

Memorandum

To: Wells, Rocky Reach, and Rock Island HCP Hatchery Committees, and Priest Rapids Coordinating Committee Hatchery Subcommittee Date: August 24, 2020

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

cc: Sarah Montgomery, Anchor QEA, LLC

Re: Final Minutes of the July 15, 2020, 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, July 15, 2020, from 9:00 a.m. to 10:30 a.m. Attendees are listed in Attachment A to these meeting minutes.

Action Item Summary

Joint HCP-HCs and PRCC HSC

- Brett Farman will discuss with Charlene Hurst (NMFS) and Mike Tonseth the potential use of a multi-population model for estimating proportionate natural influence (PNI) 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 salmon Outplanting plan based on historic run-size data (Item I-A). *(Note this item is ongoing.)*
- All parties will provide updates on changes to marking and tagging plans due to the impacts of COVID-19 on operations as updates become available (Item I-A). *(Note this item is ongoing.)*
- Kirk Truscott will determine whether scales collected from spring Chinook salmon at Wells Dam for elemental signature analysis can be used to discern Okanogan River spring Chinook salmon from Methow River spring Chinook salmon (Item I-A). *(Note this item is ongoing.)*
- Mike Tonseth will check with Andrew Murdoch (WDFW) on presenting pre-spawn mortality data to the HCP-HCs and PRCC HSC at an upcoming meeting (tentatively planned for fall 2020) and will discuss with him the potential for using estimates of female pre-spawn mortality to calculate escapement goals (Item I-A). *(Note this item is ongoing.)*

- Mike Tonseth will ask Mike Hughes (WDFW) about visual assessments of males vs. females at Tumwater Dam (Item I-A). *(Note this item is ongoing.)*
- Todd Pearsons will continue coordinating with Mark Sorel (University of Washington) regarding his work on life cycle models for Wenatchee spring Chinook salmon and invite him to an upcoming meeting (tentatively planned for winter 2020/2021; Item II-A).
- Mike Tonseth will discuss collecting extra scales from broodstock at Methow Hatchery with WDFW staff at the facility (Item II-B).
- Kirk Truscott will work with CCT staff to develop a model that addresses the probability of encountering natural-origin Okanogan spring Chinook salmon at Wells Dam (Item II-B).
- Kirk Truscott will work with Casey Baldwin (CCT) to prepare a presentation about reintroduction of spring Chinook salmon upstream from Chief Joseph Dam (Item II-B).
- Bill Gale will share with Keely Murdoch the U.S. Fish and Wildlife Service (USFWS) hazard analysis for hatchery work considering COVID-19 (Item II-C).

Joint RI/RR HCP-HC and PRCC HSC

- Catherine Willard will discuss the draft Statement of Agreement (SOA), *Regarding Chelan PUD's Okanogan Sockeye Obligation and Status of the Reintroduction Program*, with Kirk Truscott (Item I-A). *(Note this item is ongoing.)*

PRCC HSC

- None.

Decision Summary

- No decisions were approved during today's meeting.

Agreements

- The HCP Hatchery Committees and Priest Rapids Coordinating Committees representatives present approved the addition of Katy Shelby (WDFW) to their respective distribution lists (Item VI-B). *(Note: Tracy Hillman will coordinate the final approval of Shelby's addition to the HCP distribution lists through the HCP Coordinating Committees.)*

Review Items

- The *Grant County PUD Hatchery Monitoring and Evaluation Implementation Plan for Spring and Summer Chinook in the Wenatchee Basin and Summer Chinook in the Methow Basin 2021*, which was provided by Todd Pearsons and was distributed to the PRCC HSC by Kristi Geris on

July 8, 2020, is available for a 30-day review, with edits and comments due to Pearsons on August 7, 2020.

Finalized Documents

- There are no documents that have been recently finalized.

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. Hillman reviewed the agenda and asked for any additions or changes to the agenda. Mike Tonseth removed the update on outplanting surplus Methow composite spring Chinook salmon and the update on Wenatchee spring Chinook salmon pre-spawn survival estimates. Catherine Willard added an update on Chelan Falls broodstock collection and noted that she moved the decision about SOAs regarding Chelan and Grant PUD's Okanagan Sockeye Obligation and Status of Reintroduction Program to next month.

All representatives present approved the agenda with these changes.

The HCP-HCs and PRCC HSC representatives reviewed the revised June 17, 2020, meeting minutes. Minor revisions were resolved in the meeting. The HCP-HCs and PRCC HSC approved the June 17, 2020, meeting minutes, as revised. The CCT abstained because they were not represented at the June meeting.

