PRCC Hatchery Subcommittee Meeting
Wednesday, September 19, 2018
Grant PUD Wenatchee Office and via Conference Call
Meeting Summary

PRCC HSC Members	Other Participants
Matt Cooper, USFWS	Alf Haukenes, WDFW
Brett Farman, NOAA	Eric Lauver, GPUD (via phone)
Peter Graf, GPUD (alt)	Deanne Pavlik-Kunkel, GPUD
Keely Murdoch, Yakama Nation	Steve Richards, WDFW (via phone)
Todd Pearsons, GPUD	Pat Wyena, Wanapum Tribe
Mike Tonseth, WDFW	Elizabeth McManus, Facilitator
Kirk Truscott, CCT	Andy Chinn, Facilitator

Decisions

A. Approved the August 2018 meeting summary as amended.

Actions

1. .

I. Updates and Meeting Summary Review

A. August 2018 Meeting Summary – HSC members approved the August 2018 meeting summary as amended.

B. HCP – *Note: See Appendix A for summary of joint HSC-HCP discussion during September HCP meeting.*

II. White River 2026 Memo

A. Data Table Review – The HSC reviewed the White River 2026 memo, per request from the PRCC Policy Committee. HSC members identified several possible places for improvement and/or clarification in the data table (beginning on page 5 of the memo).

B. Scope of the White River 2026 Memo – HSC members discussed the scope of the assignment as originally provided by the PRCC.

- GPUD stated that the instruction from the PRCC under SOA 2013-01 is to consider the factors that will affect a decision to restart a White River spring Chinook hatchery program in 2026. The SOA does not request that the HSC consider other actions that might satisfy GPUD mitigation obligations.
- CCT and YN noted that understanding the factors that affect the White River 2026 decision will require looking at other mitigation options, not limited to a White River hatchery program.
- WDFW suggested that the discussion of mitigation options for the White River population, other than a hatchery program, could be a separate but simultaneous conversation to the narrower question of the feasibility of a White River hatchery

program.

C. Next Steps

- WDFW will check on the status of the life cycle model and if/when an update for the HSC is appropriate.
- Ross Strategic will check in with the PRCC facilitator on expected timing of the HSC's response to the White River 2026 memo request.

III. Nason Creek Acclimation Facility

A. Intake Screen Performance – GPUD provided an update on performance of the rotating intake screen at the Nason Creek Acclimation Facility. Approximately 2 months after fish were released, the screen would not turn. GPUD staff removed the gravel buildup between the debris guard and the screen but the screen still would not turn. Further inspection revealed that internal buildup of sand and fine silt was impeding the screen's movements and after cleaning, the screen is now working properly. GPUD, stakeholders, and permit agencies will meet in early October to discuss a long-term maintenance plan for the screen.

IV. Priest Rapids Hatchery

A. Real Time Otolith Reading – WDFW provided a presentation on real time otolith reading (RTOR) at Priest Rapids Hatchery. WDFW staffing changes, the complication of using RTOR with hatchery production protocols, and dependence on male fish readiness for genetic crosses are challenges to RTOR as a broodstock mating strategy. WDFW analysis indicates that ceasing RTOR and using the OLAFT and alternative broodstock collection, as well as modifying the genetic crosses, will not significantly impact pNOB. It will also provide a wider genetic sampling spread since spawning will occur over many weeks rather than just a single peak day as previously occurred with RTOR.

- CCT suggested one way to address the staffing issue with ROTR is to contract the work out (for example, to universities). This is something to consider for future broodstock collection years.
- WDFW noted that there will be opportunity to address broodstock collection in the next version of the broodstock collection protocols.

B. Decision

- HSC members agreed to proceed with PRH broodstock spawning for 2018 as outlined in the WDFW presentation.

V. Wrap Up and Next Steps

A. Next Meeting: October 17, 2018.

B. Potential Agenda Items:

- White River 2026 Memo

Meeting Materials

The following documents were provided to HSC members in advance of this meeting:

- Draft August meeting summary
- September meeting agenda
- July M&E Progress Report
- Nason Creek Rotary Trap summary
- White River Rotary Trap summary
- 2017 Chelan PUD and Grant PUD Monitoring and Evaluation Final Annual Report

Appendix A: Summary of Joint Discussion from September 2018 HC Meeting

I. Joint HCP-HC/PRCC HSC

A. Review Agenda, Review Last Meeting Action Items, and Approve the August 15, 2018 Meeting Minutes

Tracy Hillman welcomed the Hatchery Committees and asked for any additions or changes to the agenda. Kirk Truscott added an item regarding Chief Joseph Hatchery spring and summer Chinook broodstock.

