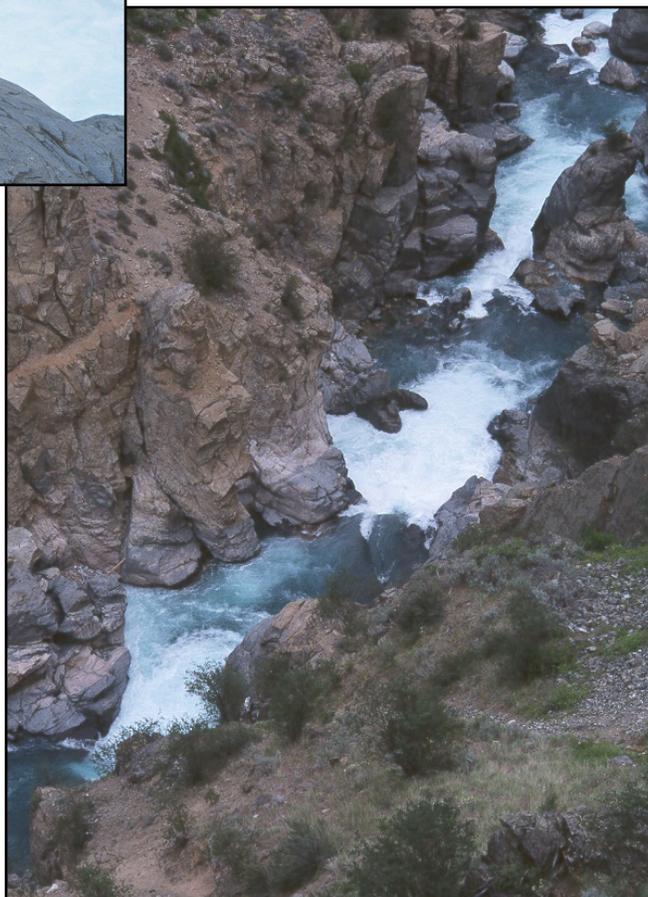


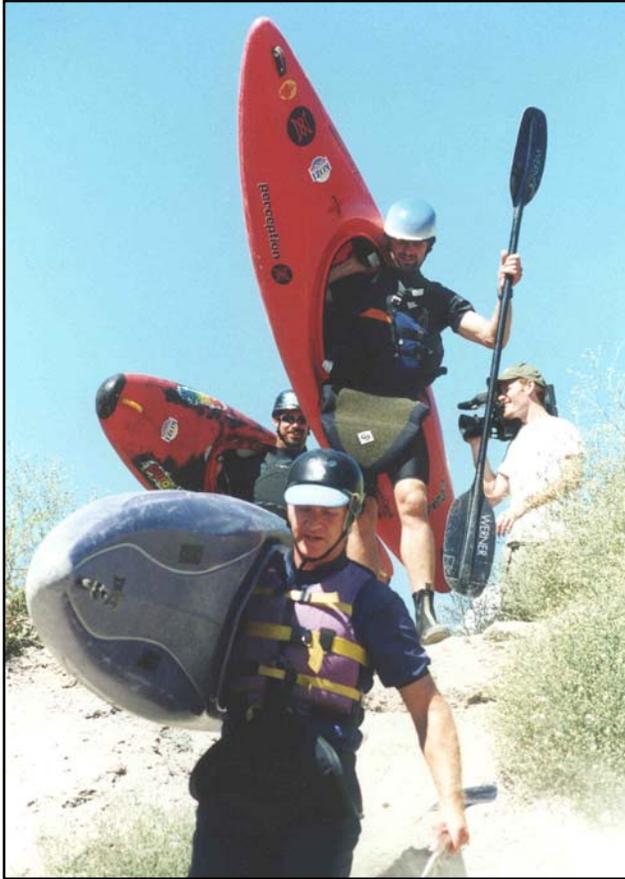
Study Photos



John Gangemi examines possible routes through Double Slide and Super Boof Falls during the on-land assessment in June 1999. Whitewater advocates and consultants assessed three flows from land to determine if boaters could safely run or portage all the major rapids, and to estimate a flow range for the on-river component of the study.

