	500 cfs/V	662 cfs/V	1000 cfs/V	Entire River		Wow!	definitely yes	definitely yes	50 miles	100's miles	-2	-2	-2	-1	2	Class I to Class III all marked with "No"	The one where Don w/deep with the sweet boof.		V
																	Big drop with sieve on bottom left.		V+
John Gangemi	400 cfs/V	600 cfs/V	800 cfs/V	50 to 60 Class IV or greater rapids			definitely yes	definitely yes	250 miles	300 miles	-2	-2	-2	-2	2	Class I to Class IV labeled as "too difficult"			
Tom Meinholz	500 cfs/V	700 cfs/V	900 cfs/V+	several		lots of beautiful side creeks with waterfalls	definitely yes	definitely yes	300 miles	400 miles	-2	-2	-2	-2	2	Class 1 to Class IV too difficult	stairway to piton	1/3 down the run	V
				several		lots of excellent rapids with incredible											bug deflector	near the end of the run	IV+
																	you gotta want it	1/2 down run	V+
Jared Nocoti	350 cfs/V	600 cfs V	800 cfs/V	The entire run		deep, narrow, scenic granite gorges	definitely yes	definitely yes	200 miles	200 miles	-2	-2	-2	-2	2	Class I to Class IV all marked with "too difficult"	Above stairway (good clean drops)		V
				River left, 3/4 of the way down		Stevenson Creek											Just below stairway		V+
				1/2 way down		volume- Big hawks soaring over dams											The whole gorge. Loaded with fun!		V
Richard Smith	550 cfs/V	662 cfs/V	700 cfs/V	Dam 6		Awesome scenery, beautiful put-in.	possibly	definitely yes			-2	-2	-2	-2	2	class I to V all marked n/a	Huge drop. Gotta want it- the one where Don went deep with the steep boof!		
				Dam 6 to stairs		Fantastic fun, quick travel, many rapids													
				Stairs to Bottom		Incredible. Many numerous drops packed with technical													

**Table 3-5b. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Chawanakee Gorge Run, San Joaquin River May 15, 2003 (continued)**

Study Flow: 662 cfs

Put-in: Mammoth Pool Powerhouse Take-out: Italian Bar Road Bridge

							Time			Hazards				Access								
#15: Difficulty of portages							#16:	#17: Number of stops/time out of boat			#18: Specific hazards				#19	#20: If no to #19, why?						
Name	Location	Portage difficulty	Requires portage rope	Portage route (river right or left)	Estimated portage time	Difficulty of rapid portaged	Time to complete run	Number of stops for breaks	Number of stops for scouting	Number of stops for portaging	Location description	GPS coord.	Safety Hazard	Recommendation	Adequate put-in	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)		
Don Beveridge	Big one with hole and sieve	mod. diff.		L	5 min.	VI	6-8 hours	2 stops/45 min.	20 stops/60 min.	4 stops/30 min.	Just below put-in		dam	clear poison oak, fix ropes	yes							
	3/4 through sieve one	easy		R		VI					portages listed above											
Phil Boyer	2/3 way down	easy to slightly diff.		left	15		5-8 hours	2 stops/40 min.	20 to 30 stops/1.5 hours	2 to 8 stops/ 1-2 hours	No				yes							
	3/4 way down	easy		right	5	VI No open route																
Polk Deters	The one where Don w/deep with the sweet boof.	easy		left	3 min	V	7 hours	1 stop/1/2 hr.	20+ stops/1 hr	2 stops/20 min.	Big ass dam		Rebar, Big	Remove it	yes							
	Big drop with sieve on bottom left.	slightly difficult		left	15 min	V+																
John Gangemi	Too difficult to identify specific locations	easy		R	15 min		7 hours	2 stops/20 min.	20 to 30 stops/35 min.	4 stops/30 min.	dam		Difficult to get around	???	No						Flatwater paddle to dam and portage around	
		easy		R	5 min																	
		easy		L	15 min																	
		easy		R	5 min																	
Tom Meinholz	stairway to piton	slightly difficult	No	RT	5 min.	V	8 hours	2 stops/1 hr.	30 stops/1 hr.	4 stops/ 1/2 hour	None				yes							
	you gotta want it	slightly difficult	No	LT	10 min.	V+																
	boulder sieve	easy	No	RT	3 min.	V+																
Jared Nocoti	After lunch	easy	no	Both	3 min.	V+	6-8 hours	2 stops/15 min	25 stops/		the dam			portage on river	yes							
	4 more downstream	easy									occasional re-bar											
Richard Smith							7 hours	4 stops/10 min.	25 stops/75 min.	4 stops/30 min.	Dam			portage RT and climb down	yes							



**Table 3-5b. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Chawanakee Gorge Run, San Joaquin River May 15, 2003 (continued)**

Study Flow: 662 cfs

Put-in: Mammoth Pool Powerhouse Take-out: Italian Bar Road Bridge

							Regional comparison		
	#21	#22: If no to #21, Why?					#23	#24	#25
Name	Adequate take-out	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Similar runs	Additional comments	Commercial viability rating
Don Beveridge	yes						Bald Rock South Yuba Golden Gate	One of the best runs in the state. I've boated over 200 different rivers. This one is in the top 10.	Possibly
Phil Boyer	yes. For small group would be nice to have a closer takeout so we not have to paddle across lake						middle feather bald rock Golden Gate South American Cherry Creek Tuolumne Purdons to Bridgeport S. Yuba	This is one of the top 5 sing day runs in California. The whitewater was exceptional the scenery was outstanding. I will definitely come back.	definitely no
Polk Deters	yes						Middle Feather Bald Rock S. Yuba to Purdons to 49 N. Feather to Poe	Totally Rockin!	definitely no
John Gangemi	yes						Middle Fk. Stanislaus-Hell's half acre Middle Fk. Feather- Bald Rock S. Yuba- Hwy 49	This is a CA classic- puts the San Joaquin high on paddlers list. This is certain to be a Sierra classic if water is in this run particularly in summer season. Many paddlers would travel to do this run	definitely no
Tom Meinholz	yes						Bald Rock Canyon Golden Gate Purdons to 49 (S. Yuba)	This by far one of the greatest stretches of river I have ever seen (in the world).	definitely no
Jared Nocoti	yes						Bald Rock- Mid Feather Purdon to Bridgeport to S. Yuba Golden Gate- S. American Kaweah	Entire run was very enjoyable for any aggressive class V kayaker. Please get some releases here for kayakers to enjoy in the future.	definitely no
Richard Smith	yes						South Merced Bald Rock Golden Gate Perdens to 49 on S. Yuba	It was fantastic.	definitely no

<sup>1</sup> 2= highly acceptable, 1= moderately acceptable, 0= neutral, -1= moderately unacceptable, -2= highly unacceptable. <sup>3</sup> rating scale: high confidence=2, neutral= 0, and low confidence= -2

<sup>2</sup> 2= improve, 0= neutral, -2= decline

<sup>4</sup> 2= highly suitable, 1= moderately suitable, 0= neutral, -1=moderately unsuitable, -2=highly unsuitable

**Table REC 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Kayaks)**

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment												Flow Assessment								
#1	#2: Evaluate today's flow <sup>1</sup>											#3: Suitable watercraft at today's flow							#4	#5
Name	Craft Type	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Kayak	Closed Deck Canoe	Raft	Open Canoe	Cataract	Inflatable Kayak	Other	Overall quality at today's flow	Prefer a higher or lower flow?
J.D. Batove	Hard shell Kayak	2	1	0	1	1	-1	2	0	2	2	X	X	X	X		X	Shredder	2	About the same; this was close to an optimum flow
Chris Clark	Hard shell Kayak	2	1	2	1	1	1	2	1	2	2	X	X	X		X	X		2	Slightly higher flow
Randy Calvin	Hard shell Kayak	2	1	0	-1	1	-1	2	1	2	2	X		X		X			2	Slightly higher flow
Louis Debret	Hard shell Kayak	2	0	1	2	1	-1	2	2	2	2	X	X	X		X			2	About the same; this was close to an optimum flow
John Gangemi	Hard shell Kayak	2	2	2	1	2	2	2	2	2 - without rafts	2	X	X						2	Slightly higher flow
Paul Martzen	Hard shell Kayak	2	2	2	0	N/A	-1	2	2	2	0	X	X	X		X	X		2	Slightly lower flow - at present level of boating; otherwise about the same; this was close to an optimum flow, if I was boating more often
Tom Meinholz	Hard shell Kayak	1	2	2	2	2	1	2	2	2	2	X	X	X		X			2	Slightly higher flow
Russ Patterson	Hard shell Kayak	2	2	2	1	1	1	2	2	-1	2	X	X	X			X		2	About the same; this was close to an optimum flow
Rick Smith	Hard shell Kayak	2	1	0	1	1	-1	2	2	2	2	X	X	X	X		X	Shredder	2	About the same; this was close to an optimum flow

