

PRCC Hatchery Subcommittee Meeting
Wednesday, October 18, 2017
GPUD Wenatchee Office and via Conference Call
Meeting Summary

PRCC HSC Members

Matt Cooper, USFWS
Peter Graf, GPUD (alt)
Keely Murdoch, Yakama Nation
Todd Pearsons, GPUD
Mike Tonseth, WDFW

Other Participants

Deanne Pavlik-Kunkel, GPUD
Pat Wyena, Wanapum Tribe (via phone)
Elizabeth McManus, Facilitator (via phone)
Andy Chinn, Facilitator (via phone)

Decisions

The HSC approved the September meeting summary as amended, pending CCT and NOAA approval.

Actions

1. Ross Strategic will follow up with CCT and NOAA for feedback on the draft SOA on Coho program goals and standards.

I. Updates and Meeting Summary Review

- A. Hanford Reach Working Group** – Reverse factor loading began on October 15th and the first spawning ground survey (Vernita Bar) is scheduled for October 22nd.
- B. Fall Chinook Working Group** – The group met on October 3rd to discuss last year's program and this year's plan. Jeff Fryer provided a presentation on capturing wild fish in the Hanford Reach. It appears that GPUD's fish releases did not compromise Jeff's tagging study but Jeff will need to look at his data and make the final determination.
 - GPUD noted that since this was a colder-water year there was likely less benefit to releasing fish early, and the evaluation will need to be run for several years to determine the impact of environmental conditions. GPUD will present PIT tag results from the five ponds where information was collected.
- C. September Meeting Summary** – HSC members approved the September meeting summary as amended, pending CCT and NOAA approval.

II. Coho NNI

- A. Draft SOA on Goals and Standards** – The draft SOA is acceptable to the two primary interested parties, GPUD and YN. With the Coho three-year life cycle, YN will provide an analytical report on a six year basis. There will also be an annual presentation similar to the ONA annual sockeye presentation. ISRP will provide an additional layer of review.
 - HSC members supported the draft SOA but noted there are ongoing conversations between YN and CCT around work in the Methow basin, and associated broader issues, to be resolved. These conversations may or may not impact CCT's ability to endorse the draft SOA.

- The second SOA (on NNI methodology) remains on hold pending resolution of the PRCC’s discussion about project survival.

B. Next Steps

- Ross Strategic will follow up with CCT and NOAA for feedback on the draft SOA on Coho program goals and standards.

III. Nason Acclimation Facility

- A. Update on Intake Area Work** – Following on USFWS concerns expressed during the September meeting, GPUD secured an emergency permit from ACOE for the in-water work at NCAF to relocate sediment to the scour hole (adjacent to the intake). The work was completed on 10/17 and GPUD is testing water flow. If the problem repeats, GPUD will bring in engineering assistance. GPUD is working with the appropriate agencies to develop a five year maintenance plan.

IV. Wrap Up and Next Steps

- A. Next Meeting:** Wednesday, November 15, 2017

B. Potential Agenda Items:

- ONA sockeye presentation
- Coho NNI

Meeting Materials

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

- October meeting agenda
- Draft September meeting summaries
- September White River rotary trap summary
- September Nason Creek rotary trap summary
- King of the Reach Flyer
- PRH 2016-2017 Annual M&E Report
- CPUD/GPUD M&E 2016 Annual Report
- CPUD/GPUD M&E 2016 Annual Report – Appendices
- PRH September M&E Update

Appendix A: Joint HCP-HC/PRCC HSC Minutes

I. Joint HCP-HC/PRCC HSC

A. NMFS Consultation Update (Emi Kondo)

Emi Kondo provided an update on consultation for the unlisted programs in the upper Columbia River. She said she requested an initiation of consultation from Chelan PUD, Grant PUD, and WDFW, which would serve as their official request to NMFS to begin consultation. Bill Gale asked if the parties sent a letter initiating consultation when they submitted Hatchery and Genetic Management Plans (HGMPs). Kondo said HGMPs were submitted in 2010, and recalculation for No Net Impact occurred since then, so it is appropriate for the PUDs to submit initiation requests for current programs. She said Chelan PUD and Grant PUD should submit requests, but Douglas PUD should not, as their program has not changed since the HGMPs were submitted. Deanne Pavlik-Kunkle (Grant PUD) said Grant PUD is drafting their request. Kondo said the next step after NMFS receives requests is to respond with a letter of sufficiency. Regarding the Biological Opinion (BiOp) for the unlisted programs, Kondo said the draft will be finished soon and will go to internal review, then comanager review.

B. USFWS Bull Trout Consultation Update (Matt Cooper)

Matt Cooper said Karl Halupka provided him an update on USFWS bull trout consultations, which he summarized as follows:

- Halupka is working to get the BiOp for the batch of Wenatchee subbasin programs signed this week.
- USFWS is continuing regular coordination with NMFS (Emi Kondo and Charlene Hurst) and Mike Tonseth on the Methow steelhead consultation, the consultation for the batch of hatchery programs for unlisted Chinook salmon stocks in the Columbia River, and reinitiation of Mitchell Act consultation for the Ringold fall Chinook salmon program with the U.S. Army Corps of Engineers. NMFS may initiate consultation on the upper Columbia batch next week.
- USFWS completed expedited consultation on Nason Creek Acclimation Facility intake maintenance and are discussing consultation options for covering future intake maintenance with NMFS and Grant PUD.

