



PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY
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January 21, 2011

VIA ELECTRONIC FILING

Honorable Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street, NE
Washington, DC 20426

Re: Lake Chelan Hydroelectric Project No. 637
License Article 407, Recreation Resources Management Plan
Whitewater Boating on the Chelan River Monitoring Study
Annual Report for 2010 Activities

Dear Secretary Bose and Deputy Secretary Davis:

The Federal Energy Regulatory Commission (Commission) issued the "Order Approving Recreation Resources Management Plan under Article 407" for the Lake Chelan Hydroelectric Project (Project) on April 14, 2008. License Article 407 and Appendix A, Agreement Article 11(5) requires the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD or Licensee), to file an annual Whitewater Boating Monitoring Study report to the Commission on or before June 1 for the previous year's whitewater boating monitoring study in the Chelan River for the initial three years.

Chelan PUD hereby files its second annual report with the Commission. This report includes activities conducted under the implemented Recreation Resources Management Plan for calendar year 2010. Chelan PUD consulted with American Whitewater and copies of comments and recommendations are included in appendices of the report.

Please contact me or Kris Pomianek at (509) 661-4186 regarding any questions or comments regarding this report.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michelle Smith".

Michelle Smith
Licensing & Compliance Manager
(509) 661-4180
michelle.smith@chelanpud.org

Enclosure: Annual Report for 2010 Activities

**WHITEWATER BOATING ON THE
CHELAN RIVER
MONITORING STUDY: YEAR TWO
JULY 10, 11, 24, 25
SEPTEMBER 11, 12, 25, 26, 2010**

Final Draft

**LAKE CHELAN HYDROELECTRIC PROJECT
FERC Project No. 637**

January 20, 2011



**Public Utility District No. 1 of Chelan County
Wenatchee, Washington
Prepared by Kris Pomianek**

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

SECTION 1: INTRODUCTION..... 3

SECTION 2: ANNUAL SCHEDULE 3

SECTION 3: SPILL VOLUME..... 4

SECTION 4: RESERVATION SYSTEM AND LIABILITY REQUIREMENTS 5

SECTION 5: PARTICIPATION 6

SECTION 6: SURVEY TOOL 6

SECTION 7: EVALUATION OF SURVEY RESULTS..... 7

APPENDIX A: DESCRIPTION OF THE CHELAN RIVER

APPENDIX B: SURVEY RESULTS

APPENDIX C: CONSULTATION WITH AMERICAN WHITEWATER

APPENDIX D: PHOTOS

EXECUTIVE SUMMARY

The Public Utility District No. 1 of Chelan County (Chelan PUD) owns and operates the Lake Chelan Hydroelectric Project, FERC No. 637, (Project) on the Chelan River in north central Washington. The Project is near the city of Chelan, in Chelan County. The Chelan River is about 3.9 miles long and extends from the dam downstream to the Columbia River. For ease of description, Chelan PUD divides the Chelan River into four sections based upon gradient, confinement, and fluvial geomorphologic characteristics (see Appendix A).

Chelan PUD operates the Project in accordance with a License issued by the Federal Energy Regulatory Commission (FERC) on November 6, 2006. As required under License Article 407, Chelan PUD submitted a recreation resources management plan (RRMP) which included a three-year whitewater boating monitoring study plan (Plan) on November 7, 2007. FERC approved the RRMP on April 14, 2008. In the RRMP, the first year whitewater boating release scheduled for 2008 was tentative based on habitat restoration work being done in the lower reaches of the Chelan River. Because of this habitat restoration work, it was determined that the whitewater boating study begin in 2009. On June 2, 2008, Chelan PUD requested approval from FERC of the revised schedule. On September 2, 2008, FERC notified Chelan PUD that the deadline for starting the whitewater boating study was extended to July, 2009.

The Plan was developed in consultation with American Whitewater and the Lake Chelan Recreation Forum. The Plan provides for an annual schedule of whitewater releases for hard-shelled kayakers in the Chelan River on the second and fourth weekends in July and September during the three-year period beginning in 2009. Kayaker surveys are required at the end of each release date to solicit input from whitewater boaters utilizing the Chelan River whitewater releases. The survey tool queries boaters on the suitability of the following: whitewater release dates, daily schedule, whitewater difficulty, spill volumes, access, carrying capacity, reservation system and real time flow information. A whitewater boating report is to be completed in consultation with American Whitewater and submitted to the FERC annually.

Following completion of the three-year whitewater boating monitoring study, a final report will be submitted to the FERC that will include information on the dates and volumes of each release for the three-year study period, annual use patterns, and an analysis of user preferences based on survey data. The report will include recommendations for providing whitewater releases, if any, for the remainder of the New License term. The report will make recommendations regarding, at a minimum, an annual schedule of releases (including volume and timing), a reservation system, the minimum number of boaters required to trigger a release, and a mechanism for liability protection.

The first year of the whitewater boating monitoring study was conducted in 2009 and a report was submitted to the FERC on January 8, 2010. On March 3, 2010 the FERC issued a letter accepting Chelan PUD's 2009 whitewater boating monitoring study report for the Chelan Hydroelectric Project which meets the requirements of Article 407 under P-637.

This document contains Chelan PUD's report of the second year whitewater boating monitoring study (2010). Second year survey data and documentation of consultation are included in the appendices.

During settlement negotiations, Chelan PUD and American Whitewater agreed to work together to obtain legislative changes to the Washington State Recreational Use Statute that would reduce liability concerns during whitewater boating releases.

During the 2009 legislative session, representatives from Chelan PUD and American Whitewater testified on a proposed amendment to the State's Recreational Use Statute, Senate Bill 5422 which would provide liability protection for whitewater boating and viewing activities associated with FERC-issued hydroelectric projects.

The requested change in language to the Bill did not come before the legislature in 2010. It is scheduled to be brought before the legislature in 2011.

SECTION 1: INTRODUCTION

Article 407 of the License Order and 11(h)(1) – (9) of the Settlement Agreement require Chelan PUD to conduct a three-year whitewater boating monitoring study. The Plan for the whitewater boating monitoring study was approved by the FERC on April 14, 2008 and was developed in consultation with American Whitewater and the Lake Chelan Recreation Forum.

The Plan requires that an annual report be developed in consultation with American Whitewater and be submitted to the FERC on or before June 1 each year. The annual report is intended to evaluate and provide for any adjustments to the flow release schedule, spill volumes, reservation, and liability requirements based on input from American Whitewater and on the evaluation of the surveys collected from participants in the previous year's study.

The whitewater boating monitoring study report summarizes and evaluates the following information:

1. Annual schedule
2. Spill volumes
3. Reservation system and mechanism for liability protection
4. Threshold number of participants and use patterns
5. Effectiveness of the survey tool
6. Survey results
7. Consultation with American Whitewater

The first year of the whitewater boating monitoring study was conducted in 2009 and a report submitted to the FERC on January 8, 2010. On March 3, 2010 the FERC issued a letter accepting Chelan PUD's 2009 whitewater boating monitoring study report for the Chelan Hydroelectric Project which meets the requirements of Article 407 under P-637.

