



Grant County  
**PUBLIC UTILITY DISTRICT**  
*Excellence in Service and Leadership*

**Priest Rapids Fish Forum  
 Meeting**

**Wednesday, 6 September 2017  
 9:00 a.m. – 12:00 p.m.  
 Grant PUD, 11 Spokane St., Suite 205B, Wenatchee, WA  
 Call-In Number: 1-800-977-8002, Bridge: 7422882**

**MEETING MINUTES**

**PRFF REPRESENTATIVES**

---

Steve Lewis, USFWS	Patrick Verhey, Chad Jackson, WDFW
Bob Rose, YN	Breean Zimmerman, WDOE
Doris Squeochs, Wanapum	Aaron Jackson, Carl Merkle, CTUIR
Jason McLellan, CCT	Keith Hatch, BIA
Mike Clement, Grant PUD	Chris Mott, Grant PUD
Tracy Hillman, Facilitator	Erin McIntyre, Grant PUD

**ATTENDEES**

---

Rod O'Connor, Grant PUD	Breean Zimmerman, WDOE (Via Phone)
Doris Squeochs, Wanapum (Via Phone)	Mike Clement, Grant PUD
Chris Mott, Grant PUD	Tracy Hillman, Facilitator
Erin McIntyre, Grant PUD	Pat Wyena, Wanapum (Via Phone)
Bob Rose, YN (Via Phone)	Chad Jackson, WDFW, (Via Phone)
Tom Skiles, CTUIR (Via Phone)	RD Nelle, USFWS, (Via Phone)
Steve Lewis, USFWS (Via Phone)	Brian McIlraith, CRIFTC, (Via Phone)

**Action Items:**

1. Bob will share a paper that describes white sturgeon autoploidy with the PRFF.
2. Breean Zimmerman will contact toxicologists within Ecology to find out about the toxicity of a triclopyr-based herbicide (used to control Eurasian milfoil) on fish, especially lamprey, and who is responsible for monitoring its effects on the ecosystem.
3. Tracy Hillman will check with the RRFF to see if they can hold a joint lamprey subgroup meeting with the PRFF.

4. Tracy Hillman will invite the Aquatic Settlement Work Group to the joint PRFF/RRFF joint lamprey subgroup meeting.

I. **Welcome and Introductions** – Tracy Hillman welcomed everyone to the Priest Rapids Fish Forum (PRFF or Forum) meeting. Participants introduced themselves.

II. **Agenda Review** – Members reviewed and approved the draft agenda.

III. **Approve August Meeting Notes** – The August 2017 Draft Meeting Minutes were reviewed and approved during the meeting.

A. Review Action Items from the August Meeting

1. RD Nelle will look at the movements of adult lamprey released upstream and downstream of a diversion dam on the Yakima River. **Complete**
2. Bob Rose will email Donella Miller asking her for the number of eggs per ml in the post-fertilization egg samples. **Complete – Bob sent the email to Donella but does not know if Donella responded.**
3. Chad Jackson will send out a descriptive summary of how many and what kind of larvae WDFW is collecting downstream from McNary Dam. **Complete**
4. 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**
5. Tom Skiles will talk with Brian McLraith regarding linkages or hypotheses that would explain operational project effects, how the operation affects the reservoir, and how the reservoir affects conversion to Wells project area and the tributaries. **Complete – This was an action item from Chelan PUD during the joint PRFF/RRFF meeting. Tom and Mike recommended that the Forums review the University of Idaho reports. Tom provided links to the reports.**
6. Mike Clement will provide the PRFF with information on the Columbia River White Sturgeon Workshop, which will be held in Coeur d'Alene, Idaho, on 15 and 16 November. **Complete**
7. Mike Clement will provide the PRFF with velocity profiles for fishway entrances at Priest Rapids and Wanapum dams. **Complete**
8. Mike Clement will send FERC's comments/responses on the Final Environmental Impact Statement for the Priest Rapids Project to the PRFF. **Complete**