Todd Pearsons asked if the signed BiOp for the batch of Wenatchee subbasin programs will be distributed to all Hatchery Committees and PRCC HSC parties. Tonseth said National Oceanic and Atmospheric Administration (NOAA) is the action agency and is consulting with USFWS, so the signed BiOp will be directly transmitted to NOAA and the applicants will likely also be notified. Tonseth said he heard that comments are still being incorporated into the BiOp, and may not be signed this week.

C. M&E Plan for PUD Hatchery Programs 2017 Update (Hillman)

Tracy Hillman said he revised the M&E Plan for PUD Hatchery Programs to reflect changes discussed during the September 20, 2017 Hatchery Committees meeting and distributed it (Attachment E). Hillman reviewed the new information in Section 7.2 (Non-target Taxa of Concern), and Section 8 (Adaptive Management).

He said he also added Appendix 1, Estimation of Carrying Capacity, which Andrew Murdoch (WDFW) is reviewing. Hillman defined two types of carrying capacity as follows:

- Population equilibrium capacity—the maximum number or biomass of a species that can occur based on density dependent mechanisms that reduce population growth rates as population size increases
- Habitat capacity—the maximum number or biomass of a species that habitat can support

He said the appendix includes an example of how carrying capacity is estimated for spring Chinook salmon in the Chiwawa River watershed and the entire Wenatchee River basin. He described methods for assessing density dependence in juvenile spring Chinook salmon and described the importance of having large contrast in spawner abundances in identifying the presence of density dependence and estimating carrying capacity. Keely Murdoch asked if there is a way to discuss the geospatial component to capacity related to the graphs in Appendix 1. She said spring Chinook salmon in the Chiwawa River watershed are a hatchery-driven population, and in years with big escapement, the proportion of hatchery origin spawners is very high. She added that the reproductive success study shows unequal spawner distributions, and a reduction in productivity (parr production) is related to distribution. Hillman agreed and indicated that calculation of habitat capacity, which is based on fish-habitat data and not just fish data, which are used to estimate population equilibrium capacity, should not be affected by hatchery production within the watershed. He said he calculated both habitat and population equilibrium capacities and compared those results in the appendix. Hillman then described the different models used to calculate carrying capacity and their associated assumptions. He said capacity estimates can be standardized by dividing the estimates by watershed area, intrinsic potential, or other watershed-scale metrics. This allows comparisons among different basins or watersheds.

Hillman said for spring Chinook salmon in the Chiwawa River, models produced a range of estimates for parr and smolt capacities. He said the smolt capacity estimates are about half of the parr capacity estimates, and these estimates can be extrapolated to the entire Wenatchee River basin using intrinsic potential. He then compared extrapolated capacity estimates based on intrinsic potential to actual capacity estimates based on data collected at the lower Wenatchee smolt trap. The actual and extrapolated estimates did not differ greatly.

Hillman also reviewed the calculation of habitat capacity using a fish-habitat model (Quantile Regression Forest Model) and using quantile regression to estimate the 90% reference interval for the stock-recruitment functions. He then compared results from all the different models. Todd Pearsons asked why there is a difference in number of spawners needed to reach parr habitat capacity between the Chiwawa River and Wenatchee River. Hillman said the Chiwawa River has higher quality habitat, so one unit of intrinsic potential in the Chiwawa produces more fish than say a unit of intrinsic potential in another area within the Wenatchee.

Hillman suggested that the Hatchery Committees review the recommendations included in Appendix 1. He said one item not included in the appendix is if abundance and productivity data should be normalized using population equilibrium capacity estimates or habitat capacity estimates. Catherine Willard suggested providing the estimate with associated levels of error. Hillman said appendices in annual reports provide error bars for stock-recruitment data, and the Chiwawa River data have less error in their estimates than other areas. Hillman said another item that will need to be decided is how to calculate carrying capacity for summer Chinook salmon.

Pearsons said in order for this document to be useful to the Independent Scientific Advisory Board (ISAB), the Hatchery Committees and PRCC HSC should try to approve it in November 2017. He said the ISAB hopes to finish their assessment by December 2017, but may continue into 2018. Hillman asked representatives present if approving this document in November would be reasonable, and they agreed. Sarah Montgomery said she will distribute the draft again as a decision item for the November 15, 2017 Hatchery Committees meeting.

D. *Timeline of Changes in Spring Chinook Salmon Programs (Tracy Hillman)*

Tracy Hillman said he drafted timelines for the Wenatchee and Methow spring Chinook salmon programs to determine interruptions for statistical analysis. Hillman shared a document, *Draft Hatchery Program Timelines* (Attachment F), and representatives present reviewed the timelines.

Hillman said he reviewed reports, permitting documents, and other items and picked events or changes he thought might interrupt the time series in a statistically important way. He requested that the Hatchery Committees review the timelines and suggest additions. Catherine Willard said these timelines might also be useful to the ISAB, and suggested adding adult management to the timeline. Keely Murdoch asked if the timelines should just have hatchery program information, or should also include other effects to populations. Hillman said as a minimum, the timelines should include anything that would potentially affect statistical analyses. Todd Pearsons agreed and suggested making a timeline with all suggested events as the first step. Mike Tonseth said the Hatchery Committees should compile one set of timelines with all suggested events, then a subset of timelines including just the major events to be used for statistical analysis. Pearsons suggested checking the timeline included in the UCSRB's Draft Hatchery Report for comparison. Hillman said he did this and

found some discrepancies between his version and the draft report. In one example, Matt Cooper explained the difference is due to stating the brood year a hatchery program began, as opposed to the release year. Hillman summarized that the Hatchery Committees will review the timelines, and provide comments and suggestions to him via email. He said he will distribute the draft timelines for review.