



## Priest Rapids Fish Forum

### Conference Call

Wednesday, 1 March 2023

9:00 a.m. – 12:00 p.m.

### FINAL MINUTES

#### PRFF Members

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RD Nelle, USFWS  
Ralph Lampman, YN  
Nathan and Clayton Buck, Wanapum  
Jason McLellan, Bret Nine, CTCR  
Mike Clement, Chris Mott, Grant PUD  
Tracy Hillman, Facilitator

Patrick Verhey, Laura Heironimus, WDFW  
Breean Zimmerman, WDOE  
Aaron Jackson, Carl Merkle, CTUIR  
Marchelle Foster, BIA  
Tom Skiles, CRITFC/CTUIR

#### Meeting Attendees

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Ralph Lampman, YN  
Mike Clement, Grant PUD  
RD Nelle, USFWS  
Jason McLellan, CTCR  
Breean Zimmerman, WDOE  
Dave Robichaud, LGL/Blue Leaf  
Ben Cox, LGL/Blue Leaf  
Erin Harris, Grant PUD

Laura Heironimus, WDFW  
Nathan Patterson, YN  
Patrick Verhey, WDFW  
Chris Mott, Grant PUD  
Chad Jackson, WDFW  
Paul Grutter, Golder  
Bao Le, HEC, LLC  
Tracy Hillman, Facilitator

#### Action Items:

- Mike Clement will provide Bao Le with Matt Young's contact information.
- PRFF comments on the draft 2022 white sturgeon annual report are due to Grant PUD by 7 March 2023.
- PRFF comments on the draft 2022 Pacific lamprey annual report are due to Grant PUD by 7 March 2023.

- PRFF comments on the draft 2022 resident fish report are due to Grant PUD by 21 March 2023.
- PRFF comments on the draft 2022 aquatic invasive species annual report are due to Grant PUD by 1 April 2023.

### **Decision Items:**

- None.

### **I. Welcome and Introductions**

Tracy Hillman welcomed everyone to the meeting and identified all attendees.

### **II. Agenda Review**

The PRFF reviewed and approved the March agenda.

### **III. Approve September Meeting Notes**

The PRFF reviewed and approved the 4 January 2023 meeting minutes.

### **IV. Review Action Items**

The PRFF reviewed the following action item from the January meeting:

- PRFF comments on the draft 2022 bull trout annual report are due to Grant PUD by Friday, 6 January 2023. **Completed. Grant PUD submitted the final report to FERC (Federal Energy Regulatory Commission) on 17 January 2023.**

### **V. White Sturgeon**

**White Sturgeon Rearing Update** – Nat Patterson reported that there are about 4,000 juvenile sturgeon on station at the Yakama Nation Sturgeon Hatchery. Based on sampling on 27 February, fish are growing and average 4.2 fish per pound. Mike Clement, Chris Mott, and Nat Patterson will begin tagging and testing fish for autopolyploidy on 27 March.

**2022 White Sturgeon Annual Report and Presentation** – Mike Clement indicated that Grant PUD sent the draft 2022 White Sturgeon Annual Report to the PRFF on 6 February. Comments are due to Grant PUD by 7 March 2023. Mike reminded the group that this report is the Five-Year Biological Objectives report and therefore includes a summary of results over the past five years. It includes results from two years of adult indexing as well as five years of juvenile index monitoring. Mike then introduced Paul Grutter, who provided a presentation that summarizes information contained in the draft 2022 report.

Paul Grutter gave a presentation titled, “2022 Grant PUD White Sturgeon M&E Summary” (see Attachment 1). Paul provided a brief overview of the presentation and gave a brief description of the project area. He then showed Columbia River temperatures and discharges within the project area in 2022 and identified when fish were released and when different aspects of monitoring occurred. He also described the tagging and release activities that occurred in 2022. Paul identified the number and size (length and weight) of fish released at each location in the project area. He noted that most fish had fin deformities. Paul indicated that broodstock were collected downstream from McNary Dam during 16-20 May and 23-27 May 2022. Six females and six males were transported to the Yakama Nation Sturgeon Hatchery and those fish were spawned on 15 June 2022. Sufficient gametes were collected to produce 36 genetic families.

Next, Paul described juvenile indexing work conducted in 2022 in the project area. He briefly described the objectives, sampling design, sampling locations, gear used, and sampling effort. He showed the number of juveniles captured by brood year in both Wanapum and Priest Rapids reservoirs over time (i.e., BY 2010-2021). He also showed the distribution of catch and CPUE (Catch Per Unit Effort) among sampling sites within each reservoir and the catch by river mile. In addition, he showed the length frequency of fish capture by brood year within each reservoir. These data are important as they show fish recruitment to the gear and away from the gear based on fish size. Paul described the mark-recapture methods used to estimate abundance and survival and the variation in recapture probabilities over time by brood year and reservoir. In general, survival from release to age-1 is less than 50%, while survival for fish older than age-1 is greater than 90%. Paul also showed abundance estimates by reservoir. Finally, Paul showed growth rates for each brood year within each reservoir. Growth appears to reach an asymptote in Priest Rapids Reservoir; an asymptote is less apparent in Wanapum Reservoir. However, it is important to point out that growth rates need to be evaluated in light of gear selectivity.

