

Rocky Reach Fish Forum

Wednesday, 6 July 2016

1:00 – 4:00 p.m.

Chelan PUD Second Floor Conference Room

Wenatchee, WA



Meeting called by Steve Hemstrom

Notes taken by Heidi Kunz

Chairperson, Tracy Hillman

Attending Representatives:

Hemstrom, Steve	Chelan PUD	(509) 661-4281	steven.hemstrom@chelanpud.org
Lewis, Steve*	USFWS	(509) 665-3508 x14	stephen_lewis@fws.gov
Rose, Bob*	YN	(509) 865-5121	rosb@yakamafish-nsn.gov
Truscott, Kirk	CCT	(509) 978-8031	kirk.truscott@colvilletribes.com
Verhey, Patrick	WDFW	(509) 754-4324	patrick.verhey@dfw.wa.gov

Attending Participants:

Connell, Meaghan	Chelan PUD	(509) 661-4757	meaghan.connell@chelanpud.org
Hillman, Tracy	BioAnalysts	(208) 321-0363	tracy.hillman@bioanalysts.net
Keller, Lance	Chelan PUD	(509) 661-4299	lance.keller@chelanpud.org
Kunz, Heidi	Chelan PUD	(509) 661-4757	heidi.kunz@chelanpud.org
Lampman, Ralph*	YN	(509) 388-3871	lamr@yakamafish-nsn.gov

* Joined via phone.

Meeting Minutes

I. Welcome and Introductions

Tracy Hillman welcomed everyone to the Rocky Reach Fish Forum (RRFF) meeting. Participants introduced themselves.

II. Agenda Review

The agenda was reviewed and approved with one change. Lance Keller added a discussion on the three-year white sturgeon monitoring report.

Tracy Hillman reported that Breean Zimmerman will be the new Washington Department of Ecology representative on the RRFF.

III. Approval of Meeting Minutes

The June meeting minutes were approved with no edits.

IV. Review of Action Items

- RD will send out an updated version of the report, *Final Draft Rapid Assessment of Adult Pacific Lamprey Passage at Tumwater Dam*. **Ongoing**
- Steve Hemstrom will write plans for the 2016 Pacific Lamprey PIT tag study. **Complete**
- Steve Hemstrom will complete the lamprey conversion rate analysis. **Ongoing**
- Bob Rose will share their ISRP proposal with the RRFF. **Complete**
- Bob Rose will communicate with ISRP regarding using the Entiat watershed as a control. **Complete; it is in the ISRP Proposal.**
- Steve Hemstrom will submit for review Chelan PUD's proposed tagging study plan to assess dam passage, overwintering, and escapement of adult lamprey into tributaries. **Complete**
- Lance Keller will provide the RRFF with a copy of the three-year White Sturgeon Monitoring Report. **Complete**
- The RRFF will send comments on the draft Artificial Propagation report to Steve Hemstrom by 30 June. Tracy Hillman will resend the report to the RRFF. **Complete**
- Alene Underwood will send electronic copies of the memo, *Tumwater Fishway Lamprey Passage Feasibility* and the project schedule to Tracy Hillman for distribution to the RRFF. **Complete**
- Steve Hemstrom will provide stream width data for the Wenatchee River near Tumwater Dam. **Complete**
- Chelan PUD welcomes comments on the *Tumwater Fishway Lamprey Passage Feasibility*

schedule. **Complete**

V. White Sturgeon

Juvenile Rearing

Lance Keller reported that eggs were not transported from Marion Drain to Chelan Hatchery this year because of a scheduling conflict. The eggs were allowed to hatch at Marion Drain and then approximately 20,000 larvae were transported from Marion Drain to Chelan Hatchery on 6 June. There was a small mortality as the 20,000 larvae were brought onto feed. An inventory of the fish will take place when they are well established on feed. The entire 2016 program will be located at Chelan Hatchery.