SECTION 2: ANNUAL SCHEDULE

Whitewater Boating Monitoring Study Plan

During the three-year whitewater boating monitoring study, Chelan PUD will release flows on the second and fourth weekends in July and September. Flows on Saturdays will be between 300 cfs and 375 cfs, and flows on Sundays will be between 400 cfs and 450 cfs. Chelan PUD will begin the ramping up of releases to meet these flows at 11:00 am and will begin ramping down no sooner than 6:00 pm each day. Chelan PUD will not be obligated to provide whitewater boating flow releases in the Chelan River when the previous day's average Stehekin River inflow is less than 333 cfs, or when the Mid-Columbia Index is greater than \$150/MWh (\$2001) as adjusted pursuant to section 19.1 of the Settlement Agreement.

July, 2010 Schedule

The 2010 whitewater boating monitoring study was scheduled for July 10, 11, 24, 25 (second and fourth weekends).

On July 7, 2010 Chelan PUD notified the FERC of a change in the schedule for the 2010 Whitewater Boating Study in the Chelan River. In coordination and discussion with American Whitewater, runs on July 10 and 11 were cancelled due to high volume runoff forecasts into Lake Chelan and potential consequential large spill volumes down the Chelan River that would exceed the maximum allowable spills for whitewater boating.

The July 24 and 25 runs in the Chelan River were cancelled by Chelan PUD in accordance with the whitewater boating plan established in the Settlement Agreement that states that *water releases are made only if six or more kayakers make a reservation with Chelan PUD either in-person at Chelan PUD offices in Chelan or Wenatchee or via the Chelan PUD website, by 5:00 pm on the Thursday prior to the scheduled release date.* By 5:00 pm on Thursday, July 22, five people had made a reservation which did not meet the minimum requirement. The weekend's runs were cancelled.

September, 2010 Schedule

The 2010 whitewater boating monitoring study was conducted on September 11, 12, and 25, 26 (second and fourth weekends).

SECTION 3: SPILL VOLUME

Whitewater Boating Monitoring Study Plan requires the release of flows in the Chelan River between 300 cfs to 375 cfs on Saturday and 400 cfs to 450 cfs on Sunday. Based on kayaker surveys and input during 2009, spill releases during the first weekend's whitewater boating study were 360 cfs and 410 cfs on September 11 and 12, respectively.

The second weekend whitewater boating study was held on September 25 and 26. Saturday's flow was increased to 370 cfs and Sunday's flow was lowered to 400 cfs at the request of the boaters. Adjusting the flows within the ranges agreed upon during settlement negotiations and surveying boaters at the end of the whitewater run is allowing Chelan PUD and American Whitewater to determine the flows that can enhance the whitewater boating experience while accommodating the majority of boaters.

The following provides a summary of boater survey results on spill volume. All boater comments are located in Appendix B.

Survey results from the September 11(360 cfs) whitewater boating study included:

- 360 cfs was slightly to moderately acceptable to nine of the boaters and totally acceptable to one boater.

Survey results from the **September 12** (410 cfs) whitewater boating study included:

- 410 cfs was marginal to one, moderately acceptable to three, and totally acceptable to three boaters.

Survey results from the **September 25** (370 cfs) whitewater boating study included:

- 370 cfs was slightly to moderately acceptable to seven boaters and totally acceptable to three boaters.

Survey results from the **September 26** (400 cfs) whitewater boating study included:

- 400 cfs was totally acceptable to six boaters.

SECTION 4: RESERVATION SYSTEM AND LIABILITY REQUIREMENTS

Whitewater Boating Monitoring Study Plan

Water releases are made only if six or more kayakers make a reservation with Chelan PUD either in-person at Chelan PUD office in Chelan or Wenatchee or via the Chelan PUD website, www.chelanpud.org by 5:00 pm on the Thursday prior to the scheduled release date. In addition, all reserved participants must be physically present at the designated kayak put-in location by 10:00 am on the date of the release. No kayaker less than 18 years of age will be allowed. It is recommended that all participants scout the river ahead of time and watch a 20 minute video of kayaking in the Chelan River Gorge which is available on American Whitewater's or Chelan PUD's website. Each kayaker will be required to sign a liability waiver prior to launching his or her kayak in the Chelan River. Only non-motorized, hard shelled kayaks suitable for Class V whitewater will be allowed.

Registration

Chelan PUD created a link on its home page for registration and where information could be found regarding every aspect of the run including a video and a link directly to American Whitewater's website for further information. Paddlers registered on line using this website. Each registration is forwarded to American Whitewater.

Check-in

All paddlers checked in at the registration area (Powerhouse Park) before 10:00 am each day of the event. Paddlers were given an identification badge and were required to sign a liability waiver form, if the form had not previously been received by Chelan PUD.

Paddlers left the check-in area and traveled along the Chelan River to the put-in area which allowed them the opportunity to scout the river from the road along the way. All paddlers had non-motorized, hard shelled kayaks.

Put-in

All kayakers put in at the designated area just below the Project dam at 11:00 am.

Run duration

The run from put-in to take-out took approximately 3 to 4 ½ hours. Boaters were asked to finish the kayaking run by 6:00 pm, although all boaters completed the run and were off the river by 3:30 pm.

Take-out

All paddlers took out at the check-in area (Powerhouse Park) and filled out a survey.

Washington State Recreation Use Statute

During settlement negotiations, Chelan PUD and American Whitewater agreed to work together to obtain legislative changes to the Washington State Recreational Use Statute that would reduce liability concerns during whitewater boating releases.

During the 2009 legislative session, representatives from Chelan PUD and American Whitewater testified on a proposed amendment to the State's Recreational Use Statute, Senate Bill 5422 which would provide liability protection for whitewater boating and viewing activities associated with FERC-issued hydroelectric projects.

The requested change in language to the Bill did not come before the legislature in 2010. It is scheduled to be brought before the legislature in 2011.

SECTION 5: PARTICIPATION

Ten boaters participated in the whitewater boating event on the Chelan River on September 11 and seven participated on September 12. Ten boaters participated on September 25 and six boaters participated on September 26. Overall, sixteen different boaters participated in the 2010 monitoring study, twelve had never participated before and four returned from 2009.

SECTION 6: SURVEY TOOL

Whitewater Boating Monitoring Study Plan

Each kayaker will be asked to fill out a survey at the end of the run. This survey tool will provide important information that will be compiled and submitted in a report to the FERC. The survey will query the whitewater boaters on the suitability of the following: whitewater release dates, daily schedule, whitewater difficulty, spill volumes, access, carrying capacity, reservation system and real time flow information.