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Kayaks) (continued)**

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment											Flow Assessment									
#6 How would you expect the characteristics of the run to change at your preferred flow? <sup>2</sup>											#7: Personal Preference -flow rate (confidence level) <sup>3</sup>				#8: General Paddling Public- flow rate (confidence level) <sup>3</sup>					
Name	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow
J.D. Batove	2	1	0	1	1	-1	2	0	2	2	Kayak	750 cfs (2)	800 cfs (2)	1000 cfs (2)		Kayak	600 cfs (2)	750 cfs (2)	850 cfs (2)	
											Open Canoe	750 cfs (0)	800 cfs (0)	1000 cfs (0)		Open Canoe	600 cfs (1)	750 cfs (1)	850 cfs (1)	
											Closed Canoe	750 cfs (2)	800 cfs (2)	1000 cfs (2)		Closed Canoe	600 cfs (2)	750 cfs (2)	850 cfs (2)	
											Shredder	750 cfs (2)	800 cfs (2)	1000 cfs (2)		Shredder	750 cfs (2)	800 cfs (2)	900 cfs (2)	
											Raft	750 cfs (-1)	800 cfs (-1)	1000 cfs (-1)		Raft	750 cfs (0)	750 cfs (0)	850 cfs (0)	
											Infl. Kayak	750 cfs (0)	800 cfs (0)	1000 cfs (0)		Infl. Kayak	600 cfs (0)	750 cfs (1)	850 cfs (0)	
											Other:					Other:				
Chris Clark	0	1	2	-1	2	0	-1	0	1	0	Kayak	700 cfs (2)	850 cfs (1)	1100 cfs (1)		Kayak	600 cfs	750	850	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft					Raft				
											Infl. Kayak					Infl. Kayak				
											Other:					Other:				
Randy Calvin	0	1	1	0	1	0	0	0	0	0	Kayak	500 cfs (1)	900 cfs (2)	1200 cfs (1)		Kayak	500 cfs (0)	900 cfs (-1)	1200 cfs (-2)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft	500 cfs (-1)	900 cfs (1)	1200 cfs (-1)		Cataraft	500 cfs (-1)	900 cfs (-2)	1200 cfs (-2)	
											Raft	500 cfs (-1)	900 cfs (0)	1200 cfs (-2)		Raft	500cfs (-1)	900 cfs (-1)	1200 cfs (-2)	
											Infl. Kayak	500 cfs (1)	900 cfs (-1)	1200 CFS (-2)		Infl. Kayak	500 cfs (0)	900 cfs (-2)	1200 cfs (-2)	
											Other:					Other:				
Louis Debret	2	0	1	2	1	-1	2	2	2	2	Kayak	500 cfs (2)	750 cfs (2)	1200 cfs (2)		Kayak	500 cfs (2)	750 cfs (2)	900 cfs (2)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	600 cfs (2)	750 cfs (2)	900 cfs (2)		Raft	600 cfs (1)	750 cfs (1)	900 cfs (1)	
											Infl. Kayak	500 cfs (1)	750 cfs (1)	1000 cfs (1)		Infl. Kayak				
											Other:					Other:				
John Gangemi	2	2	2	2	2	2	2	2	2	2	Kayak	600 cfs (1)	1000 cfs (1)	2000 cfs (-1)		Kayak	600 cfs (1)	800 cfs (1)	1500 cfs (-1)	
											Open Canoe					Open Canoe				
											Closed Canoe	600 cfs (-1)	1000 cfs (-1)	2000 cfs (-1)		Closed Canoe	600 cfs (-1)	800 cfs (-1)	1500 cfs (-1)	
											Cataraft					Cataraft				
											Raft					Raft				
											Infl. Kayak					Infl. Kayak				
											Other:					Other:				
Paul Martzen	2	-1	-1	1	-1	2	0	0	-1	2	Kayak	350 cfs (0)	650 cfs	800 cfs (2)		Kayak	350 cfs (-2)	600 cfs (1)	750 cfs (-1)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft	550 cfs (-1)	750 cfs (2)	1000 cfs (-1)		Cataraft	550 cfs (-1)	750 cfs (-1)	900 cfs (-1)	
											Raft	550 cfs (-1)	750 cfs (-1)	1000 cfs (-1)		Raft	550 cfs (-1)	750 cfs (-1)	900 cfs (-1)	
											Infl. Kayak	300 cfs (-1)	550 cfs (-1)	700 cfs (-1)		Infl. Kayak	300 cfs (-1)	500 cfs (-1)	600 cfs (-1)	
											Other:					Other:				
Tom Meinholz	1	0	0	0	0	1	0	0	0	0	Kayak	650 cfs (1)	900 cfs (2)	1100 cfs (1)		Kayak	550 cfs (1)	800 cfs (1)	900 cfs (1)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft					Raft				
											Infl. Kayak					Infl. Kayak				
											Other:					Other:				
Russ Patterson	2	2	2	2	1	1	2	2	2	2	Kayak	700 cfs (2)	750 cfs (2)	1200 cfs (1)		Kayak	500 cfs (1)	750 cfs (1)	800 cfs (1)	
											Open Canoe	400 cfs (-2)	400 cfs (-2)	400 cfs (-2)		Open Canoe				
											Closed Canoe	600 cfs (2)	750 cfs (2)	1000 cfs (2)		Closed Canoe	500 cfs (1)	750 cfs (1)	800 cfs (1)	
											Cataraft	600 cfs (0)	750 cfs (0)	900cfs (0)		Cataraft	500 cfs (0)	750 cfs (0)	800 cfs (0)	
											Raft	600 cfs (1)	750 cfs (1)	750 cfs		Raft	500 cfs (0)	750 cfs (0)	750 cfs (0)	
											Infl. Kayak	400 cfs (-1)	700 cfs (-1)	800 cfs (-1)		Infl. Kayak	600 cfs (0)	750 cfs (0)	800 cfs (0)	
											Other:					Other:				
Rick Smith	2	1	0	1	1	-1	2	2	2	2	Kayak	700 cfs (2)	800 cfs (2)	1100 cfs (1)		Kayak	700 cfs (2)	800 cfs (2)	1000 cfs (1)	
											Open Canoe	700 cfs (1)	750 cfs (1)	850 cfs (1)		Open Canoe	700 cfs (0)	800 cfs (0)	850 cfs (0)	
											Closed Canoe	700 cfs (2)	800 cfs (2)	1000 cfs (1)		Closed Canoe	700 cfs (1)	800 cfs (1)	900 cfs (1)	
											Cataraft	700 cfs (1)	850 cfs (1)	900 cfs (1)		Cataraft	700 cfs (-1)	800 cfs (-1)	900 cfs (-1)	
											Raft	700 cfs (1)	900 cfs (1)	950 cfs (1)		Raft	700 cfs (0)	800 cfs (0)	900 cfs (0)	
											Infl. Kayak	700 cfs (1)	850 cfs (1)	900 cfs (1)		Infl. Kayak	700 cfs (0)	800 cfs (0)	900 cfs (0)	
											Other:	700 cfs (2)	800 cfs (2)	950 cfs (2)		Other:				

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Kayaks) (continued)**

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment				Flow Assessment				Difficulty					Difficulty						
#9:				#10: Outstanding boating features			#11: Return for future boating		#12: How far would you travel for this run		#13: Suitability for general paddling public <sup>4</sup>					#14: Identify challenging rapids			
Name	Min. acceptable flow/whitewater water class	Optimum Flow/whitewater water class	Max. acceptable flow/whitewater water class	Location	GPS coord.	Description	At preferred flow	At today's flow	At minimum acceptable flows	At optimum flow	Class I	Class II	Class III	Class IV	Class V	If unsuitable, was the flow too low or too high?	Location description	GPS coord.	Class rating
J.D. Batove	600 cfs/Class IV	750 cfs/Class IV+	850 cfs/Class V				Definitely yes	Definitely yes	75 miles	200 miles	-2	-2	-2	1	2		Mile 2 thru the Weir/Gauge Station		V
Chris Clark	600 cfs/Class IV	750 cfs/Class IV - V	850 cfs/Class V	Hooper Diversion		Long rapid; dodging trees; left bend; two boots	Definitely yes	Probably	150-200 miles	150-200 miles	-2	-2	-2	1	2		Hooper Diversion		V
				Lower Section		Scenery, Scenery, Scenery													
Randy Calvin	500 cfs/Class IV	900 cfs/Class V-	1200 cfs/Class V	Mile 2-4		Non stop class 4 & 5 - whitewater Water Superb	Probably	Possibly	5 miles	100 miles	-2	-2	-2	0	2		Mile 2-4 Very continuous class 4 & 5 whitewater with little to no eddies because of this it is a run for advanced		V+
Louis Debret	500 cfs/Class IV	750 cfs/Class IV+/V-	1200 cfs/Class V				Possibly	Possibly	100 miles	100 miles	-2	-2	-1	1	2		Miles 3-4 (est) very fast, punchy		V-
John Gangemi	600 cfs/Class IV	1000 cfs/Class IV+	2000 cfs/Class V-	2 Miles from gauge station to Weir		Excellent continuous WW	Definitely yes	Probably	200 miles	300 miles	-2	-2	-2	2	2		2 Miles from Gauge to diversion		
Paul Martzen	350 cfs/Class IV	650 cfs/Class IV+	800 cfs/Class V	Totally continuous nature of run. Steepest section just above to Gauge Station			Definitely yes	Definitely yes	3-4 hours	4 hours	-2	-2	-2	0	1		1 Mile above Gauge Station		V
																	Several log jams created problems for rafters		
Tom Meinholz	550 cfs/Class IV	800 cfs/Class IV	900 cfs/Class IV+	Entire Run		Continuous nature of run & outstanding scenery & multiple play spots	Definitely yes	Definitely yes	200 miles	300 miles	-2	-2	-2	1	2		Middle section of the run (2 miles)		IV+
				Steep middle section		Lots of challenging rapids											The Weir and the 1/4 mile approach to it		IV+
Russ Patterson	500 cfs/Class IV	750 cfs/Class V	1200 cfs/Class V	Rapid above Weir through diversion		Very continuous section at pretty steep gradient	Definitely yes		200 miles	500 miles							Rapid above Weir		V
Rick Smith	700 cfs/Class V	800 cfs/Class V	1000 cfs/Class V	Second 2-3 miles beyond the Weir		Continuous class IV. Rapids fantastic	Probably	Probably	80 miles	200 miles	-2	-2	-2	-1	2		Second 2-3 miles A few logs across the River		V
				Last 2 miles		Fantastic scenery, granite													

Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Kayaks) (continued)

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

							Time				Hazards				Access							
#15: Difficulty of portages							#16:	#17: Number of stops/time out of boat			#18: Specific hazards				#19	#20: If no to #19, why?					#21	
Name	Location	Portage difficulty	Requires portage rope	Portage route (river right or left)	Estimated portage time	Difficulty of rapid portaged	Time to complete run	Number of stops for breaks	Number of stops for scouting	Number of stops for portaging	Location description	GPS coord.	Safety Hazard	Recommendation	Adequate put in	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Adequate take-out	
J.D. Batove	N/A	N/A	N/A	N/A	N/A	N/A	3	2	3	3	Throughout run		Trees/Wood	With annual high water most would flush through - therefore not a problem	Yes - for this study - If used for scheduled releases (refer to 20)	X					Shuttle service would need to be implemented	Yes
Chris Clark	N/A	N/A	N/A	N/A	N/A	N/A	3-4	1-2	4-5	1	Wood scattered throughout upper and lower sections				Yes							Yes
Randy Calvin							2-5	2	3-4	0			First 3 miles had several logs		Yes							Yes
Louis Debret	N/A	N/A	N/A	N/A	N/A	N/A	4	4	4	0	Numerous Logs			Scout	Yes							Yes
John Gangemi							4	2	2	0					Yes							Yes
Paul Martzen	1/4 mile after Gauge	Easy		Left	10 Min.	5	5	1	4	2					Yes - Put-In was great. Easy and close to bathrooms/ close to road							Yes
Tom Meinholz							4	1	4	1	The Weir		Not really any thing out of the ordinary	We all ran it	Yes							Yes
Russ Patterson							3-4	2-3	5-6	1	Upper 1/3 of Weir		Wood	Be Careful	Yes							Yes
Rick Smith							3	4	2	0			Logs/trees	Scout	Yes							Yes

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Kayaks) (continued)**

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

						Regional comparison		
#22: If no to #21, Why?						#23	#24	#25
Name	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Similar runs	Additional comments	Commercial viability rating
J.D. Batove						Granite Creek (Middle Fork San Joaquin)	Overall a great run for an experienced whitewater enthusiast, however, the continuous nature of the run could cause problems for the average boating public.	Definitely no
Chris Clark						Geology scenery: Fantasy Falls North of Mokelumne	Great Run, it would be a great run to do a couple of laps on as opposed to only 1 run	Definitely no
Randy Calvin						None this run. Was very to me.	This flow is about perfect for this run	Possibly
Louis Debret						North Yuba, Sierra City and South Fork American, Kyburz		Definitely no
John Gangemi						Good Creek Runs	This is an incredible run. Could be good run for Class IV boaters if they scouted the continuous section	Definitely no
Paul Martzen							Extremely Pretty area and run	Possibly
Tom Meinholz						San Joaquin - Tied for First Granite Creek Kyburz - American	The scenery alone is a draw and makes it worth driving so far to boat it	Probably
Russ Patterson						Fordyce Creek		Possibly
Rick Smith						West Walk Granite Creek "Tied for first" San Joaquin		Possibly

<sup>1</sup> 2= highly acceptable, 1= moderately acceptable, 0= neutral, -1= moderately unacceptable, -2= highly unacceptable.

<sup>2</sup> 2= improve, 0= neutral, -2= decline

<sup>3</sup> rating scale: high confidence=2, neutral= 0, and low confidence= -2

<sup>4</sup> 2= highly suitable, 1= moderately suitable, 0= neutral, -1=moderately unsuitable, -2=highly unsuitable

**Table REC 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Rafts)**

Study Flow: 750 cfs

Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment												Flow Assessment								
#1	#2: Evaluate today's flow <sup>1</sup>											#3: Suitable watercraft at today's flow							#4	#5
Name	Craft Type	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Kayak	Closed Deck Canoe	Raft	Open Canoe	Cataract	Inflatable Kayak	Other	Overall quality at today's flow	Prefer a higher or lower flow?
John Barbella	Self-bailing Raft: 13.5 ft.	2	2	2	2	2	2	2	2	2	2	X		X					2	About the same; this was close to an optimum flow
Olie Brown	Self-bailing Raft: 14'	1	0	0	0	1	-2		2	2	2	X	X	X		X			2	About the same; this was close to an optimum flow
Michael Clifton	Self-bailing Raft: 13'9" Riken Dodger XL	2	2	2	1	2	0	2	2	2	1	X		X	X - whitewater only	X			2	About the same; this was close to an optimum flow
Wendell DeLauro	Self-bailing Raft: 14 foot	-1	2	0	-1	2	-1	2	2	2	0	X		X					2	About the same; this was close to an optimum flow
Anthony Garcia	Self-bailing Raft: 14'	1	2	0	0	2	-1	2	2	0	1	X		X					2	Slightly Lower Flow
Gary Hall	Self-bailing Raft: 13.5 foot	2	2	2	2	2	2	2	2	2	2	X		X					2	About the same; this was close to an optimum flow
Brendan Riordan	Self-bailing Raft: 13'9" Riken	2	2	2	2	2	0	2	2	2	0	X	X	X		X	X	River Board ?	2	Slightly higher flow
Tim Schiller	Self-bailing Raft: 14'	1	2	1	1	2	-1	2	2	-1	-2	X		X					1	Slightly lower flow

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Rafts) (continued)**

Study Flow: 750 cfs  
 Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment											Flow Assessment				Flow Assessment					
#6 How would you expect the characteristics of the run to change at your preferred flow? <sup>2</sup>											#7: Personal Preference -flow rate (confidence level) <sup>3</sup>				#8: General Paddling Public- flow rate (confidence level) <sup>3</sup>					
Name	Boatability	Avail. of tech/ challenging boating	Avail. of powerful hydraulics	Avail. of whitewater play areas	Overall whitewater challenge	Safety	Aesthetics	Length of Run	Rate of Travel	Number of Portages	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow	Craft Type	Min. acceptable flow	Optimum Flow	Max. acceptable flow	Not suitable at any flow
John Barbella	2	2	2	2	2	2	2	2	2	2	Kayak					Kayak				
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	600 cfs (1)	750 cfs (2)	1000 cfs (1)		Raft	500 cfs (1)	750 cfs (2)	1000 cfs (1)	
											Infl. Kayak					Infl. Kayak				
Other:					Other:															
Olie Brown	1	0	0	0	1	-2		2	2	2	Kayak					Kayak	0	0	0	
											Open Canoe				Yes	Open Canoe	0	0	0	
											Closed Canoe					Closed Canoe	0	0	0	
											Cataraft	700 cfs	750 cfs (2)	1000 cfs		Cataraft	0	0	0	
											Raft	700 cfs (2)	750 cfs (2)	1000 cfs (1)		Raft	0	0	0	
											Infl. Kayak	300 cfs (1)	400 cfs (1)	500 cfs (0)		Infl. Kayak	-2	-2	-2	
Other:					Other:															
Michael Clifton	0	1	2	2	2	0	2	2	2	0	Kayak	500 cfs (1)	750 cfs	1000 cfs (1)		Kayak	500 cfs (1)	750 cfs	1500 cfs (2)	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft	500 cfs (1)	750 cfs (2)	1000+ cfs (1)		Cataraft	500 cfs (2)	750 cfs (2)	1000 cfs (2)	
											Raft	500 cfs (2)	750 cfs (2)	1200+cfs (2)		Raft	500 cfs (2)	750 cfs (2)	1000 cfs (2)	
											Infl. Kayak					Infl. Kayak				
Other:					Other:															
Wendell DeLauro	-1	2	0	-1	2	-1	2	2	2	0	Kayak					Kayak				
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	600 cfs (0)	725 cfs (0)	780 cfs (0)		Raft	550 cfs (-1)	700 cfs (0)	780 cfs (-1)	
											Infl. Kayak					Infl. Kayak				
Other:					Other:															
Anthony Garcia	2	2	0	0	2	0	2	2	0	0	Kayak					Kayak				
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	650 cfs (-1)	700 cfs (0)	750 cfs (1)		Raft	600 cfs (-1)	750 cfs (-1)	800 cfs (-1)	
											Infl. Kayak					Infl. Kayak				
Other:					Other:															
Gary Hall	0	0	0	0	0	0	0	0	0	0	Kayak	500 cfs	750-850 cfs	1200 cfs		Kayak	500 cfs	750-850 cfs	1200 cfs	
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	600 cfs	750-850 cfs	1200 cfs		Raft	600 cfs	750-850 cfs	1200 cfs	
											Infl. Kayak					Infl. Kayak				
Other:					Other:															
Brendan Riordan	0	1	2	-1	2	-2	0	0	1	0	Kayak					Kayak				
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	500 cfs (2)	1000 cfs (1)	1200 cfs (0)		Raft	500 cfs (2)	1000 cfs (1)	1200 cfs (-1)	
											Infl. Kayak	500 cfs (2)	750 cfs (1)	1000 cfs (0)		Infl. Kayak	500 cfs (2)	1000 cfs (1)	1200 cfs (-1)	
Other:					Other:															
Tim Schiller	1	2	1	1	2	0	2	2	1	1	Kayak					Kayak				
											Open Canoe					Open Canoe				
											Closed Canoe					Closed Canoe				
											Cataraft					Cataraft				
											Raft	500 cfs (1)	650 cfs (1)	1000 cfs (-1)		Raft	400 cfs (-1)	600 cfs (-1)	1000 cfs (-1)	
											Infl. Kayak					Infl. Kayak				
Other: Surf Mat	500 cfs (2)	1000 cfs (0)	? (-2)		Other															



