SOUTH SWP HYDROPOWER
FERC PROJECT NO. 2426-227

Whitewater Boating Level 3 Controlled-Flow Boating Study

April 2020

State of California
California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
Hydropower License Planning and Compliance Office

Los Angeles
DEPARTMENT OF WATER AND POWER

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

COMMONLY USED TERMS, ACRONYMS AND ABBREVIATIONS

AF	acre-feet
AW	American Whitewater
CDEC	California Exchange Data Center
CDFW	California Department of Fish and Wildlife
cfs	cubic feet per second
CNDDB	California Natural Diversity Database
CRLF	California red-legged frog
DWR	California Department of Water Resources
DPS	Distinct Population Segment
ESA	Endangered Species Act
FE	federal endangered
FT	federal threatened
FERC	Federal Energy Regulatory Commission
FR	Federal Register
IPaC	Information for Planning and Consultation
Licensees	California Department of Water Resources and Los Angeles Department of Water and Power
NMFS	National Marine Fisheries Service
NPS	National Park Service
Project	South SWP Hydropower, Federal Energy Regulatory Commission Project Number 2426-227
Study	Whitewater Boating Level 3 Controlled-Flow Study
SWP	State Water Project
USFS	U.S. Department of Agriculture, Forest Service
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
USR	Updated Study Report
UWCD	United Water Conservation District

1.0 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

The California Department of Water Resources (DWR) and the Los Angeles Department of Water and Power (collectively Licensees) are in the process of relicensing the South SWP Hydropower, Federal Energy Regulatory Commission (FERC) Project Number 2426-227 (Project). As part of its Integrated Licensing Process study program approved by FERC's Study Plan Determination dated June 14, 2017, the Licensees conducted a comprehensive recreation study for the Project including Study 4.1.19, Whitewater Boating Study. Study 4.1.19 was conducted in 2018 and 2019, and focused on the 18.1-mile section of Piru Creek from Pyramid Dam to United Water Conservation District's (UWCD) Lake Piru, a section of river known as Pyramid reach (Figure 1.1-1). American Whitewater (AW) has documented Pyramid reach of Piru Creek below Pyramid Dam as a navigable stretch of Class IV level of difficulty. American Whitewater defines a Class IV run as for advanced boaters and "Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require 'must' moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong eskimo roll is highly recommended. Rapids that are at the lower or upper end of this difficulty range are designated 'Class IV-' or 'Class IV+' respectively."
(https://www.americanwhitewater.org/content/Wiki/safety:class1benchmarkrapids).

The first 7.3 miles of Pyramid reach are designated by the United States (U.S.) Congress as a Wild and Scenic River, with the 3-mile section from just below the dam to just after Frenchmans Flat designated a "recreation river," and the next 4.3-mile section in the Sespe Wilderness to the Ventura County line designated a "wild river" (16 United States Code Section 1274[a]).

The Licensees' Study 4.1.19 identified the characteristics of the whitewater boating resource associated with Pyramid reach, particularly with regard to access in the upper reach, and assessed what ranges of flow conditions are suitable and preferable for whitewater boaters. That study consisted of four steps: (1) literature search and mapping; (2) hydrology assessment; (3) structured interviews; and (4) field reconnaissance and site visit, which included an on-land, controlled-flow reconnaissance of Pyramid reach with boating experts. The complete study results were included in the Licensees' Updated Study Report (USR) filed with FERC and posted to the Project relicensing website on May 15, 2019.

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Figure 1.1-1. Recreation Use Areas Around Pyramid Lake and Piru Creek

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In response to the USR, AW and the U.S. Department of the Interior, National Park Service (NPS) requested that FERC direct the Licensees to conduct a boating flow evaluation to better determine the acceptable boating flow range. On September 11, 2019, FERC issued a *Determination on Requests for Study Modifications and New Studies – South SWP Hydropower*. In its determination, FERC directed the Licensees to consult with AW and NPS to develop a plan to conduct a Whitewater Boating Level 3 Controlled-Flow Study (Study) in Pyramid reach. FERC further directed that the Study be conducted in accordance with the procedures described in *Flows and Recreation: A Guide for River Professionals* (Whittaker, Shelby, and Gangemi 2005) and include a detailed analysis of potential effects of whitewater boating on species listed under the federal Endangered Species Act (ESA).

Per FERC's direction, the Licensees prepared a draft Study plan that included the boating flow evaluation, and provided it on September 30, 2019, to AW, NPS, U.S. Department of Agriculture, Forest Service (USFS), U.S. Department of the Interior, Fish and Wildlife Service (USFWS), and other agencies for a 21-day review and comment period. AW, NPS, USFS, and USFWS submitted written comments on the draft Study plan.

Subsequent to the distribution of the draft Study plan, it came to the Licensees' attention that the proposed November 21 and 22, 2019 dates for conducting the on-water boating test would conflict with ongoing work at the Pyramid Dam Spillway. As such, during a follow-up coordination call with AW and the resource agencies to discuss the draft Study plan, new test dates of December 19 and 20, 2019, were established.

Thereafter, the Licensees updated the Study plan based on comments received by AW and the agencies, and filed the final Study plan for FERC's approval on November 1, 2019. FERC approved the Study plan on November 14, 2019, without modification. This *Whitewater Boating Level 3 Controlled-Flow Boating Study Report* provides the results of the Licensees' Study and, to the extent possible, an analysis of potential effects of whitewater boating in Pyramid reach on ESA-listed species.

1.2 BACKGROUND

As described in the Licensees' USR, a variety of river-based recreational activities and opportunities are available in Pyramid reach. The Licensees' Study 4.1.19 found that whitewater boating opportunities are not influenced by Project operations, since the Project operates to pass all natural inflow as outflow; rather, whitewater boating opportunities are influenced by regional hydrology and the frequency of storm events. The Piru Creek watershed has a Mediterranean climate with variable wet winters, and hot but mostly dry summers. Typical precipitation events occur during the winter months, generally between the months of October through April.

In addition to natural flow boating opportunities, supplemental flows are released by DWR into Pyramid reach in most years as part of a State Water Project (SWP) water delivery release to the United Water Conservation District (UWCD). This SWP water delivery is scheduled by UWCD and is typically released via Pyramid reach that

eventually enters Lake Piru. Annual water deliveries are based on the amount of SWP water available each year; water deliveries are determined based on a proportional share divided among all SWP water contractors up to the maximum amount specified in the SWP long term water supply contract. For the 10-year period from 2005 through 2014, an average of 1,809 acre-feet (AF) of water was delivered annually to UWCD. In some years, no supplemental flows were released due to less than optimal SWP water allocations.

Since 2009, when Article 52 in the existing Project license was amended, typical SWP water deliveries to UWCD have been carried out between the first of November and the end of February to prevent releases from interfering with the breeding habits of the arroyo toad (*Anaxyrus californicus*), which is listed as endangered under the ESA, and to avoid take of the species under the ESA. During this timeframe, water deliveries may be made over a period of a few days, ramping flows up and down to simulate the natural hydrograph of a typical storm event, or they may be released more gradually over a longer period.

In addition, the Licensees' Study 4.1.19 found that Pyramid reach can be characterized as having extremely low whitewater boating use. Whitewater boating opportunities in southern California are few, with the majority of boaters indicating they travel to the Kern River; and some boating takes place during storm events on the San Gabriel River. Similarly, whitewater boating use in Pyramid reach is generally limited to those years with higher than average precipitation and resulting higher river flows to support boating. Besides finding that whitewater boating in Pyramid reach was constrained due to natural hydrology, Study 4.1.19 found that Pyramid reach is a limited whitewater resource for kayakers due to: (1) the constricted nature of the channel; and (2) the lack of access out of the reach once a trip begins at Frenchmans Flat. Frenchmans Flat is a non-Project, USFS-managed dispersed camping and day use area near a gate that closes the upper part of the Golden State Highway to public vehicular use. Once users enter the Pyramid reach canyon from Frenchmans Flat, there is no practical way out other than proceeding through the river canyon approximately 15 river miles to the closed USFS Blue Point Campground and Lake Piru Canyon Road (Figure 1.1-1). Blue Point Campground was closed by USFS in 2000 to protect the arroyo toad and its designated critical habitat.

2.0 WHITEWATER BOATING LEVEL 3 CONTROLLED-FLOW STUDY

The Licensees' conducted the Study in accordance with the FERC-approved Study Plan, which follows the procedures described in Whittaker, Shelby, and Gangemi 2005. As noted in FERC's Determination, the flows for this Study were based on the scheduled supplemental flow releases for winter 2019-2020. The supplemental flow allocation for UWCD for the 2019 winter's annual delivery was 75 percent of full allocation, or 2,362 AF, which complies with Article 52, and was ramped up and down to simulate the hydrograph of a typical storm event.

2.1 STUDY GOALS AND OBJECTIVES

The Study was designed to provide a "qualitative assessment of the potential whitewater boating experience across the range of flows." The main objective outlined by FERC for the Study was to "verify the boater opinions and determine the minimum, optimum, and maximum boating flows."

2.2 STUDY AREA

The Study area was Pyramid reach and included two distinct whitewater boating runs (Figure 2.2-1). The first run is the 3 miles of Pyramid reach downstream of Pyramid Dam that runs alongside the paved, Golden State Highway to Frenchmans Flat, which is closed to public vehicular use by a locked gate. This 3-mile run offers boating access at multiple points and offers the potential for repeating the run multiple times in one day. There are a number of put-in and take-out sites in the upper 3-mile run (Figure 2.2-2).

The second run is the 15-mile-long section from Frenchmans Flat to Canton Crossing. Downstream of Frenchmans Flat, Piru Creek enters a long, deep, incised canyon in the Sespe Wilderness to the confluence of Michael Creek, about 16 miles downstream of Pyramid Dam. The closed non-Project USFS Blue Point Campground is about 14.5 miles downstream from Frenchmans Flat. Canton Crossing, the USFS-recommended take-out point, is approximately one-half mile downstream from Blue Point Campground, where a road crosses Pyramid reach in a "wet" crossing. Lake Piru is just downstream of this point. The run is not accessible to vehicles, other than at Frenchmans Flat and Canton Crossing, and foot access is difficult.

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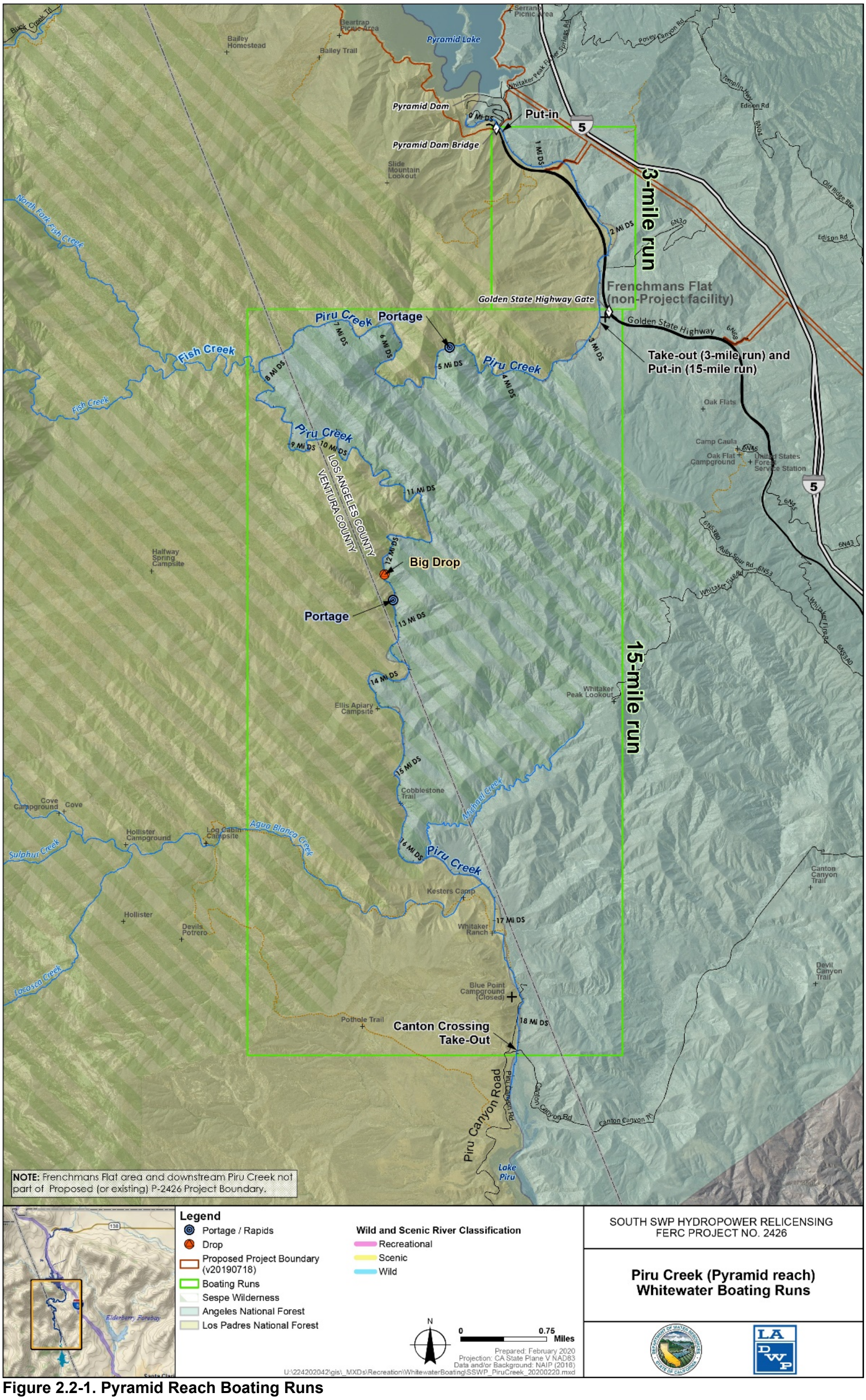

Figure 2.2-1. Pyramid Reach Boating Runs

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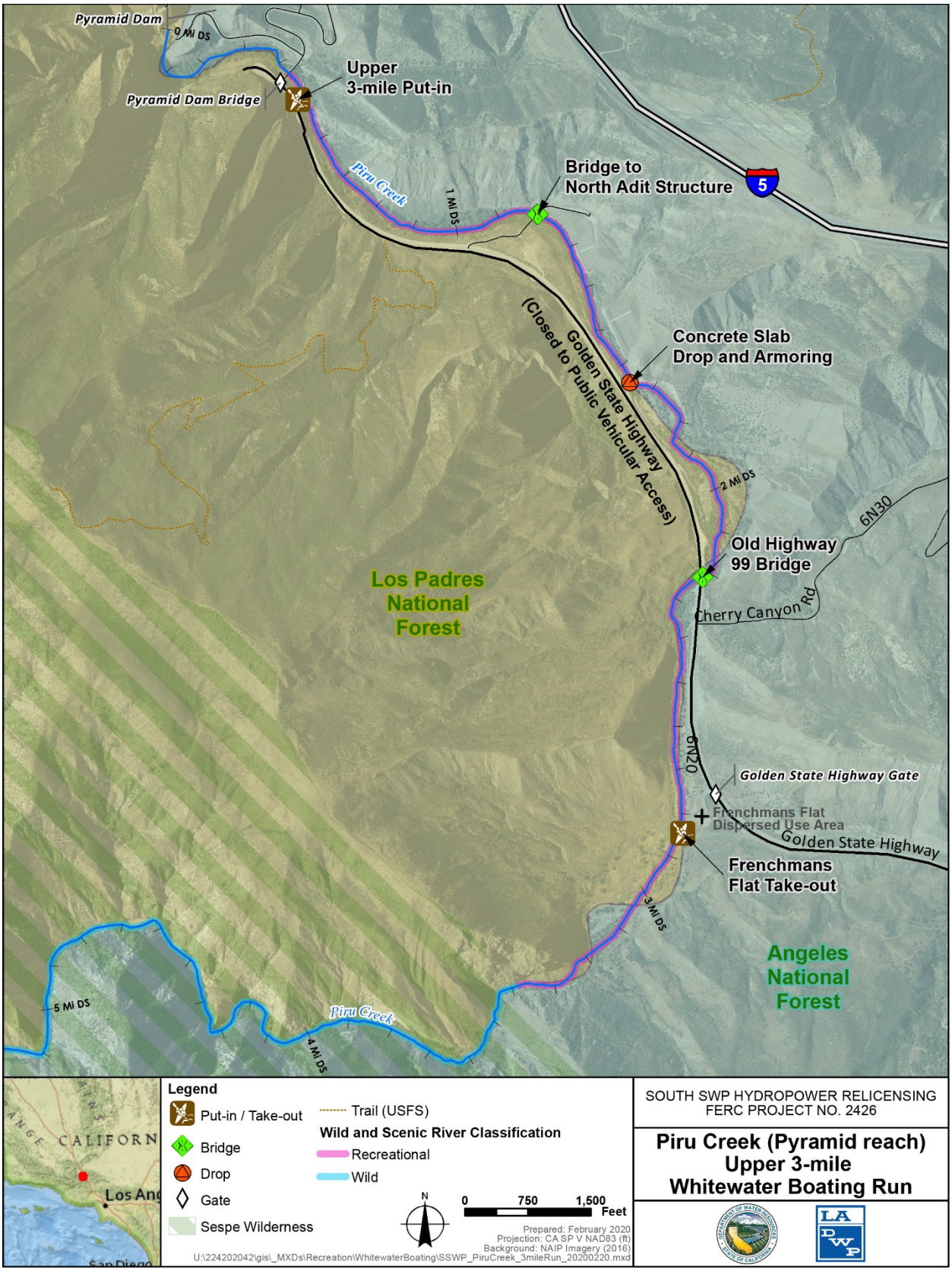

Figure 2.2-2. Upper 3-Mile Boating Run on Pyramid Reach

2.3 METHODS

The Study enlisted experienced boaters from the whitewater boating community to paddle and observe Pyramid reach to judge and rate its qualities and potential to be used as a whitewater boating resource in the future.

