

Memorandum

To: Priest Rapids Coordinating Committee Hatchery Subcommittee Document Date: January 21, 2025

From: Tracy Hillman, HCP Hatchery Committees Chairman and PRCC Hatchery Subcommittee Facilitator

cc: Caitlin Burd and Larissa Rohrbach, Anchor QEA

Re: Minutes of the December 18, 2024, PRCC Hatchery Subcommittee Meeting focused on the White River (WR) Hatchery Program

The Priest Rapids Coordinating Committee's Hatchery Subcommittee (PRCC HSC) meeting focused on the WR Hatchery Program and was held virtually on Microsoft Teams on Thursday, December 18, 2024, from 12:35 a.m. to 3:30 p.m. Attendees are listed in Attachment A to these meeting minutes.

The following Action Item Summary identifies tasks for the PRCC HSC members related to the WR Hatchery Program only. (Action items related to other ongoing business are documented in Action Item Summary and Minutes of the November 20, 2024, Joint HCP-HCs and PRCC HSC meeting.)

Action Item Summary

PRCC Hatchery Subcommittee – WR Hatchery Program

- Mike Tonseth will inquire about data outputs and potential future uses of Mark Sorel's Wenatchee Spring Chinook Salmon life-cycle model (Item I-A) (*Note: this item is ongoing*).
- Tonseth will inquire about availability of results from the Wenatchee Spring Chinook Salmon Relative Reproductive Success Study, or assembly of an executive summary, to support the WR Expert Review Panel (Item I-A) (*Note: this item is ongoing*).
- Larissa Rohrbach will identify a location for the Expert Panel to efficiently access documents (Item I-A) (*Note: this item is ongoing*).
- Grant PUD will assemble a draft report and model code for the Comparative Limiting Life Cycle (CLIC) model and population viability analysis (PVA) as discussed in the "Comparative Limiting Life Cycle (CLIC) Model [and PVA]" presentation for 30-day review in January or February 2025 (Item II-A).
- Keely Murdoch will distribute her revisions to Grant PUD's *Assessment of Collecting White River Origin Broodstock for a White River Spring Chinook Salmon Supplementation Program in the Wenatchee River Basin, Washington State (2025 WR Broodstock Feasibility)* document for subcommittee review prior to the January 15, 2025, meeting (Item II-B).

- Todd Pearsons will identify the documents and context that were used to answer sub-questions 3.1, 3.3, 3.4, 3.7, 3.8, and 3.9 for addition to the Expert Panel Reading List by the January 15, 2025, meeting (Item II-F).

Review Items

- None

Finalized Documents

- None

I. Welcome

A. Agenda, Approval of Past Minutes, Action Item Review

Tracy Hillman welcomed the PRCC HSC and reviewed the agenda. *Steelhead Encounters at Priest Rapids Hatchery* (Item II-E) was added to the agenda.

The revised meeting minutes from November 20, 2024, were reviewed and approved by parties that attended.

Action items from the PRCC HSC November 20, 2024, meeting were reviewed. *(Note: Italicized text below corresponds to action items from the previous meeting.)*

- *Mike Tonseth will inquire about data outputs and potential future uses of Mark Sorel's Wenatchee Spring Chinook Salmon life-cycle model. (Note: this item is ongoing.)*
- *Tonseth will inquire about availability of results from the Wenatchee Spring Chinook Salmon Relative Reproductive Success Study, or assembly of an executive summary, to support the WR Expert Review Panel. (Note: this item is ongoing.)*
- *Grant PUD will assemble a compilation of maps or aerial photos to be added to the Expert Panel's essential reading list. (Note: this item is ongoing.)*
- *Larissa Rohrbach will identify a location for the Expert Panel to efficiently access documents. (Note: this item is ongoing.)*
- *Grant PUD will assemble a report for the CLIC model and PVA as discussed in the "Comparative Limiting Life Cycle (CLIC) Model [and PVA]" presentation. The report will be distributed to subcommittee members for review prior to the December 18, 2024, meeting. A 30-day review period will extend until January 20, 2025.*
 - This action item was discussed in the meeting and updated accordingly.
- *Tim Taylor will distribute the corresponding CLIC model code and spreadsheets to the subcommittee prior to the December 18, 2024, meeting.*

- This action item was discussed in the meeting and updated accordingly.
- *The PRCC HSC will provide text on potentially permissible options to Grant PUD's 2025 WR Broodstock Feasibility by December 13, 2024. The revised document will be discussed at the December 18, 2024, meeting.*
 - This action item is complete.

