

FINAL MEMORANDUM

To: Wells, Rocky Reach, and Rock Island HCPs Hatchery Committees
Date: February 19, 2015

From: Mike Schiewe, HCP Hatchery Committees Chair

Cc: Kristi Geris

Re: Final Minutes of the January 21, 2015 HCP Hatchery Committees Meeting

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plans (HCPs) Hatchery Committees meeting was held at the Grant PUD office in Wenatchee, Washington, on Wednesday, January 21, 2015, from 9:30 am to 3:00 pm. Attendees are listed in Attachment A to these meeting minutes.

ACTION ITEM SUMMARY

- Chelan PUD, Douglas PUD, Grant PUD, and the Washington Department of Fish and Wildlife (WDFW) will coordinate on actions needed to finalize the Hatchery Monitoring and Evaluation (M&E) Plan Appendices (Item I-A).
 - Mike Tonseth will incorporate Chelan PUD's edits into the revised draft 2014 Wenatchee Basin Steelhead Release Strategy, and will provide the revised document to Kristi Geris for redistribution to the Hatchery Committees (Item I-A). (*Note: Tonseth provided an updated strategy to Geris on January 23, 2015, which Geris distributed to the Hatchery Committees that same day.*)
 - Hatchery Committees representatives will review and submit edits on the draft Wells 2015 HCP Action Plan to Douglas PUD prior to the next Hatchery Committees meeting on February 18, 2015 (Item II-A).
 - Chelan PUD will provide a draft Rocky Reach and Rock Island 2015 HCP Action Plan to Kristi Geris for distribution to the Hatchery Committees and discussion during the February 18, 2015 meeting (Item II-A).
 - The Yakama Nation (YN) will incorporate updates on kelt sampling at Wells Dam into the monthly kelt reconditioning updates that are routinely distributed to the Hatchery Committees (Item IV-A).
 - The YN will coordinate with Charlie Snow (WDFW) on drafting a kelt sampling protocol for Wells Dam, and will provide the protocol to Kristi Geris for distribution
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to the Hatchery Committees (Item IV-A).

- Chelan PUD will provide a draft report on the water recirculation pilot studies at Eastbank Fish Hatchery (FH) and Chiwawa Fish Facility to Kristi Geris for distribution to the Hatchery Committees for discussion during the Hatchery Committees meeting on February 18, 2015 (Item V-A).
- Mike Tonseth and Kirk Truscott will coordinate with Pat Phillips (Chief Joseph Hatchery Manager), and Keely Murdoch will coordinate internally with the YN, regarding the disposition of surplus juvenile Methow spring Chinook salmon at Eastbank Hatchery (Item V-B).
- Lynn Hatcher will provide a Hatchery and Genetic Management Plan (HGMP) update following the next joint National Marine Fisheries Service (NMFS)/U.S. Fish and Wildlife (USFWS) Biological Opinion (BiOp) Coordination Meeting to Kristi Geris for distribution to the Hatchery Committees (Item V-C).
- The YN will coordinate with Douglas PUD and Chelan PUD to develop a revised draft Upper Methow Spring Chinook Acclimation Proposal, and will provide the revised proposal to Kristi Geris for distribution to the Hatchery Committees (Item V-D).
- Chelan PUD will provide the draft Wenatchee spring Chinook salmon re-initiation of Endangered Species Act (ESA) consultation documents that will be discussed during the next joint NMFS/USFWS BiOp Coordination Meeting to Kristi Geris for distribution to the Hatchery Committees (Item V-E). *(Note: Alene Underwood provided these documents to Geris following the meeting on January 21, 2015, which Geris distributed to the Hatchery Committees that same day.)*

DECISION SUMMARY

- There were no decisions approved during today's meeting.

AGREEMENTS

- There were no agreements discussed during today's meeting.
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REVIEW ITEMS

- Kristi Geris sent an email to the Hatchery Committees on January 16, 2015, notifying them that the draft Wells 2015 HCP Action Plan is available for review, with comments due to Douglas PUD prior to the next Hatchery Committees meeting on February 18, 2015, when Douglas PUD will request approval of the plan (Item II-A).

FINALIZED DOCUMENTS

- There are no documents that have been recently finalized.

I. Welcome

A. *Review Agenda, Review Last Meeting Action Items, Approve the November 19, 2014 Meeting Minutes (Mike Schiewe)*

Mike Schiewe welcomed the Hatchery Committees and asked for any additions or changes to the agenda. Alene Underwood added a brief discussion on the Chelan PUD and Douglas PUD Methow Sharing Agreement.

The Hatchery Committees reviewed the revised draft November 19, 2014 meeting minutes. Kristi Geris said there was one outstanding comment remaining to be discussed regarding the YN's draft Upper Methow spring Chinook salmon acclimation proposal discussion. Geris said that the draft minutes report that Keely Murdoch had indicated that Table 4 in the draft proposal indicated that 25,000 spring Chinook salmon released upstream alone was not enough to drive percent hatchery-origin spawners (pHOS) values above the YN's goals. Greg Mackey indicated that he thought that Murdoch was referring to NMFS' goals. Murdoch confirmed that Mackey was correct and suggested revising "YN's goals" to "draft NMFS targets." Geris will incorporate the edits, as discussed, into the revised minutes and she said that all other comments and revisions received from members of the Committees have been incorporated into the revised minutes. The Hatchery Committees members present approved the draft November 19, 2014 meeting minutes, as revised, with NMFS abstaining as they did not attend the meeting.