Action items from the HCP-HCs and PRCC HSC meeting on June 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 Charlene Hurst and Mike Tonseth the potential use of a multi-population 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.
- *Greg Mackey will work with Mike Tonseth to test a modeling approach and prepare 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.

- *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. He said one new paper on this topic recently came out.

Tracy Hillman recognized the title and offered to send Mackey a copy.

- *Mike Tonseth will distribute the analysis showing feasibility of the Methow Spring Chinook salmon Outplanting plan based on historic run-size data (Item I-A).*

Tonseth said this item is ongoing.

- *All parties will provide updates on changes to marking and tagging plans due to the impacts of COVID-19 on operations as updates become available (Item I-A).*

Tracy Hillman said this item is ongoing.

- *Kirk Truscott will determine whether scales collected from spring Chinook salmon at Wells Dam for elemental signature analysis can be used to discern Okanogan River spring Chinook salmon from Methow River spring Chinook salmon (Item I-A).*

Truscott said he will provide an update on this today.

- *Todd Pearsons, along with representatives from Chelan PUD and Douglas PUD, will provide direction to Tracy Hillman on next steps for estimating carrying capacity (Item II-A).*

Pearsons said he will provide an update on this during II-A.

- *Mike Tonseth will check with Andrew Murdoch (Washington Department of Fish and Wildlife [WDFW]) on presenting pre-spawn mortality data to the HCP-HCs and PRCC HSC at an upcoming meeting and will discuss with him the potential for using estimates of female pre-spawn mortality to calculate escapement goals (Item II-B).*

Tonseth said this item is ongoing.

- *Mike Tonseth will ask Mike Hughes (WDFW) about visual assessments of males vs. females at Tumwater Dam (Item II-B).*

Tonseth said this item is ongoing.

- *Keely Murdoch will provide an update on the operation of the Nason Creek and White River screw traps (Item II-C).*

Murdoch reported the trap details as follows: both the Nason Creek and White River screw traps have been active since March. She said the Nason Creek and White River traps ran from March 1 to March 23. The Nason Creek trap resumed operation on June 9 and has been operating since then. The White River trap has not yet restarted. They are waiting for the flows to decrease. It should restart soon as the flows are beginning to drop in the White River.

Joint RI/RR HCP-HC and PRCC HSC

- *Catherine Willard will discuss the draft Statement of Agreement (SOA), regarding Chelan PUD's Okanagan Sockeye Obligation and Status of the Reintroduction Program, with Kirk Truscott (Item IV-A).*

Willard said this action item is ongoing and one reason why the topic was delayed.

Wells HCP-HC

- *Greg Mackey will work with Charles Frady (WDFW) to update the run forecast for hatchery spring Chinook salmon escapement to the Winthrop National Fish Hatchery (NFH) and provide it to Bill Gale and Matt Cooper (Item III-A).*

Mackey said this item is complete.

PRCC HSC

- None.

II. Joint HCP-HCs and PRCC HSC

A. Updated Retrospective Analysis of Wenatchee Spring Chinook Salmon Conservation Program Size

Todd Pearsons said he has an update on discussions about sizing the conservation programs. He said he reviewed an American Fisheries Society talk from 2019, by Mark Sorel (University of Washington), which Andrew Murdoch (WDFW) also contributed to. The research related spawning escapements to different life stages of emigrants from the screw traps. Pearsons said Sorel is now working on a life cycle model for Wenatchee spring Chinook salmon that would likely inform discussions about the size of conservation programs. Pearsons added that one aspect of Sorel's dissertation will focus on the effects of density dependence on predicting adult abundance. Another important piece to his work is incorporating management scenarios into the model. He also plans to incorporate each life stage that migrates out of the Nason, Chiwawa, and White rivers, and will try to account for growth, size, and survival rates in the model.

Tracy Hillman asked if the committees would like to invite Sorel to a meeting to discuss his work. Pearsons said winter would be a good time to invite Sorel because he is just in the beginning stages of his model. Pearsons said he will continue discussing this with Sorel and invite him to a meeting this winter.

Hillman asked whether the retrospective analysis is on hold until the committees have results from Sorel's model. Pearsons said he does not think it needs to wait because a lot of new information is available to inform the analysis that is better than what was used to size the program originally.

Murdoch said she is not comfortable changing escapement targets until the stock-recruit curve includes fall migrants and pre-spawn mortality. She said pre-spawn mortality will make a big difference in estimates of spawning escapement, too.

