

Rocky Reach Fish Forum

Wednesday, 2 August 2017

1:00 – 4:00 p.m.

Chelan PUD Second Floor Conference Room

Wenatchee, WA



CHELAN COUNTY

Meeting called by Steve Hemstrom
Notes taken by Meaghan Connell

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
Truscott, Kirk	CCT	(509) 978-8031	Kirk.truscott@colvilletribes.com
Zimmerman, Breean*	ECY	(509)575-2808	breean.zimmerman@ecy.wa.gov

Attending Participants:

Clement, Marcie	Chelan PUD	(509) 661-4186	marcie.clement@chelanpud.org
Connell, Meaghan	Chelan PUD	(509) 661-4601	meaghan.connell@chelanpud.org
Goudy, Sean*	YN	(509) 480-5196	gous@yakamafish.nsn.gov
Keller, Lance	Chelan PUD	(509) 661-4299	lance.keller@chelanpud.org
Lampman, Ralph*	YN	(509) 388-3871	lamr@yakamafish-nsn.gov
Underwood, Alene	Chelan PUD	(509) 661-4364	alene.underwood@chelanpud.org

* Joined via phone.

Meeting Minutes

I. Welcome and Introductions

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

II. Agenda Review

The agenda was reviewed and approved.

III. Approval of Meeting Minutes

The July RRFF meeting minutes were reviewed and approved with one edit.

IV. Review Action Items

- Alene Underwood will provide the RRFF with a revised copy of the Tumwater Dam Lamprey Passage Feasibility Study. **Ongoing – Revised completion date is 31 August**
- Ralph Lampman will provide a concise summary of the PIT-tagged lamprey releases from/within Tumwater Dam and the 2016 Wenatchee release by the August RRFF meeting. **Complete**
- Steve Hemstrom will look at lamprey counts at The Dalles Dam and compare those to counts at Rocky Reach Dam. **Ongoing – Data have been compiled, next steps will be to graph the data**
- Steve Lewis will follow up on any historical studies evaluating the effects of herbicide on lamprey and other fish species. **Complete**
- Steve Hemstrom or Lance Keller will check with Thad Mosey on the accuracy of adult lamprey counts at Rock Island Dam. **Complete**
- Steve Hemstrom will check to see if Chelan PUD did anything at Rocky Reach Dam to improve fish counts beginning in 2006. **Complete**
- Bob Rose will email Donella Miller asking her for the number of sturgeon eggs per ml in the post-fertilization egg samples. **Ongoing**
- Chad Jackson will send out a descriptive summary of how many and what kind of sturgeon larvae WDFW is collecting downstream from McNary Dam. **Complete**
- Patrick Verhey will coordinate with Tracy Hillman on the possibility of Dave Beauchamp presenting to the Forums on stable isotope analysis for assessing White Sturgeon diets. **Complete**
- Steve Lewis will ask USFWS policy staff for their definition of baseline conditions and provide that answer to the Forums. **Complete**

- The RRF/PRFF will think about plausible hypotheses regarding linkages between operational project effects (avoidable or unavoidable) and adult lamprey fate in reservoirs. **Ongoing**
- Tom Skiles will talk with Brian McIlraith regarding linkages or hypotheses that would explain operational project effects of a reservoir, how the operation could affect a reservoir, and how such a reservoir effect could affect conversion of adult lamprey to Wells Dam. **Ongoing**
- Forum technical representatives will talk to their policy staff about a lamprey NNI negotiation. **Complete**
- Patrick Verhey will provide the Forums with a table on potential project effects on lamprey. **Complete**

V. Aquatic Invasive Species

Use of Herbicide to Control Eurasian Milfoil in Rocky Reach Reservoir

Tracy Hillman asked if members had recommendations for Chelan PUD on the use of an herbicide to control milfoil in the Project Area. Steve Lewis reported that the information Mike Mackey (Chelan County Weed Control Board) submitted was not complete based upon his discussion with his colleague, who is the USFWS Contaminant Specialist. He said the information provided did not include studies evaluating herbicides on lamprey. Steve Lewis noted that what was lost in the discussion from the June RRF meeting is that there was not any monitoring done after the application to see whether the herbicide was effective and that was bothersome. It was also unclear whose obligation it was to monitor this. Steve Lewis stated that he felt the application area was correct but the execution and flow testing leading up to the application was not well executed. Tracy Hillman asked if there was enough uncertainty to recommend Chelan PUD not move forward with this application at their boat ramps and docks. Steve Lewis said that he did not know. He noted that there could be some benefit with the herbicide but there needed to be monitoring and follow up from this process to be able to give the PUD some level of assurance that this treatment would be okay.

