

Memorandum

To: Wells, Rocky Reach, and Rock Island HCP Hatchery Committees, and Priest Rapids Coordinating Committee Hatchery Subcommittee Date: April 21, 2021

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

cc: Larissa Rohrbach, Anchor QEA, LLC

Re: Final Minutes of the March 17, 2021, HCP Hatchery Committees and PRCC Hatchery Subcommittee Meetings

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plan Hatchery Committees (HCP-HCs) and Priest Rapids Coordinating Committee Hatchery Subcommittee (PRCC HSC) meetings were held by conference call and web-share on Wednesday, March 17, 2021, from 9:00 a.m. to 12:30 p.m. Attendees are listed in Attachment A to these meeting minutes.

Joint HCP-HCs and PRCC HSC

- Brett Farman will discuss with National Oceanic and Atmospheric Administration (NOAA) staff and Mike Tonseth the potential use of a multipopulation model for estimating proportionate natural influence for the Nason and Chiwawa spring Chinook Salmon programs (Item I-A). *(Note: this item is ongoing.)*
- Greg Mackey will work with Mike Tonseth to test a modeling approach and prepare a white paper on the method for determining a range for the number of females to be collected for a given broodstock in the upcoming year (Item I-A). *(Note this item is ongoing.)*
- Greg Mackey will prepare a plan for alternative mating strategies based on findings described in his previously distributed literature review (Item I-A). *(Note this item is ongoing.)*
- Mike Tonseth will distribute the analysis showing feasibility of the Methow Spring Chinook Outplanting plan based on historical run size data (Item I-A). *(Note this item is ongoing.)*
- Kirk Truscott will determine the number of scales that should be collected from spring Chinook Salmon at Wells Dam for elemental signature analysis to discern Okanogan River spring Chinook Salmon from Methow River spring Chinook Salmon (Item I-A). *(Note this item is ongoing.)*
- Kirk Truscott will work with Colville Confederated Tribes (CCT) staff to develop a model that addresses the probability of encountering natural-origin Okanogan spring Chinook Salmon at Wells Dam (Item I-A). *(Note this item is ongoing.)*

- Mike Tonseth and Greg Mackey will solicit input from hatchery managers on effective methods to count surplus fish (Item I-A). *(Note this item is ongoing.)*
- Representatives will review the NOAA research summary and Hatchery and Genetic Management Plans presentation distributed by Tracy Hillman and consider whether to request the authors attend a future committee meeting to discuss their research (Item I-A). *(Note this item is ongoing.)*
- Keely Murdoch and Mike Tonseth will obtain estimates of pre-spawn mortality from Andrew Murdoch to update the retrospective analysis for Wenatchee spring Chinook Salmon (Item I-A). *(Note this item is ongoing.)*
- Catherine Willard and Todd Pearsons will revise the Statements of Agreement (SOAs) with Chelan PUD and Grant PUD on the success of the Okanagan Sockeye Salmon Reintroduction Program for final review (Item II-B).

Rock Island/Rocky Reach HCP-HCs

- None.

Wells HCP-HC

- Bill Gale will convene a Joint Fisheries Parties (JFP) meeting on the disposition of surplus yearling summer Chinook Salmon from Wells Hatchery and report their decision to the Wells HCP-HC (Item V-B).

PRCC HSC

- None.

Decision Summary

- The *Upper Columbia River 2021 Brood Year Salmon and 2022 Brood Year Steelhead Broodstock Collection Protocols* (BCPs) were unanimously approved by the HCP-HCs and PRCC HSC as revised during today's meeting.
- The lethal sample request for assessment of precocity of Methow Conservation Program summer steelhead, reared at Wells Hatchery, was unanimously approved by the Wells HCP-HC in today's meeting.
- A revised Wenatchee Steelhead Release Plan was unanimously approved by the Rocky Reach and Rock Island HCP-HC by email on March 23, 2021.

Agreements

- No agreements were approved in today's meeting.

Review Items

- A revised version of the Okanagan Sockeye Re-Introduction Program SOAs prepared by Chelan PUD was distributed by Larissa Rohrbach on March 25, 2021, for HCP-HC and PRCC HSC review, with comments and edits due to Catherine Willard and Todd Pearsons by April 9, 2021.
- All Committees members will review the supporting documents used for the 2014–2023 Mid-Columbia River Hatchery Production recalculation distributed by Larissa Rohrbach on March 18, 2021, to prepare for upcoming discussions on the next recalculation effort.

Finalized Documents

- The HCP-HCs and PRCC HSC-approved *Upper Columbia River 2021 Brood Year Salmon and 2022 Brood Year Steelhead Broodstock Collection Protocols* were distributed to the Wells HCP-HC Coordinating Committee by Kristi Geris on March 18, 2021, for their approval.

I. Welcome

A. Review Agenda, Announcements, Approve Past Meeting Minutes, Review Last Meeting Action Items

Tracy Hillman welcomed the HCP-HCs and PRCC HSC to the meeting and read the list of attendees signed into the meeting. The meeting was held via conference call and web-share because of travel and group meeting restrictions resulting from the COVID-19 pandemic. He reviewed the agenda and asked for any additions or changes to the agenda. No other additions were made, and all HCP-HCs and PRCC HSC representatives approved the agenda.

Revised minutes from the February 17, 2020, meeting were reviewed and approved by all members of the HCP-HCs and PRCC HSC.

Action items from the HCP-HCs and PRCC HSC meeting on February 17, 2020, were reviewed, and follow-up discussions were addressed (*note that italicized text below corresponds to action items from the previous meeting*):

Joint HCP-HCs and PRCC HSC

- *Brett Farman will discuss with the National Oceanic and Atmospheric Administration (NOAA) staff and Mike Tonseth the potential use of a multipopulation model for estimating proportionate natural influence (PNI) for the Nason and Chiwawa spring Chinook salmon programs (Item I-A).* Farman said this item is ongoing. A presentation will be prepared for next month's meeting.

- *Greg Mackey will work with Mike Tonseth to test a modeling approach and prepare a white paper on the method for determining a range for the number of females to be collected for a given broodstock in the upcoming year (Item I-A).*
Mackey said this item is ongoing, though he has made progress on the model and written up results for Tonseth to review. Mackey will present the results in a future meeting.
- *Greg Mackey will prepare a plan for alternative mating strategies based on findings described in his previously distributed literature review (Item I-A).*
Mackey said this item is ongoing. Mackey is determining how many more matings would be possible by following the David G. Hankin et al. approach¹ (discussed by the HCP-HCs and PRCC HSC in 2019) versus the existing methods to compare the potential effort and potential benefit of each strategy. Mackey said the new approach will have to be done with a large number of broodstock to have enough pairings.
- *Mike Tonseth will distribute the analysis showing feasibility of the Methow Spring Chinook Salmon Outplanting plan based on historical run size data (Item I-A).*
Tonseth said this item is ongoing.
- *Kirk Truscott will determine the number of scales that should be collected from spring Chinook Salmon at Wells Dam for elemental signature analysis to discern Okanogan River spring Chinook Salmon from Methow River spring Chinook Salmon (Item I-A).*
Truscott said this item is ongoing.
- *Kirk Truscott will work with Colville Confederated Tribes (CCT) staff to develop a model that addresses the probability of encountering natural-origin Okanogan spring Chinook Salmon at Wells Dam (Item I-A).*
Truscott said this item is ongoing.
- *Mike Tonseth and Greg Mackey will solicit input from hatchery managers on effective methods to count surplus fish (Item I-A).*
Tonseth said this item is ongoing and progress is being made.
- *Representatives will review the NOAA research summary and Hatchery and Genetic Management Plans (HGMPs) presentation distributed by Tracy Hillman and consider whether to request the authors attend a future committee meeting to discuss their research (Item I-A).*
Hillman said this item is ongoing.
- *Catherine Willard will distribute a draft Statement of Agreement (SOA) seeking concurrence on the success of the Okanogan Sockeye Re-Introduction Program for approval in the March 17, 2021, meeting (Item II-B).*
The Okanogan Sockeye Re-Introduction Program SOA was distributed by Kristi Geris on March 16, 2021, and will be discussed in today's meeting. This item is complete.