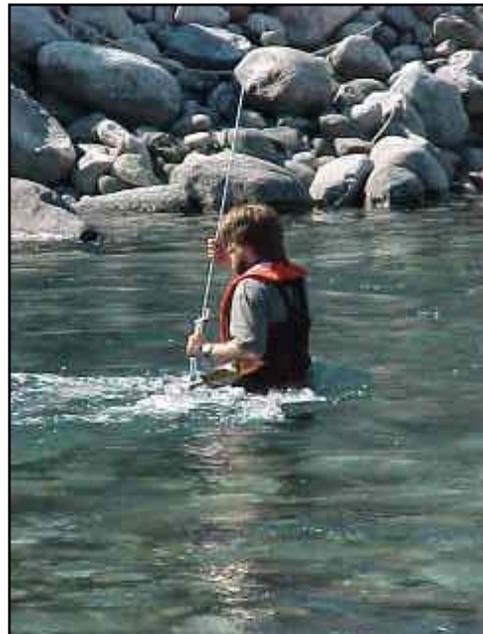
View of the Central Gorge from an overlook on the Gorge Road during the on-land assessment. Rapids in view include (in order descending downstream from bottom left of photo): Super Boof Falls, Throne Falls, Pinnacle Falls, and Boulder Sieve.





Paddlers started the on-river assessment by carrying their kayaks to the put-in, an undeveloped area immediately downstream of the dam. The take-out was at a developed area, Chelan County PUD's Powerhouse Park. Both provided good access for kayakers.

Greg Perry of the US Geological Service measured flows provided each day during the on-river component of the study. Several other agencies and organizations also contributed to the success of the study.