IV. **White Sturgeon Management Plan**

A. **Update on Juvenile Rearing** – Bob Rose indicated that Donella Miller (YN) had a couple issues with juvenile rearing at Marion Drain. There was a loss of juvenile sturgeon within one rearing tank. Chris Mott said that he and Lance Keller had received notification from Donella and she was uncertain of the cause. This particular tank contained the six, half-sib families from one female. In addition, Donella had a sample of juveniles tested for autopolyploidy. Progeny from female #1 were found to have autopolyploidy. As a result, these fish will not be released into the project area. Bob said he will share a paper describing autopolyploidy with the Forum. Chris Mott noted that autopolyploidy will be a topic of discussion during the Columbia River White Sturgeon Workshop in Coeur d'Alene. Although there are currently enough sturgeon at Marion Drain to meet the target release number (there are currently 18 half-sib families), the Forum discussed the possibility of not meeting the release target if additional losses occur. Chris reported that Jason McLellan

informed him that there are about 700-800 surplus natural-origin sturgeon larvae at Sherman Creek (from the FDR Program) that could be used to backfill production at Marion Drain. The PRFF discussed the transfer of these fish to Marion Drain and the possible release of them into the Project Area. Mike stated that the SOA approved by the policy group indicates that natural-origin sturgeon larvae are a higher priority for release than juveniles from broodstock collections. Mike also noted that Grant PUD would commit to use their equipment and staff to transfer the fish to Marion Drain. Bob asked if any Roosevelt sturgeon have been released into the Project Area in the past. Mike indicated that they have released fish from British Columbia CA that were grown out at Cranbrook several years ago. Most PRFF members present supported the transfer of larvae from Sherman Creek to Marion Drain; however, Bob indicated that it is up to Donella to decide if Marion Drain could accept the fish. Bob and Tom deferred or abstained from providing support for the transfer at this time. Chris said we need a decision as soon as possible, because these surplus fish at Sherman Creek are scheduled to be destroyed this week. Bob and Chris said they will discuss this with Donella following the meeting.

*Following the meeting, the Yakama Nation decided that because of possible disease issues (potential contamination of the remaining 18 half-sib families), stress, and other possible factors, it would not be appropriate to transfer the larvae from Sherman Creek to Marion Drain. Thus, the transfer will not occur.*

- B. **Larvae Collection** – Chris Mott indicated that WDFW collected about 230 larvae downstream from McNary Dam, but not enough to transfer to Marion Drain. Fish would have been transferred had they captured about 100 per night. The most they captured was 30 per night. WDFW is preparing a report, which will be available at the end of the year.
- C. **Update on Sturgeon Fishery in the Priest Rapids Project Area** – Chad Jackson indicated that 552 sturgeon have been captured in the Project Area since June. Of these, anglers kept 120 sturgeon. During August, anglers captured 70 adults.
- D. **Presentation on Results of Sturgeon Diet Surveys** – Chris Mott gave a presentation on sturgeon diet analyses conducted within the Project Area (see Attachment 1). He noted that they sampled 27 adult sturgeon and found mostly snails and clams. Northern pikeminnow, salmonid smolts, lamprey, carp, suckers, walleye, peamouth, and chiselmouth were consumed by subadult sturgeon in upper Wanapum reservoir. He said three sturgeon contained northern pikeminnow; one of those had 11 pikeminnow in its stomach. One sturgeon had about 10 juvenile lamprey in its stomach, while another adult had 125 juvenile lamprey (three distinctly different age classes) in its stomach. Chris stated that in sum, about 61% of the adult sturgeon sampled had macroinvertebrates, 33% contained fish, and 6% had empty stomachs. He added that adult sturgeon are opportunistic feeders and reminded the group that these were presence/absence surveys. He also said the results from this work will be included in the annual report from Golder.