The survey tool (Attachment B) developed in cooperation with American Whitewater, was filled out by all participants following each run. The survey tool helped evaluate and determine flow adjustments, timing of the event, use and understanding of the reservation system, the appropriateness of the run for each boater's level of experience, and interest in the run as an annual whitewater boating opportunity.

SECTION 7: EVALUATION OF SURVEY RESULTS

Kayaker surveys are required at the end of each release date to solicit input from whitewater boaters utilizing the Chelan River whitewater releases. The survey tool queries boaters on the suitability of the following: whitewater release dates, daily schedule, whitewater difficulty, spill volumes, access, carrying capacity, reservation system and real time flow information. A whitewater boating report is to be completed in consultation with American Whitewater and submitted to the FERC annually.

The survey results indicated that this run is a difficult Level V+ kayaking experience that should only be considered by those having extensive Level V experience. Results also indicated that the reservation system worked well, the information provided on the website was informative and concise, and access to the put-in and take-out areas were convenient and well marked.

There was significant information provided by boaters on their preference of flows for each day. Throughout the three year monitoring study it was agreed that flows will remain within the ranges indicated in the License Order and Settlement Agreement, 300 to 375 cfs on Saturday and 400 to 450 cfs on Sunday. Input from boaters helped Chelan PUD adjust flows within each range to determine the best flows for the majority of boaters.

Comments on the time of day for the release of flows were also mentioned in the survey. In July boaters prefer to get onto the river earlier than the designated 11:00 time because it can get hot in the Gorge later in the day and they would prefer to get off the river before late afternoon. In September however, boaters like the 11:00 start time because it is cold in the morning and they would like to wait for the temperature to warm before they begin the run.

Because of the difficulty of this run, boaters paddle in teams and get out of their boats often to scout sections the river. Even though this is a short river (4 miles), it takes the paddlers from 3 to 5 hours to complete the run depending on the number of boaters participating on a given day. Chelan PUD will work with American Whitewater to remain flexible on put-in time, but will continue to require that all paddlers be off the river by 6:00 pm to ensure safety.

Following completion of the three-year whitewater boating monitoring study, a final report will be submitted to the FERC that will include information on the dates and volumes of each release for the three-year study period, annual use patterns, and an analysis of user preferences based on survey data. The report will include recommendations for providing whitewater releases, if any, for the remainder of the New License term. The report will make recommendations regarding, at a minimum, an annual schedule of releases (including volume and timing), a reservation system, the minimum number of boaters required to trigger a release, and a mechanism for liability protection.

APPENDIX A: DESCRIPTION OF THE CHELAN RIVER

Description of the Chelan River

This description of the Chelan River was written by paddlers who participated in the feasibility study conducted during the relicensing process.

The Chelan River begins below the dam and continues for approximately 4 miles until it joins the tailrace of the powerhouse near the Columbia River (Figure 1). For planning purposes, Chelan PUD has divided the bypass reach into four distinct sections, as shown on the map.

Section 1 is 2.29 miles long, and is characterized by a relatively wide flood plain, low gradient (approximately 55 feet/mile), and substrate comprised of large cobble and boulders.

Section 2 is 0.75 mile long and is a transition zone between the wider floodplain and the Gorge. It is characterized by a narrow channel, canyon walls, moderate gradient (approximately 57 feet/mile), and larger cobble and boulder substrate than Section 1.

Section 3 is “Chelan Gorge,” and is 0.38 mile long. The canyon walls in this section are very steep and narrow, and the gradient of the channel is steep (approximately 480 feet/mile). The channel is characterized by cataracts from 5 to 20 feet high, numerous cascades, bedrock chutes, and large, deep pools. The substrate is very large, with some boulders exceeding 20 feet in diameter.

The Gorge (Section 3) has been further divided into three areas based on the type of specific rapids:

Entrance Exam (a complex, multi-drop rapid at the start of the Gorge)

Central Gorge (the series of drops downstream)

Lower Gorge (the lower gradient boulder gardens at the end of the Gorge)

Section 4 is located below the Gorge area and is 0.49 mile long. It is characterized by a wide flood plain, gravel/cobble/boulder substrate, and low gradient (approximately 22 feet/mile). This section extends from the bottom of the Gorge downstream approximately 2,600 feet to the confluence of the powerhouse tailrace.

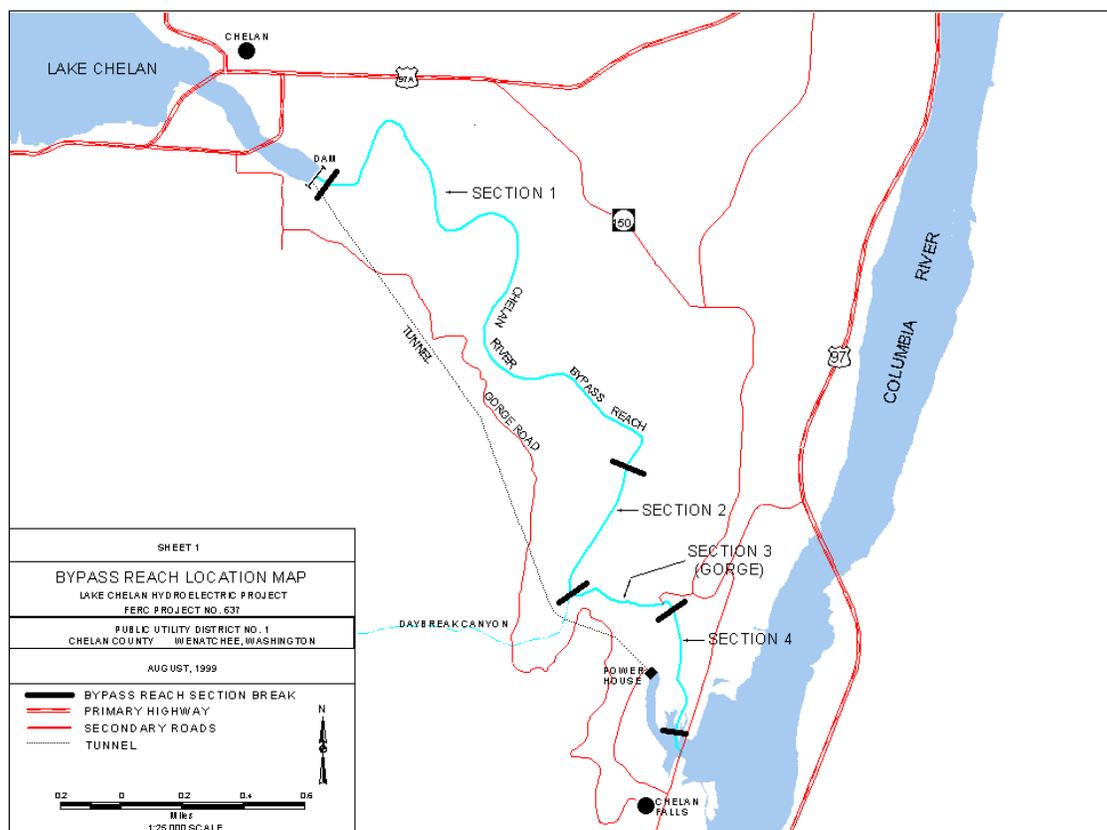


Figure 1: Chelan River And Vicinity

Launch and Take Out Facilities

Put-in. Just below the dam on river-left, an undeveloped road and short trail approach the river. The trail ends on a wide gravel bar that provides a suitable staging area for kayaks and other similar craft. There are parking and restroom facilities at a nearby City park.

