

Chelan River Fishery Forum Meeting Minutes

Date: March 2, 2016
Time: 9:00 am – 3:00 pm
Location: Chelan PUD Headquarters, Wenatchee, WA
Engineering Services Conference Room

Meeting called by: Jeff Osborn, Chelan PUD

Note taker: Debby Bitterman

Attending CRFF Members

<u>Name</u>	<u>Agency</u>	<u>Name</u>	<u>Agency</u>
Graham Simon	WDFW	Ray Walton (phone)	West Consultants
Travis Maitland	WDFW	Alec Robertson (phone)	West Consultants
Paul Picket (phone)	Ecology	Marcie Steinmetz	Chelan PUD
Jim Pacheco	Ecology	Steve Hays	Chelan PUD
Phil Archibald	LCSA	Jeff Osborn	Chelan PUD

Meeting Purpose: Meeting of the Chelan River Fishery Forum to continue Lake Chelan license implementation

Minutes

Jeff Osborn, Chelan PUD, welcomed everyone to the Chelan River Fishery Forum (CRFF) meeting and made known that voice recording of the meeting was initiated for note-taking purposes only.

Jeff reviewed the 18 August 2015 action items from the last CRFF meeting. It was noted that all action items had been completed.

Chelan River Temperature Model Results

Ray Walton, West Consultants, summarized his presentation, Temperature Modeling of the Chelan River. After discussions with Department of Ecology staff it was concluded that a temperature study of the Chelan River would likely focus on developing a Use Attainability Analysis (UAA), as defined in WAC 173-201A-510(5), rather than analyzing temperatures changes caused by the Project.

Ray noted that a preliminary Calibration Report was presented 16 July 2015. Once he receives additional data, the report will be finalized.

Jim Pacheco, Ecology, acknowledged his lack of familiarity with QUAL2Kw, but questioned the model's calibration (difference of modeled values versus observed values), primarily figures on page 21 of the model presentation. He felt that more effort towards calibrating model values should be spent in order to "tighten up" model results, specifically more research into the interaction between ground water and hyporheic flow. Ray said that could be done, but with his experience, a model is to provide informational data that can be analyzed for identifying potential improvement opportunities. Paul Picket, Ecology, noted that after his review of the Chelan River calibration results, he contacted Gregg Pelletier, one of the developers of QUAL2Kw model. Gregg supported the Chelan River calibrations and noted that the data results were very good quality.

Ray's presentation initiated the following questions:

- What different options could be available regarding how to use the 5,000-second foot day (SFD) volume for release into the Chelan River to test the ability to moderate water temperature?
- What would the hydraulic simulation calibration graph at high Chelan River flow look like by reducing the percentage of hyporheic flow?
- Would there be an advantage to alternating 5 pump and 4 pump operations for attracting adult steelhead into the Chelan River Habitat Channel?
- Are there any benefits to compiling the 2015 data and have Ray add to the model?

Once the Calibration Report is finalized, CRFF will discuss the next steps regarding future model runs.

Action Items

- Jim Pacheco, Steve Hays, Chelan PUD, and Graham Simon, WDFW, will draft potential proposal(s) on how to best use the 5000 SFD volume for releases into the Chelan River to be reviewed/discussed by the CRFF.
- Ray Walton will rerun the high flow simulation and reduce the percentage of hyporheic flow to see if any changes occur, and provide results to the CRFF.
- Ray Walton will provide a spreadsheet containing the values for July - August period of the simulated lake releases (Figure 26) to Jim Pacheco for his investigations.
- Steve will make inquiries as to the feasibility and/or the advantages to operate a multi pump adjustments procedure during a 24-hour period.
- Steve and Jeff will investigate opportunities to add 2015 data into the Chelan River model.
- Steve will provide ramping rate information to Graham Simon.

Riparian Revegetation Feasibility Investigation

Jeff stated that the Chelan River Revegetation Feasibility Assessment/Limiting Factors Analysis Report has been completed. CRFF discussed the potential next steps:

- Draft a planting plan only
or
- Draft a planting and implementation plan

Phil Archibald, LCSA, recommended “succession planting.” Jim Pacheco recommended planting willows for the first phase.

CRFF agreed and recommended that the proposals should contain both a planting and implementation plan. It was also recommended that the same contractor would draft his plan and would implement his plan.