B. Differentiating Natural-Origin Okanogan Spring Chinook Salmon from Other Natural-Origin Chinook Salmon during Broodstock Collection at Wells Dam for Methow Hatchery Programs

Kirk Truscott said collection of natural-origin return (NOR) spring Chinook salmon is occurring at Wells Dam. With the return of NOR spring Chinook salmon there is concern that these fish may be collected and used in the Methow program rather than returning to the Okanogan for natural production. He said CCT is working on methods to identify Okanogan spring Chinook salmon so those fish can be excluded from the Methow program brood collection. One potential method is scale elemental analysis, which appears to be valid when using otoliths from juveniles to distinguish Similkameen/Okanogan summer Chinook salmon from mainstem Columbia River summer/fall Chinook salmon. Presently, it is unknown whether or not elemental "scale" analysis could be used to reliably distinguish these two summer Chinook natal origins; however, the otolith results are encouraging. This method relies on differences in water chemistry between rearing sites. Water chemistry information for tributaries in the Okanogan and Methow Basins is necessary to assess if sufficient differences in water chemistry exists among tributaries such that elemental scale analysis could translate to differences in scale samples for identifying Okanogan River spring Chinook from Methow River spring Chinook. He said the CCT is looking into the available data to determine if there are sufficient differences in water chemistry among spring Chinook rearing tributaries such that it would translate to differences in elemental analysis as a method for identifying Methow spring Chinook from Okanogan spring Chinook. Greg Mackey asked how quick of a turnaround a laboratory could provide for these scale samples? Truscott said a laboratory could return results in as short as one week; however, the tests are quite expensive. He said he has been getting some guidance from Tim Lindley (Pacific Northwest National Laboratory) on this analysis, such as how many scales would need to be run to confidently assign a fish to its basin of origin.

Mike Tonseth asked if 2021 is the first year when 4-year-old returns can be expected from production in the Okanogan basin. Truscott said the first juvenile release was in 2015, so 2020 will be a full cohort. Tonseth noted that WDFW has scale samples from 2019 that were used to assign spring Chinook salmon to the Methow basin, and additional scale samples could be taken again in 2020 even if the analyses will not be undertaken until later. Truscott asked, how many scales are typically taken? Tonseth said four to five scales per fish, and he will talk to WDFW staff at Methow Hatchery to see if this can be increased.

Bill Gale asked whether grandparent and parent analysis could be used to identify natural-origin fish that were produced from releases out of Riverside Pond, because the parentage of the Riverside Pond releases are known from parentage-based-tagging efforts at Winthrop NFH. Truscott said he recalls previous work in the Wenatchee basin that showed grandparentage analysis and more removed analyses are not particularly reliable for determining assignment probabilities. Tonseth agreed and said using grandparentage analysis would require sampling all spring Chinook salmon passing Wells Dam and would depend on the manager's level of comfort with the assignment probabilities.

Todd Pearsons asked if Truscott has performed any rough modeling to estimate the number of spring Chinook that may be returning to the Okanogan basin. He suggested a scenario-based model that would provide a probability of Okanogan spring Chinook salmon being collected. Truscott said the passive-integrated transponder (PIT)-tag data from adult tagging activities might help inform a model like this. He said there are a surprisingly large number of fish that cross the PIT array in the lower Okanogan River, but spawning ground surveys show few redds. He said one problem is a lack of access to spawning habitat on private lands. This limits the scope of redd surveys in the basin. He said it is unclear how many spawners there are in the basin because the estimate would be different depending on which data source is used—last detections of the PIT reader or redd observations. He added taking the estimate of spawners then becomes even more complicated because an assumption about egg to smolt survival is needed to expand it to basin production. He said this would produce a large range of potential encounters at Wells Dam. He said the probabilistic model of encountering Okanogan fish at Wells Dam, given what is known about spawning in the Okanogan River, would still be helpful to informing these potential analyses, and that he will work with his staff to develop one. He said CCT will also work to develop a protocol and estimate costs for scale elemental analysis to determine basin of origin for spring Chinook collected at Wells Dam.

Truscott said he will continue providing updates on this item at future meetings.

C. Effect of COVID-19 Pandemic on Monitoring and Evaluation Activities

Tracy Hillman asked each committee member to provide an update on impacts of the COVID-19 pandemic on monitoring and evaluation activities.

Mike Tonseth reported no changes from the previous meeting.

Brett Farman also reported no changes.

Bill Gale reported no changes. He said USFWS has resumed field work except for electrofishing and other activities where social distancing is not feasible. He asked Tonseth what would happen if Chelan County reverted to Phase 1. Tonseth said there is always the possibility of more restrictions,

but keep in mind that before Phase 1.5 started, WDFW staff had started M&E activities with exemptions from COVID-19 restrictions. Gale asked Tonseth to continue providing updates on WDFW policy so that activities can be consistent.