¹ Hankin, D. G., J. Fitzgibbons, and Y. Chen, 2009. "Unnatural Random Mating Policies Select for Younger Age at Maturity in Hatchery Chinook Salmon (*Oncorhynchus Tshawytscha*) Populations." *Canadian Journal of Fisheries and Aquatic Sciences* 66(9):1505-1521.

- *Keely Murdoch and Mike Tonseth will obtain estimates of pre-spawn mortality from Andrew Murdoch to update the retrospective analysis for Wenatchee spring Chinook salmon (Item I-A).*
K. Murdoch and Tonseth said this item is ongoing.
- *HCP-HCs and PRCC HSC members will prepare the final Upper Columbia River 2021 Brood Year Salmon and 2022 Brood Year Steelhead Broodstock Collection Protocols (BCPs) according to the following schedule (Item II-A):*
 - *Mike Tonseth will prepare and Larissa Rohrbach will distribute to HCP-HCs and PRCC HSC members a revised draft by Friday, February 26, 2021.*
 - *HCP-HCs and PRCC HSC members will provide edits and comments to Rohrbach by Friday, March 5, 2021.*
 - *Permit holders (Chelan PUD, Douglas PUD, Grant PUD, and Washington Department of Fish and Wildlife [WDFW]) will provide and Rohrbach will distribute a final draft by Friday, March 12, 2021.*
 - *Final revisions will be addressed for approval in the Wednesday, March 17, 2021, meeting.*
 - *Rohrbach will distribute the final version to the HCP-CC by Thursday March 18, 2021.*

The Protocols were approved in today's meeting. (Note: The BCPs were distributed to the Wells HCP-Coordinating Committee by Kristi Geris on March 18, 2021, for their approval.) This item is complete.

Rock Island/Rocky Reach HCP-HCs

- *Catherine Willard will prepare, and Larissa Rohrbach will distribute a plan for the release of Wenatchee steelhead in 2021, for approval in the March 17, 2021, meeting (Item IV-B).*
The Wenatchee Steelhead Release Plan was distributed by Rohrbach on March 16, 2021.
(Note: A revised version of the Wenatchee Steelhead Release Plan was distributed by Rohrbach immediately following the meeting for Rock Island/Rocky Reach HCP-HC approval.)
This item is complete.

Wells HCP-HC

- *Matt Cooper will prepare, and Larissa Rohrbach will distribute a document describing sampling of Methow Conservation Program summer steelhead for early maturity, for approval in the March 17, 2021, meeting (Item V-B).*
The Wells Hatchery Summer Steelhead early maturation lethal sampling request was distributed by Rohrbach on February 25, 2021, for approval in today's meeting. This item is complete.

II. Joint HCP-HCs and PRCC HSC

A. DECISION: 2021 Broodstock Collection Protocols

Hillman shared on screen the most recent version of the draft *Upper Columbia River 2021 Brood Year Salmon and 2022 Brood Year Steelhead Broodstock Collection Protocols (BCPs)* to review and resolve remaining comments or edits needed. The discussions of revisions to specific sections are recorded here in the order they appear in the BCPs. All other updates or minor editorial changes were accepted as revised prior to and in the meeting.

Okanogan Steelhead Broodstock Needs

Greg Mackey suggested that a total of 44 fish (22 pairs) may be low based on the Methow Conservation program requirement of 26 pairs for the Methow Safety-Net component to produce the same size program of 100,00 fish. Kirk Truscott had previously discussed the number with Todd Pearsons, and the total of 44 fish was calculated from observed fecundity, green egg survival, and egg-to-fry survival using information provided in CCT reports for the program funded by Grant PUD, resulting in approximately 7 fewer females than have been collected in the past. He agreed the probability of under-collecting is higher in 2022, especially if females are predominantly 1-salts, but noted that when collection targets are based on mean values, production will be under 100,000 approximately 50% of the time and over 100,000 approximately 50% of the time. Mackey said the inputs may be different for the different programs and noted those fish would not be collected until 1 year from now, so there is time to adjust the numbers. Truscott noted there is authorization in the Okanogan Steelhead Hatchery and Genetic Monitoring Plan Biological Opinion for collection of up to 58 fish, and there is flexibility to adjust the number with updated information. Mackey said they would carry out the program based on the number dictated by Grant PUD and CCT. Truscott said he will work with Mackey to verify the hatchery survival rates for the Okanogan program.

Chiwawa River Conservation Program

Bill Gale provided feedback from Cindy Raekes (U.S. Fish and Wildlife Service [USFWS]) regarding approval of Chiwawa weir operations. It was confirmed that the weir will operate for up to 24 hours per day, and for every 24 hours up, the trap would be opened and the weir lowered for at least 12 hours. Gale suggested clarifying for USFWS that passive integrated transponder (PIT)-array installation would occur in 2022 for assessing Bull Trout passage delay. He asked to add language that information gathered this year could be reported to the USFWS. Catherine Willard agreed to these edits made in the meeting.

Appendix C–Draft Return Year Adult Management Plans

Mike Tonseth said, regarding the section dependent on the pre-season return forecast for the Methow Spring Chinook Salmon (Appendix C, Table 6 in the draft), low returns are predicted, and at this time, it is not possible to determine how many hatchery fish should be removed from the river. Tonseth provided language to replace the existing content. He noted that as the run commences, the estimates of natural-origin returns and estimates of the number of hatchery fish to be removed will be more reliable. The return forecasts for the Methow River appear similar to those predicted for the Icicle River, which is quite low based on NOAA Fisheries' ocean condition stoplight chart (approximately 199 fish), and the Technical Advisory Committee (TAC) forecast for 2021 was around 900, which last year under-forecasted the run by 42%. This speaks to the uncertainty in this year's estimates. Matt Cooper said early in-season observations will be important this year for tracking the run. Truscott said it should be noted that the TAC estimate is the lowest in decades, and the dynamic model from NOAA Fisheries is predicting very low returns, near levels seen in 1999. Tonseth said for the entire Upper Columbia River spring Chinook Salmon, the TAC prediction is approximately 2,000 fish. Managers will constantly be adjusting based on observed returns, and updates can be provided as information becomes available.