II. PRCC HSC – White River Spring Chinook Hatchery Program

A. White River Spring Chinook Salmon Life-Stage Productivity Assessment (and PVA) Report – Discuss Comments

Grant PUD will assemble a draft report and model code for the CLIC model and PVA as discussed in the “Comparative Limiting Life Cycle (CLIC) Model [and PVA]” presentation for 30-day review in January or February 2025.

Tim Taylor is currently integrating the straying component into the data analyses. Keely Murdoch and Andrew Murdoch proposed updates to egg-to-fry survival data. Mike Tonseth proposed alternative analysis approaches to evaluate fecundity. These changes have been incorporated into the report and did not result in major changes to results. Egg-to-fry survival saw a 4% increase when non-utilized historical spawning habitat was excluded from analyses. Fecundity was changed by 60 eggs after integrating the proposed updates. Updates to the data have resulted in an extension of time it will take for the aggregate to reach 100% extinction probability.

B. 2025 WR Broodstock Feasibility

Grant PUD's 2025 WR Broodstock Feasibility was distributed for subcommittee review on December 13, 2024. Tonseth provided comments that were discussed during the meeting.

Tonseth commented in the Broodstock Program Target Projections section (subsection Handling Stress at Traps) that data not adjusted for tag loss confound the utility of the assessment. Presented values will have less utility in decision-making if the data cannot be adjusted for bias. Taylor said this assumption was stated in the methods section of the document. The analysis was not conducted to estimate the true effect of handling in terms of mortality. Rather, it is to provide an expectation that mortality is within a reasonable range of 3% to 15% and to help visualize what mortality could be on non-target populations. Tonseth said it may be beneficial to frame analyses around all fish collected in the Nason Creek programs as opposed to only fish that were passive integrated transponder tagged at Priest Rapids Dam.

Taylor asked for clarification on Tonseth's comment regarding handling mortality. The intent was to compare theoretical mortality rates to permit conditions; however, it has been difficult to determine

the indirect take limit of adults. The 2% mortality rate is relative to juvenile trapping and does not serve as the best comparison to adult trapping.

Tonseth noted that the 2% juvenile mortality rate is in reference to the population rather than the spawning aggregate. Cited impacts and comparisons must be clearly identified as being linked to the spawning aggregate or the population. Taylor said that all spawning aggregates would be handled because fish are collected at Tumwater Dam. The estimate would therefore be at a population level. Tonseth said the mortality rate, with regard to the corresponding permit, only pertains to juveniles and adults in the conservation fishery. The current permit does not cover mortality resulting from broodstock collection at Tumwater Dam and does not identify a take limit associated with handling.

Brett Farman said a take limit should be stated in the permit. It is an oversight on behalf of the National Marine Fisheries Service (NMFS) if that limit is not present. The 2% mortality rate is a general guideline for handling. The guideline may be modified depending on the location of handling and the proximity of that location to the spawning grounds. The mortality rate guideline may be higher in the upper reaches of tributaries and the lower regions of the mainstream of rivers.

Taylor said language has been updated in the Alternative Capture Methods section (subsection Weir) to acknowledge that previous permitting limitations may not exist in the future. It was not the intent to promote the notion that the permanent weir would not be permissible. Murdoch said the Chelan County Shoreline Master Program (SMP) in 2012 designated all shorelines on the WR as natural shorelines. Aquaculture was thus prohibited within the area, and the county was unable to issue a permit. The current SMP approved in 2021 now states that noncommercial aquaculture is permissible in areas designated as natural shorelines. The SMP states that permitting should be streamlined for facilities that support the propagation and acclimation of salmonid species covered by the Upper Columbia River Salmon Recovery Plan.

Tonseth commented in the Discussion section that it may be beneficial to consider constructing a weir in the upper watershed. The subcommittee has many years of data demonstrating the distribution of spring Chinook Salmon spawners in the WR Basin. Most spawners are located in the WR at the confluence of the Napeequa River. A weir could be located in the WR near the upstream distribution of Sockeye Salmon spawning and near the downstream distribution of spring Chinook Salmon spawning. This location would also minimize encounters with Bull Trout and provide flow conditions that are conducive to weir operation.

Pearsons asked whether many Sockeye Salmon or Bull Trout move above the confluence of the Napeequa River. Tonseth said there is a robust spawning population of Bull Trout in the upper WR. There are populations of Bull Trout that linger downstream and move upstream later in the year. In general, 2,000 to 5,000 Sockeye Salmon move into the Napeequa River. Spring Chinook Salmon

enter the WR before Sockeye Salmon, with Sockeye Salmon migrating through Tumwater Dam in mid-to-late July. Locating a weir in the upper basin may allow for spring Chinook Salmon to be collected before Sockeye Salmon arrive in the area.