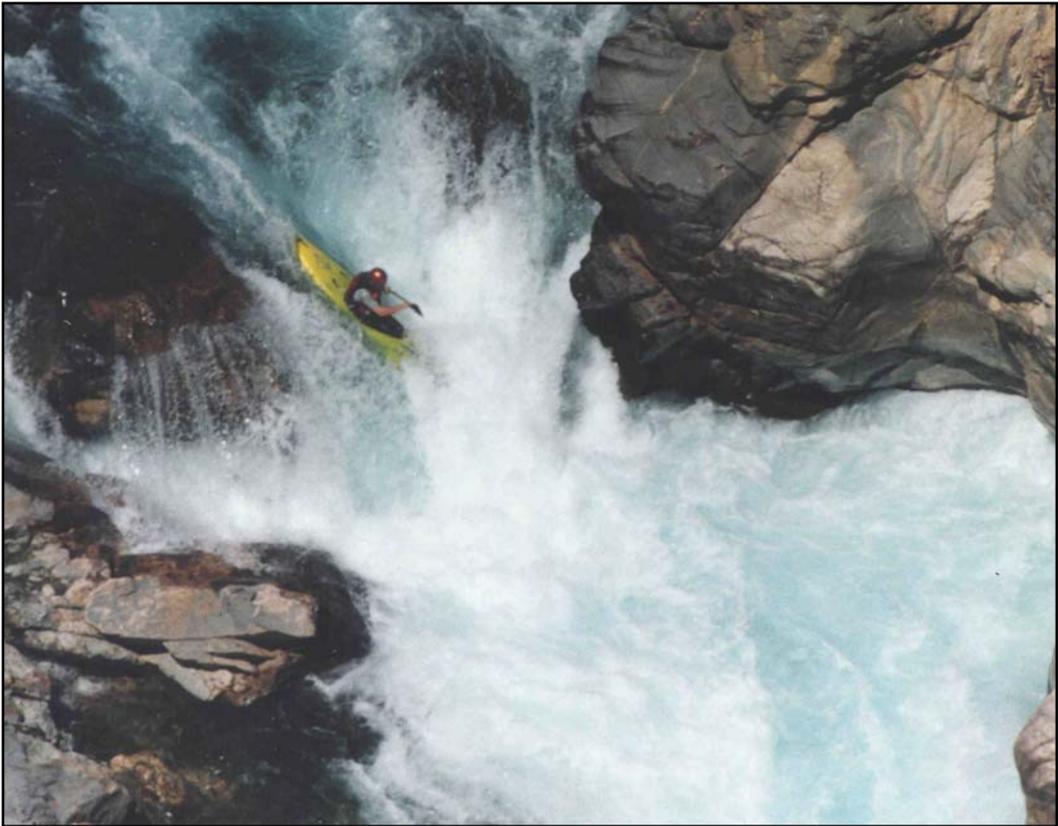




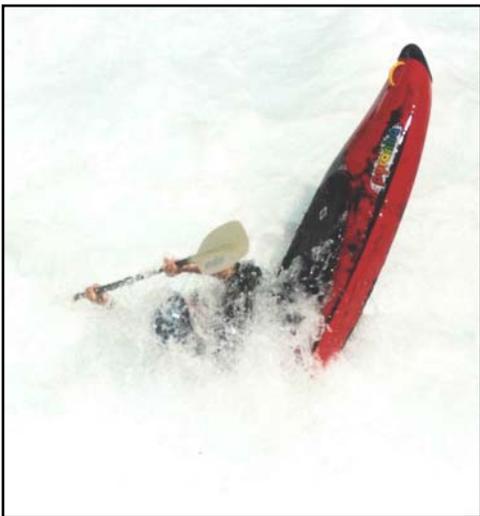
Kayakers paddle through Section 1 on the Upper River at 475 cfs. Higher flows provided more route options and produced fewer “hits,” although even this highest flow left many exposed rocks and did not fill the bottom of the channel.

John Gangemi and Rick Williams discussing alternative routes in the Central Gorge. All major rapids offered scouting, portaging, and safety/rescue options in the flow range studied.

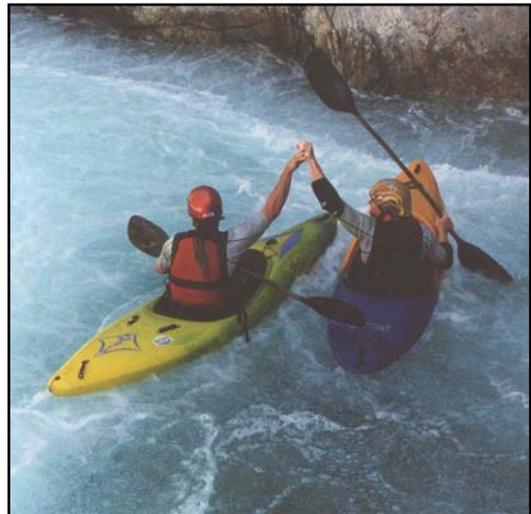




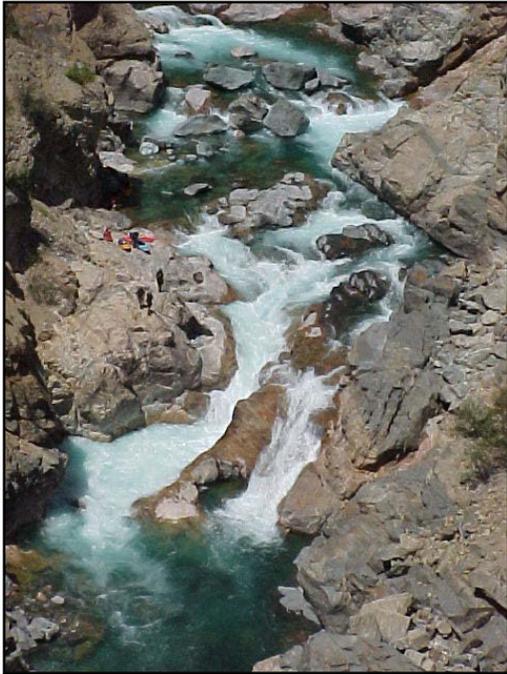
Britt Gentry entering the second drop in Entrance Exam at 391 cfs. Boaters needed to run this waterfall cleanly to set up for other drops immediately downstream of the “Punch Bowl” (an unstable eddy with rock undercuts in the bottom right of this photo). The photo was taken from Daybreak Canyon overlook on Gorge Road.