Todd Pearsons asked if there is a similar problem with estimates in the Wenatchee River. Tonseth said no, Methow spring Chinook Salmon return estimates (other than Twisp River) are generated using imprecise estimates of wild juvenile production, driven by the relatively low efficiency of the screw trap in the Methow River. Tom Kahler suggested using the Twisp River screw trap estimate, to build a forecast for the Methow Basin smolt production by assuming proportional production relative to the proportionate redd deposition across the Methow Basin (e.g., to update Table 1 of the BCPs). Tonseth said he would have to talk to David Grundy (WDFW) to verify the method currently used. Mackey said if smolt production was expanded from the proportion of redds in the Twisp River, the result would be approximately 89,000 smolts from the Methow Basin (compared to 26,290 currently shown). Tonseth said, even if the methodology is changed, it will still yield a low adult estimate (e.g., even if smolt production is 80,000 to 90,000, this is only a four-fold increase in the estimate of adult returns for Twisp River [from 13 to 52 adults]). He suggested approving the BCPs as drafted but working with Mackey to adjust to the proposed methodology in the future.

Mackey asked if the Chief Joseph Hatchery 10j Okanogan River spring Chinook Salmon program fish will not have adipose fin clips (marked as "ad-present"). Truscott said 5,000 fish will be tagged with PIT tags, and all will be marked with coded wire tags (CWTs) and ad-present. Mackey noted that hatchery-origin Okanogan River spring Chinook Salmon retained at Wells Dam would look the same as Methow Hatchery spring Chinook Salmon.

Regarding use of surplus Wells Summer Chinook Salmon for broodstock, Tonseth said he developed text to capture the needs for the Southern Resident Killer Whale program (and similar programs using surplus Wells Summer Chinook Salmon). This section was not intended to be prescriptive but is intended to inform managers where surplus adults are likely to go this year. Gale suggested using the term "juvenile" to resolving uncertainty around the number of subyearling versus yearling fish produced in the Yakima program.

Appendix G–Hatchery Production Management Plan (Section G on informing committees of surplus)

Pearsons suggested more clarifying language confirming that the marking of fish in this section refers to PUD program fish that are to be released to anadromous waters and not those released to lakes of no return. Tonseth agreed, and the language was revised.

Appendix I–Adult Prophylactic Disease Management Plan for Eastbank Hatchery Spring and Summer Chinook

Tonseth noted the plan is pending and suggested leaving a placeholder for content to be added later in the year. He said the plan can be presented later to the Rock Island and Rocky Reach HCP-HC and PRCC HSC. Gale asked if the results from the past 3 years would be presented. Tonseth answered yes, potentially.

Appendix J–Mid-Columbia Coho Broodstock Collection Protocols

Editorial corrections were noted, including that the Methow Hatchery Weir should actually be named a trap. Keely Murdoch asked that such edits be noted for her to report back to the authors. Pearsons asked if there were any substantive changes to the program. Murdoch said she is unsure other than reduced numbers to be released into the Methow.

The HCP-HCs and PRCC HSC unanimously approved the BCPs as revised.

Larissa Rohrbach will accept final revisions and send the approved BCPs to John Ferguson and Kristi Geris for distribution to the Wells HCP-CC tomorrow, March 18, 2021.

B. Okanagan Sockeye Reintroduction Statement of Agreement

Catherine Willard reminded the Committees that the requirements of the August 26, 2010, SOA had been met with a comprehensive program assessment in 2020, and presentations by Howie Wright and Ryan Benson (Okanagan Nation Alliance) during the February 17, 2021 meeting, where there was agreement among the Committee members that Sockeye Salmon reintroduction was a success. An SOA from Chelan PUD regarding the success of the program was drafted by Willard (distributed by Kristi Geris on March 16, 2021). Todd Pearsons noted that Grant PUD would draft a similar SOA for a decision among the PRCC HSC in which all language would be the same except for the Grant PUD

administrative language. Pearsons said a vote among the Joint HCP-HC and PRCC HSC would apply to both Chelan PUD's and Grant PUD's SOAs.

Keely Murdoch said some background information may be needed to link this SOA to the 2010 SOA that called for the comprehensive program assessment. She also requested a definition for the term "successful." This will help us understand the context for which the Committees deemed it successful. It is considered successful from its starting point and accomplishments relative to what was written in the first SOA, though it does not mean that the program is finished. Mike Tonseth agreed that there were some specific metrics or mileposts in the original SOA that were achieved and suggested specific language to provide a stronger link between documents. Murdoch suggested clarifying the linkage between the SOAs for efficiency—to avoid the need for future reviewers to have to search through old SOAs and meeting minutes. Willard and Pearsons agreed to make revisions, but Willard noted the metrics of "success" are also not entirely clear in the 2010 SOA.

Willard and Pearsons will provide revised SOAs for approval in the April 21, 2021, meeting, with edits and comments due to Chelan PUD and Grant PUD by Friday, April 9, 2021.

C. COVID-19 and Monitoring and Evaluation Activities

Tracy Hillman asked Committees members to provide their monthly updates on impacts of COVID-19 restrictions on Monitoring and Evaluation Activities.

- Mike Tonseth and Katy Shelby had no updates from WDFW.
- Matt Cooper had no updates from USFWS, though guidance may be upcoming in the next few weeks. Bill Gale said they are not approved for overnight travel for field work yet but hoping for approval before next month.
- Greg Mackey had no updates from Douglas PUD. PUD employees were recently notified they are eligible to be vaccinated.
- Brett Farman had no updates from National Marine Fisheries Service (NMFS).
- Keely Murdoch had no updates from the Yakama Nation (YN). Fisheries employees of the YN are considered essential employees so many are now getting vaccinated.
- Kirk Truscott had no updates from the CCT. The tribe will bring people back to normal office locations by April 5, 2021. Similar to the YN, the CCT are actively providing vaccination opportunities for non-tribal member employees in addition to tribal members.
- Catherine Willard had no updates from Chelan PUD. PUD employees have been offered the opportunity to get a vaccine with intent to return to offices part-time in early April.

- Todd Pearsons said testing is still required by Grant PUD for entering the Off-Ladder Adult Fish Trap (OLAFT) at Priest Rapids Dam. Grant PUD is working with its contractors on plans to manage COVID-19 exposure. Truscott asked if vaccinated people will still need to be tested. Deanne Pavlik-Kunkel said there are no changes at this time and restrictions remain on where visitors to the OLAFT can go, with the intent to provide more flexibility over time, but that timeline remains uncertain.

Gale asked the other representatives if they are receiving guidance indicating that vaccinations will be required to return to offices or for working at the OLAFT. This is not currently a requirement by the Federal agencies. Grant PUD, Douglas PUD, and Chelan PUD said they are not.

III. PRCC HSC

A. Draft Priest Rapids Hatchery M&E Implementation Plan

Todd Pearsons said that the draft Priest Rapids Monitoring and Evaluation Implementation Plan that was distributed by Larissa Rohrbach was essentially the same as in previous years with the dates updated. No other questions were asked about the plan.