Three-Year Monitoring Program

Lance Keller reported that the three-year White Sturgeon Monitoring Report, *Rocky Reach Reservoir White Sturgeon Indexing and Monitoring Program, Initial Phase (2012-2015)*, has been distributed to the RRFF for review. Lance stated that this will be the go-to report for the initial three-year effort of monitoring and evaluation of white sturgeon in the Rocky Reach reservoir. It's a very thorough report. The way the data have been analyzed has changed throughout the reporting process. New modeling was done for a deeper analysis on short-term survival. The report also includes a statistical analysis on using different types of hooks and bait. This analysis led to gear standardization among Chelan, Grant, and Douglas PUDs with the goal of producing more comparable data among groups.

Larvae Collection

Patrick Verhey reported that according to the information he has received from Chad Jackson and Jeff Korth, the larval collection results for this year are better than last year, but it's still not good enough to sustain the supplementation program. This may change once the sampling efforts are complete.

Bob Rose said he would like the RRFF to have a discussion in the coming months about the future of the larvae program and how realistic it is. Tracy Hillman stated that WDFW prepared a report on the program last year. He proposed having the discussion after WDFW releases this year's report. He commented that flow conditions are different this year, but temperatures are about the same as last year.

Steve Lewis asked if past sites were tested again or if different sites were sampled. Tracy responded that the same sites were used along with some exploratory work to look for possible new sites. Lance stated that WDFW increased the time frame of the effort as well.

Action Item:

- The RRFF will send comments on the three-year White Sturgeon Monitoring Report to Lance

Keller by 29 July 2016.

VI. PACIFIC LAMPREY

Draft Rocky Reach 2016 FDX PIT-Tagging Plan

Steve Hemstrom provided the draft report, *A Monitoring Study to Quantify Dam Passage and Tributary Escapement of Adult Pacific Lamprey in the Rocky Reach Project Area and the Mid-Columbia River*. Steve Hemstrom explained that this will be a full-year study to assess the movement of adult lamprey. If adult lamprey overwinter in the Columbia mainstem, their movements will be tracked in 2017. The primary goal of the study is to assess Rocky Reach Dam passage success using FDX PIT tags instead of using HDX PIT tags. Chelan PUD is proposing to tag 225-250 adult lamprey. The secondary goal of the study is to determine where the fish go when they enter a tributary; this will provide escapement proportions. Chelan PUD will monitor the Wenatchee, Entiat, Methow, and Okanogan Rivers. If fish are not passing Wells Dam, then not much time will be spent monitoring the Okanogan or the Methow rivers. The dam passage part of the study will include assessing improvements made to the fishway that were completed in 2011. Chelan PUD is still working to verify passage rates at Rocky Reach Dam.

Grant PUD will capture adult lamprey at Priest Rapids Dam for the Chelan PUD study. They will also capture 225-250 fish for their own passage studies at Wanapum and Priest Rapids dams. Chelan, Douglas, and Grant PUDs are actively communicating and coordinating on these studies. Douglas PUD has requested 50 lamprey from Chelan PUD for Douglas PUD's study. Chelan PUD has agreed to this request, but asked that they be released downstream from the confluence of the Entiat River in order to be included in Chelan's study as well. Steve Hemstrom commented that Grant PUD will capture fish for their own study first. Fish captured after the Grant PUD quota is filled will go to Chelan and Douglas PUDs.

Steve Hemstrom stated that the PIT-tag arrays in the tributaries probably do not have 100% detection efficiency. He stated, however, that detection efficiency rates for lamprey should be better than they are for salmon, which swim higher in the water column. When there are multiple antennas, such as in the Wenatchee River, at least one detection indicates escapement for that fish. The farther upstream the fish are detected, the more likely that they will stay there. Steve Hemstrom noted that there is one array downstream from Tumwater Dam, the second array is upstream from the dam. There are also two arrays in the fishway at Tumwater Dam. Steve Hemstrom commented that it will not be a perfect escapement study.

