

## FINAL MEMORANDUM

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**To:** Wells, Rocky Reach, and Rock Island HCPs Hatchery Committees  
**Date:** May 21, 2015

**From:** Mike Schiewe, HCP Hatchery Committees Chairman

**Cc:** Kristi Geris

**Re:** Final Minutes of the April 15, 2015 HCP Hatchery Committees Meeting

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The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plans (HCPs) Hatchery Committees meeting was held at Chelan PUD headquarters in Wenatchee, Washington, on Wednesday, April 15, 2015, from 9:30 a.m. to 12:00 p.m. Attendees are listed in Attachment A to these meeting minutes.

### ACTION ITEM SUMMARY

- Greg Mackey and Mike Tonseth will provide proposed targets for Methow spring Chinook salmon adult management for potential implementation in 2015 to Kristi Geris for distribution to the Hatchery Committees by Wednesday, April 29, 2015 (Item II-A).
- Greg Mackey, Catherine Willard, and Keely Murdoch will develop a draft plan and schedule for reviewing the Methow Basin Five-Year Hatchery Monitoring and Evaluation (M&E) results and new information for consideration by the Hatchery Committees at least 10 days prior to the next Hatchery Committees meeting on May 20, 2015 (Item II-B).

### 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 April 1, 2015 notifying them the draft 2014 Chelan PUD and Grant PUD Hatchery M&E Annual Report is available for a 60-day review, with edits and comments due to Tracy Hillman by Monday, June 1, 2015.

## FINALIZED DOCUMENTS

- There are no documents that have been recently finalized.

### I. Welcome

#### A. *Review Agenda, Review Last Meeting Action Items, Approve the March 18, 2015 Meeting Minutes (Mike Schiewe)*

Mike Schiewe welcomed the Hatchery Committees and asked for any additions or changes to the agenda. No additions or changes were requested.

The Hatchery Committees reviewed the revised draft March 18, 2015, meeting minutes. Kristi Geris said a second revised draft was distributed to the Hatchery Committees on April 9, 2015, which included additional edits from Chelan PUD and administrative updates (with changes tracked in redlines). Geris said all other comments and revisions received from members of the Committees were incorporated in the revised minutes, and that there were no outstanding edits or questions to discuss. Keely Murdoch clarified that while discussing broodstock collection for the Nason Creek Conservation Program, she indicated she thought all fish collected would be kept, excluding—not including—those assigned to White River. Geris said she will make this revision, as requested, and the Hatchery Committees members present approved the draft March 18, 2015, meeting minutes, as revised.

Action items from the Hatchery Committees meeting on March 18, 2015, and follow-up discussions, were as follows (italicized item numbers below correspond to agenda items from the meeting on March 18, 2015):

- *Keely Murdoch will provide a draft Yakama Nation (YN) Kelt Sampling Protocol for sampling at Wells Dam in 2015, to Kristi Geris for distribution to the*
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*Hatchery Committees and discussion during the Hatchery Committees meeting on April 15, 2015 (Item I-A).*

Murdoch provided the protocol to Geris on April 2, 2015, which Geris distributed to the Hatchery Committees the same day.

- *Mike Tonseth and Craig Busack will consult Ken Warheit (Washington Department of Fish and Wildlife [WDFW]) regarding decision rules for White River and Little Wenatchee River broodstock assignments for the Nason Creek Conservation Program (Item II-A).*

This item was completed.

- *Mike Tonseth will provide the revised draft 2015 Broodstock Collection Protocols to Kristi Geris by Monday, March 23, 2015, for distribution to the Hatchery Committees and Wells HCP Coordinating Committee for review, with Hatchery Committees' comments due to Tonseth by close of business Thursday, March 26, 2015; Tonseth will provide a final revised draft for approval by Friday, March 27, 2015, with email vote due by Monday, April 6, 2015 (Item II-A).*

Tonseth distributed the revised draft protocols for approval to Kristi Geris on March 27, 2015, as discussed. The Colville Confederated Tribes (CCT), Chelan PUD, and Douglas PUD provided edits on the revised draft protocols for approval to Geris on March 31, April 1, and April 6, 2015, respectively, which Geris distributed to the Hatchery Committees those same days. Tonseth provided the final draft protocols for approval to Geris on April 8, 2015, which Geris distributed to the Hatchery Committees the same day. The Hatchery Committees approved (via email) the final 2015 Broodstock Collection Protocols, as follows: Chelan PUD, National Marine Fisheries Service (NMFS), WDFW, and CCT approved the protocols on April 8, 2015; Douglas PUD and the YN approved the protocols on April 9, 2015; and the U.S. Fish and Wildlife Service (USFWS) approved the protocols on April 10, 2015. The final protocols were distributed to the Hatchery Committees by Geris on April 13, 2015.