Action items from the Hatchery Committees meeting on November 19, 2014, and follow-up discussions were as follows (italicized item numbers below correspond to agenda items from the meeting on November 19, 2014):

- *Chelan PUD will provide a draft report on the water recirculation pilot studies conducted at Eastbank FH and Chiwawa Fish Facility to the Hatchery Committees by December 17, 2014; the draft report will be discussed during the Hatchery Committees meeting on January 21, 2015 (Item I).*

This will be discussed during today's meeting.

- *Mike Tonseth will provide a revised memo clarifying standardized methods for Hatchery M&E Plan Objective 8.3, Fecundity at Size, to the Hatchery Committees for review by December 17, 2014; the revised memo will be discussed during the Hatchery Committees meeting on January 21, 2015 (Item I).*

Tonseth provided a revised memo to Kristi Geris on December 26, 2014, which Geris distributed to the Hatchery Committees that same day. Tonseth indicated that he was unable to determine where to append this memo, and Alene Underwood noted that the Hatchery M&E Plan Appendices have not yet been finalized. Underwood said that Chelan PUD will coordinate with Douglas PUD, Grant PUD, and WDFW, on actions needed to finalize the Hatchery M&E Plan Appendices.

- *WDFW will add a revised summary table to the 2014 Wenatchee Basin Steelhead Release Strategy, and will redistribute the final document to the Hatchery Committees by December 17, 2014; the final document will be discussed during the Hatchery Committees meeting on January 21, 2015 (Item I).*

Tonseth provided the final document to Kristi Geris on December 26, 2014, which Geris distributed to the Hatchery Committees that same day. Catherine Willard noted that there was an error in the document that was recently distributed, which she emailed to Tonseth. Tonseth said that he will review Willard's email, correct the document, and will provide the updated final document to Geris for redistribution to the Hatchery Committees.

- *The YN will provide a revised draft Upper Methow Spring Chinook Acclimation Proposal to Kristi Geris for distribution to the Hatchery Committees by December 3, 2014; the Hatchery Committees will submit suggested edits and comments on the revised draft proposal by December 17, 2014; and the YN will redistribute a final revised draft proposal to the Hatchery Committees at least 10 days prior to the Hatchery Committees meeting on January 21, 2015 (Item II-A).*

The YN provided a revised draft proposal to Geris on December 3, 2014, which she distributed to the Hatchery Committees that same day. This will be discussed during

today's meeting.

- *The Hatchery Committees meeting scheduled for December 17, 2014, has been canceled (Item VI-A).*

Observed.

II. Douglas PUD

A. Draft Wells 2015 HCP Action Plan (Tom Kahler and Greg Mackey)

Tom Kahler said that a draft Wells 2015 HCP Action Plan was distributed to the Hatchery Committees by Kristi Geris on January 16, 2015. Kahler said that the plan is similar to previous years. He noted that an estimated completion date will be added to the Wells Hatchery Modernization. He said that Douglas PUD plans to request approval of the hatchery portion of the plan at the next Hatchery Committees meeting on February 18, 2015. He added that the plan will be presented to the HCP Coordinating Committees next week, and to the HCP Tributary Committees at their next meeting. Greg Mackey requested that Hatchery Committees representatives closely review the M&E reporting and scheduling portion, with regard to development and review time, as well as how that schedule aligns with the development of the annual Hatchery M&E Implementation Plan. Hatchery Committees representatives will review and submit edits on the draft Wells 2015 HCP Action Plan to Douglas PUD prior to the next Hatchery Committees meeting on February 18, 2015. Alene Underwood also indicated that Chelan PUD will provide a draft Rocky Reach and Rock Island 2015 HCP Action Plan to Geris for distribution to the Hatchery Committees and discussion during the February 18, 2015 meeting.

III. Chelan PUD

A. Methow Sharing Agreement (Alene Underwood)

Alene Underwood said that over the past several months, Chelan PUD and Douglas PUD have been working to develop an Interlocal Agreement between Douglas and Chelan PUDs to rear Chelan PUD's Methow spring Chinook salmon production at Methow FH. She said that the plan is for the Chelan PUD 2015 spring Chinook salmon broodstock to be collected at Wells Dam and reared at Methow FH. She said that this arrangement was described in the HGMP for Chelan PUD's program and that it will be included in the new Methow BiOp. Mike Tonseth asked if NMFS has provided a letter of sufficiency for this plan; Underwood

replied that they have not, but she said that Craig Busack is already aware of the potential agreement between Chelan PUD and Douglas PUD.

Keely Murdoch said that she appreciates that Chelan PUD and Douglas PUD are close to an agreement; however, she asked whether the Hatchery Committees would have an opportunity to review where fish would be reared and acclimated. She recalled the YN's interest in testing acclimation at Carlton Pond. She added that based on Chelan PUD's work using circular ponds, she believes there could be a survival advantage. She also noted the previous low survival rates from Methow FH, and said that she is not necessarily supportive of returning to rearing at Methow FH without first evaluating overwinter acclimation at Chewuch Pond. Underwood noted that the agreement includes brood collection, incubation, and early-rearing—not final acclimation. She said that for this year, Chelan PUD's Methow production will still be acclimated at Carlton Pond. Murdoch noted that attraction of returning adults to Methow FH was a problem. Underwood recalled that the Hatchery Committees have long been supportive of rearing at Methow FH, which was agreed to in the original HGMP. She noted that Douglas PUD and Grant PUD have been meeting their Methow spring Chinook salmon production at Methow FH for many years. Murdoch said that the YN was interested in further discussing the opportunity to compare smolt-to-adult return rates (SARs) between Methow FH and Carlton/Chewuch Pond releases.