Mid-river take-out. For boaters interested in avoiding the Gorge (or starting their trip immediately at the top of the Gorge), it is possible to leave the bypass reach at the mouth of Daybreak Canyon. There is an eddy above the Entrance Exam, and at observed flows there is a relatively flat area on rocks next to the river. However, there is no established trail or access and the climb from the river to the Gorge Road is steep and hazardous.

Take-out. There are developed boat launches at both Chelan Falls and Powerhouse Parks at the confluence of the Chelan and the Columbia. These parks have extensive parking, restrooms, a large picnic shelter, and large lawn area for organizing and drying gear.

Specific Descriptions of Major Rapids in the Chelan River Gorge

Entrance Exam (Class V). This rapid has a series of four drops in short succession at the start of the Gorge. It is identified by a large rock about 100 feet upstream of a sharp left bend at the mouth of Daybreak Canyon. There is a large pool at the top of the reach, allowing boaters to scout and portage the entire rapid, as well as a smaller eddy downstream of the first drop where boaters can also get out of the river. However, once boaters commit themselves to the second drop in the series, they probably have to run the rest as a group.

First Drop. This initial challenge is a short waterfall with a strong hydraulic at the bottom. The hole appears weaker in the center, and was weaker at the lower two flows (273 cfs and 391 cfs). This hole is not the main problem in the rapid, but it requires a clean run because of the drops that lie ahead. Boaters pushed off line here face a more difficult run.

Second Drop/Punch Bowl. The second major challenge in this rapid features a steep, horseshoe shaped falls immediately above a turbulent re-circulating eddy (the “Punch Bowl”) that extends below an undercut rock. The more “clean” boating line at all three flows is just left of a distinct flatter rock on river-right.

Pile Up. The third challenge in the rapid is immediately downstream of the Punch Bowl, and features a river-wide hole. This hydraulic appears weaker in center-right. There is a small eddy on river right against the cliff after Pile-up.

Final Plunge. This last challenge is a sharp drop and hole between two pinching walls; much of the current is directed at the right hand wall, where there is also considerable turbulence. Boaters generally run it after catching the small eddy below Pile-up, moving strongly from right to left-center.

There are scouting and portage options along Entrance Exam from river-right. Boaters who portage can seal launch into the pool below Final Plunge. Boaters can access the area from the Gorge Road (via the steep route down Daybreak Canyon) as well as from the eddy upstream of the rapid. There are options for establishing safety along the rapid, particularly below Pile-up and Final Plunge, the two holes where boaters are more likely to become stuck or have to swim.

Central Gorge. A few hundred feet downstream of Entrance Exam are a series of five major rapids in the Central Gorge. Unlike Entrance Exam, each of these are separated by pools with less turbulent water, and each can be scouted or portaged independently.

Double Slide (Class V). The first major rapid in the Central Gorge is “Double Slide,” which features a boulder field and swift currents leading to side-by-side chutes. The river-left slide is longer, more gradual, and ends in a less turbulent pool. The river-right slide (labeled “Chelan Chute”) is more abrupt and concentrated, and ends in turbulence against the mid-channel dividing rock, which is undercut. A short drop and hole, followed by an exposed rock and the right-to-left current, make access to the river-left slide more difficult.

There are good scouting options for this rapid on the river-right side. There is a portage route on river-left, well upstream of the entrance into the left hand slide. The portage option on river-right would involve a very difficult seal launch into the pool below.

Super Boof Falls (Class IV/V). The next rapid is a pour-over falls directly downstream of Double Slide; during an on-land assessment it was named “Car Wreck Falls” after an abandoned car in the cliffs (this has since slid into the river and is out of sight). All boaters ran this rapid “boofing” off a rock at the top of the falls on river-left to avoid heavy turbulence at the bottom of the falls. There are scouting options on both sides of the falls. There are portage options on river-left.

Throne Falls (Class V). This is another steep drop with strong turbulence at the bottom; the rapid is named for a distinctive boulder shaped like a throne downstream of the falls. Boaters generally run center-right but with varying bow angles. There is heavy turbulence on both the right and left sides of the falls.

Pinnacle Falls (the pool before the falls). The pool between Throne and Pinnacle Falls can be smaller narrowing the margin of error if boaters fail to have a clean run. Scouting and portaging options are on river-right. There is a good eddy upstream of the falls. Portage options are available from river-right that ends with a short seal launch.

Pinnacle Falls (Class VI). This falls is immediately downstream of the Throne and is identified by a tall pillar of rock on river-right. The falls is steep and high (probably over 20 feet), concentrating the entire flow of the river through a single slot. The bottom of the falls is very turbulent. Boaters often portage this area. The portage is rated “slightly difficult” by all boaters and involves a short carry over the saddle between the pinnacle and right canyon wall, and then a short seal launch into the pool below. There are good scouting options from the river-right eddy above the falls.

Boulder Sieve. The final major rapid in the Central Gorge occurs downstream of Pinnacle Falls, and is identified by several large boulders that act as a sieve in the river; there are at least two distinct chutes through undercut rocks; the total drop is about fifteen feet. Boaters generally do not run this rapid, choosing instead to ground themselves on a rock on river-left, then seal launch down a partially wetted incline to the side of the slots and their heavier turbulence. One boater often gets out of his boat to assist the other kayakers onto the rock and then shove them over the other side. As a result, many boaters do not even get out of their boats for this portage. The ride down the incline on the other side is steep and bumpy and ends in turbulent water that masks rocks that can easily be hit by boaters. Scouting appears best from the left side. A longer portage to avoid the seal launch may be possible on the left side as well, but might require ropes to bypass larger boulders.

Lower Gorge (Class IV/V). Downstream of Boulder Sieve, the river becomes less constricted and has a slightly lower gradient. There are several significant drops and boulders in this reach, but the rapids generally have less powerful hydraulics than those upstream. The rapids above the Old Highway Bridge have been collectively labeled “Extra Credit,” while the series of larger boulders and constricted routes downstream of the bridge have been collectively labeled “Fat Lady,” a reference to the colloquialism, “the opera isn’t over until the fat lady sings.” There were at least two routes in Fat Lady that were very constricted and cause boaters to hit large rocks as they passed by. One opening was less than the width of a kayak and stopped some boaters’ momentum. At another drop at the very end of the run, all boaters chose to avoid the center route (where most of the water went) in favor of narrow, shallower routes on the sides because of a sieve with potential pinning hazards.