- *Keely Murdoch will verify the YN's approval, disapproval, or abstention on the draft Chelan PUD Methow Spring Chinook Hatchery Production Statement of Agreement (SOA) by Wednesday, April 1, 2015 (Item III-A).*

Murdoch provided a separate SOA for approval to Kristi Geris on March 20, 2015, which the Hatchery Committees approved, as revised, on March 31, 2015.

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- *The Hatchery Evaluation Technical Team (HETT) will convene to discuss a timeline for finalizing the Hatchery M&E Plan appendices and will report back to the Hatchery Committees during the next meeting on April 15, 2015 (Item III-C).*

A meeting is scheduled for Wednesday, April 29, 2015.

## **II. Douglas PUD**

### *A. Methow Spring Chinook Adult Management for Implementation in 2015 (Greg Mackey)*

Greg Mackey said a Methow Spring Chinook Adult Management presentation was distributed to the Hatchery Committees by Kristi Geris prior to the meeting on April 15, 2015. *(Note: a revised presentation [Attachment B] was distributed after the meeting on April 15, 2015.)*

Mackey said Douglas PUD and WDFW have been discussing the potential implementation of adult management of spring Chinook salmon in the Methow Basin. He said, as noted on slide 1 of Attachment B, the NMFS Permit Extension Letter for Permits 1196, [1347,] and 1395 (dated September 20, 2013), states broodstock collection and adult management of spring Chinook salmon in the Methow Basin may occur during the extension, as approved by consensus of the Mid-Columbia HCP Hatchery Committees, with NMFS concurrence. He noted that this language does not mandate the permit holders to implement adult management of spring Chinook salmon in the Methow Basin; however, he suggested it may be beneficial to take advantage of the opportunity to learn how adult management could be used for managing percentage hatchery-origin spawners (pHOS) in the basin. To that end, Douglas PUD and WDFW developed some draft information for the Hatchery Committees to consider.

Mackey reviewed Table 1 on slide 2 of Attachment B, noting that NMFS had developed this proposed sliding scale based on a similar scale for Wenatchee spring Chinook and is believed to be an approach similar to that which may be included in the Methow Biological Opinion (BiOp). Mackey said that following additional review of Table 1, the PUDs believed some of the proposed pHOS numbers were unrealistically low; therefore, Table 2 on slide 2 of Attachment B was developed, which defaults to 0.25 once more than 900 natural-origin spawners return. Bill Gale asked if the last three tiers of Table 2 reflect maximized adult management (i.e., a lesser pHOS may be targeted; however, it may not be attainable).

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Mackey said that is correct and the reason for the change was that the PUDs wanted to avoid establishing targets that could not be achieved.

Mackey said Table 3 on slide 3 of Attachment B establishes expected percent natural-origin broodstock (pNOB) and proportionate natural influence (PNI) goals. He said Table 3 includes a Methow-based pNOB, which Douglas PUD feels is achievable. He said that once the pNOB target was established the pNOS sliding scale was converted to a PNI scale, as depicted in Figure 1 on slide 4 of Attachment B. He noted near the breakpoint of the bins (bins are depicted by blue diamonds in Figure 1), there are large changes in PNI targets (e.g., from 0.56 to 0.67) that can result from as little as a one fish differential in natural-origin spawner escapement. To avoid this phenomenon, he applied a function to fit the sliding scale to minimize this effect, which resulted in a continuous calculation of the scale based on natural-origin spawner escapement instead of bins. Craig Busack asked if this function converts the bracket system to a continuous sliding scale, and Mackey said that is correct (i.e., the function is called the monomolecular function). He said Table 4 on slide 5 of Attachment B reports the sliding scale comparison to the function-derived values.

Mackey said the graph on slide 6 of Attachment B depicts an analysis that applies this proposed sliding scale using assumed numbers based on the 2015 Broodstock Collection Protocols. Mackey noted the analysis assumes a run of 500 wild fish and includes only the Methow and Chewuch complexes (it does not include the Twisp population). Busack asked if this analysis only models the Douglas PUD and Grant PUD components. Mackey said that is correct for pNOB. Busack asked about the Chelan PUD component, and Mackey replied it does not matter for this analysis so long as the brood composition is the same. Busack asked if this analysis considers Winthrop fish, and Mike Tonseth said that it does not. Tonseth added that this only addresses conservation programs. Gale noted there is still a lot to be resolved. Mackey agreed, noting this analysis is fairly simple and does not take into consideration all the components that need to be addressed in the Methow Basin. Busack asked what 372 represents; Mackey explained that is the number of wild spawners after broodstock removal. Busack asked how to consider different pNOB levels in different programs. Mackey said the pNOB was modeled as if for one homogenous program to simplify the analysis.