Greg Mackey acknowledged that Methow FH has had low SARs; however, he noted that they are approximately twice those at Winthrop National Fish Hatchery (NFH). He said that low SARs may be due to hatchery conditions or they may be due to other factors. He said that this year, spring Chinook salmon smolts will be the first reared and released at the lower recalculated values (Methow FH will release about 160,000 fish). He said that with Chelan PUD's fish, releases will increase to about 240,000 fish, which is still substantially less than the old program targets. He said that lower rearing densities should result in fitter fish, which in turn, may result in better SARs or other performance metrics. Murdoch asked if data comparing rearing densities are available, and Mackey replied that rearing densities will be halved. Tom Kahler added that Methow FH fish tend to return the earliest, which subjects them to higher sea lion predation, among other out-of-basin impacts. He said that

they are also subjected to the fishery first and the longest, with the combination of these factors resulting in low SARs.

Kirk Truscott asked about the status of the Carlton Acclimation Pond, and whether it is a Chelan PUD facility. Underwood said that Chelan PUD owns the original acclimation pond constructed in 1989, as well as the land where Grant PUD built their new acclimation facility. Truscott suggested that the HGMP include either location for intermediate rearing. Underwood agreed that those are options; however, she noted that Chelan PUD owes Douglas PUD adequate notice of any changes, per draft conditions in the Interlocal Agreement.

IV. YN

A. YN Kelt Reconditioning Project Request for Sampling at Wells Dam (Keely Murdoch and Matt Abrahamse)

Keely Murdoch said that a request to sample at Wells Dam for the YN Kelt Reconditioning Project (Attachment B) was distributed to the Hatchery Committees by Kristi Geris on January 9, 2015. Murdoch explained that during a recent Northwest Power and Conservation Council (NPCC) check-in, an Independent Scientific Review Panel (ISRP) review of the YN Kelt Reconditioning Project was discussed, which was generally favorable; however, the ISRP requested that the YN compare phenotypic characteristics between reconditioned kelts and first-time steelhead spawners in Upper Columbia. Murdoch said that because the YN release reconditioned kelts in the fall, testing fecundity is not suitable as it involves lethal sampling. As an alternate approach, Matt Abrahamse (YN) developed a plan to compare: 1) maturation spawn timing; 2) condition factors; 3) available energy stores; 4) passive integrated transponder (PIT)-tag detection rates (spring); and 5) spring migration timing between reconditioned kelts at the time of release and first-time steelhead spawners. Murdoch said that the plan involves sampling during the same time when WDFW is conducting adult steelhead stock assessment monitoring at Wells Dam. Abrahamse said that the additional sampling would only include collecting blood samples, fish length and weight, and Fatmeter readings from up to 50 steelhead females (25 natural-origin recruits [NORs] and 25 hatchery-origin recruits [HORs]). He said that, specifically, concentrations of the egg yolk precursor protein vitellogenin and the hormone estradiol will be used as a measure of maturation, Fulton's Condition Factor (K-factor) and Fatmeter readings will be used to

estimate energy levels, and PIT-tag detection rates will be compared between reconditioned kelts and first-time NOR spawners.

Abrahamse said that the additional sampling is fairly minimal, and will require very little extra handling or time. He further explained that the Fatmeter readers can be conducted when scales are sampled and length and weights are recorded, and the blood samples will be collected when fish are first anesthetized. Murdoch said that the request to the Hatchery Committees is not regarding the study design; rather, it is to sample at Wells Dam alongside WDFW's ongoing data collection. She said that the proposed sampling will be covered under the annual NMFS authorization, which Abrahamse has already requested. She added that Blane Bellerud (NMFS) typically provides the authorization letter by March or April.

Lynn Hatcher asked if any issues have been expressed about not addressing all of the ISRP's requests (e.g., testing fecundity). Murdoch said that most requests will be addressed, and she added that the fecundity comparison may still be addressed separately from this sampling proposal. Abrahamse said that the other ISRP request not addressed by this proposal is regarding egg size, which is not possible, considering the project design. Murdoch added that, based on discussions with the NPCC, the members understand that some requests are not possible.

Kirk Truscott asked about using ultrasound for assessing maturation timing, and Abrahamse said that the YN has considered ultrasound to evaluate ovary sizes. Mike Tonseth cautioned that it is necessary to ensure that the ultrasound unit is consistent from fish to fish, as well as the settings. He also recommended making comparisons between fish of the same age and similar size, as there can be morphological differences. Truscott asked if 25 NORs and 25 HORs separated into respective salt ages will be an adequate sample size for meaningful statistical power. Murdoch said that the first year of this study is meant to be exploratory, and if apparent differences are observed between salt ages, those will be considered in future studies. She said that the YN's main concern was regarding the blood samples. Tonseth noted that because WDFW will be conducting stock assessment monitoring anyway, there will be NOR and HOR controls for blood draw (i.e., others not subjected to blood draw); he suggested obtaining a few extra weight and Fatmeter readings to determine if blood draw has a negative effect on survival, by again relying on PIT-tag detection elsewhere in the system.

He suggested that regarding the fecundity requests, data mining could be conducted on Methow steelhead spawners, possibly looking at relative size differences for similar-aged fish.

Murdoch explained that Fatmeter measurements are used in other kelt programs to provide a way to estimate energy reserves of a fish. Tonseth said that Fatmeter readings have also been used in the Wenatchee Spring Chinook Reproductive Success Study (RSS), and are positively correlated with survival-to-spawn in Tumwater for spring Chinook salmon. He said that NORs tend to have higher lipids, which may contribute to higher survival in NOR spring Chinook salmon. Murdoch said that this difference is one of the reasons for including the HOR study group in the comparisons.