Keely Murdoch said the Yakama Nation are looking ahead to coho salmon broodstock collection and spawning in about 6 weeks. She said Yakama Nation staff are working on plans to implement collection and spawning with social distancing. She said she may ask staff at Tumwater or Dryden dams and Leavenworth NFH to compare how staff are setting up spawning areas and trapping while maintaining distance. Gale offered to send USFWS' hazard analyses to Murdoch to help with this effort.

Catherine Willard said when the time for coho salmon collection at Tumwater and Dryden nears, she will also be in contact with Murdoch to review procedures. Murdoch said one concern at Dryden is that the access to the trap is cramped. Willard also noted that Chelan PUD is planning to start spring Chinook salmon surveys at the end of July.

Kirk Truscott reported that CCT's M&E staff are seining and tagging juvenile summer Chinook salmon at the confluence of the Okanogan River. Next, they will install the weir on the Okanogan River when flows decline. He said staff are also collecting summer Chinook salmon broodstock with a purse seine at the Okanogan River mouth. He said a developing thermal barrier at the mouth of the Okanogan should improve collections for this effort. Truscott added that CCT staff will be working from home until at least September 30 due to the CCT partial government shutdown that has been extended.

Todd Pearsons reported no changes to impacts from COVID-19 on Grant PUD programs since the prior meeting. He said broodstock collection for fall Chinook salmon in September will pose a challenge though.

Greg Mackey reported no changes since the previous meeting.

III. Wells HCP-HC

A. Methow Hatchery Spring Chinook Salmon Broodstock

Greg Mackey provided an update on broodstock collection for the spring Chinook salmon program at Methow Hatchery. He said broodstock collection is almost complete. For the Twisp program, he said there are 7 pairs of wild fish with a target of 8 pairs. He said the Twisp program may not reach its goal for 2020, especially if fecundities are less than expected. He said if this program does not meet its broodstock targets, an extra fish spawned in the Methow-Chewuch program will be incorporated, as described in the Hatchery and Genetic Management Plan.

For the Methow programs (Methow and Chewuch), he said there are 61 females—53 wild females and 8 hatchery females. For males, there are fewer than the target—35 wild, 10 hatchery, and 2 jacks. Douglas PUD continues to trap at the hatchery outfall trap and will likely collect a few more males. He said this means there are enough fish to spawn and get the full program; however, some males may be reused. Considering how low the run was this year and challenges with broodstock collection, he said the program is in relatively good shape and that he will provide another update in August.

IV. RI/RR HCP-HC

A. Brood Year 2020 Chiwawa Broodstock Collection

Catherine Willard provided an update on the collection of brood year 2020 Chiwawa spring Chinook salmon. She said the target is 84 NOR fish, and so far, 28 NOR and 53 hatchery-origin return (HOR) fish have been collected. At Tumwater Dam, 16 NOR fish, previously PIT-tagged as smolts, were collected. She said trapping efforts at the Chiwawa Weir began on July 6, once flows were low enough to operate the trap. Staff initially tried trapping during the day from 6 am to 9 pm for four days but found that to be unsuccessful in collecting NOR Chinook salmon (but a few HOR Chinook salmon and bull trout were each collected). Willard said Chelan PUD discussed the progress with the USFWS and requested using the 2019 protocol (24 hours trapping, then 24 hours off). Once this was confirmed and implemented, collections of NOR spring Chinook salmon increased. She said the current bull trout encounter tally is at 28 fish out of an allowable 123. Trapping is ongoing at the 24-hour on/off schedule rate until either 20 days of trapping have occurred or the bull trout limit is reached. She said she will also provide an email summary of this update.

Kirk Truscott asked if there are reliable PIT-tag data that could inform when spring Chinook salmon are entering the Chiwawa River. Willard said she is not sure, but based on counts at Tumwater Dam, there was a pulse of fish and now there are fewer. Truscott asked about the likelihood of meeting brood given that peak passage has occurred. Willard agreed that it is unlikely that the Chiwawa spring Chinook salmon program will meet its full complement of NOR brood in 2020 but will be able to backfill with hatchery-origin brood to meet its smolt production target.

