



Grant County
PUBLIC UTILITY DISTRICT
Excellence in Service and Leadership

**Priest Rapids Fish Forum
Meeting**

**Wednesday, 7 August 2019
10:00 a.m. – 12:00 p.m.**

MEETING MINUTES

PRFF REPRESENTATIVES

Steve Lewis, USFWS
Ralph Lampman, Bob Rose, YN
Pat Wyena, Wanapum
Kirk Truscott, Jason McLellan, CCT
Mike Clement, Chris Mott Grant PUD
Tracy Hillman, Facilitator

Patrick Verhey, Laura Heironimus, WDFW
Breean Zimmerman, WDOE
Aaron Jackson, Carl Merkle, CTUIR
Keith Hatch, BIA
Tom Skiles, CRITFC/CTUIR
Erin Harris, Grant PUD

ATTENDEES

Kirk Truscott, CCT
RD Nelle, USFWS (Via Phone)
Doris Squeochs, Grant PUD
Ralph Lampman, YN (Via Phone)
Donella Miller, YN (Via Phone)
Tracy Hillman, Facilitator

Chris Mott, Grant PUD
Paul Anders, CFS (Via Phone)
Breean Zimmerman, WDOE (Via Phone)
Patrick Verhey, WDFW
Mike Clement, Grant PUD
Erin Harris, Grant PUD

Action Items:

- Tracy Hillman will provide the PRFF with a paper prepared by Steve Hemstrom regarding the mark-recapture model and its assumptions used to evaluate juvenile lamprey survival through hydroelectric projects.

- I. **Welcome and Introductions** - Tracy Hillman welcomed everyone, and participants introduced themselves.
- II. **Agenda Review** – Members reviewed and approved the agenda with the addition of an update on northern pike suppression efforts in Lake Roosevelt and an update on Ecology’s proposed rule changes.
- III. **Approve June Meeting Notes** – Draft June Meeting Notes were approved.
 - A. **Action Items from June Meeting:**
 - 1. Tracy Hillman will send the white sturgeon memo to the PRFF Policy Committee and request feedback from the Policy Committee by 8 July 2019. **Complete.**

IV. **White Sturgeon Management Plan**

- A. **Update on Juvenile Sturgeon Release** – Chris Mott reported that juvenile lamprey were released on 7 May 2019. They released 1,767 juvenile sturgeon into Wanapum Reservoir (Frenchman Coulee) and 890 into Priest Rapids Reservoir (Wanapum Tailrace). All fish were PIT tagged and scute marked well before release. Juveniles released into Wanapum Reservoir averaged 2.6 fish/pound, while juveniles released into Priest Rapids Reservoir averaged 2.9 fish/pound.
- B. **Update on Broodstock Spawning and Rearing** – Donella Miller said they were able to spawn a 5x5 matrix; however, there was one partial paternal group (i.e., one female was crossed with four males, not five). Thus, there are 24 paternal groups. She said spawning went well and fish are being moved from incubation to rearing tanks. Families are rearing separately.
- C. **Three-Year Check-in with Policy Committee** – Tracy Hillman reported that the Policy Group unanimously approved the PRFF recommendation to continue implementing the White Sturgeon SOA with no changes.
- D. **Juvenile Index Monitoring** – Chris Mott noted that they will begin juvenile sturgeon index monitoring on 2 September and conclude on 25 September 2019. Monitoring will be similar to past efforts with one boat working in Priest Rapids Reservoir and two boats working in Wanapum Reservoir.
- E. **Other White Sturgeon Items** – Paul Anders (CFS) reported that the Columbia River Inter-Tribal Fish Commission (CRITFC) is: 1) updating its large White Sturgeon (WST) genetic inventory from the Columbia Basin, 2) developing and applying SNP (single nucleotide polymorphism) markers for WST genetic analysis, and 3) Genidaqs/CFS and other entities are involved in sequencing the entire white sturgeon genome.

Columbia White Sturgeon Sample Inventory - CRITFC is currently compiling an inventory of its white sturgeon genetic samples, mostly from the Columbia Basin. The updated inventory indicates a total of approximately 10,500 samples. Consistent with the design and intent of ongoing CRITFC sturgeon project work, nearly all samples in the current collection (92.1%) are from locations in the Columbia River, compared to 6.6% from Snake River collection locations and the remaining 1.3% from areas outside these two rivers.