Greg Mackey asked how many years this study will take place, and Murdoch said that at this point, the YN has funding through 2017. She added, however, that depending on the first year, the proposal may be altered if some metrics do not appear useful. Mackey asked how and when sampling will take place (e.g., two fish at a time, over 2 weeks, etc.). Abrahamse said that ideally, sampling would take place within a couple of days of releasing kelts; however, he acknowledged that this may restrict trapping days. He added that the YN may sample fish relatively early because they are exploring the possibility of testing fish as early as possible, and then retaining fish that are not maturing another year. Mackey said that he has conducted blood sampling before with Atlantic salmon, and there were no noticeable mortalities. Abrahamse said that he has also conducted blood sampling on reconditioned fish via the caudal vein, with no noticeable mortalities.

Mackey said that Tom Kahler works closely with the operators sampling at Wells Dam. Kahler said that Douglas PUD will require all parties planning to sample at Wells Dam to provide plans ahead of time and complete security, trap operation, and safety training. He added that a 2015 Wells Dam trapping schedule will be presented to the HCP Coordinating Committees for approval in March or April, prior to trapping season for spring Chinook salmon.

Truscott asked if the YN will be trapping concurrent with WDFW. Murdoch said that it would, and added that YN staff will be present to help collect the extra data. Charlie Snow

suggested sampling HORs collected for broodstock, which would also provide data on mortalities. Murdoch agreed that was a good idea. Snow also noted that fish abundance at Wells Dam can be pretty low late in the run, and suggested reviewing historical data to help plan when scheduling sampling.

Murdoch recalled the Hatchery Committees request for the YN to provide monthly progress reports on their Steelhead Kelt Reconditioning Program, and suggested including an update regarding this sampling effort in those progress reports to keep the Hatchery Committees informed. Mackey noted that the NORs versus HORs data will be of particular interest. Murdoch said that the YN will incorporate updates on kelt sampling at Wells Dam into the monthly kelt reconditioning updates that are routinely distributed to the Hatchery Committees. She added that the YN will also coordinate with Snow on drafting a kelt sampling protocol for Wells Dam, and will provide the protocol to Geris for distribution to the Hatchery Committees.

V. Joint HCP/Priest Rapids Coordinating Committee Hatchery Sub Committee Meeting

A. PRESENTATION: Circular Pond Rearing at Eastbank FH and Chiwawa Facility (Catherine Willard)

Catherine Willard provided a presentation titled, “Post-Release Performance of Chinook Salmon and Steelhead Reared in Partial Water Reuse Circular Vessels Compared to Traditional Flow-Through Raceways” (Attachment C), which was distributed to the Hatchery Committees by Kristi Geris following the meeting on January 22, 2015. The presentation highlighted the results from studies conducted by Chelan PUD and Grant PUD comparing the health and performance of summer Chinook salmon and steelhead that were reared in partial water reuse vessels (recirculating aquaculture systems; RASs) versus raceways (flow-through; FT) at Eastbank FH and Chiwawa Acclimation Facility in addition to comparing performance of summer Chinook reared in single pass circular vessels at Chelan Falls as compared with fish reared in FT raceways at the Entiat National Fish Hatchery. The impetus for the study was to investigate lower-water-use rearing methods (i.e., RASs/circular vessels) versus traditional methods (i.e., FT). Willard reviewed the results of fish performance metrics that were evaluated for fish reared in RASs versus FTs, including fish health, post-release survival, migration travel time, SARs, and age structure, as further

described in Attachment C. Overall, for summer Chinook salmon, the study found equal or better survival and quality of fish and improved age structure for adult returns among fish reared in RASs versus FTs. Overall, for steelhead, the study results were mixed but promising with several confounding variables and no identifiable covariates.

Kirk Truscott asked about the methods for determining survival. He asked if survival was based on tag files, or if known fish releases were used for comparisons. Alene Underwood replied that survival was based on tag files of known releases with mortalities removed.

Mike Tonseth asked if travel times were adjusted based on release location, and Willard replied that they were.

Keely Murdoch asked how a mini-jack was defined. Willard explained, as shown in slide 35 of Attachment C, that 99.5% of all fish were interrogated at juvenile arrays prior to July 1; if the fish was detected after July 1, it was presumed to be a mini-jack.

Todd Pearsons (Grant PUD) noted, regarding slide 14 of Attachment C, that the primary difference between short-term (June to October) and long-term (June to February) RAS treatments is that it appears that winter growth may be more important; Willard agreed.

Truscott noted, regarding slide 21 of Attachment C, that it appears that mini-jack rates were low regardless of the rearing method. He asked, if mini-jacks were the more important biological risk, whether efforts should focus on the benefit of RASs on mini-jacks rather than jacks. Pearsons said that the two are closely correlated. Peter Graf (Grant PUD) added that the rate of PIT-tagged fish (y-axis) is more of an index and not a good indication of the true rate.

Tonseth asked if there was any analysis of hatchery health performance on FTs versus RASs; specifically, if any health issues were observed to differ between the two rearing methods. Willard said that specific evaluations were not conducted; however, anecdotally, nothing out of the ordinary was observed.

Truscott noted the several confounding variables for steelhead, including broodstock origin, and he asked how many different mating types were included. Willard replied that there were only two: wild-by-wild (WxW) and hatchery-by-hatchery (HxH). Truscott asked if there were PIT tags for each origin, and Willard replied that they are. Willard further explained that WxWs and HxHs were separated and distinguishable by rearing vessel. Truscott suggested evaluating survival by origin.