Marcie Clement noted that Jon Jennings with DOE clarified that water quality monitoring was an optional condition of the permit and not a requirement. If you do not use the water within 24 hours, it is okay to apply. It was noted that fish are using the water all the time, which is the concern. Steve Lewis asked if there was a request to do another application. Marcie stated that there is no request for the County to do another application. She added that Chelan PUD has not been ordered to do an application, it was just suggested that this treatment be done every two to three years in conjunction with the harvester.

Kirk Truscott stated that he had some of the same concerns that Steve Lewis had expressed relative to the lack of follow up on the application effect. Kirk noted that there was some before and after monitoring of the target species, but what was lacking was water quality, sediment sampling, and fish sampling before and after the application. This is concerning when thinking about a reservoir-wide

application to control aquatic plants. Without this information, it may be an issue expanding the treatment over a much larger area in the reservoir. Weed beds are used for cover by fish and if those are subsequently reduced there may be additional mortality. A path forward may be to do another one or two site-specific applications with the appropriate monitoring and evaluation before more widespread use.

Breean Zimmerman did not have a recommendation for the PUD but noted that what resonated from the June RRF meeting is there was no information to suggest whether it would be harmful. Steve Lewis asked Breean whose role it was to monitor the effects of the application. Breean said that this type of monitoring is a toxicology issue and she would have to ask someone in toxicology.

Ralph Lampman noted that there have been toxicology studies conducted with larval lamprey that show a correlation between concentrations of toxicants in the sediment and levels within lamprey. However, levels in the lamprey are higher than those in the sediments, indicating bioaccumulation. Ralph said that he did not know enough about the herbicide to make any recommendations.

Marcie Clement stated that the Weed Board followed DOE's process and procedure. Marcie noted that she would have liked to have seen DOE provide more input and involvement, because it was a pilot project and they provided grant funds for this project. Marcie said that Mike Mackey would like this herbicide to be used to eradicate milfoil from the Columbia River. Marcie noted that Chelan PUD does not believe this is possible and questioned what would be the benefit and cost to do that. We are identifying a lot of risks and there is little information on the specific effects of this herbicide on certain species of fish. Marcie had other concerns regarding whether DOE consulted with other fish agencies. Marcie noted that consultation was done in a general sense. When DOE was questioned about this during the June RRF meeting, they noted that fish agencies were given the opportunity to provide input when DOE issued the general permit five years ago. Marcie noted that this general permit was not project specific or water-body specific. Marcie stated that she does not believe DOE went through the same level of rigorous consultation that Chelan PUD is required to do. Marcie stated that she did not believe there was enough information for Chelan PUD to feel comfortable in applying this treatment. She noted what should be addressed is what the issue with milfoil is, and whether it is destructive to the fish species being discussed.

Tracy Hillman stated that it is unclear if the herbicide or its degraded components can work their way through the food web and ultimately accumulate within species such as sturgeon. According to diet studies, sturgeon eat a variety of mollusks, which are found in the areas where these treatments are likely to occur. If the chemical is absorbed by mollusks and then eaten by sturgeon, the chemical has a pathway to a species of concern by the RRF. This was not discussed during the meeting with the Weed Board and DOE. Steve Hemstrom said more information is needed on bioaccumulation. Marcie Clement stated that these questions were asked during the comment period with DOE but there were no answers given to those questions.

Action Items:

- **Breean Zimmerman will contact toxicology about who is responsible for monitoring the effects of herbicide applications.**
- **Marcie Clement will contact Mike Mackey about concerns and additional questions discussed at the August RRF. The discussion will continue at the September meeting, so members absent during the August meeting can provide input.**

VI. White Sturgeon

Juvenile Rearing

Lance Keller reported that all fish have hatched. He noted that there was a struggle to get a full complement of eggs from one female. Lance spoke with Chelan Hatchery personnel and was told that the fish are now past the “critical” point of getting them on feed. He said he does not have a total count but was assured there are enough to meet the target release. Lance will reach out to Donella Miller for additional information.