IV. Rock Island/Rocky Reach HCP-HCs

A. DECISION: 2021–2023 Chiwawa Hatchery Steelhead Release Plan

Catherine Willard provided an overview of the plan in last month's meeting, and a written plan was distributed on March 16, 2021. She summarized that in 2012 to 2017, the program had used a screening method to mimic a traditional volitional release and identify "movers" and "non-movers," but due to confounding variables, they were unable to identify relative survival success of different release groups. In 2021 to 2023, 10,100 "movers" and 10,100 "non-movers" would be PIT-tagged, and all would be released into the upper Wenatchee Basin on the same day to eliminate these covariates. Data would be collected on characteristics of these fish while also estimating adult returns based on proportion of redds in each tributary area.

Bill Gale said he had heard that WDFW and the Bureau of Reclamation would be installing a new PIT array in the mouth of the Wenatchee River and asked if that site could be used to estimate survival in addition to detections at McNary Dam. Mike Tonseth said he is not directly involved but confirmed that WDFW is looking into installing a barge-type array at the mouth of the Wenatchee River that is likely to be in place for next year. Katy Shelby confirmed that the purchase of barge should be final by late June, to be installed in late fall during low flows, and PIT tags will be detected in 2022 and 2023. Gale asked whether the intent of the barge was to investigate juvenile movement. Tonseth said yes.

Kirk Truscott asked if non-movers would be distributed within the upper Wenatchee Basin consistent with proportional redd deposition in various watersheds from the previous year? Willard said no, it is the movers that will be distributed proportionate to the number of redds in the upper Wenatchee Basin. The wild x wild fish reared in circular vessels will go into the Chiwawa River, non-movers that are not PIT-tagged will go to the lower Wenatchee River, and non-movers that are PIT-tagged will go to the upper Wenatchee Basin for comparison with tagged movers (10,100 of each). Willard said Table 2 shows these numbers, but she will add clarifying text to the table. Truscott said it would also be helpful to include in the text the basis for the proportion of fish to be released in the various watersheds (i.e., the proportion of redd distribution).

Truscott asked about the philosophy that more smolts would be released in watersheds that had more redds. Willard clarified the question was whether this strategy makes sense or whether to release fish into "under-seeded" habitat versus habitat that could be overseeded. Willard said that is a good question, though the decision to operate this way preceded her, and she asked for Tonseth to comment. Tonseth said the strategy to place more smolts in the vicinity of more redds has been used for a long time; that presence of adult steelhead spawners shows where the good habitat is with optimal substrate and thermal habitat. This logic is still sound because even in areas with relatively large numbers of redds, these areas are still under-seeded, but that may change once certain areas reach capacity. Keely Murdoch said this is interesting and worth investigating in future years. This is based on the assumption that the fish are not using a reach because the habitat is not good for them, but maybe the habitat can be improved and colonized if fish are outplanted to those reaches. If this is an old method, perhaps it is time to reevaluate it. Tonseth said he does not completely agree because the steelhead reproductive success study showed where fish were spawning. They specifically investigated why fish are not using the suitable habitat in the Chiwawa River. Researchers found for natural-origin fish, there was a definitive line above which steelhead just do not go. Murdoch said there has not been a thorough discussion in the Committee to look at the data and reevaluate the distribution of where fish are being released. Truscott and Murdoch said they are not advocating reevaluating release locations for 2021 but are asking whether those assumptions are still valid, particularly with habitat restoration in the Wenatchee Basin that may improve habitat quality.

Willard will provide a revised draft for distribution and ask for members to vote by email. (Note: the revised 2021–2023 Wenatchee Steelhead Release Plan was unanimously approved by email on March 23, 2021.)

V. Wells HCP-HC

A. DECISION: Steelhead Early Maturation Sampling at Wells Hatchery

Matt Cooper provided a memorandum on March 25, 2021, summarizing the request to lethally sample juvenile summer steelhead reared at Wells Fish Hatchery. He summarized the ongoing study with NOAA Fisheries on mechanisms of early maturation in which they are also interested in looking at effects of age-at-release, feeding regime, and temperature regime. There is an opportunity to evaluate siblings of steelhead raised at Winthrop National Fish Hatchery (WNFH) and at Wells Hatchery, then brought to Winthrop for release. As this is a request for a lethal sample, and there is no requirement to do this evaluation, there is a need to inform and request approval from the Wells HCP-HC. Greg Mackey noted that Douglas PUD supports this request as a valuable investigation. Cooper noted this is for 2 years, with potential interest in a future evaluation of Columbia Safety Net steelhead to determine the effects of spawning strategies and early maturation on survival.

Kirk Truscott asked if this is a gonadosomatic index (GSI) evaluation. Cooper said some fish will be immediately expressing milt, which does not require measurement of GSI, but they will also use GSI measurements to identify those initiating maturation for the following year.

Mike Tonseth asked for clarification that the request is for lethal sampling of 300 of the Wells Fish Hatchery-raised component that are sent to WNFH, not as part of WNFH production, with the difference that WNFH production are wild x wild progeny and Wells Fish Hatchery production are hatchery x hatchery progeny? Cooper said no, the component to be sampled are wild x wild; they are part of the 48,000 released in the Twisp River, with 24,000 sent to Wells Fish Hatchery to rear as S1s and the other 24,000 reared at WNFH as S2s to combat the Ryman-Laikre effect.

The Wells HCP-HC unanimously voted to approve the USFWS's lethal sample request for summer steelhead raised at Wells Fish Hatchery.

B. Surplus Wells Hatchery Summer Chinook Salmon Disposition

Greg Mackey said there are currently extra brood year 2018 yearling summer Chinook Salmon at the Wells Fish Hatchery. Of the 320,000-release target, Douglas PUD will retain 110% of the release target, or 352,000, leaving 15,277 extra fish. The Chief Joseph Hatchery program was already at capacity and not interested in taking them. Mackey is working with Mike Tonseth on finding a disposition location. The reason for the surplus was bacterial kidney disease (BKD) observed in the subyearlings of the same cohort, and there was concern the BKD would affect the yearlings, so the extra fish observed at marking were retained. Survival was ultimately good, and a surplus resulted. The program release date is April 15. At that time, surplus fish would be transported to their

destination. Some fish have been PIT-tagged and all fish have been marked with CWTs. It is estimated that approximately 200 PIT-tags will be lost due to disposition of the surplus fish.

Tonseth said their CWT code is the same as the rest of the Wells Fish Hatchery population, which limits the choices for disposition locations. They originally anticipated releasing fish to Banks Lake, but there is some interest from local fishing groups in enhancing the Chinook Salmon fishery in Lake Chelan. They are in the process of determining how to retain the fish in Lake Chelan, as the fish are not triploid (and could reproduce). This would require some hatchery capacity to transfer the fish in June; there is some capacity at the Chelan Hatchery, and they would add an additional 1,000 PIT tags to be able to observe fish leaving Lake Chelan and the Chelan River. The final destination is to be determined.

Kirk Truscott asked if Chelan Falls summer Chinook Salmon production is predicted to be at 110% of the program target. Tonseth and Catherine Willard said yes.