Tom Kahler asked if any differences in size and timing of migrants were observed. Willard said that fish reared in RASs tended to have faster travel times and also higher predation rates, which may be because they were released earlier.

Underwood said that Chelan PUD will provide a draft report on the water recirculation pilot studies to Geris for distribution to the Hatchery Committees for discussion during the Hatchery Committees meeting on February 18, 2015.

B. Methow and Wenatchee Spring Chinook Salmon Production Status Update (Mike Tonseth)
Methow Spring Chinook Salmon

Mike Tonseth said that about 37,000 surplus Methow spring Chinook salmon are on hand at Methow FH, projected to be in excess of 110% of the brood year (BY) 2014 production goal. He said that after discussions with hatchery staff, WDFW spoke with Chelan PUD about incorporating the surplus progeny into the Chelan PUD program. He recalled that for the Chelan PUD program at Eastbank Hatchery, spring Chinook salmon were collected via the Rocky Reach Trap and tangle netting in the Chewuch; and ultimately, only NORs collected at Rocky Reach and fish collected via tangle netting in the Chewuch were used. He said that because there were HORs included in the tangle netting, the 100% NORs target for Chelan PUD's conservation program was not met. He said that WDFW contacted Chelan PUD regarding removing HORs from their program and boosting the NOR component, prioritizing WxW progeny. He said that this left HxW fish; however, the wilds were already used in the WxW cross, so those genes are already represented in the mix. Alene Underwood asked why not remove the HxH fish. Tonseth replied that the decision was based on when the males matured. He explained that HxWs were prioritized over HxH where the hatchery expression is represented in the HxW crosses, and the HORs were removed where NOR males were already used in the WxW cross. Tonseth said that he also

spoke with USFWS, but their program targets had already been met; he presumed that the Colville Confederated Tribes (CCT) would not need them if Winthrop NFH was at capacity. He added that the preference was for eyed egg transfers; however, the timing was such that the transfer would be of fry if done as soon as possible.

Tonseth said that if there is no program need for the fish at Eastbank Hatchery, the only alternative may be to transfer them to Banks Lake where they become land-locked Chinook salmon. Keely Murdoch asked if this alternative has been approved by *U.S. v Oregon*, and Tonseth replied that it has not. Tonseth added that this alternative has been implemented for other programs in the past; however, not for spring Chinook salmon. He noted that Chelan PUD's update to the Hatchery Committees regarding the sharing agreement between Chelan PUD and Douglas PUD suggests the possibility that the fish at Methow FH may be held at Methow FH to minimize or remove the need for transfer to Eastbank FH. Greg Mackey said that even if the sharing agreement does not pan out between Chelan PUD and Douglas PUD, Douglas PUD is supportive of holding the surplus fish longer at Methow FH; even to the point of transferring the fish to Carlton Pond in the fall after rearing to the parr stage.

Tonseth suggested that the CCT contact the USFWS to determine how many BY 2014 fish USFWS plans to transfer to the CCT. Kirk Truscott said that the CCT have already received eyed eggs. Murdoch noted that there will be mortalities at the eyed egg stage. Lynn Hatcher asked how many eyed eggs the CCT have for Section 10j fish, and Truscott said that he would need to check. Truscott added that green egg-to-smolt survival is approximately 85%, and Tonseth noted that there tends to be variability in terms of ponding loss. Tonseth suggested holding off on transferring the surplus fish until all components have been ponded, determine the losses, and then determine the numbers and where there is capacity to hold these fish. Mike Schiewe asked about the cause of the overage at Methow FH, and Tonseth replied that it was due to better-than-expected green egg-to-eyed egg survival and low bacterial kidney disease (BKD) culling.

Mackey asked about the egg fertilization protocol (i.e., split milt or separate males) at Eastbank FH. Tonseth said that the eggs were fertilized using a factorial mating design at Eastbank FH, with each egg lot receiving milt from individual primary males with milt from

a backup male added after that. Mackey asked if each hatchery male is the primary male in one mating; Tonseth said that is correct, so the loss of those are not a loss to the program.

Truscott said that tagging occurs around the end of April, which Tom Kahler noted is a consideration. Murdoch noted that the YN may not be supportive of taking fish to Banks Lake; which, she added, is not covered by permit. Tonseth and Truscott said that they will coordinate with Pat Phillips (Chief Joseph Hatchery Manager), and Murdoch indicated that she will coordinate internally with the YN, regarding the disposition of surplus juvenile Methow spring Chinook salmon currently at Eastbank FH.

Wenatchee Spring Chinook Salmon

Tonseth reported that three female broodstock were culled from the Nason Creek Program due to high BKD, which left approximately 37,000 eyed eggs for 2014 brood. He said that depending on hatchery survival, this translates to about 34,000 smolts or 27% of the target goal for the Nason Creek Conservation Program. He said that about 141,000 eyed eggs were available for the Chiwawa Program, which is expected to yield about 136,000 smolts, or about 95% of the Chiwawa Conservation Program target. Further, by adding the 201,000 smolts expected from the Wenatchee Safety Net Program yields a total of about 371,000 smolts overall for the Wenatchee Spring Chinook Salmon Program, which is 101% of the combined Chiwawa and Nason Creek program targets. He said that this puts the combined program at about the fish release target; however, it is still well under the under target for the conservation component.

C. HGMP Update (Lynn Hatcher)

Lynn Hatcher said that he will provide a HGMP update following the next joint NMFS/USFWS BiOp Coordination Meeting to Kristi Geris for distribution to the Hatchery Committees.

