

FINAL MEMORANDUM

To: Wells, Rocky Reach, and Rock Island HCPs Hatchery Committees
Date: December 19, 2013

From: Mike Schiewe, Chair

Cc: Kristi Geris

Re: Final Minutes of the November 20, 2013 HCP Hatchery Committees Meeting

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plans (HCPs) Hatchery Committees' meeting was held at Douglas PUD headquarters in East Wenatchee, Washington, on Wednesday, November 20, 2013, from 9:30 am to 1:00 pm. Attendees are listed in Attachment A to these meeting minutes.

ACTION ITEM SUMMARY

- Keely Murdoch will provide Kirk Truscott with data on adipose fin coded-wire-tag (CWT) retention (carried forward from the Hatchery Committees' meeting on October 16, 2013; Item I).
 - The Yakama Nation (YN) will develop a document summarizing their proposed plans for expanding acclimation areas in the upper Methow, and will provide the document to Kristi Geris for distribution to the Hatchery Committees (carried forward from the Hatchery Committees' meeting on October 16, 2013; Item I).
 - Chelan PUD will take the lead on moving forward with development of the Hatchery Monitoring and Evaluation (M&E) Plan Appendices and incorporating information on carrying capacity estimates (Item III-A).
 - Chelan PUD will provide redline strikeout (RLSO) and final versions of the final Chelan PUD 2014 Hatchery M&E Implementation Plan to Kristi Geris for distribution to the Hatchery Committees (Item III-B).
 - Chelan PUD will provide reports comparing and evaluating sockeye salmon escapement estimates based on spawning ground surveys and passive integrated transponder (PIT)-tag detections of returning adults to Kristi Geris for distribution to the Hatchery Committees (Item III-C).
 - Chelan PUD will provide a draft Sockeye Addendum to the final Chelan PUD 2014 Hatchery M&E Implementation Plan to Kristi Geris for distribution to the Hatchery
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Committees (Item III-C).

- Chelan PUD will discuss the Rocky Reach Adult Trap Pilot Study Results at the Hatchery Committees' meeting on December 18, 2013 (Item III-E).
- Chelan PUD will provide a revised Methow Spring Chinook Hatchery and Genetic Management Plan (HGMP) for review to Kristi Geris for distribution to the Hatchery Committees (Item III-E).
- Lynn Hatcher will check on permit coverage for new activities conducted at Winthrop National Fish Hatchery (NFH; Item IV-A).
- Hatchery Committees representatives will submit comments on the draft Douglas PUD 2014 Hatchery M&E Implementation Plan to Greg Mackey no later than Friday, December 6, 2013; Douglas PUD will be requesting approval of the draft plan at the Hatchery Committees' meeting on December 18, 2013 (Item V-A).
- Mike Tonseth will provide a letter notifying the National Marine Fisheries Service (NMFS) of the Wells Hatchery adult steelhead loss that occurred on Sunday, November 17, 2013 (Item V-C).

STATEMENT OF AGREEMENT DECISION SUMMARY

- The Twisp River Steelhead Live Spawning Plan Statement of Agreement (SOA) was approved, as revised, by the Wells HCP Hatchery Committee via email on November 4, 2013 (Item I).
- The Chewuch Acclimation Plan SOA was approved, as revised, by the HCP Hatchery Committees representatives present (Item II-A).
- The Hatchery Committees representatives present approved the Chelan PUD 2014 Hatchery M&E Implementation Plan, contingent upon incorporating revisions as discussed during today's meeting (Item III-B).

AGREEMENTS

- The Hatchery Committees representatives present agreed to continue discussions on fish marking schemes after the Joint Fishery Parties (JFP) develop a document summarizing the current status of marking for each program (Item VI-A).
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REVIEW ITEMS

- Kristi Geris sent an email to the Hatchery Committees on November 21, 2013, notifying them that the draft Douglas PUD 2014 Hatchery M&E Implementation Plan is available for review, with comments due to Greg Mackey no later than December 6, 2013 (Item V-A).

FINALIZED REPORTS

- The final 2013 Broodstock Collection Protocols were distributed to the Hatchery Committees by Kristi Geris on November 4, 2013.