The Study included the following actions:

- Consultation and planning, including development of controlled-flow boating study protocols, logistics, and schedules for the boating event
- Two scheduled consecutive days of boating flows at levels determined in consultation with AW and NPS within the framework of UWCD water delivery schedules and Article 52 ramping requirements
- Inviting whitewater boating experts through AW and NPS to boat and evaluate the river reach as requested by AW and NPS
- Surveying boaters on their experiences after boating runs and collecting evaluation documentation of the boating event
- Data review, analysis, and reporting, including an analysis of potential effects of whitewater boating use on ESA-listed species

2.4 CONSULTATION, PLANNING, AND DEVELOPMENT OF FLOW LEVELS

The Licensees consulted extensively with AW, NPS, and UWCD to schedule the two consecutive days of boating flows within the framework of UWCD's water delivery schedule and quantity and Article 52 ramping requirements. The Licensees used two different flow levels, with one steady flow level per day. The controlled-flow releases were chosen in consultation with AW and participating boaters. On December 19, 2020, the release from Pyramid Dam was targeted to be approximately 300 cubic feet per second (cfs) as measured at Pyramid Dam. On the second day, releases from Pyramid Dam were targeted to be approximately 200 cfs as measured at Pyramid Dam.

2.5 COORDINATION WITH PROSPECTIVE BOATERS

Starting with a list of boaters who participated in the Licensees' 2018 Study 4.1.19, AW, in conjunction with the Los Angeles Kayak Club and other members, identified a total of 28 boaters who expressed interest in participating in the Study. The Licensees held follow-up coordination calls with AW and prospective boaters on November 17 and December 12, 2019. The Licensees continued throughout November and December 2019 to work with AW and prospective boaters to communicate plans, distribute and collect surveys and waivers, and discuss logistics.

2.6 BOATING RUNS

The boating trips were staged out of Frenchmans Flat; shuttles were provided to pick up boaters who completed the 15-mile run and to drop off boaters participating in the 3-mile run. Liability and pre-fieldwork forms developed by the Licensees in consultation with AW and agencies were completed by participating boaters prior to the first trips on December 19.

A total of 17 boaters participated during the boating tests. On each day of the testing, boaters, observers, and the Licensees met at Frenchmans Flat to review logistics and plans for each day. Following a safety meeting and orientation regarding the types of hazards that were previously scouted, the boaters began their runs.

On December 19, 2020, a group of seven advanced boaters departed from Frenchmans Flat at about 8:00 a.m. (Figure 2.6-1). Subsequently, a group of nine boaters were shuttled part way up the 3-mile reach to run the lower mile of that reach (Figure 2.6-2). After making a short run to Frenchmans Flat and a brief lunch break, the nine boaters were shuttled to the top of the 3-mile reach to participate in varying length trips, all ending at Frenchmans Flat. By 1:30 p.m., the Licensees departed with shuttle trucks for a 41-mile drive to Canton Crossing to pick up the 15-mile run participants. All participants gathered after the first day of runs at Frenchmans Flat for an informal group discussion and to evaluate the runs.

Figure 2.6-1. Boaters Starting at the 15-Mile Run on December 19, 2020

Figure 2.6-2. Group of Nine Boaters Starting on the 3-Mile Run on December 19, 2020

On the second day, December 20, 2019, 13 boaters met at Frenchmans Flat in the morning to review the day's logistics, plans, and safety briefings. Not all boaters from the first day were able to participate in the second day of the Study; however, 12 boaters from the previous day and one new boater representing AW were able to participate. Based on the results of the first day of boating, the boaters who ran the 15-mile run felt they had enough information to rate that reach. As such, instead of boating that reach again at a lower flow, they chose to run the upper 3-mile reach. All remaining boaters ran the upper 3-mile reach.

Flows in the reach during the Study were verified using the California Data Exchange Center (CDEC) website which provides the outflow measurements taken from the dam's low level outlet. The targeted and recorded flows at Pyramid Dam are presented in Table 2.6-1.

Table 2.6-1. Boating Study Flow Measurements at Pyramid Dam

Date	Target Flow	Recorded Flow
December 19, 2019	300 cfs	311 cfs
December 20, 2019	200 cfs	212 cfs

Source: PYM CDEC Gage
Note: The recorded flows released remained consistent throughout daylight hours on each Study day.
Key:
cfs = cubic feet per second

A list of Study participants is included in Appendix B. Table 2.6-2 shows the number of boaters that participated each day of the Study.

Table 2.6-2. Number of Participants by Date, Flow Level, and River Reach Boated

Date	Target Flow	3-Mile	15-Mile	Total
December 19, 2019	300 cfs	9	7	16
December 20, 2019	200 cfs	13	0	13

Key:
cfs = cubic feet per second

For the 3-mile run, eight of the boaters ran the run on both days, contributing to their ability to provide a comparative analysis of study flows.

2.7 BOATER SURVEYS

Post-run and close-out evaluation forms were prepared in consultation with AW and agencies, and included questions about: (1) boatability of the runs; (2) quality of the runs; (3) boaters' opinions of the class of difficulty of the run; (4) comparison of each run at its different flows; (5) number and difficulty of portages; (6) preference on run features, such as play areas versus rapids; and (7) boaters' opinions of the flows that would be optimal. The evaluation forms and interviews also enabled the boaters to assess specific characteristics of the run, such as information about creek channel conditions, potential hazards and portages, and degrees of difficulty.

The Licensees clarified questions for the participants while they were filling out the evaluation forms. However, the Licensees did not interpret the survey questions for the participants. The completed evaluation forms were checked by the Licensees for legibility, completeness, and responses that were not consistent with the directions on the forms. Participants were directed to correct any deficiencies on their evaluation forms before they departed for the day. After the evaluations were completed, a post-run group discussion led by the Licensees occurred at the staging area. The post-run group discussion topics included: (1) access at the put-in/take-out location; (2) shuttle logistics; (3) suitability of the run; (4) the time of year when boaters would be likely to boat the runs; (5) class of difficulty; (6) safety concerns; (7) alternate locations for take-outs; and (8) availability for break stops in the run. The completed forms are provided in Appendix A.

2.8 RESULTS AND EVALUATIONS

This section presents the results of the Study, including a summary of information from the pre-fieldwork information form, post-run evaluation form, and close-out evaluation form, as well as other information provided by boaters in groups or individually in discussions with the Licensees' staff. The completed surveys are included in Appendix A.

2.8.1 Pre-Fieldwork Information Surveys

Participants were asked to complete a survey prior to the boating tests. All 17 participants who boated completed a pre-fieldwork survey form, and the results are summarized below.

The participants included 4 females and 13 males ranging in age from 18 to 62 years. Participants were asked a variety of questions about their equipment, skills, river-running preferences, and distances traveled. The majority of boaters reported frequently using hard shell kayaks, and reported their skill levels using watercraft ranging from Class III to Class V.

AW defines Class III as for Intermediate boaters with "Rapids with moderate, irregular waves which may be difficult to avoid, and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy, but group assistance may be required to avoid long swims. Rapids that are at the lower or upper end of this difficulty range are designated 'Class III-' or 'Class III+' respectively." and Class V for Expert boaters with "Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex, demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult. Swims are dangerous, and rescue is often difficult even for experts. A very reliable eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential. Because of the large range of difficulty that exists beyond Class IV, Class 5 is an open-ended, multiple-level scale designated by class 5.0, 5.1, 5.2, etc… each of these levels is an order of magnitude more difficult than the last. Example: increasing difficulty from Class 5.0 to Class 5.1 is a similar order of magnitude as increasing from Class IV to Class 5.0." (https://www.americanwhitewater.org/content/Wiki/safety:start#vi._international_scale_of_river_difficulty).

The number of days participants noted they spend whitewater boating each year ranged from a low of 10 days to more than 100 days. Three of the boaters had previously boated Pyramid reach; two of them noted they ran it twice in the 1990s, and the other

ran it in 2006. Participants reported distance from where they live to Frenchmans Flat ranged from 8 to 177 miles, with the average being 93 miles. Participants were asked several questions regarding river-running preferences and those responses are summarized in Table 2.8-1. From the compilation shown in Table 2.8-1, most participants tend to prefer challenging whitewater and are willing to tolerate difficult portages and put-ins. Most also tend to prefer boating steep technical rivers.

Table 2.8-1. Pre-Fieldwork Survey River-Running Preference Summary

Statement[1]	Strongly disagree	Moderately disagree	Slightly disagree	No opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips.		1	3		3	10	
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater.				1	4	2	10
Good whitewater play areas are more important than challenging rapids.	3	1	5	3	2	3	
I prefer boating steep, technical rivers.		1		3	6	5	2

Note:
[1]Totals are for each ranking for each statement.

2.8.2 300 CFS Flow Results

The 300 cfs flow test was held on December 19, 2019 and, as noted above, the actual measured flow released from Pyramid Dam was recorded as 311 cfs from the CDEC gage at Pyramid Dam.

2.8.2.1 15-Mile Reach Run

All seven participating boaters who began the 15-mile run at Frenchmans Flat completed the run and took-out at Canton Crossing. The group left Frenchmans Flat around 8:30 a.m. and completed their run by 2:00 p.m., when Licensee-arranged shuttle vehicles met them and drove them back to Frenchmans Flat.

In post-run discussions, the boaters noted that the run was quite scenic (Figure 2.8-1) and of good quality; however, most noted it had dense riparian vegetation that presented a hazard at times and hampered their ability to enjoy the run as much as they might otherwise. Two portages were made by six of the boaters and one expert only had one in the whole reach. It was discussed by several that the run could be an overnight trip, with campsites noted along the river in places. The boaters verbally expressed that the 300 cfs release level at Pyramid Dam was near to optimal in their opinions, and a controlled-flow event is also optimal if released in the fall. They said that such a release period would be favorable, since there are few other boating opportunities at that time. Boaters also expressed interest in having a steady release flow without having to experience unknown accretion downstream.

All seven boaters completed post-run evaluation forms. Participants were asked to rate the 300 cfs flow in terms of whitewater boating level of difficulty. Of the seven boaters, five rated it as Class IV and two rated it as between Class III and IV. In rating the most challenging rapid encountered, six of the seven indicated that it was a Class V rating, and one indicated the most challenging was Class IV. Asked if they would be likely to return for future boating if the flow they experienced was provided and scheduled, three indicated “yes,” two indicated “probably,” and two indicated “possibly.” For ratings of overall quality of the flow, five indicated it was “totally acceptable,” one noted it was “marginally acceptable,” and the remaining one rated it as “slightly acceptable.”

Figure 2.8-1. Expert Boater in a Scenic Gorge of 15-Mile Run at 300 CFS

2.8.2.2 3-Mile Reach Run

A total of nine participants boated the 3-mile run. Most boated the whole run in two segments. The first segment covered the lower one-third of the upper reach. The second segment began near Pyramid Dam Bridge for about half the group, and the others joined this group below the concrete bridge on the access road to the adit to the Los Angeles Tunnel. The whole group then boated all the way to Frenchmans Flat, with some making 10 portages, while the least number of portages was three for two boaters in the whole of the 3-mile run. In post-run discussions, the boaters expressed a good

degree of satisfaction with the run, and felt it had excellent play and teaching characteristics, as well as excellent access for put-ins, take-outs, and multiple runs.

All nine boaters completed post-run evaluation forms. As with the 15-mile run, participants were asked to rate the 300 cfs flow in terms of whitewater boating level of difficulty. While three of the nine rated it as Class III (one was Class III+), the other five rated it as Class III-IV, indicating the majority felt it was above Class III rating. In rating the most challenging rapid encountered, six of the nine indicated it was a Class IV, with the other three considering it to be a Class III (Figure 2.8-2). Asked if they would be likely to return for future boating if the flow they experienced was provided and scheduled, seven indicated “yes,” one indicated “probably,” and one indicated “possibly.” In terms of flow level, all boaters were unanimous in indicating they thought the 300 cfs flow is close to optimum for this run. For ratings of overall quality of the flow, all nine indicated it was “totally acceptable.”

Figure 2.8-2. Boater Navigating the Challenging Old Highway Armoring Rapid in the 3-Mile Run at 300 CFS

2.8.3 200 CFS Flow Results

As described above, the boaters who ran the 15-mile run on December 19 at the 300 cfs level chose not to participate in running that run at the 200 cfs level on December 20 because they felt it would not yield any new information. They also felt 300 cfs or perhaps slightly higher was near optimal, and that a lower flow would not likely improve the boating, additionally noting the chance of getting pinned or tangled in channel vegetation at that flow rate. In discussions with those boaters, all felt it was boatable at 200 cfs, but likely not as enjoyable, and the vegetation encounters could be worse. Rather, the boaters who had run the 15-mile run the day before chose to join the other boaters and experience the 3-mile run at 200 cfs to learn more about the characteristics of that run and help provide more opinions to the Licensees on the overall boating quality of both runs.

A total of 13 boaters ran the 3-mile run at the 200 cfs flow and all completed post-run evaluation forms. Participants were asked to rate the 200 cfs flow in terms of whitewater boating level of difficulty. All boaters rated it as either Class III or Class IV, or in between. As with the 300 cfs flow, the majority felt the run was above a Class III rating. In rating the most challenging rapid encountered, 9 of the 13 indicated it was a Class IV, with the other 4 considering it to be a Class III. Asked if they would be likely to return for future boating if the flow they experienced was provided and scheduled, 12 indicated "yes," with just 1 indicating "probably."

Of the boaters who experienced the 200 cfs flow, 8 of the 13 participants expressed a preference for a flow higher than that experienced, and the other 5 indicated they thought the flow was close to optimum. For ratings of overall quality of the flow at 200 cfs, 10 indicated it was "totally acceptable" and 2 indicated it was "slightly acceptable," with 1 not choosing any rating level.

2.8.4 Close-Out Evaluation Form

In total,16 close-out evaluation forms were completed on the last day (or just after) of the final test flow. Four of the close-out surveys were completed by boaters who ran both the 15-mile and 3-mile runs, and eight of the forms were completed by those who ran the 3-mile run on both days, enabling them to be able to fully compare the run at the two different flow levels. Two boaters who completed the close-out forms only boated the 15-mile run on December 19th, and the other two ran the 3-mile reach just once.

Participants were asked to quantify the maximum number of stops (on-water) and portages (carrying boats around a water feature or obstacle) they are willing to tolerate for a high-quality trip on each run. The answers varied widely, but on the 15-mile run it ranged from between 5 and 15 portages to as many as 30 stops. For the 3-mile run, those who responded indicated they are willing to tolerate between 1 and 3 portages. Most indicated between 4 and 5 stops are tolerable, with 2 indicating they would tolerate up to 10 stops. These results are generally within the range of portages actually reported on the runs when boaters were asked in general discussions with the group.

In terms of an evaluation of the runs with respect to other runs in the region within a two-hour drive range, many considered it to be “average;” several considered it to be “better than average;” and two indicated it was “excellent.” When asked which months of the year they would prefer to boat the runs, most indicated a preference for fall months, and all noted a preference for the November through January calendar range.

Boaters were asked to provide overall evaluations of experienced or potential flows on the runs. Table 2.8-2 provides the results from participants who boated the 15-mile run and Table 2.8-3 provides the results for those who boated the 3-mile run.

In verbal discussions with the boaters, the consensus was that the difficulty of the 15-mile run is believed to be between a Class IV and V. The participants overwhelmingly indicated that they would likely return to boat the run during the fall and winter. The boaters also indicated that there are better whitewater rivers to boat, but not many in the fall or early winter months that are available.