D. YN Upper Methow Spring Chinook Acclimation – Draft Proposal and SOA (Keely Murdoch) Draft YN Upper Methow Spring Chinook Acclimation Proposal

Keely Murdoch said that comments were received from all three PUDs on the draft proposal. She said that Todd Pearsons proposed incorporating the expanded acclimation concept into a broader evaluation on how to improve spawning distribution. She said that the YN is

supportive of the idea; however, she wanted it separate from this proposal so that it does not hold up permitting for this proposal. Kirk Truscott asked if this larger concept will be more like a research proposal. Pearsons clarified that the concept involves testing multiple approaches or methods to alter spawning distribution of hatchery fish. He added that it aligns with what the YN has proposed with acclimation. Truscott asked if this would be testing different strategies with the same objectives, and Pearsons indicated that was his idea.

Murdoch projected the draft YN Upper Methow Spring Chinook Acclimation Proposal that incorporated comments from all three PUDs (Attachment D), and discussed individual comments, as follows:

Section 1.2 Methow Spring Chinook – Figure 1

Murdoch said that several commenters indicated that Figure 1 was of limited value and misleading; Murdoch said that she disagreed. She said that the figure was taken directly from the 5-Year Hatchery M&E Report; it displays mean female carcass recovery by river mile from 2006 to 2010 to depict spawning distributions of Methow FH-origin, Winthrop NFH-origin, and NORs on the upper Methow River. She said that Chelan PUD suggested including additional data from the 5-Year Hatchery M&E Report (e.g., Figure 50); however, Murdoch said that she did not include Figure 50 or other related information because the other figures depict proportions. She said that because the goal of adult management is to remove as many HORs as possible before they spawn, proportions have limited use; she said that leaving Figure 1 in the proposal was preferred.

Greg Mackey said that the other graphs in the 5-Year Hatchery M&E Report are important to include because Figure 1 by itself is an incomplete depiction of these data. He recalled that when the 5-Year Hatchery M&E Report was first drafted the graph identified as Figure 1 in this proposal was included as the prescribed approach from the Analytical Framework; however, the authors of the report recognized that this analysis was insufficient to properly describe the data, so two additional graphs were added, which used proportions of hatchery to wild spawners within reaches to address the spatial distribution relative to the origin of the fish and number of spawners based on reach size to address relative seeding of the reaches. Murdoch said, however, that since then the program was substantially reduced in size, and combined with removing as many hatchery fish as possible, spawners by reach are

expected to substantially change. Mackey said that he does not believe that large numbers of hatchery fish will necessarily be removed. He further explained that with the reduced program sizes, it will be much more likely that the programs will include mostly or all wild broodstock, resulting in a percent natural-origin broodstock (pNOB) value of 1 or close to 1. Given the high pNOB, the pHOS could be as high as 0.5 and still result in a proportion of natural influence (PNI) equal to 0.67, which is the minimum target for a conservation program. Since the analysis of spawner distribution in the 5-Year Hatchery M&E Report showed that all but two reaches had pHOS equal to or greater than 0.5 under the higher release regime, and the upper reaches tended to be near the 0.5 pHOS mark, it seems likely that not many hatchery fish (from Methow Hatchery) would need to be removed to achieve (what is believed to be) the PNI target.

Mike Tonseth noted that if there are additional changes in hatchery practices in-basin, such as remote acclimation, that fewer fish may return to the hatchery. He agreed with Murdoch that the landscape will be different because there are many untested approaches. Murdoch said that ultimately, this is the YN's proposal and other data were excluded because the YN did not feel they were applicable. Catherine Willard noted that Figure 1 is historical data, and she questioned why not include other historical data. Murdoch said that the point of Figure 1 is to show that spawning distributions are not the same. Willard noted that Figure 1 also implies other things because it represents incomplete data.

Truscott said he thought it would be helpful to include information by reach. Murdoch again cautioned that those data will change because of reduced program targets and adult management. Truscott suggested comparing reaches as a proportion of basin-wide spawning escapement; he offered that this would be a better assessment than trying to describe differences in spawner distribution. Murdoch agreed that this may be feasible.

Section 2.0 Goals and Objectives

Murdoch said that comments received on this section were largely from Douglas PUD. She thanked Douglas PUD for this input; however, she said that Douglas PUD's proposed "Goals and Objectives" (numbers 1 through 3) are beyond the scope of this proposal, and Douglas PUD's proposed "Learning Objectives" (number 4) are similar to what the YN has already proposed in the near-term objectives. She added that Douglas PUD's proposed

numbers 1 through 3 are largely management objectives for the Methow River; she said that at this point, there is no Methow River Management Plan and this proposal is not intended to be such a plan. She said that the YN would like to keep the four near-term objectives, as originally proposed.

Mackey explained that what Douglas PUD proposed was more to capture what this proposal is intended to achieve. He said that this is an experiment about learning. He added that if this is a management action (he noted that he thinks it is, because listed fish are being used to enhance the performance of a hatchery program), he believes there needs to be measurable targets. He said that these do not need to be restrictive; however, certain parameters need to be defined (e.g., [something] by reach or zone of interest). Murdoch said that the YN has a responsibility to manage a resource, and if something is called a “management objective,” this has explicit implications. Tom Kahler suggested, then, to reword the statement to make it a part of the study so it does not raise that concern. Mackey said that Douglas PUD and the YN are really proposing the same thing, only Douglas PUD is trying to define a measurable target. Murdoch said that the YN’s proposal is consistent with the 5-Year Hatchery M&E Report, only they are testing whether fish released higher in the basin will yield different results. Mackey said that the YN can accomplish this comparison; however, he cautioned to think carefully about what is being achieved. He added that the comparison needs to be quantitative in some form (i.e., changed by [how much] in [what way]).