Keely Murdoch said she recognizes the problem with fish being already tagged, but 15,000 is a small proportion of the population. She asked if there is a way in the Regional Mark Information System database to note that a component was released in another basin. She suggested approaching Melinda Davis (YN) for distribution in other locations. Tonseth said there is not only a need to account for whether a return to the release location would be considered a stray, but if they stray to the Upper Columbia River, they would be assumed to have been part of the normal release and confound survival analyses for the Wells Fish Hatchery program. Murdoch said it would be a very small number of fish when accounting for smolt-to-adult return rates. Truscott asked for confirmation that one of the requirements for these fish would be disposition to non-anadromous waters. Tonseth said that is true based on the fact that the fish have been tagged with CWTs. Murdoch said she thought disposition to non-anadromous waters was a priority, but not a requirement. Truscott said this was written to avoid conflicting with permits. Tom Kahler said this constraint was written so that the receiving program would not violate their program requirements.

Tonseth said the only other program they could go to would be the YN summer Chinook Salmon program. Murdoch asked whether non-anadromous waters on the Yakama and Colville Reservations were considered. Truscott said, depending on whether or not fish can be held beyond April 15, there is a possibility for using and releasing these fish above Grand Coulee Dam.

Bill Gale said fish need acclimation if moved to another location, and he is concerned there will not be enough time unless a decision is made today or tomorrow. He said he is concerned about straying due to inadequate acclimation time. Regarding release above Grand Coulee Dam, there is a need to ensure Endangered Species Act (ESA) coverage for this number of fish. Murdoch asked if ESA coverage is needed for Bull Trout, because there are no other ESA-listed fish above

Grand Coulee now. His assumption is that some of the released fish would be able to migrate downstream. He would have to inquire internally at USFWS, though he does not see a major ESA concern. Brett Farman said releasing them in anadromous waters complicates things substantially for NMFS, although he does not consider this a large biological concern due to the small number of fish, but echoes concern with alignment with existing permits and concerns about straying.

Murdoch asked whether there is a problem if these fish are released in the Yakima Basin and returning adults volunteer into Wells Fish Hatchery. Murdoch said it is not a genetic problem for the Wells population, anglers would have a larger resource, and summer Chinook Salmon in the Chelan River area are not considered to be a different population. Gale responded that his concern is if these fish are released in a different location without acclimation, they may stray at a higher rate, and chances are they will not return to Wells Fish Hatchery. They could stray into the Entiat River and spawn in the spring Chinook Salmon zone, and that could be a real impact on listed species. Murdoch said Chinook Salmon are usually drawn to their upper-most release site; some might go back to the Yakima River, but others may go back to the Wells Hatchery. Murdoch said the straying of Eastbank summer Chinook Salmon into the Entiat River is a different situation, as Eastbank has no fish ladder and the Entiat River is the first adjacent tributary. Gale said there is a challenge of managing summer Chinook Salmon in the Entiat River adjacent to spring Chinook Salmon, and this is the reason the State allows extra summer Chinook Salmon harvest in that location. Gale said it is not appropriate to assume strays will only go to the Yakima River or Wells Fish Hatchery. Murdoch said it is a low risk due to the low numbers of surplus fish and lack of imprinting to the Entiat River. Gale said if they did stray, there would be no way to know whether they were released from Wells Fish Hatchery or released in another river, and the Wells Fish Hatchery program would see a shift in its stray rate, while Douglas PUD would be responsible for the impacts of additional straying. Murdoch said it may be inferred from the CWT code that it could have strayed due to release elsewhere.

Tonseth said another topic to consider is estimating contribution to harvest in the ocean and terminal areas. Because they have the same CWT, a fish from a Yakima River release caught in a fishery would not be differentiated from a Wells Fish Hatchery-released fish. Murdoch said the effect of 1 release year and a small number of fish would be small.

Truscott said he is still interested in discussing ESA effects of planting above Grand Coulee Dam. Truscott asked Gale if the Entiat Hatchery program will be at 110% of its program target and suggested that perhaps the overall summer Chinook Salmon production above Priest Rapids Dam is not exceeded by these 15,000 fish. Matt Cooper said in January, the Entiat Hatchery program was close to 10% over the target. Truscott asked Farman his thoughts on ESA compliance of fish migrating through the anadromous zone. Farman said he would like to give it more thought, although his level of concern is low. If there is no document providing that coverage, it puts NMFS in

an awkward position. Truscott said the Chief Joseph Hatchery does not have capacity in their segregated program, but they do have “cap space” in the integrated program. However, given the hatchery influence of Wells program fish, they do not want to include them in the Chief Joseph Hatchery integrated program.

Tonseth will work with Murdoch on a disposition location for the 15,000 Wells Fish Hatchery summer Chinook Salmon. Gale suggested convening a call between the JFP next week to determine the destination for the surplus as this determination is a JFP issue rather than an HCP-HC issue.

Mackey said Wells Fish Hatchery can hold the fish until they can be released to another program. Douglas PUD is willing to transfer the fish within the region or willing for other parties to pick them up. Kahler said, at the risk of complicating the conversation, they do not all necessarily have to go to the same place.

Murdoch said she understands that hatchery managers were trying to balance BKD risk with meeting the production target, but it is disappointing that the HCP-HC was not informed earlier.

Mackey said in the long run there is a finite number of options for the disposition of surplus fish and suggested a list for transfer locations could be prepared to help the managers plan for overages, instead of initiating an open-ended discussion each time.

(Note: The JFP determined via email on Friday, April 2, 2021, that the 15,000 excess yearling summer Chinook Salmon may be released as part of the 2021 annual summer Chinook Salmon releases from Wells Hatchery (as explained in emails provided in Appendix D).

VI. Administrative Items

C. Next Meetings

The next HCP-HCs and PRCC HSC meetings will be Wednesday, April 21, 2021; Wednesday, May 19, 2021; and Wednesday, June 16, 2021, held by conference call and web-share until further notice.

Tracy Hillman said an upcoming topic of importance is recalculation of the PUDs' hatchery production obligations to meet No Net Impact goals. Hillman asked all members to review the tools and data used in the last recalculation effort, to discuss (in April) how it was done in the past and identify any needs to revise the methods. (Note: Larissa Rohrbach distributed the PUD's *2013 Recalculation Efforts* book for review, provided by Catherine Willard, on March 18, 2021.)

VII. List of Attachments

Attachment A List of Attendees

Attachment B 2021–2023 Wenatchee Steelhead Release Plan

Attachment C Wells Hatchery Summer Steelhead Early Maturation Sampling Plan

Attachment D Wells Summer Chinook Concurrence Request Emails

Attachment A
List of Attendees

Name	Organization
Larissa Rohrbach	Anchor QEA, LLC
Tracy Hillman	BioAnalysts, Inc.
Scott Hopkins*	Chelan PUD
Catherine Willard*	Chelan PUD
Kirk Truscott*‡	Colville Confederated Tribes
Tom Kahler*	Douglas PUD
Greg Mackey*	Douglas PUD
Peter Graf‡	Grant PUD
Deanne Pavlik-Kunkel	Grant PUD
Todd Pearsons‡	Grant PUD
Brett Farman*‡	National Marine Fisheries Service
Matt Cooper*‡	U.S. Fish and Wildlife Service
Bill Gale*‡	U.S. Fish and Wildlife Service
Katy Shelby	Washington Department of Fish and Wildlife
Mike Tonseth*‡	Washington Department of Fish and Wildlife
Keely Murdoch*‡	Yakama Nation

Notes:

* Denotes HCP-HCs member or alternate

‡ Denotes PRCC HSC member or alternate

Attachment B
2021–2023 Wenatchee Steelhead Release Plan

Final Memorandum

Date: March 17, 2021

To: Rock Island and Rocky Reach HCP Hatchery Committees

Re: Wenatchee Steelhead Release Plan (Brood Years 2020 to 2022)

Background

Chelan PUD is required to produce 247,300 steelhead smolts for release into the Wenatchee River Basin as part of the Rock Island and Rocky Reach HCP requirements. Through the end of February 2021, approximately 259,664 Wenatchee summer steelhead (139,767 HxH and 119,897 WxW) are on station at the Chiwawa Acclimation Facility (Chiwawa AF).