**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Rafts) (continued)**

Study Flow: 750 cfs  
Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Flow Assessment				Flow Assessment				Flow Assessment				Difficulty					
#9:				#10: Outstanding boating features				#11: Return for future boating		#12: How far would you travel for this run		#13: Suitability for general paddling public <sup>4</sup>					
Name	Min. acceptable flow/whitewater class	Optimum Flow/whitewater class	Max. acceptable flow/whitewater class	Location	GPS coord.	Description	At preferred flow	At today's flow	At minimum acceptable flows	At optimum flow	Class I	Class II	Class III	Class IV	Class V	If unsuitable, was the flow too low or too high?	
John Barbella		750 cfs/Class V		Weir		Nice hole	Definitely yes	Definitely yes	150 miles	150 miles					2		
Olie Brown	700 cfs/Class V	750 cfs/Class V	1000 cfs/Class V	The long continuous rapids above Weir		Intense in a Raft	Possibly	Possibly	150 (?) miles	150 (?) miles (my house in 3 Rivers to the run)	-2	-2	-2	1	2		
				The Gorge Run		Was very pleasant and scenic											
Michael Clifton	500 cfs/Class IV - V	750 cfs/Class IV+-V	1000 cfs/Class V	1/2 mile upstream from Scenery along entire run	Length of run 2 miles	Class V Tumble drop with large hydraulics near Most beautiful. High Sierra River. I have run - outstanding aesthetics.	Definitely yes	Definitely yes	80 miles	80 miles				2	2		
Wendell DeLauro	600 cfs/Class V	725 cfs/Class V	780 cfs/Class V				Probably	Probably	450 miles	450 miles	-2	-2	-2	2	2		
Anthony Garcia	650 cfs/Class V	700 cfs/Class V	750 cfs/Class V	Below the Weir		Excellent Class III - IV boating	Possibly	Possibly	100 miles	100 miles	-2	-2	-1	0	1		
				2 Miles above Weir		Excellent whitewater Class V											
Gary Hall	600 cfs/Class V	750 cfs/Class V-	1200 cfs/Class V	1/4 mile above Gauge		Continuous Action, exciting whitewater	Definitely yes	Definitely yes	300 miles	300 miles	-2	-2	0		2		
				Below Gauge		Fun, Exciting											
Brendan Riordan	400 cfs/Class IV	750 cfs/Class V	1200 cfs/Class V+			It was all very good and beautiful	Definitely yes	Definitely yes	250 miles	250 miles	-2	-2	-2	-1	2	Too high	
Tim Schiller	500 cfs/Class IV - V	650 cfs/Class V	100 cfs/Class V				Probably	Probably	70 miles	70 miles	-2	-2	0	2	2	Too high	

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Rafts) (continued)**

Study Flow: 750 cfs  
Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

Difficulty										Time			Hazards				Access		
#14: Identify challenging rapids				#15: Difficulty of portages						#16:	#17: Number of stops/time out of boat			#18: Specific hazards				#19	
Name	Location description	GPS coord.	Class rating	Location	Portage difficulty	Requires portage rope	Portage route (river right or left)	Estimated portage time	Difficulty of rapid portaged	Time to complete run	Number of stops for breaks	Number of stops for scouting	Number of stops for portaging	Location description	GPS coord.	Safety Hazard	Recommendation	Adequate put in	
John Barbella	Weir		V	Log Jam	3		Right	15 Min.		6		3	3	Above Weir - 3rd		Logs in River	Remove Logs	Yes	
	Above Weir		IV	Above Weir	3			1/2 Hour						Log Jam - 1st			Log Jam		Remove Logs
	Below Weir		VI	Above Weir	3			15 Min.						2nd			Log Jam		Remove Logs
Olie Brown	Long continuous rapids from flat section to just below Weir		V							4	10	4	1	Logs/Jam		Strain/drowning. Collision, snag, puncture. Killing boaters, flip	Remove Logs	Yes	
	Gorge below Weir		IV																
Michael Clifton	Overall Run - excellent Drops constantly. Lots of Action		IV to V	200 Yard section above Gauge Weir	3	Standard Lining	Left	1 hour	V	6	5	3	1	Logging various places. 1/2 mile above Weir to just below		Logs in Jams trees down	Line of Portage - could be removed? Good idea. Improve safety	Yes	
Wendell DeLauro				Trees	4					7	0	5	3			Trees	Remove Trees	Yes	
				Rapids Blue	3														
Anthony Garcia	Above Weir logs across River 2 places		V - VI	Rapid above Weir	2	No	Left	15 Min.	V	3	5	3	1	Log Jam above Weir and across below Weir		Serious for Rafterers	Remove Logs	No	
Gary Hall	Beginning 1 mile beautiful Class II		II	1st Log	2		Right			4-6		2	3	Above Gauge		Continuous V - with logs	Run if confident line if in doubt	Yes	
	Good section III+, IV- after 1st mile to 1/2 mile above Gauge		III+, IV-	Above Gauge, 2nd log	2		Left												
	1/2 mile Gauge to 1/4 mile below Gauge		IV+, V-																
	To end. Beautiful III+, IV-		III+, IV-																
Brendan Riordan	Weir	Unknown	V	Above Weir	2					4	1	4	1 possible	Trees in water		Snagging boat and people	Remove them	Yes - very good	
Tim Schiller	300 yards above Gauge Station to "Weir"		V	Big log on right	4	No	Right	10 Min.	Not difficult, too	5 hrs - not done it 3 hrs - with experience	4	6	4	Log leaning against R. wall 1/2 down? 1/2 mile above Gauge Station to Station Big rock in quarter mile above Gauge		Limb spike extremely dangerous Several snags, trees Holes	Cut it off! Some could be cut at low uster.	Yes	
				600 Yards above "Weir"	4	Yes	Right	1 hour	Too narrow										
				Top of "Weir" run	2	Yes	Left	20 Min.	V										

**Table 3-5c. Summary of Boater Responses to Single Flow Study Boater Evaluation Forms for the Florence Lake Run, South Fork San Joaquin River June 8, 2003 (Rafts) (continued)**

Study Flow: 750 cfs  
Put-in: Jackass Meadows, below Florence Lake Dam Take-out: Mono Hot Springs

												Regional comparison		
#20: If no to #19, why?						#21	#22: If no to #21, Why?					#23	#24	#25
Name	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Adequate take-out	Not enough parking	Parking too far away	Put-in too steep	Put-in too close to rapid	Other (explain)	Similar runs	Additional comments	Commercial viability rating
John Barbella						Yes						First time on a run like this.		Possibly
Olie Brown						Yes						West Walker Parts of N. Stanislaus Kicking Horse (B.C) Gateway area of Kaweah Kern thunder run	The log hazards make this beautiful run quite dangerous. If they are not removed, regular deaths could be expected here.	Possibly, but must remove tree hazards
Michael Clifton						Yes						Sections of Fordyce Creek Kings - Yucca Point to Garnett Pike McCloud - but harder North Fork Yuba	A Remove the logs, safety increases to very acceptable, for rafters. Some logs increased danger, but nothing that prohibits using this run	Probably
Wendell DeLauro						Yes							The Trees created the most difficulty. Also the top section has very continuous rapids which would be dangerous for most boaters.	Definitely no
Anthony Garcia	X					No					Difficult access to parking area	West Walker	The run was excellent except for numerous logs across the river. This created serious safety issues for rafters. If there were access below the Weir more boaters would be able to enjoy this run.	Possibly
Gary Hall						Yes						A new experience for me. More continuous than other things I have run.	At this time, with my current state of physical fitness (which is rather poor!), I feel the run was scary, but well worth the effort. I would like to raft and Kayak this run many more times. It was a little more than I was ready for today. I am grateful for our outstanding Kayak support. I believe with preparation, I would feel confident guiding this run.	Possibly
Brendan Riordan						Yes						Lower Stan goodwin Cyn.	Thanks! It was something. I will always remember. I would like to do it again if the opportunity arises.	Possibly
Tim Schiller						Yes								Definitely no

<sup>1</sup> 2= highly acceptable, 1= moderately acceptable, 0= neutral, -1= moderately unacceptable, -2= highly unacceptable.

**FIGURE**

**Placeholder for Figure**  
**Non-Internet Public Information**

This Figure has been removed in accordance with the Commission regulations at 18 CFR Section 388.112.

This Figure is considered Non-Internet Public information and should not be posted on the Internet. This information is provided in Volume 4 of the Application for New License and is identified as “Non-Internet Public” information. This information may be accessed from the FERC’s Public Reference Room, but is not expected to be posted on the Commission’s electronic library, except as an indexed item.