Truscott agreed that spawning escapement by reach cannot be determined with 25,000 fish (the current proposal). Truscott asked, regarding Douglas PUD’s “Learning Objectives,” why Douglas PUD proposed to obtain these data by reach when this cannot be obtained with only 5 years of data. Mackey said that the purpose behind these objectives was to quantify the effect. Truscott suggested reviewing historical data to determine what proportion of fish spawn in the upper reaches, and after implementing this program, evaluate those adult returns on a proportional basis to determine whether there was an effect. He added that based on those evaluations, the Hatchery Committees could determine what is biologically meaningful. Mackey agreed that this would be another option; and he added that Douglas PUD wants to implement the action in the most rigorous fashion. Truscott said that he was looking more to implementing the action and then determining next steps afterward.

Pearsons said that he believes that Douglas PUD is advocating quantitative targets as needed for an adaptively managed program. He added, for example, that if targets are being exceeded, this will help to inform future decisions. Murdoch suggested possibly developing some sort of testing targets, but not labeling them “management.” She added that developing targets is still difficult because there are several unknown factors.

Murdoch said that the purpose of this project is to move spawning higher in the system so there is not so much spawning in the vicinity of the hatchery, as it is now. She added, however, that it is unrealistic to expect that many fish will not home back to Methow FH; she said that about 43% of fish reared at Methow FH and short-term acclimated in the Chewuch returned to the Methow River in recent years, leaving about 57% to spawn in the Chewuch. She said that the YN’s objective is not to have a concrete-to-concrete program; rather, it is to make sure that conservation fish are spawning in optimal locations. Alene Underwood agreed with the intent of the program; she added that all that is missing is how success will be measured. Murdoch said that success is to have improved SARs in the upper basin, and Kahler asked what defines “improved.” He said that proportion of returns between control and treatment groups can be compared, but it needs to be defined how much of an increase will constitute success.

Tonseth said he believes that the YN proposal is a pilot study. He agreed with Murdoch that a big part of this discussion is beyond the scope of this proposal, and would more appropriately belong in a management document similar to the Wenatchee Basin Management Plan. He reiterated that there are major changes occurring in this program, including reduced program size and implementation of adult management, both of which include several unknowns. He added that the progeny of NORs could perform differently than those of multi-generational HORs that have been in the basin. He said that this proposal provides another tool to help place these conservation fish where hatchery program managers want them.

Matt Cooper said that he discussed this with Bill Gale, and they had thoughts similar to those of Tonseth. Cooper questioned what could be achieved with statistical rigor with 25,000 fish. He added, however, that he agreed with including specificity regarding defining targets. He asked how fixed the objectives should be in terms of adaptive management.

Tonseth said that this is problematic because the consultation process has yet to start, and it is still unknown whether programs will be held to a pHOS or PNI objective. Lynn Hatcher said that he spoke with Craig Busack about this, who indicated that at this stage, effects on PNI should be considered. Hatcher added that NMFS supports supplementation, and that they are interested to know what types of impacts acclimation will have on the basin.

Cory Kamphaus said that this proposal is just a small piece of hatchery M&E. He added that it is a tool to get fish distributed differently. Pearsons asked what would be considered a success from a baseline of 25,000 hatchery releases and 25,000 upstream releases (e.g., 1 more upstream released fish in 1 year, 1 fish in 5 years, 10 fish in 5 years). Murdoch said that it depends on how many fish are there in the first place, and Tonseth added that each year, it depends on the number of NORs returning.

Murdoch said that this proposal started with addressing NMFS' and the PUD's concerns with PNI, pHOS, and appropriate release numbers. She said that now, however, each time the YN addresses one issue, another issue is raised. She said that the YN has addressed all issues raised to date, and suggested that for now, the YN: 1) keep the four near-term objectives originally proposed; and 2) better define and incorporate what the CCT proposed regarding making a comparison by reach proportional to the basin. She reiterated that currently, defining an absolute numerical goal is difficult due to the unknown factors. She said that if the Hatchery Committees would like to attempt to develop specific goals, the YN is open to suggestions.

(Proposed) Section 3.0 Sources of Uncertainty in States of Nature

Murdoch said that these are good questions; however, they are beyond the scope of this proposal. Mackey said that the sources of uncertainty he presented were examples that would affect the program, but as a way to focus the concept to the project, recommended, for example, stating sources of uncertainty with regard to adult management, and Truscott suggested that a lot of uncertainty will be addressed under the adult management plan. Murdoch agreed with Truscott, and suggested removing the proposed Section 3.0. Mackey suggested at least keeping a brief list of uncertainties that the YN is aware of.

Section 3.0 Project Proposal

First paragraph, last sentence (currently stricken out): Murdoch said that this sentence started out in earlier versions to be intentionally vague; however, based on feedback from NMFS, the YN revised this sentence to be more specific for permitting purposes. She said, therefore, that this sentence will remain in the proposal, per direction from NMFS.

Goat Wall Pond: Murdoch asked about the comment regarding Goat Wall Pond being worthy of a 5-year commitment, and Mackey clarified that Douglas PUD just did not want to shift locations in the middle of the study. Murdoch said that she agrees that moving sites would make a difference; however, if this was proposed, it would need to be approved by the Hatchery Committees.