At the lowest flow of 200 cfs, most of the boaters found that boating the 3-mile run was less desirable and believed that 300 cfs is the optimal flow. In general, all participants agreed that 300 cfs was either their preferred optimal flow or was close to their preferred optimal flow for both the upper 3-mile and lower 15-mile runs. Also, during the post-run group discussion, participants indicated that the 300 cfs flow had fewer bumps and stops on rocks than the 200 cfs run. In some cases, the boaters said that the increased flows reduced the presence of rocks and vegetation obstacles.

With regard to access, most boaters indicated there were adequate put-in and take-out locations for each run. The participants found the uppermost put-in for the 3-mile run somewhat steep, but felt it did not greatly hinder their accessing the run from the shoreline (Figure 2.8-3). Downstream of this location, there were numerous spots for easy put-in choices, most not far from the old Golden State Highway.

The put-in location for the 15-mile run and take-out for the 3-mile run is at Frenchmans Flat, and was found to be quite easy to access and use (Figure 2.8-4). The take-out location for the 15-mile run was originally planned for the site of the closed Blue Point Campground; however, based on consultation with USFS during the Study planning process, USFS determined that Canton Crossing, about one-half mile downstream of the former Blue Point Campground, would be a better location to avoid impacts to arroyo toad and its critical habitat, and other sensitive species habitats located in and around the closed campground. The Canton Crossing take-out location was used, and boaters found this location provided convenient vehicular access from Piru Canyon Road and offered a gentle shoreline for boaters to egress from the river in a roaded, “wet crossing” location.

Boaters also provided comments regarding locations and observations (or direct experiences) of hazards for each run. Table 2.8-4 provides the comments elaborating on specific hazards noted by each of the seven boaters on the 15-mile run.

Table 2.8-2. Overall Number of Boater Ratings of Acceptability for Boating the 15-Mile Run at Different Flow Levels

15-MILE RUN	Totally Unacceptable	Moderately Unacceptable	Slightly Unacceptable	Marginal	Slightly Acceptable	Moderately Acceptable	Totally Acceptable	Don't Know
200 cfs		5	1			1		
300 cfs				1	3	1	2	
400 cfs				2		2	3	
600 cfs		2	1					4
1,000 cfs	1	1						5

Key:
cfs = cubic feet per second

Table 2.8-3. Overall Number of Boater Ratings of Acceptability for Boating the 3-Mile Run at Different Flow Levels

3-MILE RUN	Totally Unacceptable	Moderately Unacceptable	Slightly Unacceptable	Marginal	Slightly Acceptable	Moderately Acceptable	Totally Acceptable	Don't Know
200 cfs						4	9	3
300 cfs							13	3
400 cfs				1		2	8	5
600 cfs			1		2	1	1	11
1,000 cfs	1			1	1	2	1	10

Key:
cfs = cubic feet per second

Figure 2.8-3. Put-in Location for the 3-Mile Run Just Below Pyramid Dam Bridge

Figure 2.8-4. 15-Mile Run Put-in and Take-out Location for 3-Mile Run at Frenchmans Flat

Table 2.8-4. Transcribed (not edited) Written Notes from Each of Seven Boaters Responding to the Hazard Question (Question 13) in the Post-run Evaluation Form After the 15-mile Run at 300 CFS on December 19, 2020

• There is a ton of wood, mostly is smacking you in the face constantly but in some places medium hazard.
• Low risk pins, 2 high risk swims due to strainers. Lots of logs, brush, and sticks covered more than 75% of the run.
• Yes, trees and brush throughout the whole run were the significant hazards. Hard to find routes through the mazes without knowing if it will dead end or not. Surprising enough, it all went pretty well, higher flow would make this harder to route as it is pretty continuous in nature. Lower flow would make other rapids possibly un-runnable. There was one portage, that we had, due to a hole backed up by a rock that seemed more Class V. But it looked like a great 6-7 foot boof, if it wasn't for the bad consequence.
• 2 swims, low to medium risk pins, high risk swims due to strainers. Massive tree & brush growth chokes this run in an epic way. 90% of the run is being pushed through branches & logs.
• Trees/branches are serious hazards. I grabbed a tree, exited my boat & relaunched once. We had very little true problems, but the possibility is high for brush to cause problems. I was so beautiful & worthwhile though.
• Lots of brush – much more than 20 years ago – throughout. One very difficult rapid in the conglomerate gorge that almost all will want to portage.
• The brush/trees on this run presents a significant challenge. Overall the water quality (rapids) is very approachable, but the pin/snag hazards due to vegetation add a level of difficulty to the run.

For the 3-Mile run, boaters noted different hazards as shown in Tables 2.8-5 and 2.8-6.

Table 2.8-5. Transcribed (not edited) Written Notes from Each of Nine Boaters Responding to the Hazard Question (Question 13) in the Post-run Evaluation Form After the 3-Mile Run at 300 CFS on December 19, 2020

• Man-made hazards of red gauge (rebar) are a high hazard and disruptive to the run. One boat was pinned by vegetation/trees: medium hazard & this is what would make the river hard for beginners. More water would decrease the risk of man-made hazards but increase the background risk to natural hazards.
• Rebar in some places, tree across the river, and we had about 5 swims total. High hazard: big tree across the river. High hazard: 1 other portage cuz of brush and trees. Perfect flow but maybe at 400 cfs would be a bit more challenging.
• Swims – one of them was into logs. Medium hazard – logs over or in current – several portages. Re-bar potential concern, but not big deal, will indicate location separately.
• Location 5 to Location 6, one stop/pin & swim (3 (others) on 1st descent. 300 cfs all ok, boating got better as we got in the groove.
• Logs across channel above Adit Bridge – we portaged – high hazard. Some of the less experienced boaters had swims in some of the rapids. Swims are potentially hazardous due to lots of trees along the bank, but easy to float/swim to a decent eddy – medium hazards.
• Swims – high possibility of getting into strainers if not careful. Pins/wrapped boats at Adit Bridge and narrow spots, downed trees across river (2 locations). Concrete w/rebar in river is a puncture hazard (boat or body). Hard to know for sure how flow will affect hazards. Higher flow might drown-out the hazards, but might push you into trees or strainers. Adit Bridge would be a problem at much higher flow (hard to get under the bridge).
• Lots of logs – but today outside of main flow. Some brush, but better after clearance of one day of 200 cfs.
• This has a lot of potential but the debris/overhanging branches need to be addressed plus debris removed at eddies that can be used to portage or as a put-in/take-out, and finally there is a log in the river above the bridge and below a boulder that has a tree growing out that is a unseeable pin hazard.
• At 300 cfs Piru Creek was fun and all the rapids were really cool. Thank you guys.

Table 2.8-6. Transcribed (not edited) Written Notes from Each of 13 Boaters Responding to the Hazard Question (Question 13) in the Post-run Evaluation Form After the 3-Mile Run at 200 CFS on December 20, 2020

• I got pinned by a tree across the river trying to go under it, tried to roll but noticed I was stuck and decided to pull out of my boat. It is doable but I made a wrong move. I also witnessed about 3 other swims.
• There are several wood hazards that are easily or moderate to remove. I saw rebar but did not think it was a safety concern. All of these would be present regardless of flow levels.
• Yes, there were some logs, strainers, and debris hazards throughout the run, but all were manageable. Some spots were tight and you had to be in control of your boat to not hit the hazard which is why I consider the run to be Class III+ in some spots. Good beginner spots (to play & learn), but also a good intermediate run for the average boater.
• At 200 cfs the runs were slightly more “boney” (rocky” compared to 300 cfs but the hazards were pretty much equal (see my assessment post-run evaluation 300 cfs).
• A couple of swims & near pins on large log above Adit. Easy portage around, and not extremely difficult to go under at this flow but not possible at higher flows – have to portage. Some other logs across the river that are either easy to go over or portage around.
• Brush, especially logs & trees. Any release after a summer season would require recon to identify the trees.
• Woody debris – above location 2, rock with tree in the middle of the run. Below highway armoring, left channel narrows and tree is hanging into river. LWD on bank in between put-in below Pyramid Dam Bridge and Highway armoring, there is also a log over the river, and can boat under it on the left, but must be precise, otherwise can flip and get stuck.
• I love the run, thank you guys.
• Just one person swam after hitting a branch, today. All becoming more familiar with the features after 2-3 runs.
• Logs/Branches.
• One swim from a log below 2 (Adit) and above highway armoring that more experienced boaters are ok with the risk as they can duck to the left. “Crux” rapid is a Class IV, but with all the wood in the lead-in, it is Class V.
• Take out some of the trees to make it more fun.
• This run is easy Class III with a few logs and trees that could be removed to make it totally easy & safe & fun. That was a concern, but it was safe & simple.

2.8.5 Analysis of Using UWCD SWP Flow Allocations for Potential 300 cfs Whitewater Boating Flow Releases

Per FERC’s September 11, 2019 determination, the following analysis presents information about the potential number of boating days using supplemental flows associated with delivery of SWP water to UWCD. The boaters who participated in the boating study generally agreed that 300 cfs is optimal if not near optimal in the 3-mile and 15-mile boating runs. Boaters also expressed that weekends are more desirable than weekdays for controlled-flow boating activities and that the November and

December periods were favorable times for boating since there are fewer boating opportunities in the State during those periods.

Using the basic parameters above, theoretical calculations were made to determine how many weekend controlled-flow boating releases (Saturday and Sunday boating) could be provided using typical allocations of SWP water that have been delivered to UWCD over the last two decades. A range of three typical example allocations are presented in Tables 2.8-7 through 2.8-9. These tables estimate the number of days of possible boating and consider water release needs for ramping of flows necessary to meet the requirements of Article 52 of the existing license to simulate the natural hydrograph of a typical storm event. The three allocations include the maximum SWP water allocation of 3,150 AF (Table 2.8-7), the 2019 allocation of 75 percent, or 2,362 AF, the amount used in the December 2019 on-water boating study test (Table 2.8-8), and 1,809 AF, which represents the average of the 10-year period from 2005 through 2014 as noted in section 1.2 (Table 2.8-9).

Table 2.8-7. Potential Controlled-flow Boating Releases Using full UWCD SWP Water Allocation of 3,150 AF

Duration	Day of the week	Cumulative Release (AF) of Water Allocation	Additional Flow Released (cfs released in addition to continued passing of natural inflows)
Day 1	Tuesday	10	5
Day 2	Wednesday	59	25
Day 3	Thursday	208	75
Day 4	Friday	605	200
Day 5	Saturday	1200	300
Day 6	Sunday	1795	300
Day 7	Monday	2191	200
Day 8	Tuesday	2340	75
Day 9	Wednesday	2390	25
Day 10	Thursday	2399	5
Day 11	Friday	2449	25
Day 12	Saturday	2598	75
Day 13	Sunday	2994	200
Day 14	Sunday	3149	78

Key:
AF = acre-feet
cfs = cubic feet per second

Table 2.8-8. Potential Controlled-flow Boating Releases Using 2,362 AF, or 75 Percent of UWCD SWP Maximum Water Allocation

Duration	Day of the week	Cumulative Release (AF) of Water Allocation	Additional Flow Released (cfs released in addition to continued passing of natural inflows)
Day 1	Tuesday	10	5
Day 2	Wednesday	59	25
Day 3	Thursday	208	75
Day 4	Friday	605	200
Day 5	Saturday	1200	300
Day 6	Sunday	1795	300
Day 7	Monday	2191	200
Day 8	Tuesday	2340	75
Day 9	Wednesday	2362	11

Key:
AF = acre-feet
cfs = cubic feet per second

Table 2.8-9. Potential Controlled-flow Boating Releases using 1,864 AF, the Average UWCD SWP Allocation from 2005 to 2014

Duration	Day of the week	Cumulative Release (AF) of Water Allocation	Additional Flow Released (cfs released in addition to continued passing of natural inflows)
Day 1	Tuesday	10	5
Day 2	Wednesday	59	25
Day 3	Thursday	208	75
Day 4	Friday	605	200
Day 5	Saturday	1200	300
Day 6	Sunday	1795	300
Day 7	Monday	1862	34

Key:
AF = acre-feet
cfs = cubic feet per second

As indicated in Table 2.8-7, just one weekend of 300 cfs controlled-flow boating releases could be accommodated using the full UWCD SWP water allocation. There is not enough water available to provide for a second weekend of boating using the full UWCD SWP water allocation.

During years similar to 2019 when the SWP water allocation to UWCD was 75 percent of the full allocation, the flow scenario presented in Table 2.8-8 indicates one weekend with flows at 300 cfs could take place, however there would be insufficient water on the second day of down-ramping. Other adjustments, such as a curtailment in the hours of

release on the second day of boating (Sunday) could potentially be made to meet the full ramping requirements. Similar to the full water allocation scenario, just one weekend of boating would be possible in a year that had a 75 percent allocation of SWP water to UWCD.

As shown in Table 2.8-9, using the average flow, or approximately 60 percent of the full SWP water allocation, 300 cfs could be provided over a two day weekend, but there would be insufficient water to meet down ramping requirements. In years with this limited allocation of SWP water, only one day of flows at 300 cfs could potentially be provided for boating on a weekend day in November or December.

In addition to the flows presented in Tables 2.8-7 through 2.8-9, typical November and December periods include additional natural flows passed through Pyramid Lake into Pyramid reach. As shown in Table 5.2-5 of Exhibit E of the Licensees' *Final Application for New License for Major Project-Existing Dam for the South SWP Hydropower, FERC Project Number 2426-227*, the median November flow release into Pyramid Reach is 7.4 cfs and the median December flow into Pyramid Reach is 10.1 cfs. These natural or "base" flows would contribute to the total flow boaters would experience and would be similar to the boating flows experienced on December 19, 2019 when the flow recorded by the CDEC gauges, during the 8-hour boating test, was between 310 and 312 cfs during daylight hours.

2.9 ANALYSIS OF POTENTIAL EFFECTS TO ESA-LISTED SPECIES

As part of the Study and as directed by FERC, the Licensees assessed the potential effects on species that are listed under ESA as endangered, threatened, candidates under review, or proposed for listing. Species that are candidate species under the definitions set forth by USFWS and the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), including species under petition review or 12-month status review by USFWS and NMFS, are not discussed in this section.

2.9.1 Vegetation Communities and Habitat within Pyramid Reach of Piru Creek

Riparian habitat within Pyramid reach has been well documented from an assortment of surveys and studies done in the area per the Licensees' *Final Application for New License for Major Project-Existing Dam for the South SWP Hydropower, FERC Project Number 2426-227*, in particular for arroyo toad. Both Sandburg and Environmental Science Associates reported on vegetation along Pyramid reach between Ruby Canyon and Blue Point Campground, and along Agua Blanca Creek upstream of Lake Piru during arroyo toad surveys in 2005, as well as 2010 through 2019 (Sandburg 2006; Environmental Science Associates 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

From this information, the vegetation communities observed (per the California Department of Fish and Wildlife's [CDFW] *California Natural Community List* [CDFW 2018]) includes white alder (*Alnus rhombifolia*) groves, California sycamore (*Platanus*

racemosa) woodlands, Fremont cottonwood (*Populus fremontii*) forest, arroyo willow (*Salix lasiolepis*) thickets, sandbar willow (*Salix exigua*) thickets, mulefat (*Baccharis salicifolia*) thickets, cattail (*Typha* spp.) marshes, and scale broom (*Lepidospartum squamatum*) scrub.

2.9.2 Identification of ESA-Listed Species

The Licensees developed a list in February 2020 of ESA-listed species under the jurisdiction of USFWS that are known or have the potential to occur within 5 miles of Pyramid reach by first querying the USFWS' online Information for Planning and Consultation (IPaC). The information gathered from IPaC was used to generate an unofficial list of federally listed and proposed endangered, threatened, and candidate species (USFWS 2020). The query was based on the Geographic Information System files submitted to IPaC of the Pyramid reach area, plus 5 miles. The use of the IPaC list was to ensure a comprehensive initial list of potentially affected species.

In addition, the Licensees accessed existing species records through CDFW's California Natural Diversity Database (CNDDB) (CDFW 2020). Plant species records were also reviewed through the California Native Plant Society's online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020) on the CalFlora website (CalFlora 2020). The database queries were each based on a search of the same area as described above.

Several other species (i.e. yellow-billed cuckoo) were included based on potential habitat and guidance as referenced in the Licensees' *Final Application for New License for Major Project-Existing Dam for the South SWP Hydropower, FERC Project Number 2426-227 (FLA)*. During preparation of the FLA, the Licensees' searches identified 24 ESA-listed species that could be affected by the Project. Those species that were included based on the FLA were derived using USGS quadrangle maps, and included a wide range of area compared to the 5-mile search conducted entirely for Pyramid reach in the IPaC and CNDDB searches performed in February 2020.