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Mackey reviewed Table 5 and Table 6 on slide 7 of Attachment B. He noted the surprisingly small number of wild-by-wild (WxW) crosses spawning in nature when pHOS increases. Busack questioned the calculations in Table 6, noting, based on the values provided, there should be more WxW spawning in nature. Mackey said he believed the calculations were correct; however, that he would review them when he has access to the original spreadsheet he used to develop the examples. Busack said, regardless, the general message is quite clear—taking wild fish into the hatchery reduces the wild populations spawning in nature. *(Note: Mackey provided revised calculations following the meeting on April 15, 2015, as reported in Attachment B.)*

Mackey asked the Hatchery Committees about their initial thoughts on whether or not adult management of spring Chinook salmon in the Methow Basin should be pursued this year. He noted fish will be arriving at the Methow Fish Hatchery (FH) outfall by late-May 2015. Gale suggested, that this year, it may be most beneficial to develop research questions and collect more data on what actions are feasible and how those actions may contribute to managing adults on the spawning grounds. He suggested not targeting PNI goals this year and instead focusing on collecting additional data. Tonseth recommended developing at least a soft target, but cautioned against removal of too many fish from the basin. He also suggested establishing loose sidebars to evaluate the effectiveness of real-time monitoring. He asked, in terms of a safety net, to what degree should Methow FH fish be removed for broodstock for safety net at Winthrop National Fish Hatchery (NFH). Busack asked what percentage of returning adults to Winthrop NFH are Methow spring Chinook salmon, and Matt Cooper said it is about 15% on average. Gale said, in general, the majority of surplus hatchery fish removed at Winthrop NFH are Winthrop origin, and about 20 to 30% are Methow FH fish. He added that Methow FH is used to remove additional fish for broodstock purposes. He questioned if closing the Methow FH fish ladder would result in fish spawning in the upper reaches or cause fish to remain in that reach. Busack inquired about flexibility in the operation of the Methow FH, and Mackey said it can be operated however they would like. Keely Murdoch asked if there is passive integrated transponder (PIT)-tag detection at the Methow FH trap and outfall, and Mackey said that there is a PIT-tag detector at the trap, and that in the past the YN had operated more than one detector in the volunteer channel (for the Coho project), but he did not know if this was still in operation. Murdoch suggested monitoring those data to determine when fish are arriving and leaving the trap and outfall

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areas. Tonseth said this may be a timing issue, noting that if fish cannot immediately access the trap, they may leave the channel all together. Kirk Truscott suggested evaluating what proportion of spring Chinook salmon redds in the Methow Basin occur in the Methow FH channel, with and without adult management, as a way to determine if adult management has an effect on where fish spawn. Gale speculated, if the Methow FH fish channel was closed, some fish may go to the Winthrop channel to spawn. Tonseth said this could be studied by monitoring PIT-tagged fish.

Mackey suggested, for this year, he and Tonseth will provide a plan with proposed targets for Methow spring Chinook salmon adult management for implementation in 2015 to Geris for distribution to the Hatchery Committees by Wednesday, April 29, 2015. *(Note: the plan was sent on May 8, 2015 after including review and development including USFWS and WDFW biological and hatchery staff and Grant PUD review.)*

*B. Review of Five-Year Hatchery M&E Report (Greg Mackey)*

Greg Mackey suggested that the entire Hatchery Committees fully engage in this effort. He added that some smaller groups may need to convene; however, he recommended all review and decisions should be handled by the entire Hatchery Committees. Keely Murdoch suggested approaching review of the Five-Year Hatchery M&E Report with a more global scope (i.e., more basins and species). Mackey reminded the Hatchery Committees of the narrow focus of the SOA titled, “Regarding Timeline for Review of ‘Evaluation of Hatchery Programs Funded by Douglas County PUD 5-Year Report 2006-2010’,” (approved March 27, 2015). Murdoch then suggested approaching review of the report by species and basin, starting with spring Chinook salmon in the Methow Basin, and moving forward program-by-program (e.g., Methow, Twisp, Chewuch). Mike Tonseth agreed with Murdoch’s suggestion, and recommended reviewing the recommendations included in the last five-year report to prioritize the remaining programs. Mackey concurred with this approach, and further recommended considering more recent data along with those data included in the last five-year report, and evaluating the higher level objectives and then secondary objectives as indicated in the M&E plan hierarchy and as they pertain to the last five-year report recommendations. Mackey, Catherine Willard, and Murdoch agreed to develop a draft plan for reviewing the Methow Basin Five-Year Hatchery M&E results, and new information for consideration by the Hatchery Committees, at least 10 days prior to the next Hatchery

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Committees meeting on May 20, 2015. Tom Scribner suggested involving Charlie Snow in this effort, and Mackey indicated Snow will be involved, as needed.