WST SNP markers - During recent years CRITFC has been developing and using a panel of over 300 SNP markers for white sturgeon. These new markers may provide additional resolution when characterizing white sturgeon populations and population structure relative to the standard 13 microsatellite marker previously available for white sturgeon.

WST Genome sequencing - Genidaqs/Cramer Fish Sciences, UC Davis (Genome Variation Lab), USFWS, and other entities recently completed sequencing the entire white sturgeon genome. CRITFC also has a draft white sturgeon genome assembly and will be working with other entities to compare and improve genome assembly for WST across their range. A

primary follow-up objective for CRITFC is to test for a sex determining region of the genome. These big projects represent important initial steps toward understanding functional genomics (how specific genes and different regions of the genome contribute to different biological processes and performance). Little is currently known about functional genomics in sturgeons. Newly available sequence information (data) will be helpful for developing additional genetic markers for various purposes. More detailed information about these sturgeon genome projects is currently available if interested and future updates are expected.

V. Pacific Lamprey Management Plan

- A. **Adult Lamprey Collection, Transport, and Coordination** – Mike Clement reported that he has been coordinating with Douglas PUD on collecting and transporting adult lamprey captured at Priest Rapids Dam. He said Grant PUD soaked four lamprey traps on Monday, 5 August. He added that adult lamprey collected during the first three weeks of trapping will be handed to Douglas PUD for their program. Adult lamprey collected during the last three weeks of trapping (beginning on 26 August) will be transported by Grant PUD to Kirby Billingsley Hydro Park, which is located upstream from Rock Island Dam. Mike said they captured 15 adult lamprey during the first two nights of trapping. He said the adult lamprey run this year is lagging with only 30-70 adult lamprey passing Priest Rapids Dam over a 24-hour period. At this time in past years, they have observed about 100 adult lamprey passing during a 24-hr period. He added that so far, 1,246 adult lamprey have passed Priest Rapids Dam and 757 have passed Wanapum Dam. Interestingly, only 584 adult lamprey have been counted at McNary Dam. Mike said he and Chelan PUD have been discussing this discrepancy with the Army Corps of Engineers (ACOE). According to Mike, ACOE only monitors adult lamprey passage during daylight hours. In addition, lamprey can pass behind the counting slot at McNary Dam (the ACOE raise picket leads to allow lamprey passage behind the counting slot). At Bonneville Dam, they provide adjusted counts, which are reported to the Fish Passage Center.
- B. **Yakama Nation Translocation Work** – Ralph Lampman said they collected adult lamprey at Bonneville Dam (peak catch on 13 July), The Dalles Dam (peak catch on 19 July), and John Day Dam (peak catch on 21 July). These fish will be translocated to the Yakima, Wenatchee, Methow, and Klickitat rivers. This work is part of the Tribes master plan.
- C. **Monitoring Juvenile Lamprey with Acoustic Tags** – Ralph Lampman gave a brief overview of the acoustic tagging pilot study the Pacific Northwest National Laboratory (PNNL) conducted in the John Day Reservoir in 2017. He then described the juvenile lamprey acoustic tagging study they (Yakama Nation, USGS, and Bureau of Reclamation) are conducting within the mid and lower Yakima River. He said detections have been low, likely because of the 5-second burst rate of the tags. He suggested that the PRFF needs to start considering a tagging study at Priest Rapids and Wanapum dams. Mike Clement indicated that when the technology and methods allow, Grant PUD will evaluate survival and specific passage routes of juvenile lamprey at the dams (not within the reservoirs). Ralph indicated that PNNL has developed a tag for juvenile lamprey. PNNL is currently working on improving battery life, which will improve tag longevity and burst rates. Tracy Hillman identified some of the assumptions associated with the CJS mark-recapture model and noted that Steve Hemstrom prepared a paper describing the model and assumptions for conducting a juvenile lamprey survival study. Tracy will share the paper with the PRFF. Members also discussed the availability of test fish (a survival study will likely require about 5,000 juvenile lamprey). Ralph suggested juvenile lamprey collected offsite (e.g., within the Yakima River or Umatilla River) can be used in the survival studies. Other members disagreed and indicated that active migrating juvenile lamprey need to be collected from the Columbia River at the projects (similar to salmonid survival studies). Members also indicated

that the best time for a juvenile lamprey survival study could be when Grant PUD conducts their next salmonid survival verification study, if a source of juvenile lamprey becomes available. Telemetry equipment used to detect salmonids could be used to detect juvenile lamprey. The next survival verification study within the Priest Rapids Project Area will be in 2025.