Tracy Clapp emerges from the third drop in Entrance Exam (named “Pile Up”) at 391 cfs. This hole became more powerful and “stickier” at higher flows.

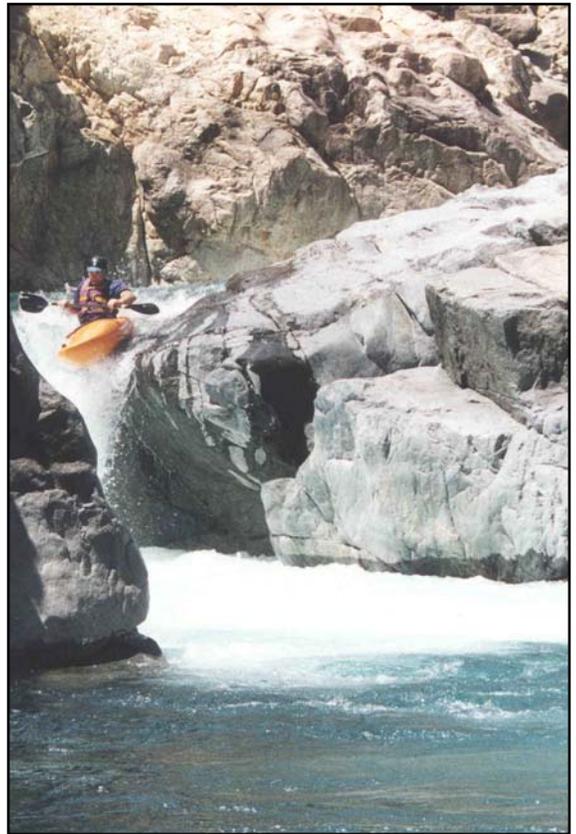


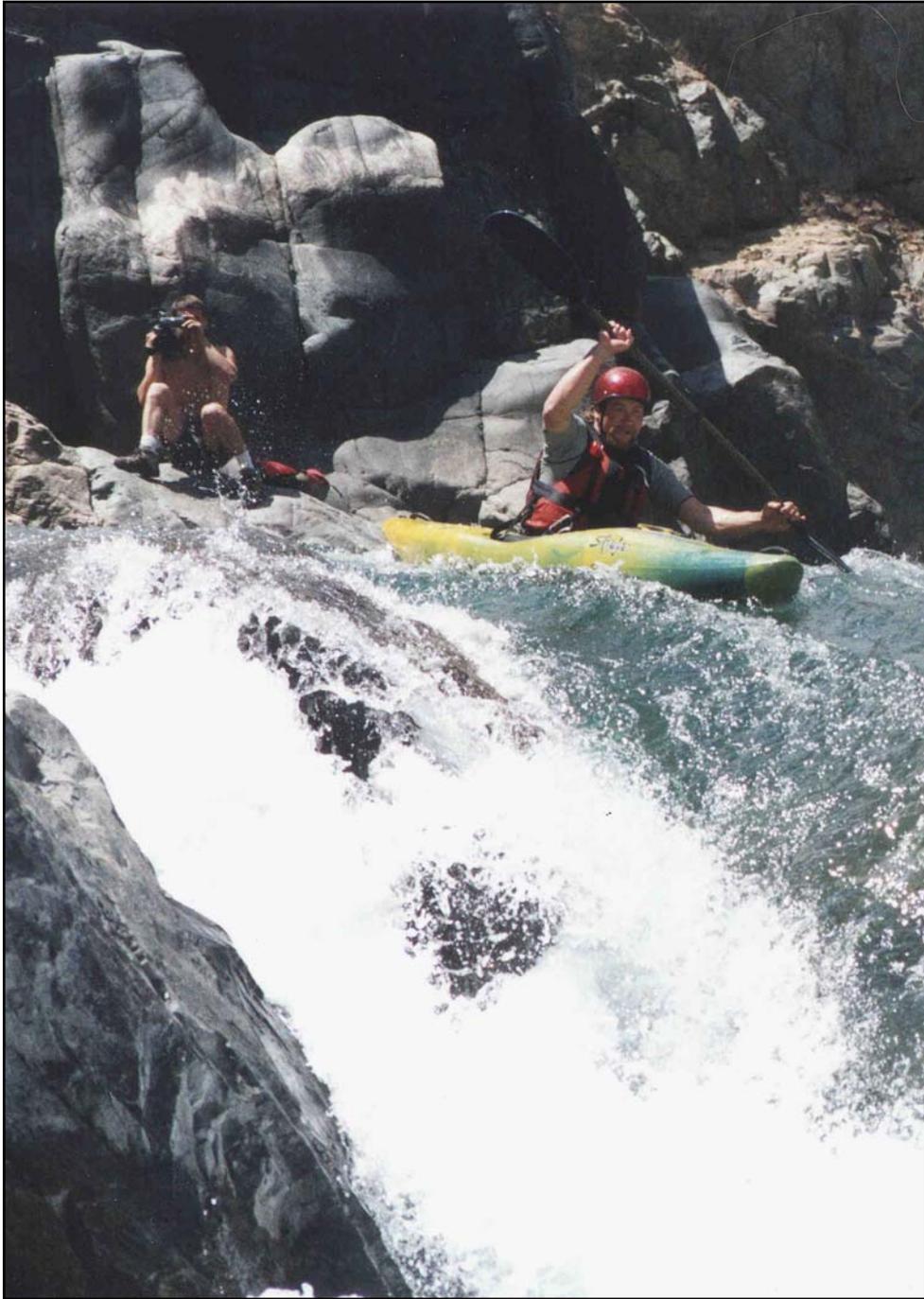
Forrest Hubler and Britt Gentry celebrate runs through Entrance Exam at 475 cfs. Teamwork and camaraderie helped boaters run the river safely and efficiently.