Paul concluded by stating that they experienced a reduced catch of juvenile sturgeon in 2022 compared to 2021. Brood years 2017 and 2018 are the dominant year classes in Wanapum reservoir, while brood year 2014 is the dominant year class in Priest Rapids reservoir. Earlier year classes have recruited to adult sampling gear. Paul added that juveniles are most abundant in the upper reservoirs and first-year survival is lower in Priest Rapids reservoir than in Wanapum reservoir. Growth rates of juveniles in Priest Rapids reservoir asymptote at a lower fork length than do sturgeon in Wanapum reservoir. Growth rates are also lower in the upper sections of both reservoirs where densities are highest.

Laura Heironimus inquired about the “unknown” fish and asked whether there was work to track down those fish through a tag search. Paul responded that he did search PTAGIS and found no record of the fish. This may be because the fish shed their tags or the tags were not uploaded to the database. He indicated that some of these “unknown” fish have been recaptured several times, but unfortunately, they cannot include these fish in their survival models. Jason McLellan indicated that they release some PIT-tagged juveniles in the Upper Columbia but do not upload those tag codes to PTAGIS. Paul will send a list of unknown PIT tag numbers to Jason so that he can check his records for them. Ralph Lampman asked whether river flows could be added to the survival model as a covariate. Paul said he will look into that. Tracy Hillman asked what measures are implemented to warn consumers that a PIT tag may be in the flesh of the sturgeon. Paul indicated that there is signage warning fishermen to remove PIT tags during cleaning of catch. He added that consuming a PIT tag should not be harmful to the consumer. Laura said WDFW adds PIT-tag warnings to their fliers.

Tracy thanked Paul for the presentation and reminded members that comments on the draft white sturgeon annual report are due to Mike Clement by 7 March 2023.

**Other White Sturgeon Items** – No other White Sturgeon items were discussed.

## **VI. Resident Fish**

**2022 Resident Fish Report and Presentation** - Mike Clement reported that Grant PUD sent the draft 2022 Native Resident Fish Management Plan Priest Rapids Project Survey and 15 Year Biological Objectives Status Report to the PRFF on 21 February. Comments are due to Grant PUD by 21 March 2023. Mike added that this work happens every five years. He then introduced Chad Jackson, who provided a presentation that summarizes information contained in the draft report.

Chad Jackson gave a presentation titled, “2022 Priest Rapids Project Resident Fish Survey” (see Attachment 2). Chad began by sharing language from the Priest Rapids Native Resident Fish Management Plan, which requires resident fish sampling within the Priest Rapids Project Area every five

years beginning in 2012. Chad then provided an overview of the sampling regime, standardized survey design, and locations of sampling sites within both reservoirs. He then talked briefly about data analysis including assessment of species composition, CPUE, length, relative weight, condition factor, biomass, and Index of Biotic Integrity (IBI).

Chad reported that the catch in 2022 was lower than catches in previous years. Most of the fish captured in 2022 consisted of largescale suckers, northern pikeminnow, and redbreast shiners. Native species made up most of the catch (92.8%); the most common non-native species was smallmouth bass. No sand rollers or walleye were captured in 2022. Chad then compared catches, CPUE, relative weight, and condition factor of the three common species across survey years. He also compared IBI scores across years and noted that the biotic integrity in 2022 was classified as “good” on the IBI scale. Most survey years indicate a “good” condition within the project area.

Chad concluded by stating that resident fish surveys will be repeated in 2027. He said they will work with co-managers and implement management actions if applicable and will modify the IBI model to be specific to the project area.

Ralph Lampman asked about the equation used to estimate relative weight. Chad responded that both the relative weight and Fulton’s condition factor equations are identified in the report. He added that the length-specific standard weight used to estimate relative weight is predicted by a length-weight regression for each fish species. Those length-specific standard weights are provided in the Fisheries Techniques book (Murphy and Willis 1996; full citation is provided in the report).

Tracy thanked Chad for the presentation and reminded members that comments on the draft resident fish report are due to Mike Clement by 21 March 2023.

**Other Resident Fish Items** – No other Resident Fish items were discussed.

## **VII. Pacific Lamprey**

**2022 Annual Pacific Lamprey Report and Presentation** - Mike Clement stated that Grant PUD sent the draft 2022 Pacific Lamprey Comprehensive Annual Report to the PRFF on 6 February. Comments are due to Grant PUD by 7 March 2023. Mike introduced Bao Le, who provided a presentation that summarizes information contained in the draft report.