The Hatchery Committees representatives reviewed the revised draft August 15, 2018 meeting minutes. Sarah Montgomery said there are some outstanding comments and revisions, which the Hatchery Committees reviewed and addressed. Hatchery Committees representatives approved the draft August 15, 2018 meeting minutes as revised.

Action items from the Hatchery Committees meeting on August 15, 2018, and follow-up discussions were addressed *(note: italicized text below corresponds to agenda items from the meeting on August 15, 2018)*:

- *Tom Kahler and Greg Mackey will provide historical information to Tracy Hillman for incorporation in the Draft Hatchery Program Timelines (Item I-A).*
  Tom Kahler said Douglas PUD is continuing to work on this action item and it can be removed from the list. Tracy Hillman said it would be helpful to include historical events on the timeline and then decide which items are statistically most important for breaking up the timeline. Mackey said finalizing the timelines will help with future data interpretation. Todd Pearsons said breaking up the timelines for analysis will result in lost statistical power and suggested analyzing the entire dataset as an adaptively managed hatchery program and providing historical changes as supplemental information regarding how the program has changed or has been adaptively managed to provide context for inference of the results.
- *Tracy Hillman will review aspects of the Independent Scientific Advisory Board's Review of Spring Chinook Salmon in the Upper Columbia River under Hatchery Committees' purview (Item I-A).*
  Hillman said the 2017 Annual Report is complete and this item will be finished next.
- *Greg Mackey will continue researching whether to include age-3 males in broodstock and discuss it with Craig Busack (National Marine Fisheries Service [NMFS]; Item I-A).*
  Mackey said this item is ongoing.
- *Keely Murdoch and Mike Tonseth will provide an update on their evaluation of the size of conservation programs in October 2018 (Item I-A).*
  Murdoch said she and Tonseth are continuing to work on this item. She said they will provide an updated version of the analysis they had done for the Nason Creek programs previously. She said additional information about differential pre-spawn mortality will also be available in late 2018 or early 2019, so those data can be incorporated into the discussion and analysis when available. Tonseth said discussions in October can focus on choosing a general direction for the conservation programs, and refined data analyses later in the year will help the Hatchery Committees come to decisions regarding the programs. Pearsons asked if the life cycle model updates and prespawn

mortality data will be incorporated into the 2019 Broodstock Collection Protocols. Murdoch said she is not sure if they will be ready in time, but based on the updated model, an interim recommendation could probably be made for the 2019 Broodstock Collection Protocols and then refined later.

- *Keely Murdoch will provide coho salmon broodstock collection protocols to Mike Tonseth by late February or early March 2019 for inclusion in the 2019 Broodstock Collection Protocols (Item I-A).*
  Murdoch said this item is ongoing.
- *Tom Scribner will discuss internally the potential to release surplus Winthrop National Fish Hatchery (NFH) brood year 2018 wild-by-wild steelhead parr at Yakama Nation (YN) restoration sites in the Methow Basin in October (Item I-A).*
  Keely said the Joint Fishery Parties (JFP) have been discussing this item. She said Yakama Nation staff and additional staff in the Methow River basin suggested sites and the JFP reviewed a summary table of potential release locations. She said this is not a Hatchery Committee item because it involves production from the USFWS program. She added Chris Pasley (USFWS) is prepared to scatter plant the fish in small numbers at multiple sites. Cooper said the surplus totals approximately 27,000 steelhead, which will be clipped during the last week of October and released in late October or early November. He said a few thousand fish will be released across about eight sites.
- *Andrew Murdoch (WDFW) will give a presentation at the October 17, 2018 Hatchery Committees meeting on prespawn mortality modeling results (Item III-A).*
  Mike Tonseth said this item is ongoing, and he will check with Andrew Murdoch whether it will be complete by the October Hatchery Committees meeting.
- *Tracy Hillman will obtain a decision from Matt Cooper whether to accept revisions to the Draft Chelan County PUD Monitoring and Evaluation Implementation Plan 2019 (Item IV-A).*
  Hillman said this item is complete.
- *Tracy Hillman will provide an update and email the revised version of the "Genetics monitoring questions for hatchery programs" to the panel of geneticists and will provide the email to the Hatchery Committees for review prior to distribution (Item II-B).*
  Hillman said this item is complete.
- *The Hatchery Committees will invite the geneticist panel to the September 19 and October 17 or November 21, 2018 Hatchery Committees meetings to discuss goals and expectations and then present conclusions (Item II-B).*
  This item will be discussed today.
- *Brett Farman will remind the Hatchery Committees representatives to send public comment distribution lists to Emi Kondo (Item III-C).*
  Hillman said this item is complete.