The Licensees' searches resulted in a list of 24 ESA-listed species that might be affected by whitewater boating in Pyramid reach. The distribution, habitat associations, and requirements of these 24 species were then considered in order to exclude some of them from further consideration. A total of 17 species known to be endemic to restricted geographic areas and/or habitat types not found within the Pyramid reach area were excluded. Seven species have the potential for being in Pyramid reach; these seven species were found in both the 5-mile species search for Pyramid reach, as well as the quadrangle map search conducted for the FLA.

Based on the information derived from these searches, the Licensees determined that 17 of the 24 species are not likely to occur in the Pyramid reach area for the reasons provided above and are therefore not included in further analysis. The 17 species excluded from further consideration are:

- Vernal pool fairy shrimp (*Branchinecta lynch*i) (federal threatened [FT])

- Riverside fairy shrimp (*Streptocephalus woottoni*) (federal endangered [FE])
- Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*) (FE)
- Santa Ana sucker (*Catostomus santaanae)* (FT)
- Steelhead Southern California DPS (*Oncorhynchus mykiss*) (FE)
- Coastal California Gnatcatcher (*Polioptila californica californica*) (FT)
- Blunt-nosed leopard lizard (*Gambelia silus*) (FE)
- Mojave desert tortoise (*Gopherus agassizii*) (FT)
- San Joaquin kit fox (*Vulpes macrotis mutica*) (FE)
- Conejo dudleya (*Dudleya parva* [*D. abramsii* ssp. *parva*]) (FT)
- Braunton's milk-vetch (*Astragalus brauntonii*) (FE)
- Lyon's pentachaeta (*Pentachaeta lyonii*) (FE)
- Marsh Sandwort (*Arenaria paludicola*) (FE)
- Gambel's Watercress (*Rorippa gambelii*) (FE)
- Nevin's Barberry (*Berberis nevinii*) (FE)
- Spreading Navarretia (*Navarretia fossalis*) (FT)
- California Orcutt Grass (*Orcuttia californica*) (FE)

Santa Ana sucker (*Catostomus santaanae*), which occurs within the Project vicinity, was excluded from further consideration, because the population within the Santa Clara River basin is not covered by the ESA listing, which includes only populations in the Santa Ana, Los Angeles, and San Gabriel river basins (65 Federal Register [FR] 19686).

Seven species are known to occur or have the potential to occur within the Pyramid reach area, with four of those species having designated critical habitat overlapping with Pyramid reach. No species listed as either a candidate for listing or proposed species were identified. These listed species include two amphibians, four birds, and one plant. Table 2.9-1 includes a brief species account and specific information regarding status, habitat associations, and known occurrences within or near Pyramid reach.

Table 2.9-1. ESA-Listed Species Potentially Affected by Potential Whitewater Boating Opportunities in Pyramid Reach

Common Name[1] (*Scientific Name*)	Status[2]	Habitat Associations	Potential to Occur in Pyramid reach
Amphibians			
Arroyo Toad (*Anaxyrus [Bufo] californicus*)	FE SSC	Breeds in low-gradient perennial and seasonal streams; terrestrial habitat is within associated riparian and adjacent upland areas.	**Known to occur.** Species is known to occur in Pyramid reach from three CNDDB occurrences, critical habitat, and studies conducted by Environmental Science Associates (2010-2019).
California Red-Legged Frog (*Rana draytonii*)	FT SSC	Largely aquatic, except during dispersal, summer aestivation, and foraging in riparian areas; breeds in still or slow-moving water, but not in large lakes or reservoirs.	**Potential to occur.** No CNDDB records occur within 5 miles of Pyramid reach; however, habitat species for this species is present and designated critical habitat for this species overlaps Pyramid reach areas. None observed in Pyramid reach during relicensing studies nor during studies conducted by Environmental Science Associates (2010-2019).
Birds			
California Condor (*Gymnogyps californianus*)	FE SE FP	Soaring bird that seeks carrion in open habitats and nests mostly in cavities on escarpments and in hollows of old growth conifers.	**Known to occur.** Habitat for this species is present. Three CNDDB records for this species occur within 5 miles of Pyramid reach, and designated critical habitat for this species overlaps Pyramid reach areas.
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	FE SE	Migratory songbird breeding in dense riparian thickets along streams and wetlands.	**Potential to occur.** No CNDDB records occur within 5 miles of Pyramid reach; however, habitat for this species is present and designated critical habitat for this species overlaps Pyramid reach areas.
Least Bell's Vireo (*Vireo bellii pusillus*)	FE SE	Migratory songbird breeding in dense riparian habitat and adjacent chaparral in river valleys from interior northern California to Baja California, Mexico.	**Potential to occur.** No CNDDB records occur within 5 miles of Pyramid reach; however, habitat for this species is present in Pyramid reach.

Table 2.9-1. ESA-Listed Species Potentially Affected by the Licensees' Proposal (continued)

Common Name[1] (*Scientific Name*)	Status[2]	Habitat Associations	Potential to Occur in Pyramid reach
Western Yellow-Billed Cuckoo, western DPS (*Coccyzus americanus*)	FT SE	Migratory songbird associated with large, structurally complex blocks of riparian habitat, usually on large streams.	**Potential to occur.** No CNDDB records occur within 5 miles of Pyramid reach; however, habitat for this species is present in Pyramid reach.
Plants			
Slender-horned Spineflower (*Dodecahema leptoceras*)	FE SE	Annual herb found on floodplain terraces and sandy benches with alluvial fan scrub vegetation at about 660 to 2,300 feet elevation.	**Potential to occur.** No CNDDB records occur within 5 miles of Pyramid reach; however, habitat for this species is present in Pyramid reach
Summary	Seven species potentially affected, with four of those species having designated critical habitat in Pyramid reach		

Notes:
[1]No federal candidates or proposed species were identified
[2]Status: FE = federal endangered, , FT = federal threatened, SE = California State endangered, ST = California State threatened, FP = California fully protected, SSC = California State species of special concern
Key:
CNDDB = California Natural Diversity Database
DPS = Distinct Population Segment

2.9.3 Species Descriptions

2.9.3.1 Aquatic and Terrestrial Wildlife Species

Arroyo Toad

The arroyo toad (*Anaxyrus californicus*) is listed as federally and State endangered. Critical habitat for arroyo toad has been designated on Piru Creek (Critical habitat units 5a and 5b, Appendix B). Sub-unit 5b, which overlaps with Pyramid reach, is a 15-mile reach of Piru Creek that begins at the confluence of Fish Creek and extends downstream to Lake Piru, and along Agua Blanca Creek from Devils Gateway downstream to the confluence with Piru Creek (76 FR 7246). Both sub-units are described in the final rule as having substantial arroyo toad populations (76 FR 7246).

The arroyo toad breeds in low-gradient, broad, open streams or low-gradient sections of streams that contain riparian vegetation as well as features such as sand bars, alluvial terraces, and streamside benches. Breeding habitats are located in overflow pools, old flood channels, and shallow pools with little or no flow, with breeding occurring from February through July. Substrates in breeding areas are usually sand or gravel, with little or no emergent vegetation. Most streams supporting arroyo toads hold surface

water for at least four to five months in most years; however, streams with water for as little as two months in spring in most years, the minimum required for at least some of the larvae to complete metamorphosis, are considered suitable (76 FR 7246).

There are three CNDDB records for arroyo toad within 5 miles of Pyramid reach, including sections of streams with known populations of the species. Two of the records are entirely outside of Pyramid reach, whereas the third record overlaps with Pyramid reach areas. The occurrences that are not within Pyramid reach are located: (1) on the Santa Clara River east of Interstate 5 within designated critical habitat unit 6B, and (2) on Piru Creek upstream of Pyramid Lake within critical habitat unit 5A.

The third CNDDB record that overlaps Pyramid reach areas downstream of the Project is located on a section of Piru Creek within designated critical habitat unit 5B, within the lower portion of Pyramid reach, from Blue Point Campground to just south of Ruby Canyon north of Lake Piru.

Sandburg (2006) details a long history of surveys for, and observations of, arroyo toads in Piru Creek, confirming its presence in the reach. Arroyo toad surveys were performed for DWR in Pyramid reach in 2005, and annually for ten consecutive years since 2010 in the 7-mile segment from the inlet of Lake Piru to Ruby Canyon and in a segment of Agua Blanca Creek, with associated reporting of results (FERC 2009, 2010; Sandburg 2006; Environmental Science Associates 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

California Red-Legged Frog

The California red-legged frog (CRLF) (*Rana draytonii*) is listed as a federally threatened species and a State species of concern. The historical range of CRLF extends through the Pacific slope drainages from Shasta County, California, to Baja California, Mexico, including the Coast Ranges and the west slope of the Sierra Nevada Range at elevations below 5,000 feet. The current range of this species is greatly reduced, with most remaining populations occurring along the coast from Marin County to Ventura County.

Critical habitat has been designated in 27 counties within California consisting of 48 units including critical habitat unit VEN-2, which overlaps Pyramid reach approximately 4 miles south of Pyramid Lake within Pyramid reach.

CRLF is primarily associated with perennial ponds or pools, and slow-moving perennial or seasonal streams or pools within streams where water remains continuously for a minimum of 20 weeks beginning in the spring (71 FR 19244). Dense, shrubby riparian vegetation (e.g., cattail and bulrush [*Typha* spp.*, Schoenoplectus* spp.] species), and bank overhangs typically occur in breeding habitat. Emergent vegetation, undercut banks, and semi-submerged root wads may provide hiding cover for larvae. Suitable aquatic habitats include natural and manmade ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds. Egg masses are attached to emergent vegetation such as cattails and bulrushes. Larvae remain in these aquatic habitats until

metamorphosis. Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae typically metamorphose between July and September.

Outside of the breeding season, adults may disperse upstream, downstream, or upslope of breeding habitat to forage and seek sheltering habitat, which may consist of small-mammal burrows, leaf litter, and other moist sites in or near (up to 200 feet from) riparian areas (71 FR 19244).

There are no CNDDB records for CRLF within 5 miles of Pyramid reach. However, historic records for CRLF on Piru Creek include an observation in 1949 about 7.5 miles north of the town of Piru (cited by Sandburg 2006). Per the Licensees' *Final Application for New License for Major Project-Existing Dam for the South SWP Hydropower, FERC Project Number 2426-227*, CRLF has been detected historically in Piru Creek, though inconsistently. The most notable CRLF occurrence is from Sandburg (2006) who, in 2005, found larval CRLF in a 7-foot-deep pool with cattails in Pyramid reach more than 10 miles downstream of Pyramid Lake, and in a 3-foot-deep pool in Agua Blanca Creek. This occurrence is not included in CNDDB records. In addition, annual monitoring surveys in the 7-mile segment of Piru Creek from the inlet of Lake Piru to Ruby Canyon and a 1-mile segment of Agua Blanca Creek has not detected any life stages of CRLF (Environmental Science Associates 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

California Condor

The California condor (*Gymnogyps californianus*) has been listed as an endangered species since 1967 (32 FR 4001). Historically, the California condor occurred from coastal British Columbia, Canada, to Baja California, Mexico, and as far east as the Cascade and Sierra Nevada Ranges. By the 1950s, the species' range had been reduced to a wishbone-shaped area within parts of the following 10 California counties: Monterey, San Benito, Fresno, Kings, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Kern, and Tulare.

California condors nest naturally in cavities on escarpments in steep mountainous or canyon terrain, and also utilize burnt-out hollows of large trees and cliff ledges. Nest site selection occurs in winter and a single egg clutch is laid between late January and early April. California condors forage over open grasslands, foothill oak savannas, and coastal areas where they feed on carrion, including deer, elk, cattle, pronghorn antelope, marine mammals and birds, and fish.

There are three CNDDB records of California condor in the Project vicinity, within or near the Sespe-Piru California condor designated critical habitat area (CDFW 2020). This critical habitat area for California condor, which is less than 1 mile south of Pyramid Lake, has been a protected area for the species in the Los Padres National Forest since 1947 (i.e., Sespe California Condor Sanctuary), with some of the last known natural nests prior to the emergency removal of wild California condors to a captive breeding program (FERC 2019). Several prior studies and incidental observations have identified California condors soaring and foraging near Pyramid Lake (FERC 2019).

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*) is listed as a federally endangered and State endangered species. This migratory, insectivorous songbird is found during the breeding season mostly in dense or patchy riparian habitat associated with low-gradient streams or lentic habitat from Kern County, California, south to northern Baja California, Mexico, east to southwest Colorado to southwest Texas.

Designated critical habitat for southwestern willow flycatcher is located within Pyramid reach approximately 3 miles downstream of Pyramid Lake and extends to the confluence of Piru Creek with the Santa Clara River (USFWS 2018a).

The southwestern willow flycatcher nests in riparian thickets that are generally composed of willow and/or tamarisk. Breeding territories may be as small as 0.25 acres, but most are at least 0.5 acres. Wintering habitat is Neotropical, with lowlands of Costa Rica and other parts of Central America probably most important (USFWS 2017).

There are no CNDDB records of southwestern willow flycatcher in Pyramid reach. USFWS (2002) indicated the presence of one southwestern willow flycatcher site (i.e., an area with one or more southwestern willow flycatcher territories) in the “Santa Clara River – Upper Piru Creek” under the Coastal California recovery unit, located northwest and upstream of Pyramid Lake. Other studies conducted in the area also determined that there was suitable habitat for this species; however, no individuals were detected (FERC 2019).

Least Bell’s Vireo

The least Bell’s vireo (*Vireo bellii pusillus*) is listed as a federally endangered and State endangered species. This small, mostly migratory, insectivorous songbird is closely associated with dense, riparian habitat and adjacent chaparral in river valleys from interior northern California to northwestern Baja California, Mexico (USFWS 2006). Critical habitat has been designated in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties. The nearest designated critical habitat is more than 8 miles from Elderberry Forebay, along the Santa Clara River (USFWS 2018b).

Nesting occurs in dense riparian habitat dominated by willows. Nests are often placed in openings or near habitat edges in dense understory riparian shrubs. Wintering habitat includes arroyos with scrub vegetation, hedgerows, and other shrubby areas as far south as southern Baja California, Mexico (USFWS 2006). Clutch size is usually three or four eggs, with incubation by both sexes lasting 14 days. Nestlings fledge at 10 to 12 days. Some pairs may produce multiple broods annually; however, young are rarely fledged from more than two nests (USFWS 1998).

There are no CNDDB records of least Bell’s vireo within 5 miles of Pyramid reach. USGS conducted surveys on Pyramid reach (area not specified) in 2018 and documented three pairs, three single males, and one transient male least Bell’s vireo (pers. comm., Taylor 2019).

Yellow-Billed Cuckoo

The western DPS of yellow-billed cuckoo (*Coccyzus americanus*) is listed as a federally threatened and State endangered species. The yellow-billed cuckoo is a medium-sized migratory bird, which winters primarily in South America, east of the Andes Mountains. Nesting occurrences of the western DPS are now largely limited to sites in Arizona, California, and New Mexico. The nearest of these critical habitat units (Riverside County) is located more than 62 miles from Pyramid reach.

The species is closely associated with open deciduous woodlands where there is dense, low cover and nearby water. Western DPS yellow-billed cuckoo nests in low to moderate elevation, riparian woodlands, mostly comprising native broadleaf trees (i.e., Fremont's cottonwood and willow) and shrubs of various species in patches that are 50 acres or more in extent, and are within arid to semi-arid landscapes (79 FR 78548).

Western DPS yellow-billed cuckoo typically do not complete migration to breeding grounds and begin nesting until at least mid-June, with nesting activity sometimes occurring into September. Clutch size typically ranges from two to four eggs, which may be laid asynchronously, with rapid development and growth. The young may fledge in as little as 17 days after eggs were laid but are still attended to and fed by the parents 28 to 32 days after hatching (Halterman et al. 2016).

There are no known records of yellow-billed cuckoo within Pyramid reach. As indicated above, there is no designated critical habitat within or near Pyramid reach. As also noted above, western DPS yellow-billed cuckoo was not included in the IPaC Resource Report (USFWS 2020, Appendix A).

2.9.3.2 Plant Species

Slender-horned Spineflower

The slender-horned spineflower (*Dodecahema leptoceras*) was listed as federally endangered and State endangered. Slender-horned spineflower is a small, rosette-forming annual of the buckwheat family (Polygonaceae) that is found on floodplain terraces and sandy benches, areas that flood infrequently (52 FR 36265). Occurrences are associated with alluvial fan scrub and scalebroom scrub vegetation, with germination directly related to rainfall. Slender-horned spineflower is a southwestern California endemic species restricted to northern Los Angeles County, east to San Bernardino County, and south to southwestern Riverside County in the foothills of the Transverse and Peninsular Ranges. It has been found at elevations of about 660 to 2,300 feet (USFWS 2010). At the time of listing, there were only five known extant populations. There are no records of slender-horned spineflower in Pyramid reach or within 5 miles of Pyramid reach. As indicated above, no critical habitat has been designated for this species.