Action Item:

- **Lance Keller will contact Donella Miller regarding juvenile sturgeon totals.**

Larvae Collection

Lance Keller did not have any updates to provide on larvae collection. He said that from the information Chad Jackson provided, they (WDFW) are handling more fish than they have in the past but still not to the numbers where they will start transporting fish to Marion Drain. Tracy Hillman reported that during the PRFF meeting, Mike Clement (Grant PUD) stated that they (WDFW) are beginning to collect more larvae but would need to collect 100 per night before they can transport them to the hatchery. Mike did not know if they had reached that number, but he believed they were getting close.

Update on Monitoring

Lance Keller reported that M&E efforts with set lines will begin the end of August or early September this year.

Lance Keller provided an update on R&D broodstock collection downstream from Priest Rapids Dam. Lance said that Chelan PUD along with guide Dan Sullivan went out 6 July, 12 July, and 13 July. Lance reported that during that time they encountered five or six adult-sized sturgeon. On the first day, the first two fish caught were a ripe female and ripe male. Water temperature was 16°C. Lance noted that broodstock collection downstream from McNary Dam occurs when temperatures are 12.5°-13°C, assuming 14°C is ideal for spawning. Lance stated that while 16°C is on the backside of what is ideal, it was still encouraging. Lance reported that logistically the area downstream from Priest Rapids Dam

would be difficult to capture a viable fish, and it would be difficult to find a suitable location to get the fish out of the area for transport to the hatchery.

Tracy Hillman asked why Chelan PUD was researching broodstock collection downstream from Priest Rapids Dam and Grant PUD was exploring downstream from Rock Island Dam. Lance Keller responded that the R&D request came from Oregon (ODFW) and was an activity that needed to occur in order to engage in a discussion to have a permit for collecting broodstock downstream from McNary Dam. The R&D portion of the effort was to examine another area that has not been explored in a while. Lance noted that some of the broodstock collected in 2010 came from the area downstream from Priest Rapids Dam.

VII. Pacific Lamprey

Review of Pacific Lamprey Management Plan

The group reported that they had reviewed the Pacific Lamprey Management Plan.

Definition of Baseline Condition and Adaptive Management

Steve Lewis discussed the language from the Rocky Reach EIS that described baseline conditions. Specifically, the EIS states, *Therefore, to accurately differentiate between the no-action alternative (baseline), the proposed action (Chelan PUD's proposal, which includes implementation of the HCP), and any other alternatives, we define the no-action alternative as project operations as they stood on January 12, 2005, when the Commission issued its Ready for Environmental Analysis (REA) notice.* In short, baseline includes existing project conditions and therefore the presence of the reservoir is part of baseline. As such, the Forum needs to link any effect on adult lamprey within the reservoir to project operations, not to the presence of the reservoir.

Kirk Truscott stated that his interpretation of the FERC language was that it is reservoir operations, whether it is how water moves through the concrete or the reservoir based on operations since 2005. Kirk added his concern that there was no mitigation for lamprey when the reservoir was first created. Conceivably, the fact that there is a reservoir could be the leading issue for lamprey and there does not appear to be anyway to address the presence of the reservoir based on the FERC definition of baseline condition.

Alene Underwood asked if the management plans associated with the license were considered part of the proposed action or was it mitigation? Steve Lewis suggested that the proposed action is part of operations because it is part of the "whole package." Alene stated that she was not sure if they would define Management Plans as operations but certainly in that context it is considered a proposed action. Alene noted that if this is the case, then all of the consultation would have included those interactions. Steve Lewis noted that they consulted on Bull Trout but did not consult on lamprey. Steve Lewis said that the goal is not to search for project effects. Rather, the goal is to evaluate an identified effect.

Because adaptive management requires the identification of testable hypotheses, where hypotheses need to link adult lamprey “fate” to project operations, Tracy shared with the RRFF the hypotheses identified by the PRFF during their meeting. It was noted that some of these hypotheses are not necessarily project specific.