Bao Le gave a presentation titled, “Pacific Lamprey Management Plan (PLMP) 2022 Comprehensive Annual Report” (see Attachment 3). After providing a brief outline for the presentation, Bao talked about the origins of the report, requirements of the report, and the organization of the report. He then described report content development and showed that tables describing lamprey activities in the basin are organized by topics (e.g., general lamprey biology/ecology, migration in rivers, adult passage, juvenile passage, artificial propagation, etc.). Importantly, the tables indicate whether actions taken at Wanapum and Priest Rapids dams are similar to actions taken at other projects, whether actions taken at other projects would be appropriate at Priest Rapids and Wanapum dams, and whether the actions would be cost effective.

Bao summarized some of the results and identified the number of Pacific lamprey activities implemented basin wide. He said 92 projects were implemented basin wide in 2022. In general, implementation of activities in the project area is on schedule and consistent with the PLMP. In addition, where appropriate, PLMP activities are consistent in scope and scale to basin-wide activities. Bao then identified the primary entities implementing actions within the basin and pointed out trends in activities associated with general biology and ecology, adult and juvenile passage, artificial propagation and

translocation, and policy/recovery activities. He also briefly discussed general division of activities and coordination among implementers.

Bao followed up with an overview of the 15-Year Biological Objectives Status Report, which is a 401 Certification requirement every five years. He identified the objectives of the report and noted where Grant PUD is currently in meeting those objectives. He stated that Grant PUD continues to make steady progress through the implementation of the Pacific Lamprey Management Plan, including adult monitoring and evaluation, implementation of the trap-and-transport Statement of Agreement (SOA), adult and juvenile protective activities, and participation in regional research and recovery forums.

Bao concluded the presentation by noting the following Grant PUD 2023 activities:

- Continue Project-wide passage efficiency monitoring and calculations at Priest Rapids and Wanapum dams (HDX-PIT).
- Test, operate, and maintain HDX readers at Priest Rapids and Wanapum dams.
- Continue trap and transportation per the SOA.
- Continue regional participation in lamprey working groups.
- Continue collaborating with regional researchers to support annual reporting.

Ralph Lampman noted that he did not see ODFW and the CTCR listed in the points of contact. Ralph indicated that those groups are working with lamprey. Bao responded that he reached out to ODFW and said he will reach out to them again. Bao indicated that he did not have a contact for CTCR. Ralph suggested that he reach out to Matt Young. Mike Clement said he will provide Bao with Matt's contact information.

Mike stated that they are using a different model to estimate passage efficiency. The previous model produced estimates with large confidence intervals (CIs). The new model does not incorporate a correction factor based on upstream detections to estimate passage efficiency and CIs. Thus, the new model produces estimates with smaller CIs; however, the new estimates are lower than those estimated using the previous model. To describe the new model, Mike introduced Ben Cox, who developed the new model.

Ben Cox gave a presentation titled, "Revised Adult Pacific Lamprey Fish Passage Efficiency Estimates at Priest Rapids and Wanapum Dams" (see Attachment 4). Ben provided some background, including an overview of the previous method (Cormack-Jolly-Seber [CJS] model) and how it could generate efficiencies greater than 100%. This exceedance of 100% was the impetus to develop a new model that constrains fish passage efficiency (FPE) estimates between 0 and 100%. The new approach uses a modified CJS model and includes a Bayesian framework for calculating confidence intervals.

Following a description of the new model, Ben compared FPEs using the new and previous models. In general, the previous model tended to overestimate FPE at both dams. The previous model tended to overestimate FPE because it did not account for imperfect detection at entrance/ladder arrays. The new model accounts for detection efficiency at every array and constrains FPE to be between 0 and 100%. Ben added that estimates are affected by lamprey behavior (e.g., drop backs and dip ins).

Ralph asked whether the new model addresses fallback. Ben responded that the new model currently does not address fallback. Addressing fallback would add complexity to the current model. Ralph also asked for additional clarification on how the model uses information from arrays in the middle of the fishways. Ben explained how the model uses those data.

Tracy thanked Bao and Ben for the presentations and reminded members that comments on the draft Pacific lamprey report are due to Mike Clement by 7 March 2023.

**Other Pacific Lamprey Items** – Tracy Hillman noted that the Pacific lamprey annual report is getting to be quite large. He asked whether there is a way to shorten the annual report by referencing previous 5-year reports. That is, an extensive comprehensive report is prepared every five years. Annual reports can be shortened by not repeating what is in the comprehensive report. The annual report can simply reference the previous 5-year comprehensive report. Mike Clement agreed and said a tremendous amount of work goes into preparing the annual reports. Bao Le asked what the forum would like to see in the basin-wide research section. Ralph indicated a brief summary is all that is needed in the basin-wide research section. Members present agreed that the annual report can be shortened and it should reference the previous 5-year report where necessary. Mike said he will work on shortening the 2024 report.

### **VIII. Administration**

Ralph Lampman reported that Donella Miller has taken a position with CRITFC (Columbia River Inter-Tribal Fish Commission). Dave Blodgett III will fill Donella's position until the Yakama Nation hires a new director.

### **IX. Adjourn**

With no additional business to discuss, Tracy Hillman adjourned the meeting at 12:00 pm.

### **X. Next Meeting**

The next meeting of the PRFF will be on 5 April 2023.