### **III. NMFS**

#### *A. Hatchery and Genetic Management Plan Update (Craig Busack)*

Craig Busack said the reinitiation Wenatchee Spring Chinook BiOp was sent to the National Oceanic and Atmospheric Administration General Counsel (NOAA-GC) for review last week. He added he has not heard anything back, but speculated that ongoing litigation regarding Puget Sound hatchery programs may slow the review process. He said the Wenatchee Steelhead BiOp is also ready for review; however, he has not forwarded it to NOAA-GC, which will allow them to focus on one BiOp at a time.

### **IV. U.S. Fish and Wildlife Service**

#### *A. U.S. Fish and Wildlife Service Bull Trout Consultation Update (Bill Gale)*

Bill Gale said Karl Halupka (USFWS) is still waiting to receive comments on the draft USFWS Wenatchee BiOp and Incidental Take Statement.

### **V. BioAnalysts**

#### *A. Presentation: "The Thermal Blob" (Tracy Hillman)*

Tracy Hillman shared a presentation titled, *Ocean Conditions in 2014; Potential Consequences for Salmon*, which was prepared by NMFS and presented at a recent Life-Cycle Modeling Workshop in Seattle, Washington. *(Note: permission was not obtained to distribute this presentation; therefore, only a brief overview of the presentation is provided below.)*

This presentation described the different ecosystem indicators NMFS scientists annually evaluate and how the indicators relate to salmon runs. These include the Pacific Decadal Oscillation, Oceanic Nino Index, sea surface temperatures, zooplankton abundance and species richness, and other selected conditions. He said results from 2014 suggest bad news for future salmon runs. Conversely, measures of Chlorophyll *a* in the nearshore ocean suggest good news for salmon. The Upwelling Index and juvenile salmon survey data suggest a mixed outcome. In general, the forecasting models indicate decreased salmon returns in the next few years; however, the confidence intervals associated with the estimates are large,

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indicating high uncertainty. The large uncertainty is primarily due to the unique patterns observed in the ecosystem indicators in 2014. Most of the patterns documented in 2014 have not been observed in the past several decades.

*B. Presentation: "Pinnipedageddon" (Tracy Hillman)*

Tracy Hillman shared a presentation titled, *Estimation of Survival and Run Timing of Adult Spring/Summer Chinook from the Columbia River Estuary to Bonneville Dam*, which was prepared by NMFS and presented at a recent Life-Cycle Modeling Workshop in Seattle, Washington. *(Note: permission was not obtained to distribute this presentation; therefore, only a brief overview of the presentation is provided below.)*

This presentation included estimates of the numbers of pinnipeds counted in the estuary from 2010 through 2014 and provided an early estimate for 2015; the latter of which is about four times greater than the number estimated in 2014. Based on mark-recapture studies in the estuary since 2010, average annual Chinook salmon survival has ranged from 55 to 90%. Mortality was highest and travel times to Bonneville Dam were slowest for fish tagged in March and April. The higher mortality and longer travel times coincided with peak numbers of sea lions. In addition, the average annual survival of Chinook salmon decreased from 2010 to 2014, which correlates with the number of sea lions hauled out near Astoria, Oregon. The study also indicated parental-based genetics testing shows promise for evaluating hatchery- and tributary-level information on Chinook salmon survival and movement. The increasing numbers of pinnipeds in the estuary could create survival bottlenecks for selected salmon runs.

## **VI. HCP Administration**

*A. Mike Schiewe's Retirement*

Mike Schiewe reminded the Hatchery Committees members that this was his last meeting before Dr. Tracy Hillman of BioAnalysts becomes the new Chairman on May 1, 2015. He recalled, during the past 10 years, the Hatchery Committees have addressed many complex questions, and successfully resolved them. He wished the representatives continued success. The Hatchery Committees representatives present thanked Schiewe for his years of leadership and contributions to the Hatchery Committees and the HCPs.

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*B. Next Meetings*

The next scheduled Hatchery Committees meetings are on May 20, 2015 (Douglas PUD), June 17, 2015 (Chelan PUD), and July 15, 2015 (Douglas PUD).

**List of Attachments**

Attachment A	List of Attendees
Attachment B	Revised Methow Spring Chinook Adult Management Presentation

**Attachment A**  
**List of Attendees**

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<b>Name</b>	<b>Organization</b>
Mike Schiewe	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tracy Hillman	BioAnalysts, Inc.
Alene Underwood*	Chelan PUD
Catherine Willard*	Chelan PUD
Greg Mackey*	Douglas PUD
Tom Kahler*	Douglas PUD
Todd Pearsons	Grant PUD
Craig Busack*†	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
Jeff Korth*†	Washington Department of Fish and Wildlife
Jayson Wahls	Washington Department of Fish and Wildlife
Kirk Truscott*	Colville Confederated Tribes
Tom Scribner*†	Yakama Nation
Keely Murdoch*	Yakama Nation

Notes:

\* Denotes Hatchery Committees member or alternate

† Joined by phone

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