Tom Skiles asked where the adult lamprey were collected. Chris responded they were all captured in Wanapum pool downstream near Crescent Bar. Tom added that Blaine Parker (CRITFC) has not yet evaluated the stomach contents of sturgeon collected in the Tribal fishery. Steve Lewis asked if Grant PUD measured the size of lamprey consumed by sturgeon. Chris indicated that they did not measure lamprey; however, all lamprey were juveniles. Mike Clement added that the juvenile lamprey were about 80 mm, 100-120 mm, and 140 mm. Tom asked if the pikeminnow consumed by sturgeon were fish discarded during the pikeminnow removal program. Chris said it is unlikely given that pikeminnow captured and killed during the removal program have their tail fins removed. There was no evidence that the pikeminnow consumed by sturgeon had missing fins. In addition, the

sturgeon were captured in a location where pikeminnow fishing is difficult because of water velocities. It was noted that pikeminnow are often found in deep water near the bottom. Thus, it would not be unusual to think that sturgeon would eat pikeminnow. Chris added that crayfish also made up a large portion of the diet of sturgeon.

**E. Other White Sturgeon Items – None.**

- V. Resident Fish Study** – Chad Jackson stated that WDFW is gearing up for resident fish sampling this fall. They are scheduled to begin sampling in early October depending on water temperatures. Surveys will include nighttime electrofishing. The survey methods will be identical to those used five-years ago. WDFW will calculate species composition and indices of biotic integrity. The only difference will be selection of new randomly selected sites. The WDFW Large Lakes Team will conduct the work. Anyone interested in participating in the surveys should contact Chad.

**VI. Pacific Lamprey Management Plan**

- A. Use of Herbicides in the Project Area** – Tracy Hillman reported that the Chelan County Weed Control Board is requesting that Chelan PUD use an herbicide to control Eurasian milfoil at their docks and boat ramps along Rocky Reach Pool. During the last Rocky Reach Fish Forum (RRFF) meeting, members of the Forum voiced concern with the use of an herbicide in the reservoir, especially because the effects of the herbicide on juvenile lamprey are unknown. Grant PUD asked for a discussion on this topic because at some point they may be asked to use the herbicide in their Project Area.

Mike Clement stated that he read a report on the herbicide (and the information provided by Ralph Lampman and the USGS) and noted that the herbicide was banned in the 1980s because of its toxicity. Mike said that Grant PUD strongly opposes the use of any chemicals within the Project Area that have the potential to be toxic to aquatic resources. Members noted that there was a lack of monitoring of the experimental treatments conducted in the Rocky Reach Project Area by the Weed Board. Thus, members are unsure of the potential effects of the herbicide on species within the reservoir. In addition, it was noted that small fish were observed consuming the pellets. Bob questioned the Weed Boards competency and noted that unless you treat a large area, the effects of the treatment will be minimal. Bob added that it was clear the Weed Board did not know the short or long-term consequences of the herbicide. Mike asked if Breean Zimmerman could talk with Ecology's toxicologists about the toxicity of the herbicide and its short and long-term effects on fish species, especially juvenile lamprey. Breean said she will talk with their toxicologists about the herbicide. Tracy added that the herbicide is intended for closed systems and it may not be appropriate for run-of-the-river reservoirs, which are not closed systems. Mike noted that Grant PUD is trying to be proactive rather than reactive in the event Grant PUD is asked to pursue using the herbicide in its Project Area. Pat Wyena asked if the Weed Board had consulted with the tribes and if the Board examined the effects of the herbicide on cultural resources. Pat added that Wanapum is concerned with the preservation of natural resources.

- B. Release of Adult Lamprey Upstream from Wells Dam** – Tracy Hillman reported that both the Yakama Nation and Colville Tribes are translocating adult lamprey into various tributaries in the Upper Columbia. Mike Clement stated that Grant PUD captured 343 adult lamprey at Priest Rapids Dam. Of those, the Yakama Nation and Colville Tribes tagged 316 adults on 16 August. The tribes released 51 tagged fish in the Similkameen River downstream from Enlow Dam, 131 at the confluence of the Okanogan River, and 134 at Star Boat Launch upstream from Wells dam. He added that over 100 adult lamprey have been counted passing Wells Dam this year. Bob Rose commented that translocation is

doable and inexpensive, especially if we all work together. He would like the PUDs to continue supporting this work in the future.