Action Items:

- Jeff will prepare a contractor list for Chelan River riparian planting and implementation plan and send to the CRFF for review/comment/additional contractors
- Jeff will draft a Request for Proposal (RFP) for a phased approach planting/implementation plan with willow planting first, and circulate to the CRFF for review.

Benthic Macroinvertebrate Investigation

Steve reported that Chelan PUD prepared a RFP for the Chelan River Benthic Investigation on behalf of the CRFF. The sampling will occur in 2016, 2017, and, potentially, 2018. Chelan PUD received six bid responses. Terraqua was awarded the bid. They will also draft the Quality Assurance Project Plan, which will be submitted to Ecology.

Action Items:

- Jeff will send to the CRFF the Benthic Macroinvertebrate Investigation Request for Proposal and the awarded proposal from Terraqua with their information.

Four Year Outlook/2016-2019 “To Do” List

Jeff gave a brief overview of Chelan PUD’s License requirement status regarding the Chelan River Biological and Water Quality Objectives. He provided a 4-year outlook, 2016-2019, that outlines the methods and timeframe for collecting the remaining information. This information will provide Department of Ecology all the required data necessary to initiate a process for determining water quality standards for the Chelan River. (handout provided)

Action Item:

- Jeff will follow-up with Mark Peterschmidt, Ecology, regarding water quality requirements necessary to satisfy Chelan River Biological and Water Quality Objectives.

Steelhead egg-to-fry Survival Measurement

Jeff reported the high spawning success of cylindrical egg tubes (CETs) data for Chinook salmon to the CRFF and inquired whether this data would be a sufficient surrogate for steelhead spawning. One complication of measuring steelhead-spawning success is gathering test eggs. Coordination with Eastbank Hatchery staff to establish specific steelhead spawning timing and egg incubation would be necessary. Steelhead broodstock and eggs are collected and incubated significantly earlier than steelhead spawning in the wild. Using test eggs with similar temperature units to naturally spawned eggs would be required to perform a valid test.

Jeff proposed the following options to the CRFF for consideration:

- Option 1: Use Chinook salmon CET data as surrogate for predicting steelhead egg-to-fry survival in the Habitat Channel;
OR
- Option 2: Coordinate steelhead egg take and incubation with Eastbank Hatchery staff to “match up” hatchery egg temperature units with wild fish estimated temperature units, and perform a CET investigation in the Habitat Channel using the same methodology by WDFW for spring Chinook salmon. Conduct the investigation in 2016, if possible. If not schedule the investigation for 2017, and, possibly, 2018.

The CRFF supported Option 2. It was noted that due to lack of time, WDFW may not be able to schedule this study in 2016, which is the preferred starting time. It might be necessary that Chelan PUD contact other consultants to see if they may be able perform this study in 2016.

Phil suggested that Chelan PUD investigate as to whether any others (i.e. BioAnalysts) have done survival egg-to-fry studies.

Chelan PUD recognized that it will be necessary to contact the HCP committee to obtain permission to handle ESA eggs.

After discussing other options, the CRFF recommend to explore the use of a Vibert box methodology used by WDFW for spring Chinook salmon egg-to-fry survival evaluation for conducting the steelhead egg-fry survival study.

Action Items:

- Jeff and Steve will contact Catherine Willard, Chelan PUD, who is Chelan PUD’s Hatchery Committee representative. They will request that this study be discussed in the HCP Hatchery Committee so that the 2016-2017 Broodstock Collection planning include steelhead eggs for this study. Chelan PUD will request permission and their input using the WDFW Vibert Box methodology for the steelhead egg-to-fry survival study.

Steelhead 2016 Spawning Operations: 4-pump or 5-pump

Jeff noted that the last 2 years Chelan PUD performed a 4-pump operation during the steelhead spawning period (March 15 to May 15). Jeff stated that the 4-pump operation provides more available steelhead spawning habitat based on PHABSIM modeling. Discussion was open as to which operation the CRFF would prefer to implement for steelhead spawning in 2016.