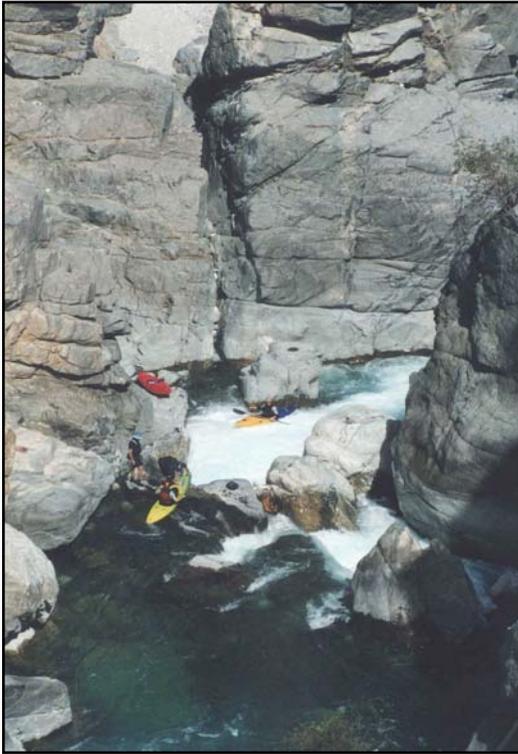
Kayakers scout Double Slide rapid in the Central Gorge at 391 cfs. The right side run (“Chelam Chute”) featured a steeper drop and more powerful hydraulics at all flows, and included an undercut wall on the left that several boaters scraped. The left side provided a less daunting run, but was more difficult to enter at lower flows because of an exposed rock at the top of the chute.