Ralph Lampman reported that the Yakama Nation is planning on releasing adult lamprey in the Wenatchee and Methow rivers this summer and next spring. He said they could do a release right below the arrays to get an idea of how many are passing. Steve Hemstrom noted that 50 fish were released by the Yakama Nation below the lower antenna site in the lower Wenatchee River in April. Eleven of those fish have been detected on the lower Wenatchee array. Kirk Truscott commented that detection rates

for an array can only be calculated if all of the fish move upstream.

Steve Hemstrom asked if the PRFF had received study plans from Grant and Douglas PUDs. Tracy recalled that Blue Leaf Environmental gave a presentation to the PRFF and also provided a study plan as well.

Action Item:

- The RRFF will send comments to Steve Hemstrom on the dam passage and tributary escapement study by 11 July 2016.

Results from ASWG Pacific Lamprey Workshop

Tracy Hillman reported that the Aquatic Settlement Working Group (ASWG) Pacific Lamprey Workshop was held in June and was well attended. Bob Rose reported that no significant changes came from the meeting, but he was pleased with the attendance and was happy to see the groups working together and coordinating. Patrick Verhey commented that it was a good opportunity for information exchange, including details that were shared between the PUDs. He stated that there was discussion about adult lamprey approaching Wells Dam. This included identifying at what point adult lamprey come into Douglas PUD's project area and when they would be counted as trying to pass or not pass.

Kirk Truscott commented that after this year's escapement study is complete, there will still be questions as to what happens to the fish that aren't detected in a tributary, fish that don't enter the Wells project area, and fish that left the Rocky Reach project area.

Tracy noted that Grant PUD will be using acoustic "sleeper" tags, which are programmed to turn off in January and February and then reactivate from March through August. Tracy asked if the notes from the workshop will be available for the RRFF and PRFF. Steve Lewis will provide the meeting minutes from the workshop to Chelan and Grant PUDs after they have been finalized.

Action Item:

- Steve Lewis will provide meeting minutes from the ASWG Pacific Lamprey Workshop.

Tumwater Canyon and Tumwater Dam Lamprey Passage

Steve Hemstrom reviewed information he had emailed to the RRFF, which included an evaluation of the Wenatchee River channel width downstream from Tumwater Dam along with several pictures of Tumwater Dam and Tumwater Canyon. He reported that Chelan PUD measured the cross-section width of the Wenatchee River about 80 feet downstream of Tumwater Dam. Data and drawings were available from the 1986 Tumwater Dam fishway rehabilitation to enable the measurements. The river channel width at 80 feet downstream of the dam was measured to be 75 feet across. This measurement was done in October 1986 at 615 cfs. He stated that it would be significantly easier to build something to improve lamprey passage on the left bank. He stated that the river is not too wide for the lamprey to cross to the left bank. Steve Hemstrom indicated that if the lamprey can travel 33 miles up Tumwater

canyon at 10,000 cfs, then they should be able to cross to the left bank in order to find the fishway.

Kirk Truscott commented that the velocities at the river bottom may be greater immediately downstream from the project (Tumwater Dam) than they are in other sections of Tumwater Canyon. Steve Hemstrom stated that areas where the lamprey are required to go around boulders would have even faster velocities. He commented that it is not known how the fish make their way around the boulders or the roughness downstream from Tumwater Dam. Tracy Hillman commented that there is a pinch point in the lower portion of the canyon that is about 65 feet wide that has extremely fast velocities. Tracy noted this is not a barrier for salmonids, but was unsure if it would affect lamprey passage at high flows. Steve Hemstrom referenced photos of Tumwater Dam to illustrate that there does not appear to be a large difference in velocities between the right and left banks.

Steve Hemstrom concluded that it is difficult for the fish to travel through the entire canyon. Chelan PUD is working under the hypothesis that if the fish can make it to Tumwater Canyon under high flows, and want to pass at 5,000-10,000 cfs, then getting to a left-bank fishway would not be impossible compared to a right-bank fishway.