RD Nelle said the USFWS was caught off guard with the release in the Okanogan. He said they did not know about it until he received an email from Ralph Lampman. Mike commented that Steve Lewis was at the previous meeting and was aware of the release and was involved in the conversations. Bob apologized for not including RD in the conversations. RD asked if Ralph or anyone collected eDNA samples in the Okanogan before the release of the adult lamprey. Bob and Mike responded that it is unlikely Ralph collected eDNA samples before the release.

Bob noted that the Yakama Nation will release about 300 adult lamprey into the Wenatchee River within the next few days; about 95 of those will be released upstream from Tumwater Dam.

- C. **Update on Adult Lamprey Monitoring** – Mike Clement reported that Grant PUD continues to operate their HD PIT-tag interrogation system. They also provided the Warm Springs Tribe with 150 PIT tags. Mike noted that they are monitoring the passage of tagged lamprey through the Project Area. He said they have counted about 23,000 adult lamprey at Priest Rapids Dam, about 22,700 at Wanapum Dam, and about 17,400 at Rocky Reach Dam. He said there are a lot of adult lamprey in the river even though salmonid numbers are low.
- D. **Identification of Testable Hypotheses Addressing Lamprey Fate in Reservoirs** – Tracy Hillman summarized the efforts from the last PRFF meeting where members identified hypotheses regarding the possible effects of project operations on the “fate” of adult lamprey within the reservoirs. Those hypotheses were:
- Hypothesis 1 (USFWS): White sturgeon predation. If sturgeon consume adult lamprey in the Project Area, this could be an issue even if it is not directly linked to project operations.
  - Hypothesis 2 (Colvilles): Changes in operations at the dam associated with salmonid passage could affect Pacific lamprey entrance efficiency.
  - Hypothesis 3 (Colvilles): 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.

Bob indicated that the Yakama Nation does not agree with the Federal Power Act's (FPA) definition of baseline condition and stated that about 5-20% of the adult lamprey counted at Wanapum are unaccounted for. He said this could be related to reservoir spawning, predation, or disease. Mike indicated that it could also be related to overwintering of adults in the reservoir. Bob asked Mike if they are proposing to do nothing based on FPA's definition. Mike said we could do the studies, but what do we do with the results? That is, how would we change project operations if adults are lost to predation or disease? Bob questioned why we need a lot of monitoring. Monitoring was important 5-6 years ago because we had little understanding of lamprey biology. Bob noted that translocation is important and trying to measure things with high certainty seems less important. He added that we will always have uncertainty, but adaptive management allows us to move forward with management actions like translocation.

Members suggested the PRFF lamprey subgroup meet with the RRFF subgroup to discuss project operations, reservoir effects, and hypotheses. Members agreed and suggested that the Aquatic Settlement Work Group be included in the discussions. Bob recommended that

Tracy talk with Douglas PUD and John Ferguson (Chair of the ASWG) about attending the joint subgroup meeting. Bob recommended the subgroup meeting replace the PRFF meeting in October. Members present agreed. Tracy will check with Chelan PUD and Douglas PUD to see if they can attend the subgroup meeting.

- E. **Other Pacific Lamprey Items** – RD Nelle reported that the USFWS sampled five small tributaries to the Columbia River for lamprey. They found one juvenile lamprey at the mouth of Colockum Creek.

VII. **Next Meeting:** 4 October 2017 – Grant PUD Natural Resources Wenatchee Office

# Attachment 1: Grant PUD Diet Analyses in the Priest Rapids Project Area

- Sample periods: Apr. '16, Jun. '16, May '17, Jun. '17 and Jul. '17
- 27 fish sampled
- Average FL = 155 cm (61 in)

Snails	14	88%
Clams	13	81%
Smolt	6	38%
Crayfish	5	31%
Empty	4	25%
NPM	3	19%
Carp	3	19%
Sucker	3	19%
Macroinvertebrates	3	19%
Leach	3	19%
UnknownFish	2	13%
Lamprey	1	6%
Walleye	1	6%
Peamouth	1	6%
Chiselmouth	1	6%
TerrestrialInsects	1	6%