Bo Shelby executes the title move at Super Boof Falls at 391 cfs. Most rapids in the Central Gorge had good recovery pools at the two lower flows; at the highest flow, recovery time shortened and became more critical.





A videographer films Britt Gentry at the top of Throne Falls at 391 cfs. Video crews were stationed at five set locations along the river during the study, but also filmed from additional locations to capture the experience of boating the river. A video that summarizes the study and compares runs at different flows is available from Chelan County PUD.

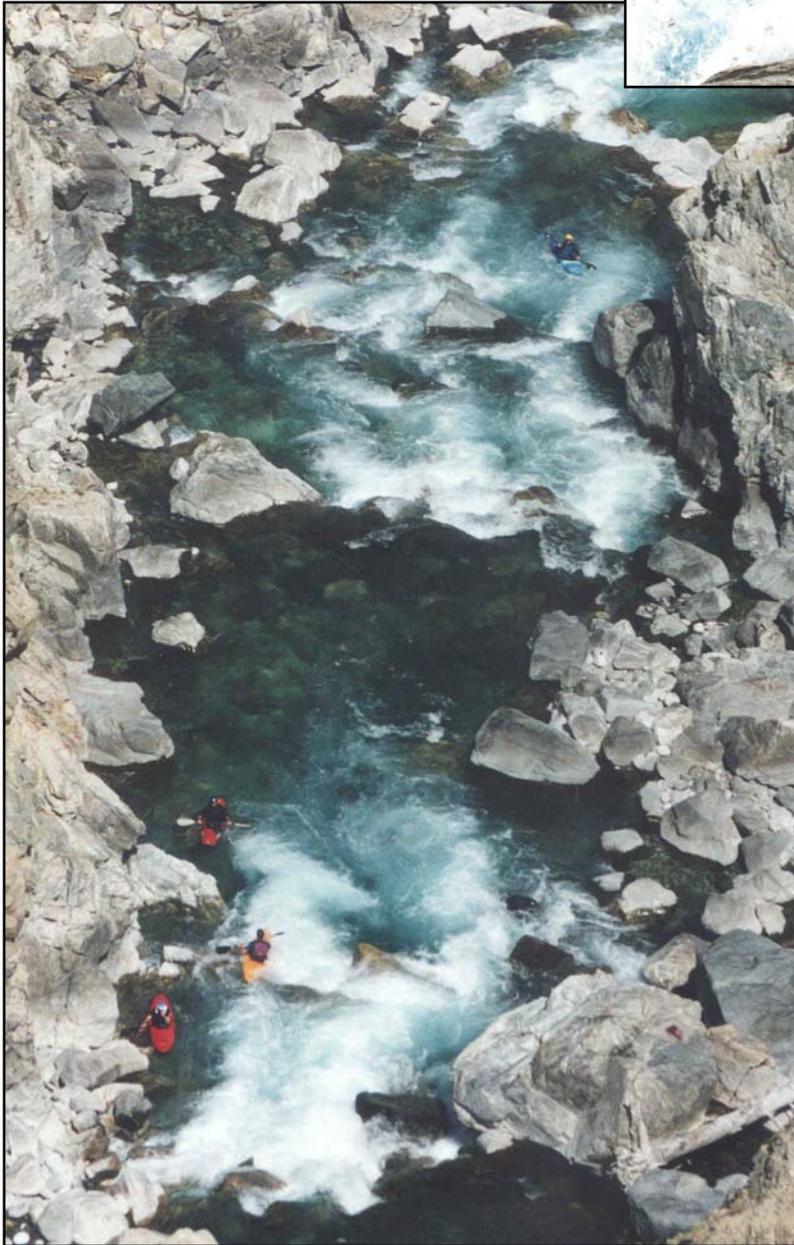


Boaters negotiate Boulder Sieve by “seal launching” down a 15-foot rock slide at 273 cfs. All boaters chose not to run Boulder Sieve or Pinnacle Falls (immediately upstream) at any flow.