Murdoch said that regarding the comment on Reaches M9 to M15 and the suggestion to limit the evaluation to a shorter stretch of the river, she was attempting to define the Upper Methow reaches where a lot of NORs spawn. She added that she was not trying to exclusively get fish to these reaches.

Table 1: Truscott asked if Table 1 is necessary; Murdoch said that the Hatchery Committees requested that the YN include this table.

Murdoch said that the YN will coordinate with Douglas PUD and Chelan PUD to develop a revised draft Upper Methow Spring Chinook Acclimation Proposal, and will provide the revised proposal to Kristi Geris for distribution to the Hatchery Committees.

Draft Goat Wall Acclimation SOA

Murdoch projected the draft Goat Wall Acclimation Statement of Agreement (SOA; Attachment E), and noted the edit received from Douglas PUD (in redline strikeout). Underwood also noted that Rocky Reach and Rock Island need to be added to the title of the SOA.

E. Re-initiation of Spring Chinook BiOp (Alene Underwood)

Alene Underwood said that NMFS and WDFW were discussing a new Wenatchee Spring Chinook BiOp; however, NMFS' Legal Counsel indicated that the applicants (Chelan PUD, Grant PUD, and WDFW) would need to request re-initiation of the BiOp for this action.

Underwood said that NMFS, in conjunction with the co-managers, made a preliminary decision on a preferred alternative approach to collect Wenatchee basin spring Chinook salmon broodstock at Tumwater Dam and the Chiwawa Weir beginning BY 2015. She said that Chelan PUD and Grant PUD drafted a letter to NMFS indicating that this new preferred broodstock collection strategy was not previously analyzed in the BiOp, and will ultimately lead to re-initiation of consultation; this was drafted with the intention of submitting a letter with signatures of the Priest Rapids Coordinating Committee Hatchery Sub Committee (PRCC HSC) and HCP Hatchery Committees.

Lynn Hatcher said he believes that this letter will be adequate. He added that NMFS' Legal Counsel just wanted a letter for record-keeping from either the three Mid-Columbia PUDs or the PRCC HSC and HCP Hatchery Committees. Underwood said that she hoped that the PRCC HSC and HCP Hatchery Committees could review the letter before it was discussed at the next joint NMFS/USFWS BiOp Coordination Meeting. She said that the letter was drafted using language from NMFS-produced documents, and that directly after today's meeting, she can provide the draft letter and associated Wenatchee spring Chinook salmon re-initiation of ESA consultation documents to Kristi Geris for distribution to the Hatchery Committees for review. Kirk Truscott said that the CCT will need time to review the documents internally. Keely Murdoch asked if the BiOp is on track for broodstock collection this year. Mike Tonseth said that based on direction from Amilee Wilson, NMFS is proceeding toward providing permit coverage by the time broodstock collection begins. He added that the 2015 Broodstock Collection Protocols will include this protocol. *(Note: Underwood provided the Wenatchee spring Chinook re-initiation of ESA consultation documents [Attachments F, G, H, and I] to Geris following the meeting on January 21, 2015, which Geris distributed to the Hatchery Committees that same day.)*

F. USFWS Bull Trout Consultation Update (Matt Cooper)

Matt Cooper said that a USFWS Bull Trout Consultation update will be provided during the next joint NMFS/USFWS BiOp Coordination Meeting.

VI. HCP Administration

A. Next Meetings

The next scheduled Hatchery Committees meetings are on February 18, 2015 (Chelan PUD); March 18, 2015 (Douglas PUD); and April 15, 2015 (Chelan PUD).

List of Attachments

Attachment A	List of Attendees
Attachment B	YN Kelt Reconditioning Project Request for Sampling at Wells Dam
Attachment C	Post-Release Performance of Chinook Salmon and Steelhead Reared in Partial Water Reuse Circular Vessels Compared to Traditional Flow-Through Raceways
Attachment D	Draft YN Upper Methow Spring Chinook Acclimation Proposal with Comments
Attachment E	Draft Goat Wall Acclimation SOA
Attachment F	HCP Hatchery Committees and PRCC HSC Letter to NMFS Re: New Preferred Broodstock Collection for Wenatchee Spring Chinook Hatchery Supplementation Programs
Attachment G	NMFS Letter to USFWS Re: New Preferred Broodstock Collection for Wenatchee Spring Chinook Hatchery Supplementation Programs
Attachment H	2015-2023 NMFS Preferred Approach to Wenatchee Spring Chinook Broodstock Collection – Attachment 1
Attachment I	Nason Creek and Chiwawa River Broodstock Collection Options – Attachment 2

Attachment A
List of Attendees

Name	Organization
Mike Schiewe	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Elizabeth McManus††	Ross Strategic
Andy Chinn††	Ross Strategic
Alene Underwood*	Chelan PUD
Catherine Willard*	Chelan PUD
Greg Mackey*	Douglas PUD
Tom Kahler*	Douglas PUD
Todd Pearsons	Grant PUD
Peter Graf††	Grant PUD
Deanne Pavlik-Kunkel	Grant PUD
Lynn Hatcher	National Marine Fisheries Service
Matt Cooper*	U.S. Fish and Wildlife Service
Cory Kamphaus††	Yakama Nation
Mike Tonseth*	Washington Department of Fish and Wildlife
Charlie Snow†	Washington Department of Fish and Wildlife
Kirk Truscott*	Colville Confederated Tribes
Keely Murdoch*	Yakama Nation
Matt Abrahamse	Yakama Nation

Notes:

- * Denotes Hatchery Committees member or alternate
 - † Joined by phone
 - †† Joined for the joint HCP/PRCC portion
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