**APPENDIX A**  
**Copies of Boater Invitation Letters**  
**and**  
**Boater Profile Form**

**BIG CREEK ALP**  
**SINGLE FLOW WHITEWATER STUDY**  
***BOATER PROFILE FORM***

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**Background Information (Confidential\*)**

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Gender:  Male  Female

Address: \_\_\_\_\_

City: \_\_\_\_\_

County: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

FAX Number: \_\_\_\_\_

Email address: \_\_\_\_\_

**\*Confidentiality Statement**

Background and contact information (name, address, e-mail, etc.) is considered confidential and will not be disclosed to any parties as a result of this study.

**BIG CREEK ALP**  
**SINGLE FLOW WHITEWATER STUDY**  
**BOATER PROFILE FORM**

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1. To which whitewater organizations, groups, or clubs do you belong?
  
2. Please identify your skill level for the following craft types by checking the appropriate box for the International Whitewater Scale difficulty level that you are qualified to boat in each craft type. Check the box under N/A if you are not experience with a craft type listed. Give your years of experience in the last column.

Craft Type	Skill Level						Years of Experience
	N/A	I	II	III	IV	V	
Kayak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Closed deck canoe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Raft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Open canoe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cataraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Inflatable kayak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

3. How many days do you participate in whitewater boating activities annually? \_\_\_\_\_
  
- 3a. Are these typically single or multi-day trips?
  - Single       Multi-day       Both



**BIG CREEK ALP**  
**SINGLE FLOW WHITEWATER STUDY**  
**BOATER PROFILE FORM**

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4. Indicate below the number of times that you have run each of the following rivers in California (check the appropriate box).

River	Number of Times Run							
	+ 50	+ 20	+ 10	5-10	4	3	2	1
American	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battle Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Big Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cache Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carmel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carson, E. Fork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chowchilla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clavey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cosumnes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cottonwood Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dinkey Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fresno	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kaweah	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Klamath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mattole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McCloud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Merced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mokelumne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nacimiento	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noyo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Putah Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubicon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Russian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sacramento	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salmon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
San Joaquin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smith	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stanislaus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stony Creek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trinity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Truckee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tuolumne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Walker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yuba	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**BIG CREEK ALP**  
**SINGLE FLOW WHITEWATER STUDY**  
**BOATER PROFILE FORM**

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5. Indicate the number of times, if any, that you have boated the following reaches in the San Joaquin River watershed.

Whitewater Run	Times Run
Upper Mono Creek – Mono Creek below Vermilion Valley Dam to diversion*	_____
Lower Mono Creek – Mono Creek below diversion to the South Fork San Joaquin River (SJR)	_____
Big Creek from Huntington Lake to Dam 4	_____
Big Creek Canyon – Big Creek from Dam 4 to Dam 5	_____
Lower Big Creek Canyon – Big Creek from Dam 5 to the SJR	_____
Bear Creek	_____
Stevenson Creek below Shaver Lake to the SJR	_____
North Fork Stevenson Creek from tunnel outlet to Shaver Lake	_____
Florence Lake Run – South Fork SJR from Florence Lake to Mono Hot Springs*	_____
Mono Hot Springs Run – South Fork SJR from Mono Hot Springs to Rattlesnake Crossing*	_____
Tied-for-First Run – SJR from Mammoth Pool Dam to Mammoth Pool Powerhouse (SJR from Mammoth Pool Dam to Dam 6) *	_____
Chawanakee Gorge Run – SJR from Dam 6 to Redinger Reservoir*	_____
Horseshoe Bend Run – SJR from Dam 7 to Kerckhoff Reservoir	_____
Patterson Bend (pass through water)	_____
Portal Tailrace (Rancheria Creek)	_____
Big Creek 4 Tailrace	_____
*Reaches targeted for single flow whitewater studies	_____

6. Have you participated in a single flow study in the past?

Yes       No

If yes, please provide the year, river, and reach for each study. (Use bottom of page for additional space if required.)

Study 1 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_  
 Study 2 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_  
 Study 3 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_

7. Have you participated in a controlled flow study in the past?

Yes       No

If yes, please provide the year, river, and reach for each study. (Use bottom of page for additional space if required.)

Study 1 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_  
 Study 2 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_  
 Study 3 Year: \_\_\_\_\_ River: \_\_\_\_\_ Reach: \_\_\_\_\_

**BIG CREEK ALP**  
**SINGLE FLOW WHITEWATER STUDY**  
***BOATER PROFILE FORM***

---

8. Have you ever been employed for your whitewater boating skills?  Yes  No

If yes, please explain your experience (year, location, position held, etc.): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

9. Do you have any certifications for whitewater boating?  Yes  No

If yes, please explain list certification: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

10. Do you have any experience on competitive whitewater boating teams?  Yes  No

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



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(916) 923-6251 Fax

May 7, 2003

**RE: Whitewater Boating - Single Flow Study  
Tied-for-First Run and Chawanakee Run  
San Joaquin River**

Dear Whitewater Flow Study Participant:

Thank you for your interest in, and willingness to volunteer for, the Whitewater Flow Study on the Tied-for-First and Chawanakee runs on the San Joaquin River. This letter is an invitation to participate in the study and provides an orientation to the study. This letter provides very important information about the study and your participation. Please read it carefully.

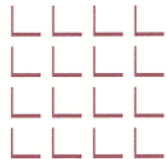
**Purpose of the Study**

The purpose of the single flow whitewater study is to identify: access limitations; initial class ratings; whitewater boating activity-types that could be supported; channel and flow-dependent factors that could influence low, high, and optimum flow limits for each activity-type; and estimated boatable flow ranges. The study will focus on the Tied-for-First and Chawanakee runs. This study is one of a series of studies undertaken by Southern California Edison (SCE) as part of the relicensing of their Big Creek hydro facilities and is being conducted by SCE in collaboration with American Whitewater and the San Joaquin Paddlers. The information collected by the study will be used to determine if further study is necessary such as a controlled flow study. We are asking you to join this select group because you are an experienced expert paddler that can represent paddlers of one or more of the following categories: creek/rodeo/river running K1's , C1's, OC1's, inflatables, and rafts/cataracts.

**Schedule and Commitment**

The official dates for the Whitewater Flow Study are **Wednesday, May 14 and Thursday, 15, 2003**. The study requires a commitment from you. It is necessary that you commit for a full day on May 14<sup>th</sup> and/or on May 15<sup>th</sup>, and adhere to the schedule, in order to participate in the study.

The study requires all participants to boat Class V whitewater. Due to the length of the runs (7-8 miles) and Class V difficulty, this will be a physically demanding day. Please consider this reality when deciding whether to participate in the study. If you have any reservations about your ability to do this run, please do not commit to the study.



# E N T R I X

Whitewater Flow Study Participants  
May 7, 2003  
Page 2

The study will start with orientation meetings that begin at 7:00 AM on both days. Please plan to arrive at the orientation meeting location by 6:30 AM on each day. The orientation meeting for the Tied-for-First run will take place at the Mammoth Pool Powerhouse, followed by a day on the river. The Chawanakee Gorge run orientation meeting will take place at the take out near Powerhouse No. 3. Everyone is encouraged to meet on Thursday May 15<sup>th</sup> at 6:30 AM at the Chawanakee School Parking lot. Please note that Chawanakee School is only a meeting location, we can not leave parked vehicles at this location. We will all be leaving the Chawanakee School Parking lot promptly at 7:00 AM to caravan our vehicles to a parking area located near the take out at Powerhouse No. 3. Since this parking area is located behind a locked gate it is imperative that everyone be at the meeting location in time to caravan to the parking area.

**The orientation meetings are mandatory.** If you miss the orientation meeting, you will not be able to participate in the study. In addition, all boating participants will be required to sign a liability waiver.

SCE will provide a shuttle to the put-in for both days. For the Tied-for-First run, vehicular access to the put-in for the study is restricted, as the USFS annually closes the road to Mammoth Pool Reservoir during the deer migration season. Only the shuttle vehicles will be allowed access to the put-in for the Tied-for-First run. For the Chawanakee run access to the vehicle parking/staging area at the take out is restricted behind locked gates leading to Powerhouse No. 3. Only those vehicles that meet at Chawanakee School and are ready at 7:00 AM to caravan to the parking/staging area will be allowed access through the locked gate. SCE will provide a shuttle from the take out parking/staging area to the put-in for the Chawanakee run. Directions to the meeting locations and a map depicting the meeting locations are attached.

Please do not broadcast the study dates to the paddling community. Participant numbers for this study are limited, and non-participants showing up to paddle the river will jeopardize the study.

## Logistics for the Flow Study

The boating schedule will be as follows:

Run	Flow (cfs)	Date	Day	Orientation Meeting Time	Put-on Time
Tied-for-First	800	May 14	Wednesday	7:00 AM	9:00 AM
Chawanakee	600	May 15	Thursday	7:00 AM	9:00 AM

# ENTRIX

Whitewater Flow Study Participants  
May 7, 2003  
Page 3

The whitewater single flow study will involve paddling on the runs at a pre-arranged flow level. As a study participant you will be asked to evaluate specific characteristics of the river, as well as the quality of your experience using a standard survey questionnaire. The intent of the study is to collect objective information about various aspects of the flow being tested, so it is important that your responses to the survey questions be as objective as possible.