In Extra Credit, kayakers found at least one good play hole for rodeo maneuvers (endos, cartwheels, pirouettes, etc.) There are numerous opportunities for boaters to get out and scout either Extra Credit or Fat Lady from the various boulders, and numerous portage and rescue options are also available if needed.

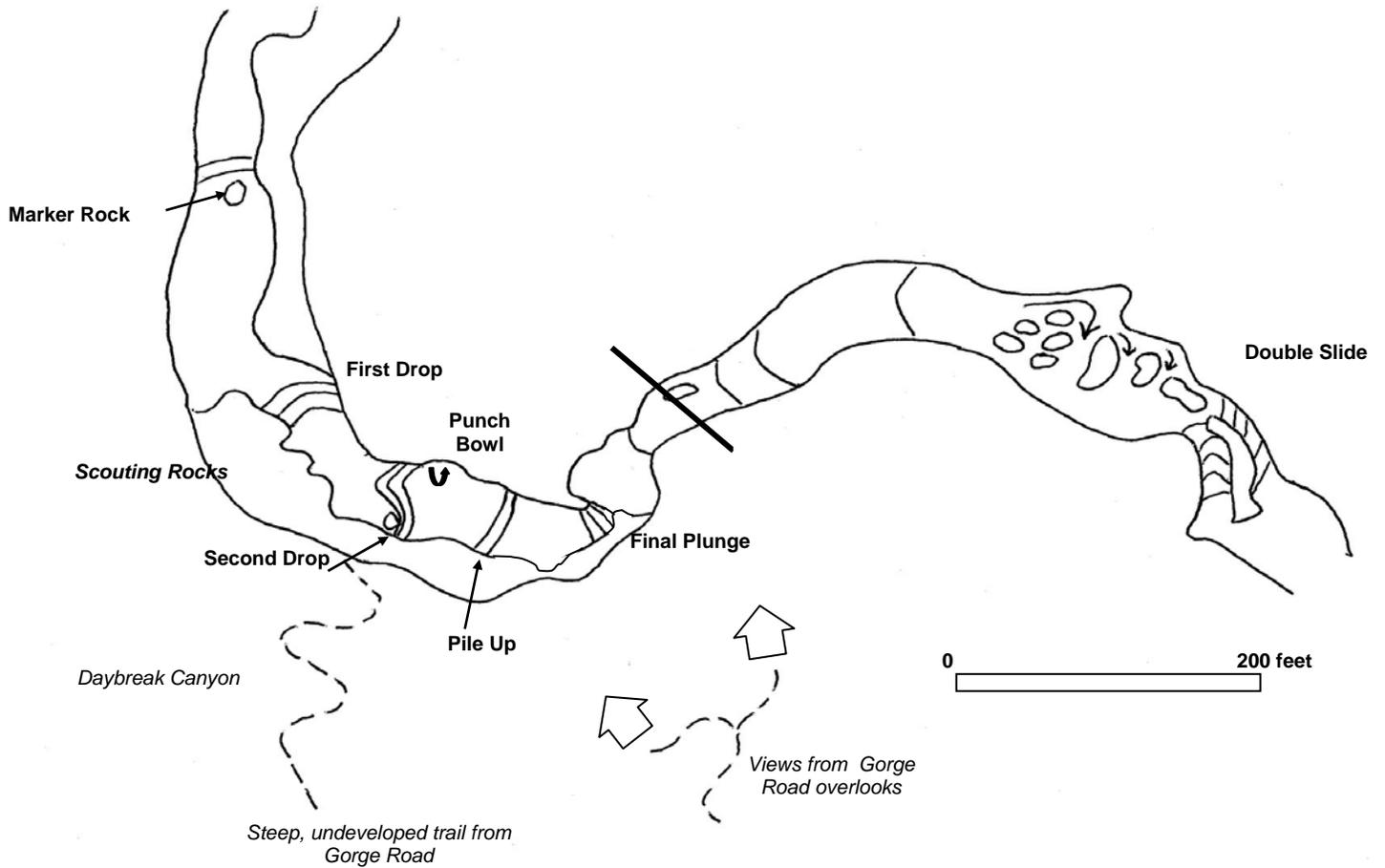


Figure 2: Map Of Key Rapids In The Central Gorge In Section 2 & 3 (Chelan Gorge).