B. Genetic Monitoring (Tracy Hillman)

Tracy Hillman welcomed the geneticist panel (Table 1) to the meeting and thanked them for their participation. He provided an overview of the programs under the Hatchery Committees purview and the M&E Plan. He said during the most recent update of the M&E Plan, Hatchery Committees representatives recognized that input from expert geneticists could help determine whether the plan asks the correct questions of the programs and stipulates the correct monitoring procedures for these programs.

Table 1. HCP-HC/PRCC HSC Upper Columbia Genetic Monitoring Panel

Name	Organization	Contact Information
Morgan Robinson	National Oceanic and Atmospheric Administration	morgan.robinson@noaa.gov (360) 534-9338
Christian Smith	U.S. Fish and Wildlife Service	Christian_Smith@fws.gov (360) 442-7980
Ilana Koch	Columbia River Inter-Tribal Fish Commission	koci@critfc.org (208) 837-9096 x1117
Shawn Narum	Columbia River Inter-Tribal Fish Commission	nars@critfc.org (208) 837-9096 x1120
Todd Seamons*	Washington State Department of Fish and Wildlife	Todd.Seamons@dfw.wa.gov (360) 902-2765

*Did not attend this meeting

Hillman reviewed the questions that the Hatchery Committees asked of the geneticists via email and asked whether representatives present have anything to add. Todd Pearsons said the Hatchery Committees are hoping to achieve a consensus opinion from the geneticists, which will be important for long-term genetics monitoring and interpretation of results.

Hillman asked each geneticist if they have any initial questions. Morgan Robinson (National Oceanic and Atmospheric Administration [NOAA]) asked what is the best source to read for an overview of the status of these populations. Hillman said the Upper Columbia Salmon Recovery Board's (UCSRB) Hatchery Summary Report will be a good source. In addition, the Hatchery M&E Annual Report provides a good summary of the different hatchery programs and their sizes.

Christian Smith (USFWS) said additional information regarding which populations the committees are concerned about would be helpful. Hillman identified spring Chinook, summer/fall Chinook, summer steelhead, and sockeye populations within the upper Columbia River. He said the committees are generally concerned with straying among populations in the upper Columbia River. He said there are some hatchery fish that stray into the Snake and Deschutes rivers, but the biggest concern is straying among the upper Columbia populations. He said an additional concern is maintaining diversity within and among populations. Smith indicated the USFWS generally tries to come to a consensus about which populations are of most concern before starting a genetic hatchery evaluation. He said that helps define the genetic analyses and sampling if populations can be identified as of concern. Hillman said the M&E Plan does not provide much detail about the level of concern for each population but suggested keeping in mind that summer/fall Chinook are considered one population (i.e. sub-populations should be considered at the management scale). Greg Mackey suggested that the geneticist panel be provided with the older genetic population reports for steelhead and spring Chinook salmon. Hillman said genetics reports are appended to the annual report. Pearsons said some of the programs are supplementation programs. For these programs, genetic monitoring needs to evaluate effects to the target population (the population being supplemented), and the second concern is for populations that the fish may stray into. Hillman also noted that Nason Creek and Chiwawa River spring Chinook salmon are subpopulations and maintaining subpopulation or within population structure is also important to the committees.

Ilana Koch (Columbia Inter-Tribal Fish Commission [CRITFC]) had no questions. Shawn Narum (CRITFC) said it would be helpful for the different programs to be collated into a single list with summary information about the type of program, which populations it may affect, and the size. Pearsons said the Upper Columbia Salmon Recovery Board (UCSRB) report has a table with this information that provides an overview of all the hatchery programs in the upper Columbia River. Hillman said Table 3 in the M&E Report also identifies all programs in the upper Columbia River, including the purpose of each program and their production goals. Hillman asked if coho salmon should be included in this discussion. Keely Murdoch said coho salmon have a separate M&E Plan, so they should not be included. The genetic questions asked about that program are different because it is a reintroduction program. Narum agreed that coho should be excluded from these discussions.