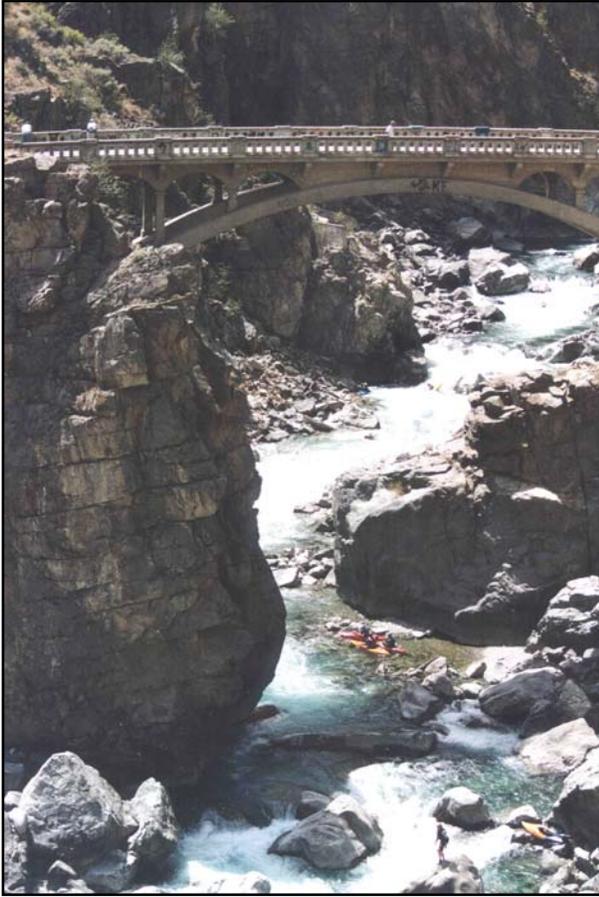


Forrest Hubler powers through a big hydraulic in the Chelan Gorge at 475 cfs. Higher flows required quicker and stronger reactions from paddlers.

Rick Williams in a drop in Extra
Credit rapid at 475 cfs.



Kayakers pick their way
through Extra Credit in the
Lower Gorge at 273 cfs.
Arrowhead Point, just off the
Gorge Road, provides
opportunities to appreciate
the scenic beauty of the
canyon.



Boaters exit Extra Credit in the Lower Gorge upstream of the Old County Bridge at 391 cfs. Higher flows in this section created more powerful hydraulics, but did not substantially widen the narrow chutes between boulders nor create new routes.



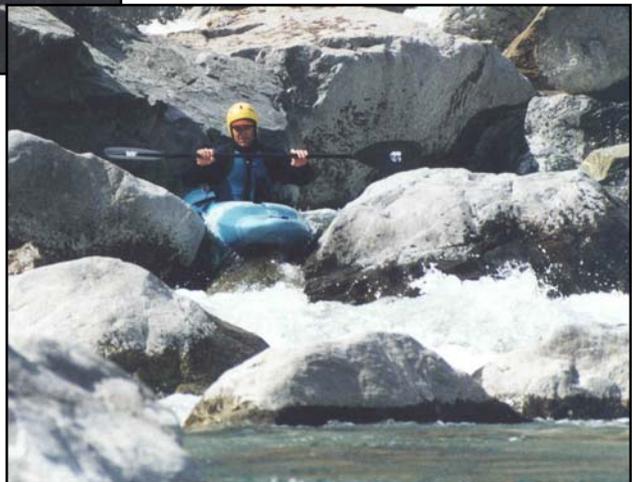
A study observer watches kayakers negotiate the boulder gardens in Extra Credit at 391 cfs. Chelan County PUD and the Chelan County sheriff's office allowed limited access to safe areas for both spectators and media during the study.