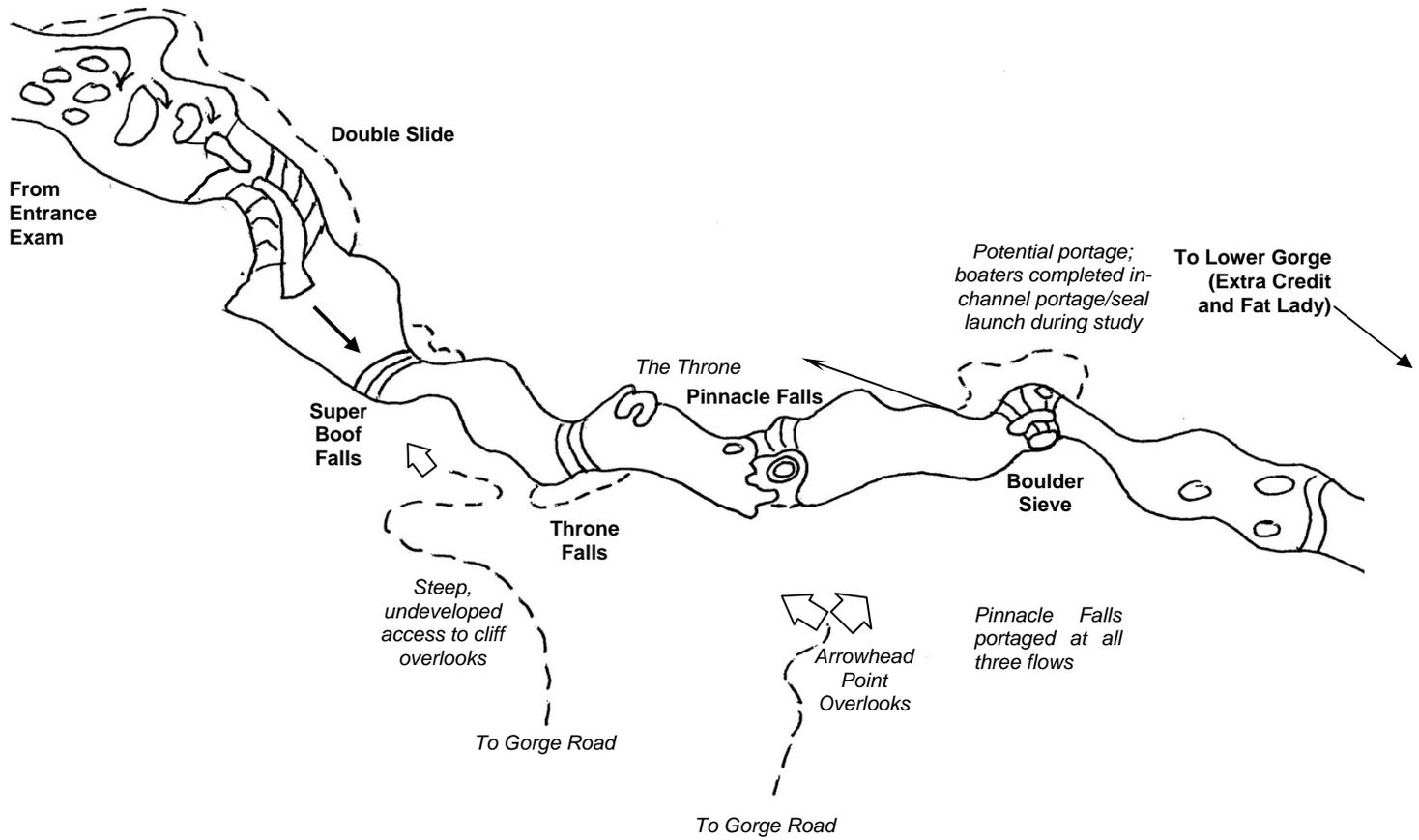
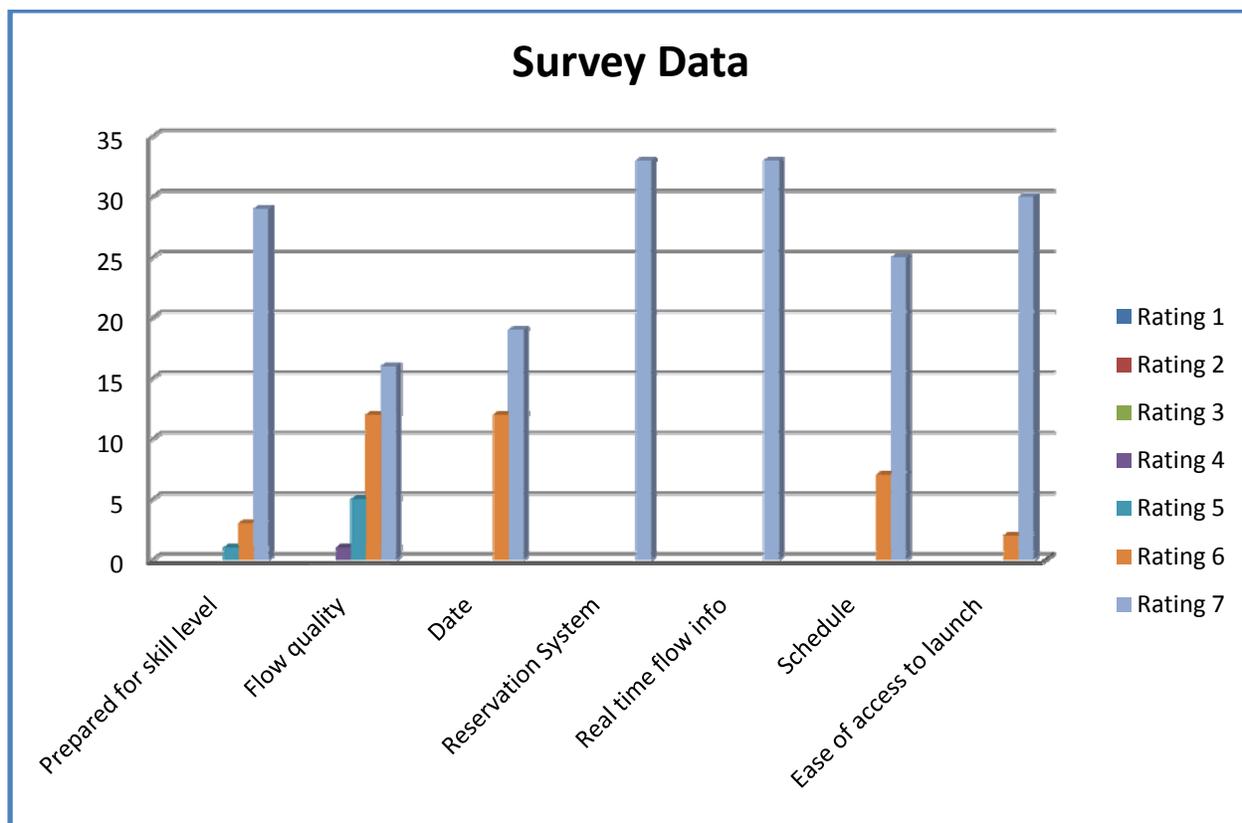


Figure 3: Map Of Key Rapids In The Central Gorge In Section 3 (Chelan Gorge).

APPENDIX B: SURVEY RESULTS



This is a summary of survey data from all four days of 2010 whitewater boating on the Chelan River.

Vertical axis represents number of people responding

- Rating 1 totally unacceptable
- Rating 2 moderately unacceptable
- Rating 3 slightly unacceptable
- Rating 4 marginal
- Rating 5 slightly acceptable
- Rating 6 moderately acceptable
- Rating 7 totally acceptable

Question	Average Response	Standard Deviation
Based on your skill level, were you provided enough information to be prepared for the difficulty of this run?	6.78788	0.5453
Score the quality of flow you experienced for the craft and skill level	6.24242	0.8303
Dates scheduled for the release	6.6	0.4982
Convenience, ease of use and understanding of the reservation system	7	0
Use and easy access to real-time flow information	7	0
The dates scheduled for the release	6.80645	0.4016
Was access to the beginning of the run easy to find and satisfactory to launching?	6.90909	0.2919

Based on survey data, the following is a compilation of desired flows by paddlers.

<i>Desired flow in "cfs"</i>											
350	360	370	380	385	390	400	410	420	425	450	500
1	2	1	2	2	9	15	2	1	1	3	1
<i>Number of people responding</i>											

The average of the above "cfs" is **399.875** down from **420.5** in 2009

Would you recommend this run to others?

Yes 33 No 0

Post Run Data – All Comments

Survey results from the **September 11**(360 cfs) whitewater boating study included:

- 360 cfs was slightly to moderately acceptable to nine of the boaters and totally acceptable to one boater.