B. Chelan Falls Broodstock Collection

Catherine Willard said the adult summer Chinook trap for collecting broodstock in the Chelan River habitat channel for the Chelan Falls program was planned to be installed and operational by July 16, 2020; however, due to delays associated with COVID-19, the trap will not be ready until the fourth week of July. She said this is close to the timeframe when it would be beneficial to trap for broodstock in the Chelan River but not close enough to plan on collecting the full brood. She said Chelan PUD has an Interlocal Agreement with Douglas PUD to collect all of the needed brood for the

Chelan Falls program at the Wells Dam Volunteer Trap in 2020. She said the adult summer Chinook trap will still be installed in the Chelan River in late July as a pilot to test collection for future years. The fish collected through this effort will be surplus, per discussion with Mike Tonseth, and may be held at Eastbank Hatchery. Tonseth added the surplus fish will be set aside to satisfy production needs for either the CCT or YN production programs, or as food fish.

Keely Murdoch asked for confirmation about whether the trap will be operated in 2020. Willard said yes but not for brood collection—brood will be sourced from Wells Dam Volunteer Trap. Willard also confirmed the trap was not installed due to delays from COVID-19.

V. PRCC HSC

A. Review Agenda, Announcements, Approve Past Meeting Minutes

The PRCC HSC representatives approved the June 17, 2020, meeting minutes as revised.

B. Grant County PUD Hatchery Monitoring and Evaluation Implementation Plan for Spring and Summer Chinook in the Wenatchee Basin and Summer Chinook in the Methow Basin 2021

Todd Pearsons said Grant PUD's Hatchery Monitoring and Evaluation Implementation Plan for Spring and Summer Chinook Salmon in the Wenatchee Basin and Summer Chinook Salmon in the Methow Basin 2021 is available for a 30-day review, with edits and comments due by August 7. Pearsons said the main difference between this version and the previous version is new text associated with the new Section 10 permit for summer and fall Chinook salmon in the appendices.

C. Carlton Acclimation Facility Construction Updates

Todd Pearsons said he has another update on construction at the Carlton Acclimation Facility. He said installation of the backup well has been postponed to next year. He said Grant PUD had originally planned to have it running before fish are on station. He said, on the other hand, the domestic well, which provides water for showers, eyewash stations, etc., will be completed before fish are on station.

Truscott asked what caused the delay. Deanne Pavlik-Kunkel said there were supply chain issues related to COVID-19. She said the bid was also higher than anticipated for this work, making it challenging to get full funding for the work in 2020. She said the plan is to have everything in place by spring or early summer in 2021.

VI. Administrative Items

A. Anchor QEA Support Through 2020

Tracy Hillman and Sarah Montgomery notified representatives present that Montgomery will be providing support to the committees through the end of 2020.

B. WDFW Requests Change to Distribution Lists

Tracy Hillman said he received a request from Mike Tonseth to add Katy Shelby (WDFW) to the primary distribution list for the HCP Hatchery Committees and PRCC HSC. Alf Haukenes (WDFW) said Shelby is a recent hire with WDFW and she will be providing technical support to the committees. Hillman asked representatives present if they approve the addition of Shelby to the distribution list for the HCP Hatchery Committees and all present approved. Hillman said the next step for adding Shelby to the distribution list is to get approval from the HCP Coordinating Committees.

Regarding the PRCC HSC distribution list, Todd Pearsons said the PRCC HSC can also add Shelby to the list and inform Denny Rohr (facilitator of the PRCC). Hillman said he will inform the PRCC that Shelby will be added to the distribution list.

VII. Next Meetings

Keely Murdoch requested that the CCT provide a presentation or update about the phased approach for reintroduction of spring Chinook salmon to blocked areas in the upper Columbia River. Kirk Truscott said he will work with Casey Baldwin to provide this update sometime this fall. Murdoch thanked Truscott and noted that the program is not tied to the HCP Hatchery Committees or PRCC HSC but that it would be interesting to the committees.

The next HCP-HCs and PRCC HSC meetings will be Wednesday, August 19, 2020; Wednesday, September 16, 2020, and Wednesday, October 21, 2020; held by conference call and web-share until further notice. Note that the August meeting will begin at 9 am.

VIII. List of Attachments

Attachment A List of Attendees

**Attachment A
List of Attendees**

Name	Organization
Sarah Montgomery	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 Graff†	Grant PUD
Deanne Pavlik-Kunkel	Grant PUD
Todd Pearsons‡	Grant PUD
Brett Farman**	National Marine Fisheries Service
Bill Gale*‡	U.S. Fish and Wildlife Service
Matt Cooper**	U.S. Fish and Wildlife Service
Mike Tonseth**	Washington Department of Fish and Wildlife
Charlie Snow	Washington Department of Fish and Wildlife
Alf Haukenes	Washington Department of Fish and Wildlife
Keely Murdoch*‡	Yakama Nation

Notes:

* Denotes HCP-HCs member or alternate

‡ Denotes PRCC HSC member or alternate