The orientation meetings (starting promptly at 7:00 AM each day) will consist of a detailed review of the survey questionnaire and study logistics. This meeting will be **mandatory for all study participants**. All shuttle logistics will be arranged at this meeting and are provided for as part of the study.

Lunch, consisting of on-water goods (i.e. Power Bars, Fruit, etc.) will be provided to study participants on both days. Food will be provided during the post run meeting. Everyone is responsible for their own breakfast.

Overnight accommodations are available in the towns of North Fork and Shaver Lake. However, travel time to the meeting location is long (North Fork 1 hour and Shaver Lake 2.5 hours). Undeveloped camping facilities are available at Redinger Lake. Directions to the location of the camping facility are provided on the attached directions.

## RSVP

Please confirm your intent to participate in the study and that you can commit to the study dates and other requirements noted above. Please RSVP by May 9<sup>th</sup> by calling me (530) 626-0929 or email [mtz@directcon.net](mailto:mtz@directcon.net). If you do not confirm by May 9<sup>th</sup> we will assume you cannot participate and will fill the available places in the study from the RSVP list. Participant numbers for this study are limited, so please confirm participation with me before planning to travel.

All boaters participating in the study are asked to complete the attached **Boater Profile Form**. We are asking that these forms be completed and returned prior to the study. Please send these forms to Mr. Martin Ostendorf at ENTRIX, Inc., 7919 Folsom Boulevard, Suite 100, Sacramento, CA, 95826.

If you have any questions about the study or need further clarification, please do not hesitate to also contact me. We appreciate your participation in this important study.

Sincerely,

David Martinez  
**ENTRIX, Inc.**

**Southern California Edison  
Big Creek Alternative Licensing Process**

**RE: Whitewater Boating – Single Flow Studies on  
Tied for First and Chanawakee Runs on the San Joaquin River  
Below Mammoth Pool Reservoir**

**Directions to morning meeting locations on May 14<sup>th</sup> and 15<sup>th</sup> and to  
undeveloped dispersed camping area at Redinger Reservoir**

---

The following provides directions to the meeting locations for the Tied for First Run on May 14<sup>th</sup> and the Chawanakee Run on May 15<sup>th</sup>. Also provided are directions to the nearest overnight camping location which is located at Redinger Reservoir (undeveloped dispersed camping area). Two maps are attached that depict the meeting locations and the camping area, the second map provides a more regional overview.

**Directions to Mammoth Pool Powerhouse/Chawanakee Flat from  
Sacramento:**

- Hwy-99 S toward MODESTO/FRESNO
- In Madera take the exit toward MILLERTON LAKE/YOSEMITE
- Turn LEFT onto W CLEVELAND AVE
- Turn LEFT onto E YOSEMITE AVE/HWY-145. Continue to follow HWY-145
- Turn LEFT onto Hwy-41/SOUTHERN YOSEMITE HWY
- Turn SLIGHT RIGHT onto ROAD 200/NORTH FORK RD. Continue to follow ROAD 200
- Stay straight to go onto MINARETS RD/MAMMOTH POOL RD
- Turn RIGHT on Forest Service Road 8S03 (if you come to the Clearwater Ranger Station then you have gone too far)
- Continue down to the Mammoth Pool Powerhouse at the base of the canyon at the San Joaquin River

**Directions to Mammoth Pool Powerhouse/Chawanakee Flat from Fresno:  
(estimated travel time: 1 hour 30 minutes)**

- From HWY-99, Turn onto HWY-41 north
- Turn SLIGHT RIGHT onto ROAD 200/NORTH FORK RD. Continue to follow ROAD 200
- Stay straight to go onto MINARETS RD/MAMMOTH POOL RD
- Turn RIGHT on Forest Service Road 8S03 (if you come to the Clearwater Ranger Station then you have gone too far)
- Continue down to the Mammoth Pool Powerhouse at the base of the canyon at the San Joaquin River

**Directions to Mammoth Pool Powerhouse/Chawanakee Flat from Redinger Lake Campground: (Estimated travel time: 1 hour 15 minutes)**

- Take REDINGER LAKE ROAD (Rd. 223) to ROAD 225
- Turn LEFT on ROAD 225
- Turn RIGHT on MINARETS RD/MAMMOTH POOL RD
- Turn RIGHT on Forest Service Road 8S03 (if you come to the Clearwater Ranger Station then you have gone too far)
- Continue down to the Mammoth Pool Powerhouse at the base of the canyon at the San Joaquin River

**Directions to Redinger Lake Campground from Sacramento:**

- HWY-99 south toward MODESTO/FRESNO
- Take the exit toward MILLERTON LAKE/YOSEMITE
- Turn LEFT onto W CLEVELAND AVE
- Turn LEFT onto E YOSEMITE AVE/HWY-145. Continue to follow HWY-145
- Turn LEFT onto HWY-41/SOUTHERN YOSEMITE HWY
- Turn SLIGHT RIGHT onto ROAD 200/NORTH FORK RD. Continue to follow ROAD 200
- Stay straight to go onto MINARETS RD/MAMMOTH POOL RD
- Turn RIGHT on ROAD 225
- Turn RIGHT on ROAD 235/REDINGER LAKE ROAD, the dispersed camping area is the open area adjacent to the dam

**Directions to Redinger Lake Campground from Fresno: (Estimated travel time: 1 hour 30 minutes)**

- Take Hwy 168 to Auberry Road into the town of Auberry
- Then take Powerhouse Road to Kerckhoff Lake
- Turn RIGHT onto Road 235/REDINGER LAKE ROAD to Redinger, the dispersed camping area is the open area adjacent to the dam

**To get to Chawanakee School No. 2 from Redinger Lake Campground: (Estimated travel time: 30 minutes)**

- Take REDINGER LAKE ROAD/ROAD 235 to ROAD 225
- Turn LEFT on ROAD 225
- Continue on ROAD 225 across the San Joaquin River to Chawanakee School





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June 5, 2003

**RE: Whitewater Boating - Single Flow Study  
Florence Lake Run  
San Joaquin River**

Dear Whitewater Flow Study Participant:

Thank you for your interest in, and willingness to volunteer for, the Whitewater Flow Study on the Florence Lake Run on the South Fork San Joaquin River. This letter is an invitation to participate in the study. This letter describes the study purpose and provides very important information about your participation in the study. Please read it carefully.

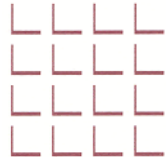
**Purpose of the Study**

The purpose of the single flow whitewater study is to identify: access limitations; initial class ratings; whitewater boating activity-types that could be supported; channel and flow-dependent factors that could influence low, high, and optimum flow limits for each activity-type; and estimated boatable flow ranges. The study will be conducted on the Florence Lake Run of the South Fork San Joaquin River from Florence Lake Dam to the Mono Hot Springs Campground. This study is one of a series of studies undertaken by Southern California Edison (SCE) as part of the relicensing of their Big Creek hydroelectric facilities and is being conducted by SCE in collaboration with American Whitewater and the San Joaquin Paddlers. The information collected by this study will be used to determine if further study is necessary such as a controlled flow study. We are asking you to join this select group because you are an experienced expert paddler that can represent paddlers of one or more of the following categories: creek/rodeo/river running K1's , C1's, OC1's, inflatables, and rafts/catarafts.

**Schedule and Commitment**

The official date for the Whitewater Flow Study is **Sunday, June 8, 2003**. The study requires a commitment from you. It is necessary that you commit for a full day on June 8<sup>th</sup>, and adhere to the schedule, in order to participate in the study.

The study requires all participants to have the ability to boat Class V whitewater. The length of the run is 7 miles and is Class IV-V difficulty. This will be a physically demanding day. Please consider this reality when deciding whether to participate in the



# E N T R I X

Whitewater Flow Study Participants  
June 5, 2003  
Page 2

study. If you have any reservations about your ability to do this run, please do not commit to the study.

The study will start with an orientation meeting to begin at 7:00 AM at the Mono Hot Springs Campground take-out area. Due to the backcountry location of the Florence Lake Run, it is strongly recommended that you arrive in the area on Saturday night. A camping location for the boating team and other study personnel has been arranged. Please note that driving time from Fresno to Florence Lake is 2.5 to 3 hours. Following the orientation meeting, the boating team and equipment will be transported by SCE to the put-in below Florence Lake Dam. Directions to the meeting location and camping area and a map depicting these locations are attached.

**The orientation meeting is mandatory.** If you miss the orientation meeting, you will not be able to participate in the study. In addition, all boating participants will be required to sign a liability waiver.

Please do not broadcast the study dates to the paddling community. Participant numbers for this study are limited, and non-participants showing up to paddle the river will jeopardize the study.

## Logistics for the Flow Study

The boating schedule will be as follows:

Run	Flow (cfs)	Date	Day	Orientation Meeting Time	Put-on Time
Florence Lake	750	June 8	Sunday	7:00 AM (at Mono Hot Springs Campground)	9:00 AM (below Florence Dam)

The whitewater single flow study will involve paddling the run at a pre-arranged flow level of approximately 750 cfs. As a study participant you will be asked to evaluate specific characteristics of the river, as well as the quality of your experience using a standard survey questionnaire. The intent of the study is to collect objective information about various aspects of the flow being tested, so it is important that your responses to the survey questions be as objective as possible. All boaters participating in the study will be asked to complete a **Boater Profile Form** provided with the boater evaluation (except if you participated in studies in May 2003 and already completed a form).