Hypothesis 1 (Steve Lewis): White sturgeon predation. It was noted that diets of sturgeon are currently being evaluated to see if sturgeon consume adult lamprey. If sturgeon do consume adult lamprey in the Project Area, this could be an issue even if it is not directly linked to project operations. Alene Underwood asked if this hypothesis addresses hatchery sturgeon predation or existing sturgeon predation. Alene clarified that it was her understanding that the stocking of white sturgeon in Rocky Reach did not correspond to the timing of decrease in adult lamprey counts between Rocky Reach and Wells dams. Lance Keller noted if it is the existing adult population of sturgeon that are decreasing passage to Wells Dam, then reducing the hatchery stocking rate would not fix this problem. Kirk Truscott suggested that a management action may be to reduce the overall population of sturgeon in the Project Area. Steve Hemstrom noted that the effect is the Management Plan that requires the release of sturgeon, which at some point will be large enough to prey on adult lamprey. If predation effects are large, one could look at reducing sturgeon stocking levels to control predation rates. Lance stated that this interaction was discussed when evaluating sturgeon stocking numbers. Tracy Hillman added that policy members foresaw that adding sturgeon to the Project Area may cause predatory inertia and therefore added diet analyses to the monitoring plan.

Hypothesis 2 (Kirk Truscott): Changes in operations at the dam associated with salmonid passage could affect Pacific lamprey entrance efficiency. Alene Underwood noted that she did not think that entrance efficiency was an issue at Rocky Reach. Steve Hemstrom reported that the spillway and bypass have not had any updates since 2003. Tracy Hillman asked if operations have changed since the 2004 lamprey efficiency data were collected. Lance Keller noted that in August 2016 the OG gates were closed to allow Chelan PUD to hit the differentials at the entrances to keep it more uniform. Analysis of PIT tags and passage numbers were reviewed on a weekly basis during that time. Kirk Truscott remarked that this hypothesis is more specific to Wanapum and Priest Rapids dams.

Hypothesis 3 (Kirk Truscott): Operations may be affecting the spawning habitat used by Pacific lamprey in the reservoir. If lamprey spawn successfully in the reservoir and operations change flows such that redds are scoured, dewatered, or covered with fine sediments, then operations may affect lamprey survival in the reservoir. Steve Hemstrom reported that every four seconds headwater is measured, and he is compiling the data into a report to look at reservoir characteristics. He added that he will be looking at the reservoir characteristics during peak spawning for lamprey. Lance Keller asked what is considered ideal lamprey spawning habitat. Ralph Lampman responded that lamprey spawning habitat is generally similar to spring Chinook spawning habitat, with some overlap with steelhead and fall Chinook. Tracy Hillman noted that in some locations, Rocky Reach reservoir provides spawning habitat for summer/fall Chinook. He suggested using existing maps from the deep-water spawning surveys to identify possible lamprey spawning areas.

Kirk Truscott suggested Steve Hemstrom do an assessment from the Rocky Reach headwater (forebay) elevation duration curves to determine the potential for desiccation of lamprey redds. Kirk noted that regardless of passage at Wells Dam, fish are not getting to Wells Dam. He suggested looking to impacts of operations in the reservoir that could have negative impacts on lamprey. Tracy Hillman noted that developing these hypothesis and discussion follows Section 3, Definition of Adaptive Management. This discussion will continue next month.

Update on 2017 Passage Study

Steve Hemstrom reported that the number of adult lamprey Chelan PUD will tag for the Rocky Reach lamprey passage study has increased from 200 to 300 adults because the opportunity is available to capture and tag more fish. He said they have released over 200 tagged fish at Kirby Billingsley Hydro Park thus far with two more releases scheduled. He added that the year-to-date passage totals are 13 adults at Wells, 1,810 at Rocky Reach, and 2,637 at Rock Island.

Action Item:

- **Ralph will email Lance a spreadsheet with PIT-tag codes, release location, and release date for lamprey released by the Yakama Nation in the Wenatchee River.**

Rocky Reach Reservoir Operations, 2005-2016

Steve Hemstrom reported that he is working on a Hydraulic Analysis Report that will contain multiple years of duration curves.

Action Item:

- **Steve Hemstrom will provide the RRFF with a Reservoir Operations Hydraulic Analysis Report.**

Rock Island Lamprey Count Window Accuracy

Steve Hemstrom reported that there are areas within the Rock Island right-bank fishway that still contain 1-inch grating. The PUD is looking to replace any 1-inch grating with ¾-inch grating beginning in the right-bank ladder. Steve Hemstrom noted that if fish are being missed at Rock Island, it could affect Rock Island to Rocky Reach conversion rates. Grating replacement is expected to begin during winter 2018.

VIII. Public Comment

None.

IX. Next Meeting

The next meeting of the RRF is scheduled for Wednesday, 6 September 2017 from 1:00 to 4:00 p.m. and will be held at the Chelan PUD office in Wenatchee at 327 N. Wenatchee Avenue (2nd Floor Conference Room).