Beginning in winter 2011 the Chelan PUD Wenatchee River steelhead program was relocated to the Chiwawa AF following significant upgrades to accommodate tributary based overwinter acclimation for the Wenatchee steelhead program. Steelhead are transferred from Eastbank and Chelan Fish Hatcheries to the Chiwawa AF in November and released in April through May by truck planting into the Chiwawa, Nason and Wenatchee rivers.

Chelan PUD and WDFW (the Permit Holders) were issued NMFS Wenatchee River Steelhead Section 10 Permit #18583 for operation, monitoring, and evaluation of the Wenatchee River summer steelhead hatchery program in December of 2017. A special condition of this permit is to minimize residualism rates for hatchery releases and maximize the rate and probability of downstream migration. The use of voluntary release strategy has been shown to substantially reduce residualism rates (4.5 percentage points) (Hausch and Melnychuk 2012). The configuration of the ponds at the Chiwawa AF does not allow for a traditional volitional release. To mimic a traditional volitional release, the program used a “screening” method to differentiate between apparent active migrants from apparent non-active migrants for release years 2012 to 2017. Raceways One (RCY1) and Two (RCY2) are located adjacent to each other. The wall between the two raceways contains a gated opening that when removed, allows fish to move between the raceways for approximately two weeks (typically beginning April 20th); fish that move to RCY1 are termed movers and fish that remain in RCY2 are termed non-movers. In addition to removing the gate, the water is lowered in the receiving pond to establish a directional flow that apparent active migrant fish may cue to. At the end of the screening period, fish are loaded into a hatchery truck and truck-planted to one of five release locations. Due to the presence of confounding variables, the effectiveness of the screening method to differentiate between apparent active migrants from non-active migrants has not been fully evaluated.

2021-2023 Release Strategy Objectives

Directly measuring residualism is difficult; however, Permit 18583 states that agreed upon performance standards can be used to infer residualism for the Wenatchee steelhead program. Outmigration survival, fish size, smolt index and GSI will be used to evaluate potential residualism and determine if the screening method can separate potential residuals from non-residuals.

- Evaluate survival of movers and non-movers from release to McNary Dam to inform best hatchery management practices for hatchery releases that optimize homing fidelity, minimize residualism, maximize out-migration survival, and minimize negative ecological interactions (Permit #18583).
- Minimize confounding variables (i.e., release timing, flow conditions, release location) to evaluate outmigration survival of movers and non-movers.
- Assess characteristics of the non-movers and movers including: non-lethal precocial maturation, smolt index, length data (100% of PIT-tagged fish) and weight data (10% of PIT-tagged fish); conduct GSI sampling on 300 movers and 300 non-movers at the end of June.
- Utilize data collected from the 2021-2023 Wenatchee River Steelhead release to assess applicable monitoring and evaluation objectives (i.e., Objectives 4 and 6) for the Wenatchee River summer steelhead hatchery program (Hillman et al. 2019).

Methods

- The gate between RCY 1 and RCY 2 will be open April 21 to begin screening.
- Steelhead located in the partial water reuse circular vessels (RAS 1 and RAS 3) will be released between April 21st to April 27th.
- The movers will be PIT-tagged into RAS 3 April 28th to May 2nd.
- The gate between RCY 1 and RCY 2 will be shut May 3rd.
- The non-movers will be PIT-tagged into RAS 1 May 3rd to May 7th.
- Release of non PIT-tagged RCY 1 movers will begin May 4th.
- Release of non PIT-tagged RCY 2 non-movers will begin May 8th.
- All PIT-tagged fish will be released by May 11th.
- The percentage of PIT-tagged fish detected in the Wenatchee sub-basin after July 1 of the year of release will be calculated to estimate potential residualism for each release group as required by Permit.

Each treatment group will contain approximately 10,000 PIT-tagged fish ((statistical power $1 - \beta = 0.80$; $\alpha = 0.10$, two-tailed) (Skalski 2018)) (Table 1). Cormack-Jolly-Seber survival probabilities to MCN will be calculated for each release group using recaptures of PIT-tagged fish. To minimize confounding variables, all PIT-tagged fish will be directly released at one release location on the same day. Release locations in 2021 will be the same as previous

years for non-PIT tagged movers and are based on the natural origin spawner distribution above Tumwater in 2020; non-PIT tagged non-movers will be released in the lower Wenatchee; and PIT-tagged fish will be released at one release location on the same day to the Upper Wenatchee (Table 2).

Table 1. Treatments for evaluation.

Vessel	Brood Origin	Treatment	Treatment PIT release size
RCY2	HxH/WxW	Movers	10,100
RCY1	HxH/WxW	Non-movers	10,100

Table 2. Steelhead release numbers and locations, 2021.

Vessel	Origin ¹	Estimated Number Released	Estimated # PIT-tagged	Destination	RKM
RCY1	Mixed (movers)	10,100	10,100	U. Wenatchee	79.2
RCY2	Mixed (non-movers)	10,100	10,100	U. Wenatchee	79.2
				Total	20,200
RCY2	Mixed (movers)	TBD	0	Nason	7
				Total	
RAS 1&3	WxW (NA)	TBD	10,100	Chiwawa	11.4
RCY2	Mixed (movers)	TBD	0	Chiwawa	11.4
				Total	
RCY1	Mixed (non-movers)	TBD	0	L. Wenatchee	40.2

¹Mixed = HxH and WxW.

REFERENCES

- Hausch, S.J. 2012 and M.C. Melnychuk. 2012. Residualization of hatchery steelhead: a meta-analysis of hatchery practices. *North American Journal of Fisheries Management* 32:905–921.
- Hillman, T., T. Kahler, G. Mackey, A. Murdoch, K. Murdoch, T. Pearsons, M. Tonseth and C. Willard. 2019. Monitoring and evaluation plan for PUD Hatchery Programs, 2017 update. Report to the HCP and PRCC Hatchery Committees, Wenatchee, WA.
- Skalski, J. R. 2018. Precision and power calculations for a Chiwawa steelhead smolt experiment. Columbia Basin Research, School of Aquatic and Fishery Science, University of Washington. February 16, 2018.

Attachment C
Wells Hatchery Summer Steelhead Early Maturation Sampling Plan



**United States Department of the Interior
Fish and Wildlife Service
Mid-Columbia Fish and Wildlife Conservation Office**

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7501 Icicle Road
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Winthrop Field Station:
PO Box 429
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MEMORANDUM

TO: Interested Parties
FROM: Matt Cooper and Michael Humling
DATE: 25 February 2021
RE: Lethal sample request of Wells Hatchery Summer Steelhead NFH.