# ENTRIX

Whitewater Flow Study Participants  
June 5, 2003  
Page 3

The orientation meeting (starting promptly at 7:00 AM) will consist of a detailed review of the survey questionnaire and study logistics. This meeting will be **mandatory for all study participants**. All shuttle logistics will be arranged at this meeting and are provided for as part of the study.

Lunch, consisting of on-water goods (i.e. Power Bars, Fruit, etc.) will be provided to study participants on both days. Food will be provided during the post run meeting. Everyone is responsible for their own breakfast.

## **Potential for Second-Day Run (May 9<sup>th</sup>, 2003)**

There may be an opportunity to conduct the study at a different flow on Monday, June 9<sup>th</sup>. This determination will be made Monday morning depending on flow conditions and boater participation/availability. On Monday morning, the flow rate on the Florence Run will be identified and reported back to the boating team. It is unknown whether the flow on Monday will be higher or lower than the flow that was set for the Sunday run. If the boating team chooses to conduct a second run, then the study will be completed in accordance with the protocols from the previous day.

## **RSVP**

Please confirm your intent to participate in the study and that you can commit to the study date and other requirements noted above. Please RSVP at your earliest convenience by calling me **(530) 626-0929** or email [mtz@directcon.net](mailto:mtz@directcon.net). Participant numbers for this study are limited, so please confirm participation with me before planning to travel.

If you have any questions about the study or need further clarification, please do not hesitate to also contact me. We appreciate your participation in this important study.

Sincerely,

David Martinez  
**ENTRIX, Inc.**

# Directions to Mono Hot Springs

**From San Francisco, Sacramento:** Take State Route (SR) 99 south to Madera. At Cleveland Ave exit, turn left onto Cleveland and immediately get in the right-hand lane so you can turn right on Gateway. Go south on Gateway to Yosemite Ave, SR 145. Turn left (east) on SR 145 about 15 miles, cross SR 41 at signal. You're now on Road 145; continue 3 miles to Road 206. Turn right and continue to Friant. At stop sign, turn left, go past Millerton Lake to stop sign at Auberry Rd. Turn left to town of Prather. At stop sign, turn left onto SR 168. Follow signs to Huntington Lake.

**From Los Angeles:** Go north on SR 99 to Kingsburg, which is about 30 miles south of Fresno. Take the Kingsburg/Sanger exit (to Pine Flat Lake and Huntington Lake) and go north on 18th Ave (it becomes Mendocino Ave). At Adams Ave, turn left, go half a mile, turn right on Academy Avenue. Go north, turn right on Tollhouse Rd. Follow signs to Huntington Lake.

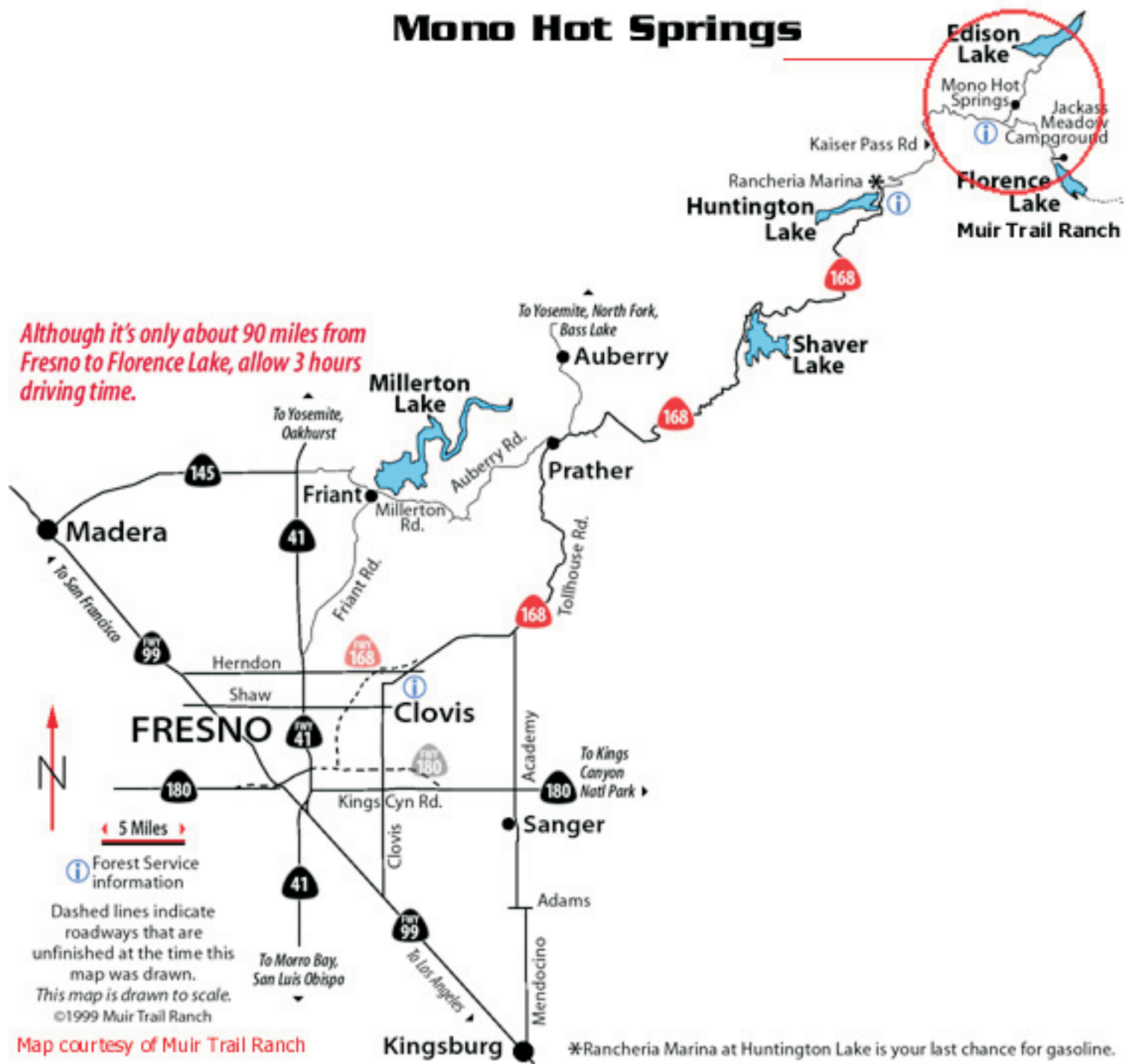
**Once you've arrived at Huntington Lake:** Check to see that you have plenty of fuel for your car, because Rancheria Marina is the last place to get it (closes 7pm). If you need fuel, stay on SR 168, going a quarter mile past the Florence and Edison Lakes turnoff to Rancheria, then go back to the turnoff, turn left, and head up the hill on Forest Service Road 80, the Kaiser Pass Road. At the junction of SR 168 and the Kaiser Pass Road is the Eastwood Ranger Station if you need info.

Drive up the nice two-lane road for about 5 miles, and you'll come to the one-lane portion. Relax, it's only another 12 miles to Mono Hot Springs Resort. It is rather narrow and winding, but paved road that takes approximately 40 minutes to drive (No steep cliffs!).

On the way, you'll pass the last Ranger outpost, the High Sierra station. A mile past that is the turnoff to Mono Hot Springs and Edison Lake.

Just after crossing the bridge over the river, you will turn left into the Mono Hot Springs Resort. A camping area has been reserved for the boating team just past the resort. Drive into the resort, go past the store, then there is a road that takes off to the north, right, that leads to a dispersed camping area near the trailhead for Doris Lake. It's only about a 5 minute walk from the resort. You can always stop at the store for directions, if necessary.

# Mono Hot Springs



Although it's only about 90 miles from Fresno to Florence Lake, allow 3 hours driving time.

Map courtesy of Muir Trail Ranch

\*Rancheria Marina at Huntington Lake is your last chance for gasoline.

## **APPENDIX B**

### **Completed Single Flow Study Questionnaires and Completed Boater Profile Forms**

**Placeholder for Appendix B**

**APPENDIX C**  
**Boater Evaluation Form**



**SOUTHERN CALIFORNIA EDISON  
BIG CREEK ALTERNATIVE LICENSING PROCESS  
SINGLE FLOW WHITEWATER STUDY  
BOATER EVALUATION FORM**

---

## Glossary

### Individual Paddler

#### Minimum Navigable Flow –

The minimum flow you need to navigate the river without portaging due to low flow conditions.

#### Minimum Acceptable Flow –

The lowest flow at which you would be willing to return to recreate on the river/reach.

#### Optimum Flow –

The flow that creates the best combination of resource characteristics for your craft type and skill level.

#### Maximum Acceptable Flow –

The highest flow at which you would be willing to return to recreate on the river/reach.

### Paddling Public

#### Minimum Acceptable Flow –

The lowest flow at which you predict that 50 percent of the paddling public would be willing to recreate on the river.

#### Optimum Flow –

The flow at which you predict that 90 percent of the paddling public would be willing to recreate on the river.

#### Maximum Acceptable Flow –

The highest flow at which you predict that 50 percent of the paddling public would be willing to recreate on the river.