Comments included the following:

- Fun run!
- Thanks a ton!
- Beautiful run. There was a lot of sediment in the water so it wasn't as clear as the on-line photos showed. Awesome run!
- A few pitchers more water would have cleaned up the last rapid, 400 cfs would be nice.
- Flow between 375 – 400 cfs are ideal.
- Full on. Great day. Beautiful.
- Espresso girl at the take-out!?
- Challenging but manageable Class V
- Thanks!
- Bridge as a possible take-out.

Survey results from the **September 12** (410 cfs) whitewater boating study included:

- 410 cfs was marginal to one, moderately acceptable to three, and totally acceptable to three boaters.

Comments included the following:

- 360 was good on Saturday, 410 cfs was more challenging
- 390-400 cfs is ideal
- 400-410 is perfect
- 400ish cfs is perfect
- Rapids not too big
- Start and end not too low
- 400 cfs is better
- Thanks! Try to get the put-in closer to the entrance of the Gorge.
- Cookies?
- Had a great time
- Kris is awesome!
- Thanks to everyone!
- Today's flow was great, but I wacked entrance exam because the hydraulic at the last ledge was pretty nasty.
- Thank you!

Survey results from the **September 25** (370 cfs) whitewater boating study included:

- 370 cfs was slightly to moderately acceptable to seven boaters and totally acceptable to three boaters.

Comments included the following:

- 370 cfs was a great flow
- 370 to 390 cfs is optimal
- Great level today. Maybe just a little more water.
- Thank you, Kris!
- 370 – 400 cfs I think is optimal
- Create “kayak” channel
- in the shallows, mainly on the paddle out of the canyon, but also on the paddle in.
- Thanks for the great hospitality
- Kris and crew are great!
- Once again, your hospitality was awesome!
- Thanks!
- Cool run!
- Everything was great, thanks!
- Please dredge out the shallow area in the paddle out.
- This is fantastic and one of the best experiences of my life. As more people run it, they will get more and more experienced and there will be a plethora of experts available to lead others down.
- Class V+

Survey results from the **September 26** (400 cfs) whitewater boating study included:

- 400 cfs was totally acceptable to six boaters.

Comments included the following:

- Today’s flow was perfect. I liked it better @ today’s flow than yesterday.
- We proved yesterday that it is possible to hike in and out. Not ideal, but doable without climbing gear.
- What a weekend!
- I think having resources available online for photos and video will be a big help so that people can be clear on what they are getting themselves into. All the boaters that have pictures and video would be happy to provide them for your website along with detailed descriptions or how to run each rapid.
- 400 cfs was a great flow
- 375 to 4095 cfs is ideal
- September is the best time for releases
- Late August through September is the best for more participation
- Best time in September
- 360-400 cfs is the optimal flow – period
- 360-400 cfs is optimal
- September is a great month, after Labor Day
- Sept is a great month for releases due to the poor weather on the west side of mts
- This is the perfect time of year. June and September, maybe October

Post Run Survey

Date: _____

Name: _____

Phone: _____ E-mail: _____

Thank you for taking the time to complete this post run survey. Chelan PUD in cooperation with American Whitewater is conducting a 3 year monitoring study that will allow them the opportunity to determine if whitewater boating in the Chelan Gorge should continue into the future.

Rate the following:

(1 totally unacceptable, 2 moderately unacceptable, 3 slightly unacceptable 4 marginal 5 slightly acceptable, 6 moderately acceptable, 7 totally acceptable)

The dates scheduled for the release (2nd and 4th weekends in July and September)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Daily schedule (11 am to 6 pm)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Convenience, ease of use and understanding of the reservation system

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Use and easy access to real-time flow information

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Based on your skill level, were you provided enough information to be prepared for the difficulty of this run?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Score the quality of the flow you experienced (300 to 375 cfs Saturdays, 400 to 450 Sundays) for your craft and skill level. Please consider all the flow-dependent characteristics that contribute to a high quality trip (e.g. boatability, whitewater challenge, safety, availability of surfing or other play areas, aesthetics, and length of run.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

If you could select an optimal flow for boating on this reach given your craft and skill level, what flow would you prefer (please specify cfs)

Was access to the beginning of the run easy to find and satisfactory to launching?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

If you were with someone, or you yourself did not complete the run, how difficult was it to get out and back to the start of the run?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Would you recommend this whitewater boating experience through the Chelan Gorge to others?
Yes_____ No _____

Please provide any additional comments or suggestions on access to information about the run, flows provided, access, or any other issues you have.

Again, thank you for completing this survey. This information will be tabulated and become part of the final monitoring study report.

APPENDIX C: CONSULTATION WITH AMERICAN WHITEWATER

From: [Thomas O'Keefe](#)
To: [Pomianek, Kris](#);
cc: ["\(okeefe@amwhitewater.org\)"; Bitterman, Deborah](mailto:(okeefe@amwhitewater.org));
[Sokolowski, Rosana](#);
Subject: Re: 2010 Whitewater Boating Monitoring Study
Date: Wednesday, January 19, 2011 12:26:15 AM

Kris,

A couple comments:

Page 2

You refer to 2010 legislative session. Actually testimony was provided on 1/22/2009. There was no action in 2010 which was a short session.

Page 3

I am confused by the sentence "...FERC issued a letter order P-637-022 accepting..." That is the project/docket number not the order number. Maybe you mean the accession number, unique to the document, which is 20100304-0027.

Page 6

Another reference to 2010 session (see above).

Page 17

The figure is hard to read especially in black and white. I would at least consider presenting the information in a simple table in addition to the figure. List each item in a separate row with the rating expressed as mean and standard deviation.

Appendix

Please include a copy of the survey instrument in the appendix.

Looking forward to year 3 and let's schedule a discussion next fall before you start into a more comprehensive summary of all 3 years. Nothing to change for 2011 but I would like to have some discussion regarding dates and number of releases. I would also like to review our reservation system approach.

Also just so you are aware, now that folks are getting to know the run better there is more interest in doing more than one lap. For the first two years we have encouraged folks to take their time and only do one run. It is a natural progression for paddlers to want to get in more than one run a day once they learn the run better. It will be important to emphasize the need to be off the water by 6pm and we can work together on that.

Let me know if you have any question on my comments.