The Service in collaboration with NOAA Northwest Fisheries Science Center Manchester Research Station have been investigating mechanisms of early maturity in Winthrop NFH conservation program steelhead. Area of focus has primarily been age-at-release and rearing regime (1 yr vs. 2yr smolts) but we're also interested in other mechanisms including feeding regime, temperature profiles, and number of generations removed from natal wild stock (i.e. potential degree of domestication). The inter-relation of the conservation programs (wild x wild WNFH and DPUD Twisp programs) and the corresponding safety-net program (hatchery x hatchery Wells program), coupled with the current interim management strategy for Twisp River conservation program releases, provide a unique opportunity to further compare rearing environment effects and possibly other factors on genetically identical groups of Methow Conservation program steelhead..

USFWS requests to lethally sample approximately 300/yr of portion of the approximate 24K conservation program steelhead reared at Wells Hatchery, currently being returned, and released at Winthrop NFH each spring. Proposed sampling includes release years 2021 (BY20) and 2022 (BY21). These yearling release groups are genetically identical (full siblings) to 2-year smolt releases from Winthrop NFH, for release years 2022 and 2023, as well as to ongoing "split-rearing" study yearling steelhead scheduled for release years 2021 and 2022. An additional non-split yearling release group of BY21 conservation program steelhead is also planned for release in 2022 from WNFH, providing a unique opportunity to isolate rearing and feeding regimes in genetically-related yearling release groups broodstocked by wild x wild parents collected in the tributaries. Continuation of this yearling study release group will depend on its success, but an associated request will not be made until continuation of the yearling study is confirmed. Comparisons across these groups will allow elimination of several different genetic, spawn selection, and rearing regime variables.

Below is a timeline of inter-related steelhead groups associated with the Methow Subbasin steppingstone application, illustrating potential comparisons.

Release year	Production S2	Split S1	Split S2	WNFH S1	Wells S1	CSN S1
2019	BY2017	BY2018		n/a	<i>missed</i>	
2020	BY2018	BY2019	BY2018	n/a	<i>missed</i>	
2021	BY2019	BY2020	BY2019	n/a	requested	
2022	BY2020	BY2021	BY2020	BY2021	requested	YTBD
2023	BY2021	n/a	BY2021	YTBD	YTBD	YTBD
2024	BY2022	n/a	n/a	YTBD	YTBD	YTBD

Attachment D
Wells Summer Chinook Concurrence Request Emails

Larissa Rohrbach

Subject: FW: [EXTERNAL] Re: Wells summer Chinook concurrence request

From: Greg Mackey <gregm@dcpud.org>

Sent: Wednesday, April 14, 2021 9:14 AM

To: Larissa Rohrbach <lrohrbach@anchorqea.com>

Subject: FW: [EXTERNAL] Re: Wells summer Chinook concurrence request

CAUTION – EXTERNAL EMAIL: This email originated from outside of Anchor QEA. Please exercise caution with links and attachments.

From: Cooper, Matt <matt_cooper@fws.gov>

Sent: Monday, April 5, 2021 1:02 PM

To: Michael Tonseth <michael.tonseth@dfw.wa.gov>

Cc: Emi Melton <emi.melton@noaa.gov>; Chad Jackson <Chad.Jackson@dfw.wa.gov>; Tom Scribner <scrt@yakamafish-nsn.gov>; Keely Murdoch <murk@yakamafish-nsn.gov>; Kirk Truscott <kirk.truscott@colvilletribes.com>; Gale, William <william_gale@fws.gov>; Tom Kahler <tomk@dcpud.org>; Greg Mackey <gregm@dcpud.org>; Brett Farman <brett.farman@noaa.gov>; Raekes, Cynthia L <cynthia_raekes@fws.gov>

Subject: Fw: [EXTERNAL] Re: Wells summer Chinook concurrence request

Good afternoon Mike,

As a follow up to Brett's email, the Service concurs with NMFS and finds the proposed Wells Hatchery aggregate summer Chinook program release to be within the effects analyzed in prior consultations for bull trout and its designated critical habitat. Please see Cindy's response for additional details below.

Let me know if you have any additional questions or concerns.

Have a great week everyone.

Matt

From: Raekes, Cynthia L <cynthia_raekes@fws.gov>

Sent: Monday, April 5, 2021 11:57 AM

To: Gale, William <william_gale@fws.gov>; Cooper, Matt <matt_cooper@fws.gov>

Subject: Re: [EXTERNAL] Re: Wells summer Chinook concurrence request

USFWS consulted on the Wells summer Chinook program initially in 2012 and issued a Biological Opinion to the FERC for relicensing of the Wells Hydroelectric Project (FWS Reference number 13410-2011-F-0090). We also consulted informally with NMFS in 2017 for a batch of four hatchery programs, including Wells summer Chinook (FWS Reference number 01EFWF00-2018-I-1385).

Our 2012 FERC Opinion included consideration of the Wells Hatchery summer/fall Chinook salmon program and included a comprehensive analysis of exposure risk to bull trout and program effects to bull trout and its designated critical habitat. Our 2017 Letter of Concurrence to NMFS also evaluated effects to bull trout and their designated critical habitat from activities associated with sub-yearling and yearling juvenile releases prescribed in the hatchery management plan. Our consultations and analyses described mostly beneficial effects to subadult and adult bull trout exposed to yearling and sub-yearling summer Chinook releases from Wells Hatchery in April and May; and discountable effects to rearing juveniles due to the low likelihood of juveniles being present at the release site on the Columbia River. Our analyses concluded that smolt releases from the Wells program likely represent a prey subsidy for subadult and adult bull trout and contribute to improved foraging efficiency and physiologic condition of these bull trout life stages.

Following a review of our analyses mentioned above, we believe that the release of 15,000 excess yearling Chinook from Wells Hatchery in 2021 will not exert any additive negative stressors on bull trout or their critical habitat that were not already considered in our 2012 Opinion and 2017 Letter of Concurrence. We find the proposed 2021 aggregate of sub-yearling and yearling summer Chinook proposed for release at Wells Hatchery to be consistent with the environmental effects analyzed in our previous consultations.

Let me know if you would like any additional information.