**Southern California Edison**  
**Big Creek Alternative Licensing Process**  
**Single Flow Whitewater Study**  
**Boater Evaluation Form**

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
River: \_\_\_\_\_ Reach: \_\_\_\_\_  
Put in: \_\_\_\_\_ Take out: \_\_\_\_\_  
Study Flow: \_\_\_\_\_ Staff Gage Height: \_\_\_\_\_  
Gage ID: \_\_\_\_\_ Gage Location: \_\_\_\_\_

1. What type of craft did you use for this run?

- |   |   |
|---|---|
| <input type="checkbox"/> Hard shell kayak           | <input type="checkbox"/> Cataract: please indicate length: _____          |
| <input type="checkbox"/> Inflatable kayak           | <input type="checkbox"/> Self-bailing raft: please indicate length: _____ |
| <input type="checkbox"/> Closed deck canoe          | <input type="checkbox"/> Wrap-floor raft: please indicate length: _____   |
| <input type="checkbox"/> Open canoe with floatation | <input type="checkbox"/> Other: please explain _____                      |

**Flow Assessment**

2. Please evaluate today's flow for your craft and skill level for each of the following characteristics. *(Circle one number for each characteristic).*

Characteristic	Rating				
	Acceptable		Neutral	Unacceptable	
	Highly	Moderately		Moderately	Highly
Boatability	2	1	0	-1	-2
Availability of challenging technical boating	2	1	0	-1	-2
Availability of powerful hydraulics	2	1	0	-1	-2
Availability of whitewater "play areas"	2	1	0	-1	-2
Overall whitewater challenge	2	1	0	-1	-2
Safety	2	1	0	-1	-2
Aesthetics	2	1	0	-1	-2
Length of run	2	1	0	-1	-2
Rate of travel	2	1	0	-1	-2
Number of portages	2	1	0	-1	-2

3. What type(s) of watercraft would be suitable for this reach at today's flow? (*Circle all that would be appropriate*).

- a. Kayak
- b. Closed deck canoe
- c. Raft
- e. Open canoe
- f. Cataract
- g. Inflatable kayak
- h. Other: \_\_\_\_\_

4. Please rate the overall quality of this reach at today's flow as a whitewater boating opportunity.

Characteristic	Rating				
	Acceptable		Neutral	Unacceptable	
	Highly	Moderately		Moderately	Highly
Overall Rating	2	1	0	-1	-2

5. In general, would you prefer a flow that was higher, lower, or about the same as this flow? (*Circle one*)

- a. Much lower flow
- b. Slightly lower flow
- c. About the same; this was close to an optimum flow
- d. Slightly higher flow
- e. Much higher flow

6. In general, how would you expect the characteristics of the run to change at your preferred flow? (*Circle one number for each characteristic*).

Characteristic	Rating				
	Improve		Neutral	Decline	
Boatability	2	1	0	-1	-2
Availability of challenging technical boating	2	1	0	-1	-2
Availability of powerful hydraulics	2	1	0	-1	-2
Availability of whitewater "play areas"	2	1	0	-1	-2
Overall whitewater challenge	2	1	0	-1	-2
Safety	2	1	0	-1	-2
Aesthetics	2	1	0	-1	-2
Length of run	2	1	0	-1	-2
Rate of travel	2	1	0	-1	-2
Number of portages	2	1	0	-1	-2

7. **PERSONAL PREFERENCE:** From your past experience and from today's run, what would be your minimum acceptable, optimum, and maximum acceptable flows for boating this reach, for each of the craft types listed below? Only provide estimates for the craft types that you have experience with. In addition for each of the estimates provided, how would you rate your confidence level in estimating these flow ranges?

(Rating scale: High Confidence = 2 Neutral = 0 and Low Confidence = -2)

Craft Type	Minimum Acceptable Flow	Optimum Flow	Maximum Acceptable Flow	Not Suitable at Any Flow
Kayak	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Open canoe	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Closed deck canoe	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Catacraft	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Raft	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Inflatable kayak	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Other:				
Other:				

8. **GENERAL PADDLING PUBLIC:** From your past experience and from today's run, what do you feel the minimum acceptable, optimum, and maximum acceptable flows would be for the general paddling public boating this reach, for each of the craft types listed below? Only provide estimates for the craft types that you have experience with. In addition for each of the estimates provided, how would you rate your confidence level in estimating these flow ranges?

(Rating scale: High Confidence = 2 Neutral = 0 and Low Confidence = -2)

Craft Type	Minimum Acceptable Flow	Optimum Flow	Maximum Acceptable Flow	Not Suitable at Any Flow
Kayak	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Open canoe	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Closed deck canoe	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Cataract	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Raft	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Inflatable kayak	(cfs)	(cfs)	(cfs)	
<i>Confidence level</i>	2 1 0 -1 -2	2 1 0 -1 -2	2 1 0 -1 -2	
Other:				
Other:				

9. In general, for **your craft type**, how would you rate the whitewater difficulty of this reach for the respective minimum acceptable, optimum and maximum flows you identified in question 7 above? (Use American Whitewater's International Scale of Whitewater Difficulty that ranges from Class I to Class VI).

Minimum Acceptable Flow: \_\_\_\_\_ cfs      Class \_\_\_\_\_  
 Optimum Flow: \_\_\_\_\_ cfs      Class \_\_\_\_\_  
 Maximum Acceptable Flow: \_\_\_\_\_ cfs      Class \_\_\_\_\_

10. Did you observe any outstanding whitewater boating features or opportunities at today's flow? If so, please describe them below. (If you require additional space please use the backside of this page).

Location	GPS Coordinates	Description of Feature/Opportunity
1.		
2.		
3.		
4.		

11. If your preferred flow was provided in the future, are you likely to return for future boating? Are you likely to return for future boating if flow were to be provided at today's flow? (Circle one for each preferred flow and today's flow).

**At your preferred flow**

- a. Definitely no
- b. Possibly
- c. Probably
- d. Definitely yes

**At today's flow**

- a. Definitely no
- b. Possibly
- c. Probably
- d. Definitely yes

12. How far would you travel to do this run?

At minimum acceptable flow \_\_\_\_\_ miles  
 At optimum flow \_\_\_\_\_ miles

**Difficulty**

13. For the general paddling public, how would you rate the suitability of this reach for the respective skill levels at today's flow in your craft type? For each one that you rate as "unsuitable," indicate whether the flow was too low or too high. *(Circle one value each).*

Boating Skill Level	Rating					If Unsuitable, was the flow Too Low / Too High	
	Suitable		Neutral	Unsuitable			
	Highly	Moderately		Moderately	Highly		
Class I	2	1	0	-1	-2		
Class II	2	1	0	-1	-2		
Class III	2	1	0	-1	-2		
Class IV	2	1	0	-1	-2		
Class V	2	1	0	-1	-2		

14. Please identify particularly challenging rapids or sections and rate their difficulty at this flow, using the International Scale of Whitewater Difficulty. (If you require additional space please use the other side of this page).

Location Description	GPS Coordinates	Class Rating
1.		
2.		
3.		
4.		



15. Please identify rapids or sections you needed to portage and rate the difficulty of those portages (using your type of craft at this flow level).

Location Description/GPS Coordinates	Portage Difficulty				Requires Technical Portage Ropes	Portage Route (River Right or Left)	Estimated Portage Time	Difficulty of Rapid Portaged
	Easy	Slightly Difficult	Moderately Difficult	Extremely Difficult				
	1	2	3	4				
	1	2	3	4				
	1	2	3	4				
	1	2	3	4				
	1	2	3	4				
	1	2	3	4				

**Time**

16. Estimate the time to complete this run for the paddling public \_\_\_\_\_(hours/minutes).

17. Estimate the number of times the paddling public would stop and get out of their boat for breaks, scouting, or for portaging and estimate the total amount of time spent.

Number of stops for breaks \_\_\_\_\_ Total minutes out of boat \_\_\_\_\_  
 Number of stops for scouting \_\_\_\_\_ Total minutes out of boat \_\_\_\_\_  
 Number of stops for portaging \_\_\_\_\_ Total minutes out of boat \_\_\_\_\_

**Hazards**

18. Did you observe any specific safety hazards beyond those normally encountered running a river of this difficulty at this flow? If so, please describe them below.

Location Description	GPS coordinates	Safety Hazard	Recommendation
1.			
2.			
3.			
4.			

**Access**

19. Was the put-in that you used adequate?

- a. Yes
- b. No

20. If "No", what made the put-in inadequate? *(More than one choice may be circled).*

- a. Not enough parking
- b. Parking too far away
- c. Put-in too steep
- d. Put-in too close to rapid
- e. Other (explain) \_\_\_\_\_

21. Was the take-out that you used adequate?

- a. Yes
- b. No

22. If "No", what made the take-out inadequate? *(More than one choice may be circled).*

- a. Not enough parking
- b. Parking too far away
- c. Take-out too steep
- d. Take-out too close to last rapid
- e. Other (explain) \_\_\_\_\_

**Regional Comparison**

23. In terms of difficulty, length of run, aesthetics, quality of experience, and overall character, what other whitewater runs in California are most similar to this one?

- |          |           |
|----------|-----------|
| 1) _____ | 6) _____  |
| 2) _____ | 7) _____  |
| 3) _____ | 8) _____  |
| 4) _____ | 9) _____  |
| 5) _____ | 10) _____ |

24. Please provide any additional comments about the run at this flow. (If you require additional space please use the other side of this page).

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25. Please rate this run for commercial viability. Circle One.

- a. Definitely no
- b. Possibly
- c. Probably
- d. Definitely yes