2.9.4 Potential Effects of Whitewater Boating Activity on ESA-Listed Species

In FERC's September 11, 2019 determination, Licensees were instructed to include a detailed analysis of potential effects of whitewater boating on ESA-listed species and an analysis of potential measures to mitigate for effects. The following presents an assessment of potential effects and analysis of potential measures to meet the requirements of FERC's request; however, none of these measures are part of the Licensees' Proposal and it is outside the Licensees' control and responsibility on how individual actions of whitewater boaters on public (i.e., federal) land could affect ESA-listed or other wildlife and plant species.

2.9.4.1 Aquatic and Terrestrial Wildlife Species

Arroyo Toad

Impacts from whitewater boating have the potential to affect arroyo toad. Arroyo toad and its associated designated critical habitat occurs in Piru Creek downstream of Pyramid Lake (sub-unit 5b). Arroyo toad has been detected in certain segments of Pyramid reach and its tributaries in previous surveys (FERC 2009, 2010; Sandburg 2006; Environmental Science Associates 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019), as there is suitable arroyo toad habitat present.

The flow regime in Pyramid reach, as a result of flows released from Pyramid Dam, has been designed to not affect arroyo toad per Article 52 of the existing Project license. Flow releases replicate natural flow conditions year-round by passing all natural inflow through into Pyramid reach. SWP water releases are limited to the period from November through February and are required to either simulate a natural storm event or be released more gradually over a longer period of time. This operational regime coincides with natural rain events and helps to maintain arroyo toad habitat by scouring encroaching emergent riparian vegetation that could degrade arroyo toad habitat. In addition, the restriction on SWP water deliveries prevents releases from interfering with the arroyo toad breeding season. This operational flow regime is supported by the USFWS to avoid impacts to the arroyo toad.

Potential impacts to arroyo toad from whitewater boating include the degradation of habitat from human disturbance at portage sites and increased trash and pollution from human presence. Recreational activities associated with whitewater boating (i.e., hiking, swimming) could result in excess sedimentation in the water which could affect arroyo toad larvae and eggs during the breeding season. Disturbance to arroyo toad and its habitat may also occur through crushing, trampling, and entombment. The use of access roads located within suitable arroyo toad habitat could cause death or injury from vehicle strikes if toads attempt to cross the roads during upland foraging and dispersal. In addition, toads may use roads and trails as potential dispersal routes and could be present on roads when feeding at night.

In the event of controlled releases specifically for whitewater boating purposes, such releases would need to be configured to occur outside periods when it is expected that

all life stages of toads would not be present in the stream channel and adjacent stream banks, including the breeding season and the period of when toads would be expected to be dispersing and migrating to upland habitat, for this species following the current requirements of the Project regarding supplemental flow releases. Therefore, if whitewater boating were to take place using the supplemental flow releases, the boating would be scheduled to occur from November through February to reduce potential effects to arroyo toad. In addition, information about the effects of whitewater boating and practical avoidance measures could be developed by USFWS and USFS for boaters to use as measures to potentially help avoid or minimize the take of arroyo toads during boating activities.

Furthermore, USFWS provided the following precautionary measures for arroyo toad and its critical habitat during the Level 3 portion of the study. Whitewater boating participants can reduce the spread of Chytridiomycosis by following these three best management practices; (1) prior to floating the Pyramid reach, clean all boats, equipment, and water clothing (e.g., water-shoes, sandals, wetsuits, drytops, etc.) with a 5 percent bleach-water solution; (2) avoid cleaning equipment on site at put-in locations, and residue from any cleaning agents that remain on boats of equipment should also be rinsed with clean water offsite; and (3) boaters should avoid handling any amphibians while floating either segment of Pyramid reach. The Licensees provided boaters with these USFWS recommendations for protecting the arroyo toad and its designated critical habitat prior to the on-water study.

California Red-legged Frog

There are known historical occurrences of CRLF and designated critical habitat in Pyramid reach (unit VEN-2), with the most recent known detection (i.e., an unreported number of larvae in a deep pool) in 2005 (Sandburg 2006). The species has not been detected during annual sensitive species surveys performed since 2010 along a 7-mile section of Piru Creek and about a mile contiguous section of its tributary, Agua Blanca Creek (Environmental Science Associates 2018), which is within critical habitat unit VEN-2 (i.e., from the Los Angeles County/Ventura County line downstream to Lake Piru), and a portion of the same critical habitat unit along Agua Blanca Creek.

The flow regime in Pyramid reach, as a result of flows released from Pyramid Lake, has been designed to not affect CRLF, per Article 52 of the Project license. Flow releases simulate natural flow conditions by passing water through Pyramid reach, except during the November through February time period when SWP water delivery is released in addition to natural flows. This operational requirement coincides with natural rain events and prevents releases from interfering with the CRLF breeding season.

Although CRLF has not been detected in Pyramid reach during recent surveys, potential impacts to CRLF from whitewater boating, if present, include the degradation of habitat from human disturbance at portage sites and increased trash and pollution from human disturbance. Recreational activities associated with whitewater boating (i.e., hiking, swimming) could result in excess sedimentation in the water, which could affect CRLF larvae and eggs. Disturbance to CRLF and its critical habitat may also occur through

crushing, entombment, and trampling by boaters during portage. The use of access roads located within suitable CRLF habitat could cause death or injury from vehicle strikes if CRLF attempt to cross the roads during upland foraging and dispersal. Information to increase awareness of avoidance measures could be developed by the USFWS and USFS for boaters to use to potentially avoid or minimize adverse effects.

California Condor

California condors are known to fly high over the Project area, reflecting the proximity of the Sespe California Condor Sanctuary and Sespe-Piru designated critical habitat, and the wide-ranging nature of this species associated with the search for carrion. No California condor nests or roosts are known to occur within Pyramid reach. However, locations of natural foraging are unpredictable and could occur in open areas near Pyramid reach. Potential impacts to California condors from whitewater boating includes the ingestion of microtrash left behind by boaters and general disturbance during boating activities. Information to increase awareness of these effects could be developed by USFWS and USFS for boaters to use to potentially avoid or minimize adverse effects.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Yellow-billed Cuckoo

The three species of ESA-listed, riparian associated birds are discussed together because of substantial similarities in habitat use, particularly regarding southwestern willow flycatcher and least Bell's vireo. Designated critical habitat for southwestern willow flycatcher occurs along the Pyramid reach approximately 3 miles south of Pyramid Lake.

In their 2008 Final Environmental Assessment, FERC determined that the operating regime under Article 52 could increase scouring and decrease dense riparian habitat. FERC further stated that these effects occur in unregulated streams in California and as such are considered natural. The operating regime under Article 52 was determined to have no effect on sensitive riparian birds including the yellow-billed cuckoo, southwestern willow flycatcher and least Bell's vireo. Flow releases simulate natural flow conditions by passing water through Pyramid reach. This schedule coincides with natural rain events and prevents releases from interfering with these bird species' breeding and nesting season. Currently, whitewater boating activities could only occur November through February based on continued provisions of Article 52. These timeframes are based on the potential for not affecting these and other ESA-listed species during those times of the year. Therefore, whitewater boating activities should not affect the breeding and nesting season for this species.

Potential impacts to southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo from whitewater boating include the degradation of habitat from human disturbance at portage sites, and increased trash and pollution from human visitation. Information to increase awareness of these effects could be developed from USFWS and USFS recommendations that boaters could access to perhaps avoid or minimize adverse effects.

2.9.4.2 Plant Species

No ESA-listed or candidate plant species have been documented to occur in Pyramid reach, and there are no historical records of these species within Pyramid reach. No critical habitat has been designated for slender-horned spineflower. Habitat for slender-horned spineflower is present in the upper terraces and upland portions of the Pyramid reach; however, it is unlikely that these areas will be disturbed by whitewater boating activities.

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Appendix A

Pre-Fieldwork Information Form, Post-Run Evaluation Form, and Close-Out Evaluation Form

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Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: _____/_____/_____ Your name: _____

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Inflatable kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	No	Rare	Occasional	Frequent		II	III	IV	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? _____ days per year

3. What is your age? _____ years

4. Are you ☐ male or ☐ female?

5. Have you previously boated Piru Creek? _____. If so, when and where did you boat? _____

_____

_____

6. How far from your residence is Frenchman's Flat? _____ miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	7
Good whitewater play areas are more important than challenging rapids	1	2	3	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: _____

2. Date of Run: _____

3. Which Study Reach are you evaluating? (circle one)

   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: _____ ► Time: _____

   b. Take-out location: _____ ► Time: _____

5. What was the target flow (flow you are evaluating) on this run? _____ cfs ►

6. What type of craft did you use for this run? (circle one)

   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? _____ .

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly c. Probably d. Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about _____ times.

    b. I was **stopped** after hitting rocks or other obstacles about _____ times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about _____ times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about _____ times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

_____

_____

_____

_____

_____

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: _____

2. Date: _____

3. Reach boated: (3-mile reach above Frenchman's Flat) _____ Date_____
   (15-mile reach below Frenchman' Flat) _____ Date_____

4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run _____15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run _____15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ____ 15-mile____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile ____ 15-mile____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run _____ 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run _____ 15-mile run _____

7. What months of the year would you prefer to boat on middle Piru Creek? _____
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? _____

9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

Appendix B

List of Boating Participants

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First	Last	Pyramid reach Participation
Jon	Cizmar	15 Mile Wilderness/3 Mile below Pyramid Dam
Mike	Ferral	15 Mile Wilderness
Eric	Giddens	15 Mile Wilderness/3 Mile below Pyramid Dam
Matt	Perkins	15 Mile Wilderness
Keith	Richards-Dinger	15 Mile Wilderness
Derrick	Tito	15 Mile Wilderness/3 Mile below Pyramid Dam
Tanner	Tito	15 Mile Wilderness/3 Mile below Pyramid Dam
Melanie	Dunwoody	3 Mile below Pyramid Dam
Paul	Macey	3 Mile below Pyramid Dam
Jose	Magana	3 Mile below Pyramid Dam
Rick	Norman	3 Mile below Pyramid Dam
Anthea	Raymond	3 Mile below Pyramid Dam
Donnette	Dunaway	3 Mile below Pyramid Dam
Magno	Escobar	3 Mile below Pyramid Dam
Ray	Fields	3 Mile below Pyramid Dam
Chris	Mattox	3 Mile below Pyramid Dam
Theresa	Simsiman	3 Mile below Pyramid Dam

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Appendix C

Completed Pre-Fieldwork Information, Post-Run Evaluation, and Close-Out Evaluation Forms

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Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/18/2019 Your name: Tanner Tito

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
(Hard shell kayak)	No	Rare	Occasional	(Frequent)	3	II	III	IV	(V)
Inflatable kayak	No	(Rare)	Occasional	Frequent		II	(III)	IV	V
Raft/cataraft (length: 14)	No	Rare	Occasional	(Frequent)		II	III	(IV)	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 200 days per year

3. What is your age? 18 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 124 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	(3)	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	6	(7)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: Dec / 18 / 2019 Your name: Matthew Perkins

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)		II	III	IV	(V)
Inflatable kayak	No	(Rare)	Occasional	Frequent		II	III	(IV)	V
Raft/cataraft (length: 12)	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Other: N/A	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 30 days per year

3. What is your age? 30 years

4. Are you [X] male or [ ] female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 63 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	(5)	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	(6)	7
Good whitewater play areas are more important than challenging rapids	1	2	(3)	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/19/19 Your name: Michael Farrell

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)
Hard shell kayak	No	Rare	Occasional	(Frequent)	20	II III IV (V)
Inflatable kayak	(No)	Rare	Occasional	Frequent		II III IV V
Raft/cataraft (length: 10-14	No	Rare	(Occasional)	Frequent	25+	II III IV (V)
Other: _____	No	Rare	Occasional	Frequent		II III IV V

2. In general, how many days per year do you spend whitewater boating? 50 days per year

3. What is your age? 42 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? Yes. If so, when and where did you boat? Section below Piru Lake, several times between 2012 & 2015 during fall whitewater releases.

6. How far from your residence is Frenchman's Flat? 52 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	(1)	2	3	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	(6)	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/18/19 Your name: DERRICK TITO

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	Frequent	33	II	III	IV	V
Inflatable kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length: 14)	No	Rare	Occasional	Frequent		II	III	IV	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 200 days per year

3. What is your age? 50 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? NO. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 124 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	7
Good whitewater play areas are more important than challenging rapids	1	2	3	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12 / 19 / 2019 Your name: Keith Richards-Dinger

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)		II	III	IV	(V)
Inflatable kayak	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Raft/cataraft (length: 14)	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 30 days per year

3. What is your age? 51 years

4. Are you [X] male or [ ] female?

5. Have you previously boated Piru Creek? Yes. If so, when and where did you boat? Frenchmans to Lake Piru - twice in 1990s, above Pyramid one also in 1990s

6. How far from your residence is Frenchman's Flat? 120 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	3	(4)	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12 / 19 / 2019 Your name: JONATHAN CIZMAR

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	9	II	III	IV	(V)
Inflatable kayak	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Raft/cataraft (length: 10-14)	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Other: TUBING	No	Rare	(Occasional)	Frequent		II	(III)	IV	V

2. In general, how many days per year do you spend whitewater boating? 120 days per year

3. What is your age? 33 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? YES. If so, when and where did you boat? LOWER PIRU CREEK BELOW PIRU LAKE. 2017

6. How far from your residence is Frenchman's Flat? 120 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	(3)	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	(6)	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12 / 19 / 19 Your name: Eric Giddens

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	35 yrs	II	III	IV	(V)
Inflatable kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	No	Rare	Occasional	Frequent		II	III	IV	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 45 days per year

3. What is your age? 46 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 120 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	(3)	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	(6)	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/19/19 Your name: Therese Simsiman

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	21	II	III	(IV)	V
Inflatable kayak	No	Rare	(Occasional)	Frequent		II	(III)	IV	V
Raft/cataraft (length:____)	No	Rare	(Occasional)	Frequent		II	(III)	IV	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 30 days per year

3. What is your age? 51 years

4. Are you ☐ male or ☑ female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? _____ miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	(2)	3	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	(4)	5	6	7
Good whitewater play areas are more important than challenging rapids	1	2	3	(4)	5	6	7
I prefer boating steep, technical rivers	1	2	3	(4)	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/19/19 Your name: Jose Magana

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)		II	III	(IV)	V
Inflatable kayak	(No)	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	(No)	Rare	Occasional	Frequent		II	III	IV	V
Other: River Board	No	Rare	(Occasional)	Frequent		II	III	(IV)	V

2. In general, how many days per year do you spend whitewater boating? 60+++ days per year

3. What is your age? 31 years

4. Are you [X] male or [ ] female?

5. Have you previously boated Piru Creek? NO. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 8 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	(3)	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/14/20 Your name: Magno Escobar

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)
Hard shell kayak	No	Rare	Occasional	Frequent		II (III) IV V
Inflatable kayak	(No)	Rare	Occasional	Frequent		II III IV V
Raft/cataraft (length:____)	(No)	Rare	Occasional	Frequent		II III IV V
Other: Riverboard	No	Rare	(Occasional)	Frequent		II (III) IV V

2. In general, how many days per year do you spend whitewater boating? 10ts days per year 60

3. What is your age? 34 years

4. Are you ☑ male or ☐ female?

5. Have you previously boated Piru Creek? NO. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 1½ miles 34miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	3	4	(5)	6	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/17/19 Your name: Ray Fields

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	(Occasional)	Frequent	12	II	III	(IV)	V
Inflatable kayak	No	(Rare)	Occasional	Frequent	12	II	(III)	IV	V
Raft/cataraft (length: 14)	No	Rare	(Occasional)	Frequent	12	II	III	(IV)	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 10 days per year

3. What is your age? 59 years

4. Are you ☒ male or ☐ female?

5. Have you previously boated Piru Creek? NO. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 177 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	(3)	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	(5)	6	7
Good whitewater play areas are more important than challenging rapids	(1)	2	3	4	5	6	7
I prefer boating steep, technical rivers	1	2	3	(4)	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/17/2019 Your name: Donette Dunaway

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)
Hard shell kayak	No	Rare	(Occasional)	Frequent	30	II (III) (IV) V
Inflatable kayak	No	(Rare)	Occasional	Frequent	5	II (III) IV V
Raft/cataraft (length: 16)	No	Rare	(Occasional)	Frequent	35	II (III) (IV) V
Other: _____	No	Rare	Occasional	Frequent		II III IV V