Kirk Truscott said that weir picket spacing has been altered in other locations to allow Sockeye Salmon to pass through and exclude spring Chinook Salmon. He asked what proportion of spring Chinook Salmon redds occur above or below the Napeequa River confluence. Tonseth said that information should be in the annual report. The majority of spring Chinook Salmon spawn above the Napeequa River confluence. Hillman said geo-located data for individual spring Chinook Salmon redds are available for analysis.

Tonseth said a WR captive brood program would not likely occur because redds would need to be hydraulically pumped to require enough eggs to meet collection goals. Pearsons clarified that the option considered was a captive broodstock program rather than captive rearing.

Pearsons said the Other Approaches section focuses on the likelihood of implementing composite-broodstock based on genetic distinctiveness. Tonseth said it is important to consider whether implementing composite-broodstock collection is worth risking the genetic extinction of the WR population. A subset of WR program fish that have been genetically assigned would be supplemented with natural-origin fish from the Chiwawa or Nason Creek programs to meet broodstock needs. Washington Department of Fish and Wildlife has been reluctant to implement composite-broodstock due to concerns that it may not sufficiently promote genetic diversity.

Murdoch has started providing edits to the document and has proposed a restructuring of the report. The report may be structured around two main sections: 1) Tumwater Dam; and 2) White River Collection. The Tumwater Dam section will discuss two further options: collection of Wenatchee River broodstock and WR-specific broodstock. The White River Collection section will address temporary and permanent weirs as well as the use of tangle netting and Merwin traps. Farman said he has no major concerns at this time regarding NMFS support of the document. Murdoch will distribute her revisions to Grant PUD's 2025 WR Broodstock Feasibility document for subcommittee review prior to the January 15, 2025, meeting.

C. DECISION – WR Spring Chinook Salmon Carrying Capacity

Hillman reminded the subcommittee that the Murdoch et al. *Compilation and Summary of White River Spring Chinook Salmon Carrying Capacity* document was sent out for review on November 14, 2024. No comments were received. The PRCC HSC approved report for distribution to the Expert Panel.

D. Next Steps to Approve WR Expert Panel Package

White River Maps and Photographs

Rod O'Connor shared Grand PUD's *Maps and Photographs of the White River* document with the subcommittee. The document includes a collection of visual aids to help familiarize the Expert Panel with the WR. This document has been uploaded to the PRCC Hatchery Subcommittee SharePoint site. Subcommittee members may add content directly to the document.

Draft Reading Content List

The PRCC HSC discussed the Draft Reading Content List. Materials that are currently under development are highlighted in yellow. Pearsons said it would be beneficial to create a list of documents that pertain to the sub-questions that the Expert Panel will not directly address. These documents should be clearly identified to demonstrate what information was used to answer these questions.

Pearsons will identify the documents and context that were used to answer sub-questions 3.1, 3.3, 3.4, 3.7, 3.8, and 3.9 for addition to the Expert Panel Reading List by the January 15, 2025, meeting. PRCC approval of the complete Expert Panel package is set to occur in January 2025. Hillman will begin reaching out to candidates upon the approval of the Expert Panel package.

III. Administration

A. Next Meetings

The next meetings of the HCP-HCs and PRCC HSC will be held on January 15, 2025, February 19, 2025, and March 19, 2025.

IV. Attachments

Attachment A: List of Meeting Attendees

Attachment A
List of Meeting Attendees

Name	Organization
Caitlin Burd ^o	Anchor QEA
Tracy Hillman ^o	BioAnalysts, Inc.
Brandon Kilmer ^o	Douglas PUD
Rod O'Connor ^{‡o}	Grant PUD
Deanne Pavlik-Kunkel ^o	Grant PUD
Todd Pearsons ^{‡o}	Grant PUD
Tim Taylor ^{*‡o}	Grant PUD
Lindsay Ciepiela ^o	Washington Department of Fish and Wildlife
Katy K Shelby ^o	Washington Department of Fish and Wildlife
Mike Tonseth ^{*‡o}	Washington Department of Fish and Wildlife
Charles Frady ^{*‡o}	U.S. Fish and Wildlife Service
Matthew Maxey ^{*‡o}	U.S. Fish and Wildlife Service
Brett Farman ^{*‡o}	National Marine Fisheries Service
Keely Murdoch ^{*‡o}	Yakama Nation
Kirk Truscott ^{*‡o}	Confederated Tribes of the Colville Reservation

Notes:

* Denotes HCP-HCs member or alternate

‡ Denotes PRCC HSC member or alternate

^o Joined remotely