Britt Gentry running a narrow chute in Extra Credit at 391 cfs.



Scouting and portaging parts of Fat Lady rapid at 273 cfs. At lower flows, hydraulics were less powerful, although the channels between rocks were narrow and route options were limited.

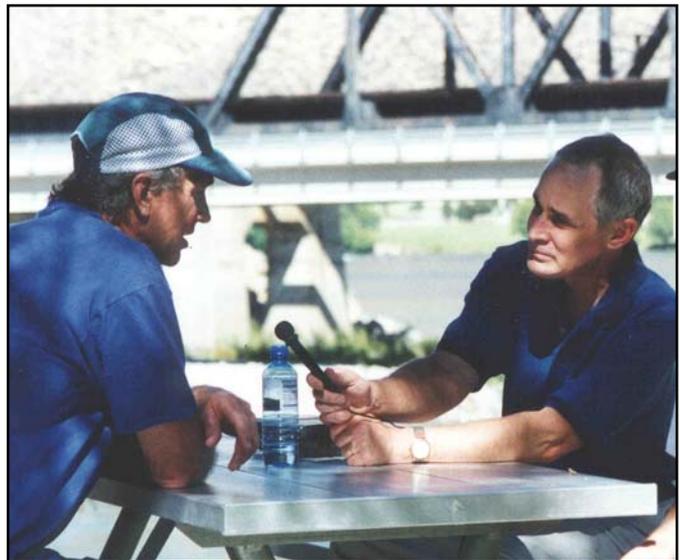
Rick Williams squeezes through a chute in Fat lady rapid at the end of the Lower Gorge at 273 cfs.



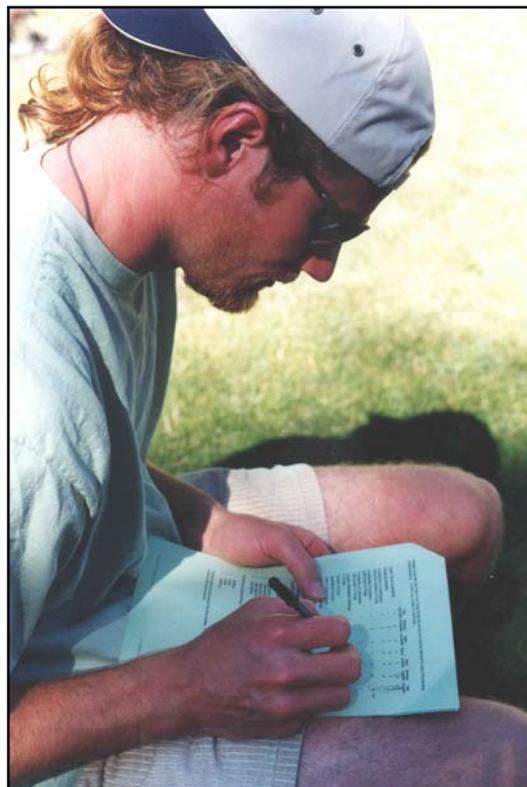


Boaters exit the Lower Gorge at 475 cfs. Whitewater abruptly turns to flatwater at the end of the Gorge, while the Chelan River continues for about a half mile through an alluvial channel before meeting the Columbia River. The powerhouse is in the top right hand corner of the picture; the take-out in Powerhouse Park is in the distance in the top center of the photo.

Steve Hair of KPQ interviews Bo Shelby after the third run. Media and public interest in the study was high because the Gorge had never been boated, kayaking is unfamiliar to many area residents, and flows may affect many resource values. Releases during the high run-off summer months offer opportunities for whitewater flows that do not decrease power generation.



Forrest Hubler filling out a survey. Boaters completed a survey after each run as well as a close-out survey that allowed comparisons between the three flows paddled during the study.



Boaters participated in a focus group after each run, adding qualitative information to the quantitative data provided on surveys.