2. In general, how many days per year do you spend whitewater boating? 10 days per year

3. What is your age? 57 years

4. Are you ☐ male or ☒ female?

5. Have you previously boated Piru Creek? no. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 177 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	(3)	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	(5)	6	7
Good whitewater play areas are more important than challenging rapids	(1)	2	3	4	5	6	7
I prefer boating steep, technical rivers	1	(2)	3	4	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12 / 19 / 19 Your name: CHRIS MATTOX

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	~15	II	III	IV	(V)
Inflatable kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length: 16)	No	Rare	(Occasional)	Frequent		II	III	(IV)	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? ~30 days per year

3. What is your age? 29 years

4. Are you [X] male or [ ] female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 120 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	(5)	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	3	4	5	(6)	7
I prefer boating steep, technical rivers	1	2	3	4	5	(6)	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/19/19 Your name: Paul Macey

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	30	II	III	IV	(V)
Inflatable kayak	No	(Rare)	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	(No)	Rare	Occasional	Frequent		II	III	IV	V
Other: _____	(No)	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 20 days per year

3. What is your age? 51 years

4. Are you ☑ male or ☐ female?

5. Have you previously boated Piru Creek? yes. If so, when and where did you boat?
Hard Luck ~ 2004 (into Pyramid Lake)
Middle ~ 2006 (Pyramid to Piru)

6. How far from your residence is Frenchman's Flat? 50 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	6	(7)
Good whitewater play areas are more important than challenging rapids	1	2	3	4	5	(6)	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12/19/15 Your name: Melanie Dunwoody

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)		II	(III)	(IV)	V
Inflatable kayak	No	Rare	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	No	Rare	Occasional	Frequent		II	III	IV	V
Other: _____	No	Rare	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? ~ 40 days per year

3. What is your age? 62 years

4. Are you ☐ male or ☑ female?

5. Have you previously boated Piru Creek? no. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 90 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	(3)	4	5	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	(5)	6	7
Good whitewater play areas are more important than challenging rapids	1	2	3	4	5	(6)	7
I prefer boating steep, technical rivers	1	2	3	4	5	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: 12 / 19 / 19 Your name: Andrea Raymond

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)		II	(III	IV)	V
Inflatable kayak	No	(Rare)	Occasional	Frequent		II	III	IV	V
Raft/cataraft (length:____)	(No)	Rare	Occasional	Frequent		II	III	IV	V
Other: riverboard	No	(Rare)	Occasional	Frequent		II	III	IV	V

2. In general, how many days per year do you spend whitewater boating? 35 days per year

3. What is your age? 65 years

4. Are you ☐ male or ☒ female?

5. Have you previously boated Piru Creek? No. If so, when and where did you boat? _____

6. How far from your residence is Frenchman's Flat? 30 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	(5)	6	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	(5)	6	7
Good whitewater play areas are more important than challenging rapids	1	2	3	4	(5)	6	7
I prefer boating steep, technical rivers	1	2	3	4	5	(6)	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Pre-Fieldwork Information Form

Date: _____/_____/_____ Your name: Richard Norman (Rick)

1. For the following types of whitewater craft, please indicate 1) the frequency you use each compared to other craft, 2) the years of experience you have with each, and 3) your skill level with that craft.

Craft	Frequency of use (circle one for each craft)				Years of experience	Skill level (circle one class)			
Hard shell kayak	No	Rare	Occasional	(Frequent)	32	II	(III)	IV	V
Inflatable kayak	No	(Rare)	Occasional	Frequent		(II)	III	IV	V
Raft/cataraft (length:____)	No	Rare	Occasional	(Frequent)		II	III	(IV)	V
Other: River board	No	Rare	(Occasional)	Frequent		II	(III)	IV	V

2. In general, how many days per year do you spend whitewater boating? 50 days per year

3. What is your age? 62 years

4. Are you [X] male or [ ] female?

5. Have you previously boated Piru Creek? Yes. If so, when and where did you boat? Upper Mutau flt to Pyrmd Lake late nineties - early 2000's // Middle - gorge 2x's, mid-nineties // Lower to Santa Clara River 10x's 2007-2008

6. How far from your residence is Frenchman's Flat? 75 miles

7. Please respond to each of the following statements about your river-running preferences.

	Strongly disagree	Moderately disagree	Slightly disagree	No Opinion	Slightly agree	Moderately agree	Strongly agree
Running challenging whitewater is the most important part of my boating trips	1	2	3	4	5	(6)	7
I am willing to tolerate difficult put-ins and portages in order to run interesting reaches of whitewater	1	2	3	4	5	(6)	7
Good whitewater play areas are more important than challenging rapids	1	2	3	(4)	5	6	7
I prefer boating steep, technical rivers	1	2	3	4	(5)	6	7

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Keith Richards-Dinger
2. Date of Run: 12/19/2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b.) 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Frenchmans Flat ▶ Time: 8:30a
   b. Take-out location: Canby Crossing ▶ Time: 1:40p
5. What was the target flow (flow you are evaluating) on this run? 310 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV .
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV (V.)
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 100+ times. (branches)
    b. I was **stopped** after hitting rocks or other obstacles about 1 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating -- such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Lots of brush - much more than 20 yrs ago - throughout
One very difficult rapid in the conglomerate gorge that almost all will want to portage.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

15-mile

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Eric Giddens
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b.) 1.5-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Frenchman's Flat ▶ Time: 8:30 am
   b. Take-out location: Canton Crossing ▶ Time: 1:45 pm
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III - IV .
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV (V)
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly (c.) Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	(4)	5
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	(2)	3	4	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	(4)	5
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about many times.
    b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 1 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

The brush/trees in this run present a significant challenge. Overall the water quality (rapids) is very approachable, but the pin/snag hazards due to vegetation add a level of difficulty to the run

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	(4)	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Matthew Perkins

2. Date of Run: 12/19/19

3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b.) 5-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Frenchman Flat ▶ Time: 8:30 am
   b. Take-out location: Canton Crossing ▶ Time: 1:30 pm

5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶

6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV.

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly (c.) Probably d. Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	(4)	5
This reach offers challenging and technical boating.	1	2	(3)	4	5
This reach has nice water features such as waves and holes.	1	(2)	3	4	5
This reach has good play spots.	1	(2)	3	4	5
This run offers good overall whitewater challenge.	1	2	(3)	4	5
This is an aesthetically pleasing run.	1	2	3	(4)	5
This run is a good length.	1	2	3	(4)	5
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about too many to count times.
    b. I was **stopped** after hitting rocks or other obstacles about 10 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 1 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

There is a ton of wood, mostly is smacking you in the face constantly but in some places it's a medium hazard

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

		lower 15
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	(3)
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Tanner Tito
2. Date of Run: 12-19-2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b.) 5-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Frenchman's Flat ▶ Time: 8:30
   b. Take-out location: CANTON Crossing ▶ Time: 1:45
5. What was the target flow (flow you are evaluating) on this run? 310 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? ~~III~~ IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV (V)
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No (b.) Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	(2)	3	4	5
This run offers good overall whitewater challenge.	1	(2)	3	(4)	5
This is an aesthetically pleasing run.	1	(2)	3	4	(5)
This run is a good length.	1	2	(3)	4	5
The portages on this run are not a problem.	1	2	3	(4)	5
There are enough places to take a break or have lunch on this run.	1	2	3	(4)	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 1000 times.
    b. I was **stopped** after hitting rocks or other obstacles about 20 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Low risk pins, 2 high risk swims due to strainers. Lots of logs, brush, and sticks covered more than 75% of the run.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: JONATHAN CIZMAR
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b.) 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: FRENCHMAN'S FLAT ▶ Time: 8:30 am
   b. Take-out location: BELOW BLUE POINT CAMPGROUNDS ▶ Time: 1:30 pm
5. What was the target flow (flow you are evaluating) on this run? 310 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III - IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV (V.)
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 30 times.
    b. I was **stopped** after hitting rocks or other obstacles about 5 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

YES, TREES AND BRUSH THROUGHOUT THE WHOLE RUN WERE THE SIGNIFICANT HAZARDS. HARD TO FIND ROUTES THROUGH THE MAZES WITHOUT KNOWING IF IT "DEAD ENDED OR NOT." SURPRISING ENOUGH, IT ALL WENT PRETTY WELL. HIGHER FLOW WOULD MAKE THIS HARDER TO ROUTE AS IT IS PRETTY CONTINUOUS IN NATURE. LOWER FLOW WOULD MAKE OTHER RAPIDS POSSIBLY UNRUNNABLE.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	(5)

15-MILE

THERE WAS ONE PORTAGE THAT WE HAD, DUE TO A HOLE BACKED UP BY A ROCK THAT SEEMED MORE CLASS V. BUT IT LOOKED LIKE A GREAT 6-7 FOOT BOOF, IF IT WASN'T FOR THE BAD CONSEQUENCE.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: DERRICK TITO
2. Date of Run: 12-19-2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 5-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: FRENCHMAN'S ▶ Time: 0830 AM
   b. Take-out location: CANTON CROSSING. ▶ Time: 1:45 PM
5. What was the target flow (flow you are evaluating) on this run? 310 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 500 times.
    b. I was **stopped** after hitting rocks or other obstacles about 20 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

2 SWIMS, LOW TO MEDIUM RISK PINS. HIGH RISK SWIMS DUE TO STRAINERS. MASSIVE TREE & BRUSH GROWTH CHOKES THIS RUN IN AN EPIC WAY. 90% OF THE RUN IS BEING PUSHED THROUGH BRANCHES & LOGS.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Michael Farrell
2. Date of Run: 12/17/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat (b. 15-mile reach below Frenchman's Flat)
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Frenchmans flat ▶ Time: 8:30 am
   b. Take-out location: Canton Crossing ▶ Time: 1:30 pm
5. What was the target flow (flow you are evaluating) on this run? 310 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a. Hardshell kayak) d. R2 (length: _____ft.) g. No craft: I road/trail-scouted this run
   b. Inflatable kayak e. Raft (length: _____ft.)
   c. Cataraft (length: _____ ft.) f. Other (specify) _____ (length: _____ft.)
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV (V.) - portage
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly (c. Probably) (d. Definitely Yes) → October/November YES!
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c. About the same (this is close to optimum)) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	(3)	(4)	5
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	(4)	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits, stops, boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 1000 times. trees/branches
    b. I was **stopped** after hitting rocks or other obstacles about 1 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 1 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Trees / branches are serious hazards. I grabbed a tree, exited my boat & relaunched once. We had very little true problems, but the possibility is high for brush to cause problems.

It was so beautiful & worthwhile though.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

		Lower
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Donette Dunaway
2. Date of Run: 12/14/2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Just below Pyramid Dam Bridge ▶ Time: 10
   b. Take-out location: Frenchman's Flat ▶ Time: 4
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III - IV (IV: dipstream of Hwy Bridge)
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4 – 5 (short)	
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 4 times.
    b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 3 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Swims - high possibility of getting into strainers if not careful.
pins/wrapped boats possible at bridges and narrow spots, downed trees across river (2 locations)
Concrete w/rebar in river is a puncture hazard (boat or body)
Hard to know for sure how flow will affect hazards. Higher flow might drown-out the hazards, but might push you into trees or strainers.
Adit bridge would be a problem at much higher flow (hard to get under the bridge)

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

	300cfs	
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Amber Raymond
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: 4 approx final ▶ Time: 3:30
   b. Take-out location: 6 1200 yds ▶ Time: 4:15
5. What was the target flow (flow you are evaluating) on this run? 307 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? 3+/.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III+ IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

N/A

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 3 times.
    b. I was **stopped** after hitting rocks or other obstacles about 3 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 3 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Lots of logs - but today out of main flow
Some brush! Bit better after clearance
of one day of 200 cfs.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column) Section 4 Section 5

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Melanie Dunwoody
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: above bridge @ #4 ▶ Time: _____
   b. Take-out location: campground ▶ Time: _____
5. What was the target flow (flow you are evaluating) on this run? _____ cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III IV + II in some spots
8. What is the class of the most challenging rapid encountered? (circle one) Class I II (III) (IV) V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No (b. Possibly) c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	(4)	5
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	4	(5)
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	(2)	3	4	5
There are enough places to take a break or have lunch on this run.	(1)	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 10 times.
    b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about _____ times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

This has alot of potential but the debri/overhanging branches need to be addressed plus debris removed at eddys that can be used to portage or as a put in/take out. and finally there is a log in the river abbove the bridge and below a boulder that has a tree growing out that is a unseeable pin hazard.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Magno Escobar
2. Date of Run: 12/19/22
3. Which Study Reach are you evaluating? (circle one)
   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Top Upper ▶ Time: _____
   b. Take-out location: Frenchman's Flat ▶ Time: _____
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV and III
8. What is the class of the most challenging rapid encountered? (circle one) Class I II (III) IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	(3)	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 2 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

at 300 CFS Pine Creek Run was fun and the Rapids were really cool. Thank you guys.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

I Love you guys.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Ray Fields
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Just below Pyramid Dam Bridge ▶ Time: 12 pm
   b. Take-out location: Frenchman's Flat ▶ Time: 4
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III .
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV- V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 5 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 3 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Log across channel above Adit Bridge – we portaged. High Hazard
Some of the less experienced boaters had swims in some of the rapids. Swims are potentially hazardous due to lots of trees along bank, but easy to float/swim to a decent eddy – medium hazards

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Rick Norman
2. Date of Run: 12-19-19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Loc 5 Hwy Bridge Thr ► Time: 10:00 AM ?
   b. Take-out location: Loc 6 FF ► Time: 11:30 ? AM
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ►
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III+ -///
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III- IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. **I hit** rocks or other obstacles (but did not stop) about 1 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

(Loc 5 to Loc 6) one stop/pin & swim 3 (others) on 1st decent 300 cfs all ok, Boating got better as we got in the groove

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Paul Macey
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: top ▶ Time: _____
   b. Take-out location: bottom ▶ Time: _____
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV upper III lower
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III VI+ V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about _____ times. several - but expected
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 3 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

swims - one of them was into logs
main hazard - logs over or in current - several portages
ie-bar potential concern, but not big deal
will indicate location separately

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Virginio Escobar
2. Date of Run: 8/21/19/12
3. Which Study Reach are you evaluating? (circle one)
   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: TOP ▶ Time: _____
   b. Take-out location: bottom ▶ Time: _____
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV upper
8. What is the class of the most challenging rapid encountered? (circle one) Class I II (III) IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 2 times.
    b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about No times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about No times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

_____

_____

_____

_____

_____

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Jose Luis Magana
2. Date of Run: December 9th
3. Which Study Reach are you evaluating? (circle one)

   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: just Below Pyramid Dam After first Big Rapid Drop ► Time: _____

   b. Take-out location: Frenchman's Flat Campground ► Time: Around 3:30 - 4:00PM
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ►
6. What type of craft did you use for this run? (circle one)

   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? Class 3+++ - Class 4
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	(3)	4	5
This reach has good play spots.	1	2	(3) X	(4)	5
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about 2 times.

    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 2 times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Rebar in some places, tree across the River, and we had about 5 swims total

High – Big tree across the River
High – 1 other Portage CUZ of Brush and trees
Perfect Flow But Maybe at 400cfs would be a bit more Challenging

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: CHRIS MATTOX
2. Date of Run: 12/19/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: RUN #1 LOC. #5 / RUN #2 LOC #1-3 ▶ Time: 9 12
   b. Take-out location: LOC #6 / #4-6 ▶ Time: 11 3
5. What was the target flow (flow you are evaluating) on this run? 300 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III - IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length. SHORT	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 3 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

- MAN-MADE HAZARDS P.S. OF RED GAGE (REBAR) ARE A HIGH HAZARD AND DISRUPTIVE TO THE RUN.
- ONE BOAT WAS PINNED BY VEGETATION / TREES. MEDIUM HAZARD
- THIS IS WHAT WOULD MAKE THE RIVER HARD FOR BEGINNERS
- MORE WATER WOULD DECREASE RISK OF MAN-MADE HAZARDS BUT INCREASE THE BACKGROUND RISK TO NATURAL HAZARDS

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

	3-MILE	
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Jose Magana
2. Date of Run: December 20th, 2019
3. Which Study Reach are you evaluating? (circle one)

   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: Below Pyramid Dam ▶ Time: 10:00AM

   b. Take-out location: Frenchman's flat ▶ Time: 3:30 PM

5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶

6. What type of craft did you use for this run? (circle one)

   (a) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? Class 4.

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about 7 times.

    b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 3 times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

I got pinned by a tree across the River trying to go under it, tried to roll but noticed I was stuck. and decided to pull out of my boat its doable but I made the wrong move. I also witnessed about 3 other swims

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Eric Giddens
2. Date of Run: 12/20/19
3. Which Study Reach are you evaluating? (circle one)

   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: Above Plumas Dam bridge ▶ Time: 9:30

   b. Take-out location: Frenchman Flat ▶ Time: 10:45

5. What was the target flow (flow you are evaluating) on this run? 20 cfs ▶

6. What type of craft did you use for this run? (circle one)

   (a) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III .