Jim indicated that he is interested in gathering flow data attraction regarding to the Chelan River. Travis stated that the attraction data would be difficult to quantify. Is the flow actually attracting more fish or not? Jim was curious as to whether it was possible for the following:

- 1) Can Chelan PUD schedule a day or two to gather velocity and depth data at the 80 cfs flow level at all transects? and
- 2) Can Chelan PUD trade the cost of not operating one pump during the steelhead-spawning period to add volume to the 5,000 SFD?

Steve gave a brief summary of snorkel surveys, January 2016, in the Chelan Habitat Channel and Tailrace, and Reach 1 of the Chelan River. (handout provided)

Jim asked whether Chinook salmon and steelhead redd depth and velocity data were collected during fall 2015. Jeff acknowledged that depth and velocity data were not collected due to unavailability of Chelan PUD staff. Jim would like this additional depth and velocity data so that he may add the data to his existing database. Therefore, Jim would like to make the collection of depth and velocity data at the head of steelhead redds a requirement during snorkel surveys. Steve noted that he would attempt to add this additional work into the snorkel surveys, but noted that due to staff shortage this effort may not be attainable.

After discussion, **Jeff proposed that Chelan PUD provide 280-290 cfs, from 15 March 2016 thru 15 May 2016 via either operating 4 pumps or providing the flow from the Low Level Outlet at the dam. This is a modification of the Lake Chelan Comprehensive Settlement Agreement that contains the requirement of providing a minimum of 320 cfs during the steelhead and Chinook salmon spawning periods, which, in early operating years, was provided by 5 pumps. The 280-290 cfs spawning flow operation was recommended by the CRFF.**

Action Items:

- Chelan PUD will provide responses to Jim's requests after further investigation:
 - 1) Can Chelan PUD schedule a day or two to gather velocity and depth data at the 80 cfs flow level at all transects? and
 - 2) Can Chelan PUD trade the cost of not operating one pump during the steelhead spawning period to add volume to the 5,000 SFD?

Gravel Supplementation

Jeff stated that Chelan PUD has a 5-year maintenance permit in place to maintain the Chelan Habitat Channel. Steve recapped 2014 gravel placement activities:

- placed suitable steelhead spawning gravel in areas where past steelhead redds were observed but the current gravel supply was reduced
- added suitable steelhead spawning gravel near boulder or log cover in areas where hydraulics look good but steelheads redds not observed and little or no small gravel present
- increased number of potential spawning locations in upstream sections 4, 5, and 6

No gravel placement was needed in 2015.

At this time, no gravel enhancement is schedule for 2016 after Steve's observations; the 2014 gravel enhancement was still in place. However, if high spill happens and Chelan PUD sees gravel movement they will discuss an implementation plan for replenishing gravel where needed. Jim recommends Chelan PUD should place gravel in front of "Noah's Ark" and let the river transport gravel naturally downstream.

Jim also proposed that additional investigations take place. He would draft a proposal to take depth and velocity measurements on the 14 transects in the Habitat Channel at 80cfs, and create a group (Ecology, WDFW, and Chelan PUD) to direct gravel placement.

Jim requested that Chelan PUD make more of an effort to update Chelan Habitat Channel aerial photos.

Jim inquired if staff gauges are present within the channel. Steve noted that we do not have staff gauges in place. Jim also inquired if Chelan PUD could borrow an Acoustic Doppler Current Profiler (ADCP) to check velocity in the Habitat Channel at high flows.

Action Items:

- Jim will draft a depth and velocity measurement effort work plan for CRFF to review
- Chelan PUD will make another effort to upgrade Chelan Habitat aerial photos.
- Jeff will contact Vern Chamberlain and Tyler Sellers, Chelan PUD, to verify the window (date) for gravel placement enhancement
- Chelan PUD will respond to Jim's request regarding locating/borrowing an ADCP.

Stocking Westslope Cutthroat Trout in Reach 1 Spring 2016

The CRFF recommended that Westslope cutthroat be stocked in Spring 2016, and that the stocking mirror the 2015 Westslope Cutthroat stocking effort.

- Release ~200 fish
- Match Chelan River water temperature with hatchery water temperature
- Release half of the fish below low level outlet
- Release half of the fish at the end of the Reach 1 Trail

Travis will ask the Eastbank Hatchery staff, if possible, to clip all cutthroat to be released.

Action Items:

- Jeff will contact Cory Morrison, Chelan Hatchery, to schedule the 2016 stocking of the Westslope cutthroat.