All the Best,

Tom

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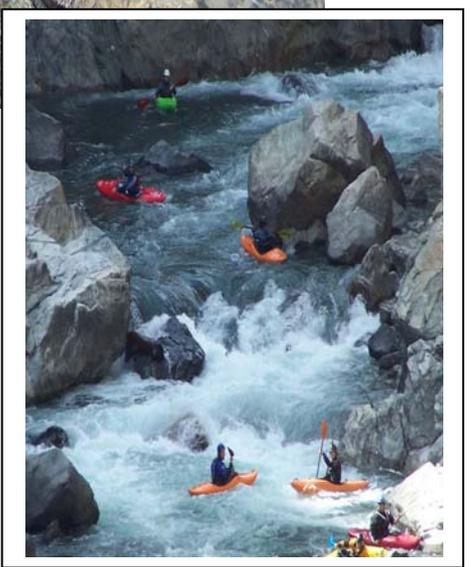
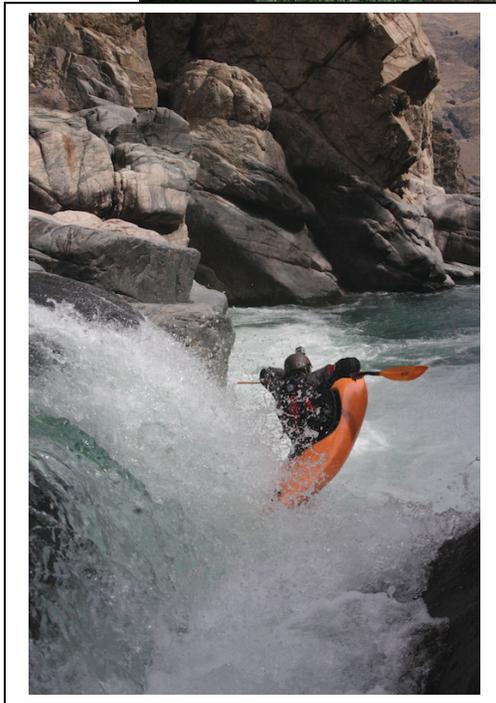
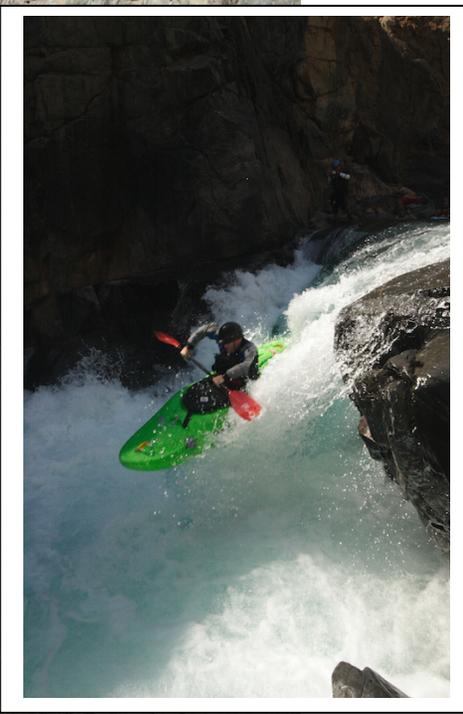
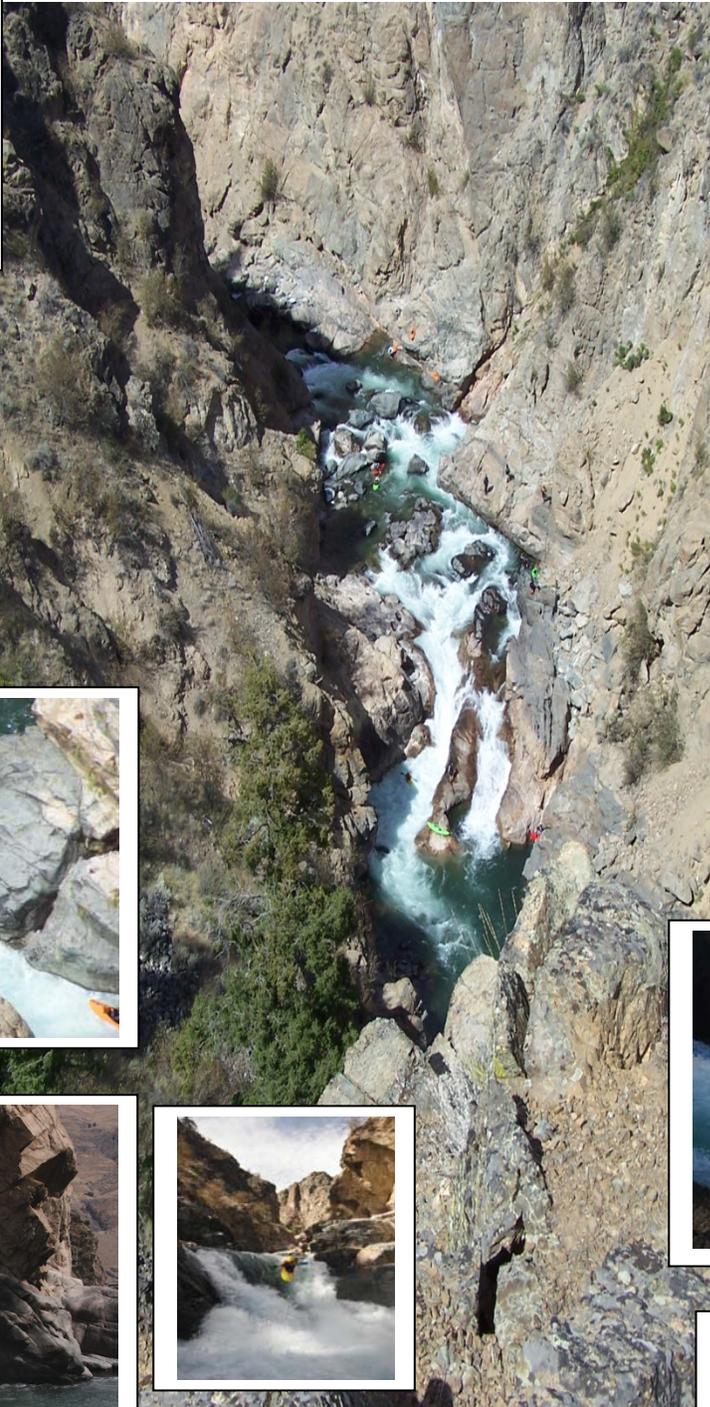
On Dec 29, 2010, at 8:54 AM, Pomianek, Kris wrote:

>
> Hi Tom -
>
> Hope all is well with you and that you are enjoying the season with your family - Hopefully you are getting a chance to take some time off!
>
> I am attaching the 2nd year whitewater boating monitoring study and I would appreciate it if you could please provide comment. I would like to send it off to FERC by January 20, so any changes or comments from you before then would be greatly appreciated. If you have questions, have any problems with the document or if you are unable to meet the deadline, please be sure and let me know - I am very flexible. As you know, we still have quite a bit of time before the plan is due to FERC, but I am anxious to get year 2 done so we can move on to planning for year 3.
>
> Overall, I have really enjoyed the experience and all of the boaters. They are a great group! My best to you, Tom for a Happy New Year and I look forward to hearing from you soon.
>
> Regards,
>
> Kris
>
>
>

>
>
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>
> <D 35876 (2).docx>

APPENDIX D: PHOTOS

Whitewater Boating, Chelan River September, 2010



Document Content(s)

LC 2010 WW Report.PDF.....1-30