Ralph Lampman commented that turbulent, converging flows combined with the straight ladder at Tumwater Dam make it difficult for the lamprey to get to the fishway entrance. Steve Hemstrom predicted that in the future, lamprey arriving at Tumwater Dam in late summer/early fall could pass the fishway during low flows and then overwinter upstream. Steve Hemstrom said that flows at that time should be below 1,000 cfs. Steve Hemstrom believes that a large percentage of the fish will pass Tumwater Dam in the fall and overwinter upstream. Fish that overwinter below the dam could move upstream in February, March, and April during lower flows before spawning in July. He believes the fish will have plenty of opportunity to get through a left-bank fishway.

Ralph stated that it is not known what percentage of lamprey are migrating in the spring versus the fall in the Wenatchee River. He also noted that they are not a fast swimming fish and they need the right conditions to be able to cling and climb.

Tracy noted that flows at Peshastin are between 300-1,000 cfs in September, October, and November. Kirk stated that flows could be even lower this year.

Ralph stated that he believes lamprey would prefer to go to the right bank during high and low flows and would recommend building a passage structure there. Steve Hemstrom stated that if lamprey always choose to use the side with lower velocities, they would need to cross the river multiple times during the 30-mile trip in the Wenatchee River. He is not sure if they would use their energy reserves to cross continuously to the lowest velocity side. Steve Hemstrom stated that Chelan PUD has not conducted a right-bank evaluation. He pointed out that there is no road or crane platform on the right bank. It is by far the most difficult build option; the left bank is a much more feasible option.

Steve Lewis pointed out that if adult lamprey are more inclined to go to the right bank, he would like to build the fishway there in order to minimize the back and forth searching behavior for the lamprey.

Ralph believes the velocities would be higher on the left bank as the lamprey approach the dam, and therefore they would be more likely to approach the dam on the right bank where velocities are lower.

Patrick Verhey suggested that it would be helpful to determine if the velocities at the fishway structure are within the swimming capabilities of the lamprey during the times they would be approaching the dam. He agreed that the right bank looks more favorable for lamprey passage, but he doesn't like the idea of disturbing the riparian habitat along the right bank in order to build a fish passage structure there.

Steve Hemstrom said that Chelan PUD will use Google Earth to capture photographs of the river downstream from the dam this summer to see how river widths and surface turbulence change when adult lamprey would be there. He said that Chelan PUD is committed to assessing the feasibility of building lamprey passage on the left bank.

Steve Hemstrom confirmed that Alene Underwood will provide a revised copy of the Tumwater Dam lamprey passage feasibility study.

Action Item:

- Alene Underwood will provide the RRFF with a revised copy of the Tumwater Dam Lamprey Passage Feasibility Study.

Pacific Lamprey Subgroup

Tracy Hillman reported that the Pacific lamprey subgroup will meet on Thursday, 4 August from 9:00 am to 4:00 pm. He will try to schedule the meeting at the Grant PUD office in Wenatchee. The purpose of the meeting will be to identify the appropriate adult lamprey passage metrics, how these metrics are measured, and how unavoidable effects are measured. Bob Rose commented that he is not sure what the subgroup meeting will accomplish. He believes that the proposed topics may be too broad for one meeting. Bob plans to attend the subgroup meeting.

Kirk Truscott commented that the regional Lamprey Technical Work Group has been discussing these topics and may have information available for the subgroup. Steve Hemstrom will provide the meeting minutes from the Pacific Lamprey Technical Work Group to Tracy Hillman for distribution to the RRFF. Steve Hemstrom stated that the work group had set a goal of 80% dam passage. Kirk stated that dam passage can be measured, but questioned how conversion can be measured and how it enters into the equation for project effects.

Action Items:

- Tracy Hillman will provide an agenda and meeting location for the Pacific Lamprey Subgroup, which will convene on Thursday, 4 August from 9:00 am to 4:00 pm.
- Steve Hemstrom will provide the meeting minutes from the Pacific Lamprey Technical Work Group to Tracy Hillman for distribution to the RRFF.

VII. Next Meeting

The next regular meeting of the RRFF is scheduled for Wednesday, 3 August 2016 from 1:00 to 4:00 p.m. in the Chelan PUD Second Floor Conference Room.