Narum said it would be helpful to understand the committees' expectations of what the geneticist panel will be providing. He said it is difficult to come up with blanket answers for many of these questions. Pearsons asked if there are genetics M&E programs already in place outside the upper Columbia River that have discussed these types of questions and developed relevant protocols. He said it would be ideal to develop something that is useful in the upper Columbia River and also at a broader scale for genetic monitoring of hatchery programs. Narum said a widely useful protocols document is unlikely because every program has specific differences. Pearsons said perhaps there is some categorizing that can occur; e.g., integrated programs have certain things in common from a genetics perspective compared to segregated programs. Narum said this is a significant effort and having categorical information about each program and population will be an important starting point. Mike Tonseth said Todd Seamons (WDFW) provided input to him that a protocols document is impractical to develop under this timeline; he suggested focusing on specific questions that could potentially lead to a broader discussion in the future. Tonseth said Seamons indicated that a comprehensive document such as Pearsons suggests would be substantial and would require many more geneticists to provide input. Pearsons asked whether there are any other plans or documents that discuss similar questions that could be used as a starting point. Narum said there are some review papers that discuss certain practices pertaining to these programs that can be drawn from, but not at the level of detail that Pearsons hopes.

Smith said USFWS' protocol is to collect minimum genetic criteria across all programs, and then add on additional sampling for programs with specific risks identified. He said it would be unnecessarily expensive to do the same sampling across all hatcheries, but it is helpful to have a minimum standard.

Hillman brought up the M&E Plan and showed the questions pertaining to genetic monitoring (starting on page 27). He said these questions might be a good starting point. Mackey said the committees have struggled with the concept of adaptive management in the M&E program. He said the population's genetic traits and parameters are monitored and results become available, but it does not inform whether an observed shift is big enough to warrant a change in how the program is managed. He said the committees are looking for information they can use to actively manage the programs—that is, waiting too long to act on changing a program because there are not enough data available can result in compromising the population beyond recovery. Hillman said it will also be helpful to review previous genetic reports and historical stock information. The committees are generally interested in improving diversity since the Grand Coulee Fish

Maintenance Program homogenized populations in the upper Columbia River. Pearsons said some of this information is in the UCSRB report.

Hillman asked the geneticist panel whether they are comfortable with the proposed timeline. He said the committees will start performing comprehensive genetic analyses in 2019. He asked whether the panel can work together via conference calls and emails, and perhaps provide feedback to the committees in November. The geneticists were in favor of this plan, and Hillman said he will provide the documents discussed today to them for review. He said any questions can be directed to him. Representatives present thanked the geneticists for their participation.

C. NMFS Consultation Update (Emi Kondo)

Emi Kondo said NMFS is working to finish the Environmental Assessment (EA) for the summer/fall Chinook salmon programs and steelhead programs. She said the next steps are for the applicants to send Hatchery and Genetic Management Plan addenda to her for the summer/fall Chinook salmon programs, and for the steelhead programs to Charlene Hurst. Then, the Hatchery and Genetic Management Plans (HGMPs) will be available for public comment at the same time as the EA. She said the EA is currently in General Counsel review, after which the Hatchery Committees will review, and finally it will be available for public comment. She asked for any email contacts for local stakeholders, such as the UCSRB, to be sent to her. She said the draft permits will be available for Hatchery Committees review after the EA, so that the review periods are staggered. Greg Mackey said he does not recall providing stakeholder contact information during previous consultations and asked why NMFS is requesting that information. Kondo said one purpose of the National Environmental Policy Act (NEPA) process is to get public input on agency actions, so there is a responsibility to contact stakeholders and the public who may be interested in reviewing the documents. She said NMFS has identified public outreach as an area for improvement in the NEPA process.

Kondo said in order to issue the Section 10 permits for the summer/fall Chinook salmon programs and the Douglas PUD portion of the steelhead program, NMFS needs to complete consultation with USFWS, then finish the associated EA. She said the EA needs to be finished before the Section 10 permits are complete. She said USFWS will also be issued a 4(d) determination for their steelhead program.