D. **Other Pacific Lamprey Items – None.**

VI. **Northern Pike**

Northern Pike Removal in Lake Roosevelt – Kirk Truscott said the tribes will be testing the use of setlines to capture northern pike in Lake Roosevelt. In addition, the Colville Tribes and Chelan PUD will be using gillnets in the lake to capture northern pike this month. Mike Clement said Grant PUD will use eDNA sampling to evaluate the presence or absence of northern pike in the Priest Rapids Project Area. They will collect eDNA sample from four different areas within the project area. In addition, Grant PUD will look for northern pike during their annual northern pikeminnow sampling and predator control programs (i.e., set lines, beach seining, electrofishing, etc.).

VII. **Washington Department of Ecology Proposed Rule Changes**

Proposed Rule Changes for Total Dissolved Gas – Breean Zimmerman described Ecology's proposed rule changes for total dissolved gas (TDG) (see Attachment 1). The proposed rule change will affect all dams on the Columbia River. Currently, there is a temporary rule change in place that is only for the lower four Columbia River and lower four Snake River federal dams. The rule change is only for the spill season. Comments on the rule change are due by 26 September 2019.

VIII. **Next Meeting:** If necessary, the next PRFF meeting will be on Wednesday, 4 September 2019 at the Grant PUD Natural Resources Office in Wenatchee, WA.

Attachment 1

In support of salmon recovery, Ecology seeks feedback on proposed rule changes

Proposed changes aim to help increase salmon migration in the Snake and Columbia rivers, support orca and salmon recovery

OLYMPIA – Snake and Columbia river hydropower dams may soon be allowed to spill more water over the dams at crucial times to help juvenile salmon migration. The Washington Department of Ecology is proposing to change the water quality standard for Total Dissolved Gas during the spring spill season on the two rivers.

“Increased spill over the dams has the potential to be a win-win for salmon, orca, and power generation,” said Heather Bartlett, Ecology’s Water Quality program manager. “We are at a critical time for our orca and salmon. This is a change we can make relatively quickly to help with the long-term recovery efforts.”

Taking action to allow more spill over the dams is one of the [Southern Resident Orca Task Force recommendations](#) to the Governor. Salmon runs on the Snake and Columbia rivers include Chinook, the Southern Resident orca’s primary food.

Increasing spill over dams leads to an increase in gases in the water, mainly nitrogen and oxygen. There is a water quality standard for this, called Total Dissolved Gas, and Ecology is proposing to change the amount of gases allowed in the water for the Snake and Columbia rivers.

Studies show dam spillways are safer routes for fish migrating downstream, when compared to passing through the turbines. This means spilling more water at specific times could allow more juvenile salmon to make it to the ocean, eventually leading to more prey for orca and more adult salmon returning to spawn.

The proposed changes are specific to the spring spill season – April through June – when large amounts of runoff from melting snowpack typically lead to high water flows in the river systems.

There is a risk with increasing the amount of gases, as it can harm aquatic life through a condition called ‘gas bubble trauma’. The proposed changes aim to minimize the potential negative effects, while improving salmon passage and survival.

Ecology is accepting feedback on the proposed changes from July 31 through Sept. 26. More details on the proposal, information on public hearings, and instructions on how to submit comments are available on Ecology’s [rulemaking webpage](#).

Ecology made a [short-term change](#) to the Total Dissolved Gas standard earlier this year, to support the new agreement for flexible spill operations at the four lower Columbia and Snake river dams. The changes Ecology is proposing now would be permanent.

In addition to proposing changes to the Total Dissolved Gas standards, Ecology is taking comment on three other revisions to different parts of the water quality standards. Ecology is proposing these other changes due to a 2018



McNarry Dam is one of the hydropower projects in the Columbia River Basin that could spill more water to help with juvenile salmon migration. Photo: U.S. Army Corps of Engineers

legal agreement with U.S. EPA and the Northwest Environmental Advocates, and to clarify the descriptions of marine water aquatic life designations. The full description of these changes is in the rulemaking proposal.

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