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly (c.) Probably d. Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) (d) Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	(4)	5
This run is a good length.	1	2	3	(4)	5
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about 3 times.

    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 6 times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

There are several wood hazards that are easily or moderate to remove. I saw rebar but did not think it was a safety concern. All of these would be present regardless of flow levels

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: JONATHAN CIZMAR
2. Date of Run: 12/20/19
3. Which Study Reach are you evaluating? (circle one)
   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: ABOVE PUBLIC BRIDGE ▶ Time: 9:45 AM
   b. Take-out location: FRENCHMAN'S FLAT ▶ Time: 11 AM
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? II - III+.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II (III+) IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) (d.) Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	4	(5)
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	(4)	5
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 30 times.
    b. I was **stopped** after hitting rocks or other obstacles about 4 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

YES THERE WERE SOME LOGS, STRAINERS, AND DEBRIS HAZARDS THROUGHOUT THE RUN, BUT ALL WERE MANAGEABLE. SOME SPOTS WERE TIGHT AND YOU HAD TO BE IN CONTROL OF YOUR BOAT TO NOT HIT THE HAZARD WHICH IS WHY I CONSIDERED THE RUN TO BE CLASS III+ IN SOME SPOTS. GOOD BEGINNER SPOTS (TO PLAY + LEARN) BUT ALSO A GOOD INTERMEDIATE RUN FOR THE AVERAGE BOATER.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	5

3 MILE

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Donette Dunaway
2. Date of Run: 12/20/2019
3. Which Study Reach are you evaluating? (circle one)

   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: just below the dam bridge ▶ Time: 11:30

   b. Take-out location: Frenchmans Flat ▶ Time: 2:30pm

5. What was the target flow (flow you are evaluating) on this run? 700 cfs ▶

6. What type of craft did you use for this run? (circle one)

   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III + ~~IV~~ IV/IV+

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV-) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) (d.) Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	(3)	4	5
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	(4)	5 short
The portages on this run are not a problem.	1	2	(3)	4	5
There are enough places to take a break or have lunch on this run.	1	2	(3)	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about 4 times.

    b. I was **stopped** after hitting rocks or other obstacles about Ø times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about Ø times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 3 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

At 200 cfs the runs were slightly more "boney" (rocky) compared to 300 cfs but the hazards were pretty much equal. (See my assessment Post-Run Eval. for 300 cfs)

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

	200 cfs	300 cfs
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	(4)
Totally acceptable	5	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Ray Fields
2. Date of Run: 12/20/19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Below Dam bridge ▶ Time: 1130
   b. Take-out location: Frenchman's Flat ▶ Time: 230
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III to IV-
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV- V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 10 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

A couple of swims + near pins on large log above Adit. Easy portage around, and not extremely difficult to go under at this flow. Some other logs across the river that are either easy to go over or portage around. Not possible at higher flows - have to portage.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Ann Marie Raymond
2. Date of Run: 12-20-19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Just below location 1 ▶ Time: 11:00
   b. Take-out location: Frenchmen's Flat Loc. 6 ▶ Time: 2:40
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III+.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one) maybe 250 cfs
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 5 times.
    b. I was **stopped** after hitting rocks or other obstacles about 1 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

Brush, especially logs + trees.
Any release after a summer season would require recon to identify the trees.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

	300 cfs	2012 cfs
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	(4)
Totally acceptable	(5)	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Theresa Simsiman
2. Date of Run: 12-20-19
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Location 5 (First Run), Below Pyramid Bridge ▶ Time: 10:20 am 1st run (2nd run 12:20 second run)
   b. Take-out location: Frenchman's Flat ▶ Time: 11am, 2:30pm
5. What was the target flow (flow you are evaluating) on this run? 210 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? Below pyramid to location 5 Class IV location 5 to FF Class III
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	(4)	5
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	3	(4)	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	(4)	5
There are enough places to take a break or have lunch on this run.	1	2	3	(4)	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 15 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

- Woody Debris - ~~on location above~~ above location 5 rock w/Tree in middle of the run Medium at these flows.
- Below Highway Armory left channel narrows tree hanging into river - LWD on bank at turn medium

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

	Run 1	Run 2
Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

- In between putin below Pyramid Bridge + Highway armory log over river - can ~~pass~~ boat under it on left but must be precise - otherwise can flip + get stuck - medium

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Magno Esnaola

2. Date of Run: 12/20/19

3. Which Study Reach are you evaluating? (circle one)
   (a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Below Diamond Dawn ▶ Time: 10 am
   b. Take-out location: Frenchman's Flat ▶ Time: 3:30 pm

5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶

6. What type of craft did you use for this run? (circle one)
   (a.) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? Class IV.

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	4	(5)
This reach has good play spots.	1	2	3	4	(5)
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	3	4	(5)
The portages on this run are not a problem.	1	2	3	4	(5)
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 2 times.
    b. I was **stopped** after hitting rocks or other obstacles about 1 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 1 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

I Love the run. Thank you guys

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Rick Norman

2. Date of Run: 12-20-19

3. Which Study Reach are you evaluating? (circle one)

   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

   a. Put-in location: #1 Loc 5 / #2 Loc 4 ▶ Time: 10AM - #1 / #2 12 pm

   b. Take-out location: Loc 6 / Loc 6 ▶ Time: 11:30 - 3 pm #1 / #2

5. What was the target flow (flow you are evaluating) on this run? ~~200~~ cfs ▶ 210

6. What type of craft did you use for this run? (circle one)

   a. Hardshell kayak d. R2 (length: _____ft.) g. No craft: I road/trail-scouted this run

   b. Inflatable kayak e. Raft (length: _____ft.)

   c. Cataraft (length: _____ ft.) f. Other (specify) _____ (length: _____ft.) #1

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? #1 II- to 3+

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III+ IV V.

9. Are you likely to return for future boating if the flow you are evaluating ~~were~~ to be provided and scheduled? (circle one)

   a. Definitely No b. Possibly c. Probably d. Definitely Yes

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

    a. I **hit** rocks or other obstacles (but did not stop) about 2 times.

    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).

    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.

    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

1

just one person swam after hitting a branch, today becoming much more familiar with the features after 2-3 runs.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: Paul Macey
2. Date of Run: 12/20/19
3. Which Study Reach are you evaluating? (circle one)
   (a) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: Above Pyramid Bridge ▶ Time: _____
   b. Take-out location: Frenchman's Flat ▶ Time: _____
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   (a) Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? IV.
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV+) V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably (d.) Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) (d.) Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	(4)	5
This reach has nice water features such as waves and holes.	1	2	3	4	(5)
This reach has good play spots.	1	2	(3)	4	5
This run offers good overall whitewater challenge.	1	2	3	(4)	5
This is an aesthetically pleasing run.	1	2	3	4	(5)
This run is a good length.	1	2	(3)	4	5
The portages on this run are not a problem.	1	2	3	(4)	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about _____ times.
    b. I was **stopped** after hitting rocks or other obstacles about 1 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 3 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

logs / branches

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	(4)	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: CHRIS MATOX

2. Date of Run: 12/20/19

3. Which Study Reach are you evaluating? (circle one)

(a.) 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat

4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.

a. Put-in location: LOC #5 | LOC# 1 @ DAM ▶ Time: 9 | 12

b. Take-out location: CAMP | CAMP ▶ Time: 10:30 | 3

5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶

6. What type of craft did you use for this run? (circle one)

(a.) Hardshell kayak
b. Inflatable kayak
c. Cataraft (length: _____ ft.)
d. R2 (length: _____ft.)
e. Raft (length: _____ft.)
f. Other (specify) _____ (length: _____ft.)
g. No craft: I road/trail-scouted this run

7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III-IV

8. What is the class of the most challenging rapid encountered? (circle one) Class I II III (IV) V.

9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)

a. Definitely No b. Possibly c. Probably (d.) Definitely Yes SHUTTLE IS THE LIMITING FACTOR.

10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)

a. Much Lower Flow b. Lower (c.) About the same (this is close to optimum) d. Higher e. Much Higher

11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	(5)
This reach offers challenging and technical boating.	1	2	3	4	(5)
This reach has nice water features such as waves and holes.	1	2	3	(4)	5
This reach has good play spots.	1	2	3	(4)	5
This run offers good overall whitewater challenge.	1	2	3	4	(5)
This is an aesthetically pleasing run.	1	2	3	(4)	5
This run is a good length.	1	2	(3)	4	5
The portages on this run are not a problem.	1	2	3	(4)	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	(5)

12. Please estimate the number of **hits**, **stops**, **boat drags**, and **portages** you had on this run.

a. I **hit** rocks or other obstacles (but did not stop) about 5 times.

b. I was **stopped** after hitting rocks or other obstacles about 2 times (but did not have to get out of my boat to continue downstream).

c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 1 times.

d. I had to **portage** around un-runnable rapids, log jams, or other sections about 2 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

2 SWIMS FROM A LOG BELOW 2 (ADEQ) AND ABOVE 3. THAT MORE EXPERIENCED BOATERS OK W/ THE RISK CAN DUCK TO THE LEFT.

"LOG" RAPID IS A CLASS IV BUT W/ ALL THE WOOD IN THE LEAD-IN IT IS CLASS V.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: TANNER Tito
2. Date of Run: 12-20-2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: VERY TOP ▶ Time: 9:00am
   b. Take-out location: CAMPGROUND ▶ Time: 11:00am
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? III .
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits, stops, boat drags,** and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 3 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

TAKE OUT SOME OF THE TREES TO MAKE IT MORE FUN.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach *(Circle one number for each column).*

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	5	5

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Post-Run Evaluation Form

1. Name: DERRICK TITO
2. Date of Run: 12-20-2019
3. Which Study Reach are you evaluating? (circle one)
   a. 3-mile reach above Frenchman's Flat b. 15-mile reach below Frenchman's Flat
4. Please identify the put-in and take-out locations used and your estimate of the time you put-in and took out on this run.
   a. Put-in location: ABOVE UPPER BRIDGE ABOUT ½ MILE ▶ Time: 0900
   b. Take-out location: CAMP ▶ Time: 1100
5. What was the target flow (flow you are evaluating) on this run? 200 cfs ▶
6. What type of craft did you use for this run? (circle one)
   a. Hardshell kayak
   b. Inflatable kayak
   c. Cataraft (length: _____ ft.)
   d. R2 (length: _____ft.)
   e. Raft (length: _____ft.)
   f. Other (specify) _____ (length: _____ft.)
   g. No craft: I road/trail-scouted this run
7. In general, how would you rate the whitewater difficulty at this flow (Class I to Class VI)? 3 .
8. What is the class of the most challenging rapid encountered? (circle one) Class I II III IV V.
9. Are you likely to return for future boating if the flow you are evaluating were to be provided and scheduled? (circle one)
   a. Definitely No b. Possibly c. Probably d. Definitely Yes
10. Would you prefer a flow that was higher or lower or the same as this flow? (circle one)
    a. Much Lower Flow b. Lower c. About the same (this is close to optimum) d. Higher e. Much Higher
11. Please respond to each of the following statements about the characteristics of this run at the flow you are evaluating.

Statement	No -Totally unacceptable	No - Slightly unacceptable	Marginal	Yes - Slightly acceptable	Yes - Totally acceptable
This reach is boatable at these flows.	1	2	3	4	5
This reach offers challenging and technical boating.	1	2	3	4	5
This reach has nice water features such as waves and holes.	1	2	3	4	5
This reach has good play spots.	1	2	3	4	5
This run offers good overall whitewater challenge.	1	2	3	4	5
This is an aesthetically pleasing run.	1	2	3	4	5
This run is a good length.	1	2	3	4	5
The portages on this run are not a problem.	1	2	3	4	5
There are enough places to take a break or have lunch on this run.	1	2	3	4	5

12. Please estimate the number of **hits, stops, boat drags,** and **portages** you had on this run.
    a. I **hit** rocks or other obstacles (but did not stop) about 3 times.
    b. I was **stopped** after hitting rocks or other obstacles about 0 times (but did not have to get out of my boat to continue downstream).
    c. I had to get out to **drag or pull my boat** off rocks or other obstacles about 0 times.
    d. I had to **portage** around un-runnable rapids, log jams, or other sections about 0 times.

13. Did you observe or experience any significant safety hazards on this run at the flow you are evaluating – such as swims, pins, wrapped boats, man-made or natural river features etc.? Please identify the location of hazards below, rate them as "High", "Medium", or "Low", and include if they are flow specific or would be present only at a certain flow range.

THIS RUN IS EASY CLASS III WITH A FEW LOGS & TREES THAT COULD BE REMOVED TO MAKE IT TOTALLY EASY & SAFE & FUN. THERE WAS THE REBAR AREA THAT WAS A CONCERN, BUT IT WAS SAFE & SIMPLE.

14. Using the scale below, please rate the overall quality of the flow you boated for each reach
(Circle one number for each column).

Totally unacceptable	1	1
Slightly unacceptable	2	2
Marginal	3	3
Slightly acceptable	4	4
Totally acceptable	(5)	(5)

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: JONATHAN CIZMAR
2. Date: 12/20/19
3. Reach boated: (3-mile reach above Frenchman's Flat) 1X ✓ Date 12/20/19 200 CFS
   (15-mile reach below Frenchman' Flat) 1X Date 12/19/19 310 CFS
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 10 15-mile run 30
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 5 15-mile run 15

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:*	
3-mile	Worse than average
15-mile	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:*	
3-mile	Worse than average
15-mile	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 150 cfs 15-mile run 200 cfs
   What is the lowest flow that provides for an optimal trip? 3-mile run 200 cfs 15-mile run 300 cfs
7. What months of the year would you prefer to boat on middle Piru Creek? NOV - FEB
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach 2-4 WEEKS
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	(6)	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	(6)	7	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Eric Gibens

2. Date: ~~12/20/19~~ 12/20/19

3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date 12/20/19
   (15-mile reach below Frenchman' Flat) ✓ Date 12/19/19

4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 5 15-mile run Many
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 2 15-mile run 5

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

   * for this time of year

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ___ 15-mile ___ (both)	**Other Rivers in California** *Reach compared:* 3-mile ___ 15-mile ___
Worse than average	Worse than average
Average	Average ✓
Better than average ✓	Better than average
Excellent	Excellent
Among the very best	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 150 15-mile run 200
   What is the lowest flow that provides for an optimal trip? 3-mile run 200 15-mile run 300

7. What months of the year would you prefer to boat on middle Piru Creek? November
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1-week

9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	(6)	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	(5)	6	7	
1000 cfs	1	2	3	(4)	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	(3)	4	5	6	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	(2)	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: DERUK TITO
2. Date: 12-20-2019
3. Reach boated: (3-mile reach above Frenchman's Flat) X Date 12-20-2019
   (15-mile reach below Frenchman' Flat) X Date 12 19 -2019
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 10 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 1 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile X 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile X 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 150 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? NOV - FEB
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 MONTH
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Tanner Tito
2. Date: 12-20-2019
3. Reach boated: (3-mile reach above Frenchman's Flat) X Date 12-20-2019
   (15-mile reach below Frenchman' Flat) X Date 12-19-2019
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 10 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 0 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile X 15-mile ___	Worse than average
	(Average)
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile X 15-mile ___	Worse than average
	(Average)
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 150 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 200 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? November, December, January
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	(Moderately interested)	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? a week or a month would be nice
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	(6)	7	
1000 cfs	1	2	3	4	5	(6)	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	(2)	3	4	5	6	7	
300 cfs	1	2	3	4	(5)	6	7	
400 cfs	1	2	3	(4)	5	6	7	
600 cfs	1	2	(3)	4	5	6	7	
1000 cfs	1	(2)	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Matthew Perkins

2. Date: Jan 12, 2020

3. Reach boated: (3-mile reach above Frenchman's Flat) _____ Date_____
   (15-mile reach below Frenchman' Flat) X Date Dec 19, 2019

4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run _____ 15-mile run X
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run _____ 15-mile run 5

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ____ 15-mile X	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile ____ 15-mile X	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run _____ 15-mile run 250 cfs
   What is the lowest flow that provides for an optimal trip? 3-mile run _____ 15-mile run 350 cfs

7. What months of the year would you prefer to boat on middle Piru Creek? November, December, January
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 week

9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	X
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Keith Richards-Dinger

2. Date: 19 Jan 2019

3. Reach boated: (3-mile reach above Frenchman's Flat) _____ Date_____
   (15-mile reach below Frenchman' Flat) x Date 19 Jan 2019

4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run _____ 15-mile run x
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run _____ 15-mile run 5

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ____ 15-mile x	Worse than average
	Average
	Better than average
	(Excellent)
	Among the very best

Other Rivers in California *Reach compared:* 3-mile ____ 15-mile x	Worse than average
	(Average)
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run _____ 15-mile run 300 cfs
   What is the lowest flow that provides for an optimal trip? 3-mile run _____ 15-mile run 500 cfs?