-Cindy

Cindy Raekes
Fish and Wildlife Biologist
USFWS - Ecological Services
Central Washington Field Office
215 Melody Lane, Suite 103
Wenatchee, WA 98801
509-665-3508 ext. 2009

From: Brett Farman - NOAA Federal <brett.farman@noaa.gov>
Sent: Friday, April 2, 2021 1:57 PM
To: Tonseth, Michael A (DFW) <Michael.Tonseth@dfw.wa.gov>
Cc: Emi Melton - NOAA Federal <emi.melton@noaa.gov>; Jackson, Chad S (DFW) <Chad.Jackson@dfw.wa.gov>; Tom Scribner (<scrt@yakamafish-nsn.gov>) <scrt@yakamafish-nsn.gov>; Murdoch Keely (<murk@yakamafish-nsn.gov>) <murk@yakamafish-nsn.gov>; Kirk Truscott <kirk.truscott@colvilletribes.com>; Gale, William <william_gale@fws.gov>; Cooper, Matt <matt_cooper@fws.gov>; Tom Kahler <tomk@dcpud.org>; Greg Mackey (<gregm@dcpud.org>) <gregm@dcpud.org>
Subject: [EXTERNAL] Re: Wells summer Chinook concurrence request

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Thank you for the good summary of our discussion laying out the options we considered for context. For this year, we do concur that these 15,000 excess yearling Chinook may be released as part of the 2021 annual summer Chinook releases from Wells Hatchery. While neither the Biological Opinion nor the permit explicitly address this scenario, we do believe that it does fall within the effects discussed in the Biological Opinion because of the unique circumstances this year. This concurrence should not be interpreted as a change to the program for future years, or interpreted that overages are always consistent with the permit and Biological Opinion for future years without a specific review of the unique circumstances. Our concurrence is based on the following information which we discussed:

- While the program description seems to imply that the yearling and sub-yearling components are a collective "program", the effects analysis accurately analyzes the effects of each component (yearling and sub-yearling) differently, because they behave and survive differently once released. As a result of how we analyzed impacts, we would typically look at the components as separate "programs" that would individually be limited by the 110% production cap. In this case, you point out that the overall yearling releases throughout the Upper Columbia are below the maximum capacity analyzed in the Biological Opinion (110% of production targets). Therefore the addition of 15,000 yearlings from this program falls within the overall analysis of yearlings emigrating from the system. So, the release this year, would not be expected to increase the overall impacts analyzed in the Biological Opinion.
- The additional 15,000 yearling Chinook have already been marked consistent with the rest of the Wells Hatchery releases. As a result, these fish will be managed and monitored consistent with the expectations in the overall program, and would not add to any confusion that may occur if these fish were to be released somewhere other than Wells Hatchery.

We appreciate the acknowledgement that this is an exception to the program operations, and not an expected approval for future releases of this type. Because annual variations in fecundity, returns, and survival make managing to an exact release target annually difficult, we typically include flexibility in the assumptions in the effects analysis, and have that capped at 110% in this case. Though we do acknowledge this 110% overage may occur in some years, a consistent overproduction pushes the limits of what the analysis considers. Therefore, we appreciate the focus on hatchery management and operations to minimize overages of this kind in an effort to manage more closely to the stated production targets.

As always, we appreciate the communication and open discussion to address this issue this year. We recognize that managing hatchery programs to precisely meet production targets every year can be challenging, and we are glad that we were able to come to a compromise this year that was acceptable to all parties, while staying within the effects analysis considered in the Biological Opinion.

If you have questions about this response, or need additional clarification, please don't hesitate to reach out. Have a great weekend!

Brett

On Fri, Apr 2, 2021 at 10:49 AM Tonseth, Michael A (DFW) <Michael.Tonseth@dfw.wa.gov> wrote:

Good Morning Brett,

As a follow up to yesterday's Joint Fisheries Party (JFP) conference call regarding the disposition of surplus juveniles from the BY-19 yearling Wells summer Chinook program, WDFW is formally requesting concurrence to retain and release the approximately 15K surplus yearlings as part of Douglas PUDs combined 2021 yearling and subyearling summer Chinook releases.

To summarize, the JFP considered four options or uses of the surplus progeny:

- Release into non-anadromous waters.
- Release in the blocked area above Chief Joseph and/or Grand Coulee dams to evaluate outmigration performance and survival as part of investigations for reintroduction.
- Release into the Yakima subbasin to offset current production losses related to disease and to provide for a paired yearling/subyearling release evaluation.
- Retain and release as part of the 2021 annual summer Chinook releases from Wells Hatchery.

Without getting bogged down in the discussion details for the above options (each with their own merits and concerns), ultimately the JFP determined that release as part of the Wells Hatchery 2021 summer Chinook releases was the most reasonable (least controversial) compromise, provided such an action could be authorized under the Biological Opinion (BiOp) and Section 10 permit for the program.

To recap, presently there are a total of about 819,323 (366,432 BY19 yearling and 452,891 BY20 subyearling) summer Chinook juveniles for the Wells program on hand at Wells Hatchery scheduled for release in 2021. The aggregate annual summer Chinook release goal (100% of program) is 804,000 juveniles (320K yearlings and 484K subyearlings). If released as is (with no surplus) the aggregate summer Chinook population to be released in 2021 at will be about 102% of the total release goal (Table 1).

Upon reviewing the BiOp and permit, in the Special Conditions section of Section 10(a)(1)(B) permit 23193 issued to Douglas PUD and WDFW (item 12, pg 6), it states: “*Annually, the Permit Holders shall manage the program to 100 percent of the overall production goal (320,000 yearling; 484,000 sub-yearling) with releases limited to no more than +10 % of the production goal.*” As I read it, “*of the overall production goal*”, could be interpreted as meaning the full 804K annual summer Chinook production target (884.4K at +10%) and not necessarily the individual program elements. This would infer that because the subyearling program is short and the yearling program is long for 2021 releases (see Table 1), retaining the ~15K yearling surplus and releasing them into the Columbia as part of Douglas PUDs overall summer Chinook mitigation obligation, would remain consistent with the permit conditions to not exceed the overall production goal (projected 2021 Wells summer Chinook releases would be 102% of the overall based on current inventory – well within the 110%). As you had pointed out in an earlier email and during yesterdays conference call, a fundamental question for NOAA is how “program” is defined within the BiOp. Throughout much of the BiOp, references are made to the Wells Hatchery summer/fall Chinook program with the yearling and subyearling components identified as a release or life history type. The only time a significant distinction is made between the two releases is within the effects analysis section of the BiOp. However, it was noted that the effects evaluated were as an aggregate of all four of the yearling summer Chinook programs authorized in the BiOp (Methow, Wells, Chelan Falls, and Wenatchee). At current inventories for these programs (1,705,537), the projected aggregate releases would at or below 106% of the combined yearling releases authorized under this BiOp and therefore under the cumulative effects analyzed in the BiOp.

It is WDFW's opinion that based on the language in the BiOp and how the effects analyses were conducted, retention and release of the ~15K surplus summer Chinook juveniles in the Wells yearling program as part of Douglas PUD's overall summer Chinook releases for 2021 falls within the authorizations allowed in the BiOp and permit. We are asking for NOAA's concurrence based on this opinion. I would additionally add that WDFW views this concurrence request as an exception and not an opportunity to overreach the authorizations, particularly when better hatchery operations/actions can be implemented to avoid overages of this kind. I have communicated with Douglas PUD (they are included on this email) and they support the option of keeping the surplus as part of their 2021 summer Chinook releases.

Please let me know if you have any questions. Thank you for your time and consideration.

Mike

Table 1. Current inventory of Wells summer Chinook scheduled for release in 2021.

Brood Year	Release Year	Release Goal	Current inventory	Percent of program	110% Program level
2019	2021	320,000	366,432	1.15	352,000
2020	2021	484,000	452,891	0.94	532,400
Total Projected 2021 Releases		804,000	819,323	1.02	884,400

Mike Tonseth

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