7. What months of the year would you prefer to boat on middle Piru Creek? Oct, Nov, Dec
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 week

9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	x
300 cfs	1	2	3	4	5	6	7	x
400 cfs	1	2	3	4	5	6	7	x
600 cfs	1	2	3	4	5	6	7	x
1000 cfs	1	2	3	4	5	6	7	x

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	(2)	3	4	5	6	7	
300 cfs	1	2	3	4	5	(6)	7	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	6	7	x
1000 cfs	1	2	3	4	5	6	7	x

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Mike Farrell
2. Date: 1/29/20
3. Reach boated: (3-mile reach above Frenchman's Flat) _____ Date_____
   (15-mile reach below Frenchman' Flat) X Date 12/19/19
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run _____ 15-mile run X
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run _____ 15-mile run 5

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ____ 15-mile X	Worse than average
	Average
	Better than average
	Excellent
	(Among the very best)

Other Rivers in California *Reach compared:* 3-mile ____ 15-mile X	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run _____ 15-mile run 300cfs
   What is the lowest flow that provides for an optimal trip? 3-mile run _____ 15-mile run 400cfs
7. What months of the year would you prefer to boat on middle Piru Creek? September, October
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 3 days
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	X
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	(2)	3	4	5	6	7	
300 cfs	1	2	3	(4)	5	6	7	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Paul
2. Date: 12/20/19
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date 12/20/19
   (15-mile reach below Frenchman' Flat) _____ Date _____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run X 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run X 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ✓ 15-mile ____	
	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile ✓ 15-mile ____	
	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? any outside of Spring
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 month
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	(6)	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	7	X
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Jose Maggini
2. Date: December 20th, 2019
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date December 19-20, 2019
   (15-mile reach below Frenchman' Flat) _____ Date_____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 2 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 2 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:*	
3-mile ✓ / 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:*	
3-mile ✓ / 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run _____ 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? April to August
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 week
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	(6)	(7)	
400 cfs	1	2	3	4	5	(6)	7	
600 cfs	1	2	3	4	5	6	7	I Dont Know
1000 cfs	1	2	3	4	5	6	7	I Dont Know

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	H
300 cfs	1	2	3	4	5	6	7	Dont
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	Know

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Rick Norman
2. Date: 12-20-19
3. Reach boated: (3-mile reach above Frenchman's Flat) X Date 12-19 and 12-20-2019
   (15-mile reach below Frenchman' Flat) _____ Date _____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run X 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run X 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:*	
3-mile ✓	Worse than average
15-mile ___	(Average)
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:*	
3-mile ✓	Worse than average
15-mile ___	(Average)
	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 125 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 150 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? Nov Dec Jan Feb
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1-2 wks
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
(200 cfs)	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	(3)	4	5	6	7	
300 cfs	1	2	3	4	(5)	6	7	
400 cfs	1	2	3	4	5	(6)	7	
600 cfs	1	2	3	(4)	5	6	7	
1000 cfs	1	(2)	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: AnDrea Raymond
2. Date: 12-20-19
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date: 12-19-20-19
   (15-mile reach below Frenchman' Flat) _____ Date_____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run X 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 4 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile ✓ 15-mile ___	
	Worse than average
	Average
	Better than average
	(Excellent)
	Among the very best

Other Rivers in California *Reach compared:* 3-mile X 15-mile ___	
	Worse than average
	Average
	(Better than average)
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? Fall, early winter
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	(Moderately interested)	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? _____
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	(6)	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	(7)	X - Might be a good clearance flow

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Donette Dunaway
2. Date: 12/20/2019
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date 12/19 and 12/20
   (15-mile reach below Frenchman' Flat) _____ Date _____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 5 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 3 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

It's like comparing apples to oranges of different flavors of ice cream.

Other Rivers in the Area (within 2 hours)	
Reach compared:	Worse than average
3-mile ✓	Average
15-mile ____	Better than average
	Excellent
	Among the very best *

Other Rivers in California	
Reach compared:	Worse than average
3-mile X	Average
15-mile ____	Better than average
	Excellent
	Among the very best

needs brush cleared to be average or better!

*might say this is the best b/c I dont know of others except the Kern. We lack many rivers in S. Cal.

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? doesn't matter
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 week
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	(6)	7	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	7	X
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	X
300 cfs	1	2	3	4	5	6	7	X
400 cfs	1	2	3	4	5	6	7	X
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Magno Escobar
2. Date: 12/20/19
3. Reach boated: (3-mile reach above Frenchman's Flat) 200 Date_____
   (15-mile reach below Frenchman' Flat) _____ Date_____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: X 3-mile run X 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run X 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours)	
Reach compared:	Worse than average
3-mile Excellent	Average
15-mile____	Better than average
	(Excellent)
	Among the very best

Other Rivers in California	
Reach compared:	Worse than average
3-mile excellent	Average
15-mile____	Better than average
	(Excellent)
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? Summer
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	(Moderately interested)	Very interested	(Extremely interested)
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	(Extremely interested)

both are good!

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? _____
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	6	(7)	
600 cfs	1	2	3	4	(5)	6	7	
1000 cfs	1	2	3	4	(5)	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Ray Fields
2. Date: 12/20/19
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date 12/19 & 12/20/19
   (15-mile reach below Frenchman' Flat) _____ Date _____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 4 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 3 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:* 3-mile X 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Other Rivers in California *Reach compared:* 3-mile X 15-mile ____	Worse than average
	Average
	Better than average
	Excellent
	Among the very best

Haven't boated any rivers within 2 hours of here

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 was perfectly acceptable + could probably be boated at less, maybe 150 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 was great 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? Fall - Sept, Oct, Nov
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 month
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	X
300 cfs	1	2	3	4	5	6	7	X
400 cfs	1	2	3	4	5	6	7	X
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: CHRIS MATTOX
2. Date: 12/20/19
3. Reach boated: (3-mile reach above Frenchman's Flat) X Date 12/19 & 12/20
   (15-mile reach below Frenchman' Flat) _____ Date N/A
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 5 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 4 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) KERN & SANTA MARGARITA	
Reach compared:	Worse than average
3-mile X	Average
15-mile ____	Better than average
	Excellent
	Among the very best

Other Rivers in California - ~~KERN RIVER~~ -	
Reach compared:	Worse than average
3-mile X	Average
15-mile ____	Better than average
	Excellent
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 100(?) 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 250 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? SEPT - APRIL
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 2 wks
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	4	5	(6)	7	
600 cfs	1	2	3	4	5	6	7	X
1000 cfs	1	2	3	4	5	6	7	X

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	X
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

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Whitewater Boating Level 3 Controlled-Flow Boating Study
South SWP Hydropower, FERC Project No. 2426-227
Close-Out Evaluation Form

1. Name: Teresa Simsman
2. Date: 12-20-19
3. Reach boated: (3-mile reach above Frenchman's Flat) ✓ Date 12-20-19
   (15-mile reach below Frenchman' Flat) _____ Date _____
4. Given what you know about the quality of whitewater and other features of middle Piru Creek, please tell us maximum number of **stops** and **portages** that are tolerable for a high quality trip in your craft on each reach?
   If you "don't care" about the number of stops and portages, place an X in the space provided.

   Number of **stops** I will tolerate after hitting rocks: 3-mile run 0 15-mile run _____
   Number of **portages** I will tolerate around unrunnable rapids/logs: 3-mile run 3 15-mile run _____

5. Please evaluate the middle Piru Creek reach(s) compared to other rivers within two hours and within California.
   (Circle one number for each, if you are unsure, leave that item blank).

Other Rivers in the Area (within 2 hours) *Reach compared:*	
3-mile ✓	Worse than average
15-mile ____	Average
	Better than average
	(Excellent)
	Among the very best

Other Rivers in California *Reach compared:*	
3-mile ✓	Worse than average
15-mile ____	Average
	Better than average
	(Excellent)
	Among the very best

6. What is the lowest flow that provides an acceptable trip? 3-mile run 200 15-mile run _____
   What is the lowest flow that provides for an optimal trip? 3-mile run 300 15-mile run _____
7. What months of the year would you prefer to boat on middle Piru Creek? Fall, Winter
   Please rate your interest in boating flow releases on weekdays vs. weekends (Circle choices).

WEEKDAYS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested
WEEKENDS	Not at all interested	Slightly interested	Moderately interested	(Very interested)	Extremely interested

8. In general, how far in advance would you need to know about releases in order to plan trips on the reach? 1 month
9. Please circle overall evaluations of flows on the two whitewater reaches. Please consider all flow-dependent characteristics that contribute to high quality trips (e.g. boatability, whitewater challenge, safety, availability of play areas, aesthetics, and rate of travel). *If you do not feel comfortable evaluating a flow you have not seen, don't circle a number for that flow and place an "X" in the "I don't know" column.*

3-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	(7)	
300 cfs	1	2	3	4	5	6	(7)	
400 cfs	1	2	3	(4)	5	6	7	
600 cfs	1	2	(3)	4	5	6	7	
1000 cfs	(1)	2	3	4	5	6	7	

15-mile run:

FLOWS	Totally unacceptable	Moderately unacceptable	Slightly unacceptable	Marginal	Slightly acceptable	Moderately acceptable	Totally acceptable	I don't know
200 cfs	1	2	3	4	5	6	7	
300 cfs	1	2	3	4	5	6	7	
400 cfs	1	2	3	4	5	6	7	
600 cfs	1	2	3	4	5	6	7	
1000 cfs	1	2	3	4	5	6	7	

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Appendix D

Flow Graphs and Ramp Up – Ramp Down Schedule

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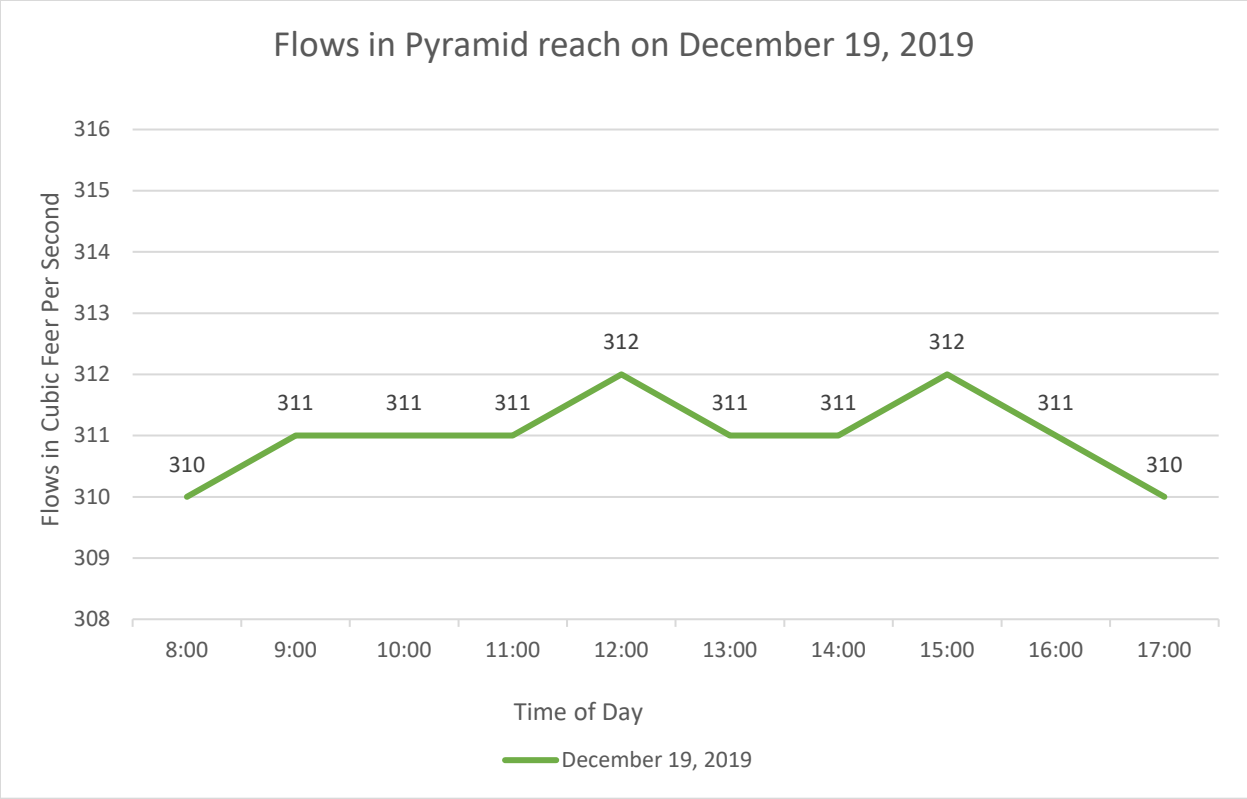
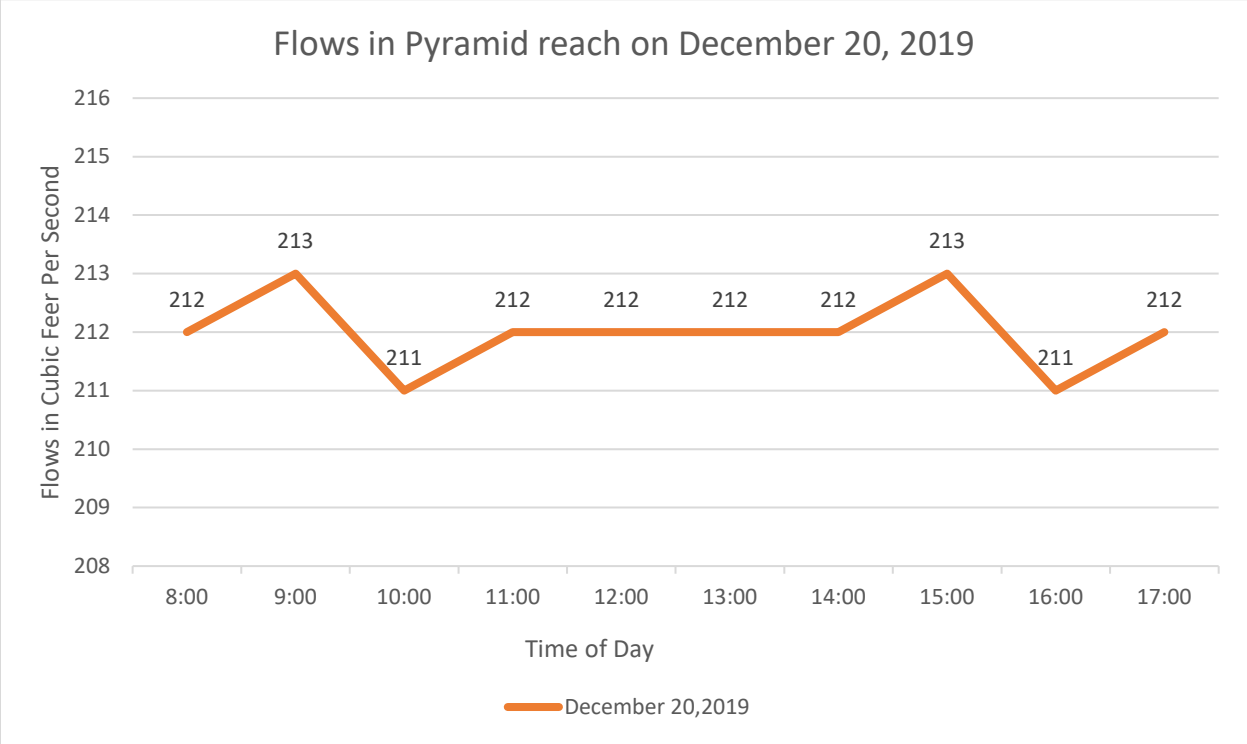

Flows in Pyramid reach on December 19, 2019
Flows in Cubic Feer Per Second
316
315
314
313
312
311
310
309
308
310
311
311
311
312
311
311
312
311
310
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
Time of Day
December 19, 2019


Flows in Pyramid reach on December 20, 2019
Flows in Cubic Feer Per Second
216
215
214
213
212
211
210
209
208
212
213
211
212
212
212
212
213
211
212
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
Time of Day
December 20,2019

Date	Proposed Release Flows in CFS
12/10/2019	natural flow
12/11/2019	5 cfs + natural flow
12/12/2019	5
12/13/2019	5
12/14/2019	5
12/15/2019	5
12/16/2019	25
12/17/2019	75
12/18/2019	200
12/19/2019	300
12/20/2019	200
12/21/2019	160
12/22/2019	130
12/23/2019	110
12/24/2019	85
12/25/2019	85

Key:
Green Highlight – The ramping of the delivery began
Yellow Highlight – The two scheduled boating days
CFS – Cubic Feet Per Second