I. Welcome, Agenda Review, Meeting Minutes, and Action Items

Mike Schiewe welcomed the Hatchery Committees and asked for any additions or other changes to the agenda. The following revisions were requested:

- Alene Underwood added: 1) a Similkameen Pond production update; and 2) a Spring Chinook HGMP update.
- Greg Mackey added: 1) a Wells steelhead broodstock update; and 2) a Wells modernization update.
- Mike Tonseth added a fish marking discussion update.

The Hatchery Committees reviewed the revised draft October 7, 2013 conference call minutes. Kristi Geris said that all 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. Hatchery Committees members present approved the draft October 7, 2013 conference call minutes, as revised. Geris will finalize the conference call minutes and distribute them to the Committees.

The Hatchery Committees reviewed the revised draft October 16, 2013 meeting minutes. Three outstanding comments were discussed, as follows:

- Regarding the Chewuch Acclimation Plan, Bill Gale clarified that he did not support acclimating spring Chinook derived from Winthrop broodstock in Chewuch Pond—Winthrop is to serve as a safety net program and therefore should not be the first choice for use in conservation program.
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- Regarding expanding acclimation areas in the Upper Methow, Gale clarified that he suggested looking at data from Winthrop NFH because the same water source is used there as at Methow Hatchery—not Chewuch.
- Regarding the discussion about a carrying capacity SOA, Keely Murdoch clarified a statement that she made that reproductive success estimates vary because of how the hatchery program is operated, *in addition to* natural conditions.

Geris said that all other comments and revisions received from members of the Committees were incorporated in the revised minutes, and the Hatchery Committees members present approved the draft October 16, 2013 meeting minutes, as revised. Geris will finalize the meeting minutes and distribute them to the Committees.

Action items from the last Hatchery Committees meeting on October 16, 2013, and follow-up discussions were as follows: (*Note: italicized item numbers below correspond to agenda items from the October 16, 2013 meeting.*)

- *Kristi Geris will follow up with Lynn Hatcher, once he becomes available after the government shutdown, regarding his approval of the Hatchery Committees August 21, 2013 meeting minutes, prior to finalizing and distributing them to the Committees (Item I).*

Hatcher approved the Hatchery Committees August 21, 2013 meeting minutes via email on October 18, 2013, and the final meeting minutes were distributed to the Hatchery Committees by Geris on October 21, 2013.

- *Greg Mackey will follow up with Tom Kahler by October 18, 2013, regarding Douglas PUD's approval of the Okanagan Nations Alliance (ONA) Sockeye Program Update memorandum, prior to Kristi Geris finalizing and distributing the memorandum to the Committees (Item I).*

Kahler provided minor grammatical edits to, and his approval of, the ONA Sockeye Program Update memorandum via email on October 18, 2013, as distributed to the Hatchery Committees by Geris on October 21, 2013.

- *Greg Mackey will provide Douglas PUD's revised edits to the Twisp River Steelhead Live Spawning Plan SOA to the YN (Item II-A).*

Edits were provided.

- *The YN will provide a revised Twisp River Steelhead Live Spawning Plan SOA to*
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Kristi Geris for distribution to the Hatchery Committees by October 21, 2013, that includes: 1) Douglas PUD's suggested revisions; 2) the revised Washington Department of Fish and Wildlife (WDFW) Fish Health risk analysis memorandum and the revised Twisp River Steelhead Live Spawning Plan; and 3) a statement indicating that the YN will keep the Hatchery Committees updated on progress and results of their Steelhead Kelt Reconditioning Program (Item II-A).

Keely Murdoch provided the final revised SOA to Geris on October 22, 2013, which Geris distributed to the Hatchery Committees, along with the revised WDFW Fish Health risk analysis memorandum and the revised Twisp River Steelhead Live Spawning Plan, on that same day. The Twisp River Steelhead Live Spawning Plan SOA was approved, as revised, by the Wells HCP Hatchery Committee via email on November 4, 2013.

- *The YN will prepare a Chewuch Acclimation Plan SOA, and will provide the SOA to Kristi Geris for distribution to the Hatchery Committees. The YN will be requesting approval of the SOA at the Hatchery Committees' meeting on November 20, 2013 (Item II-B).*

Keely Murdoch provided a draft Chewuch Acclimation Plan SOA to Geris on October 30, 2013, which Geris distributed to the Hatchery Committees on that same day.

- *Keely Murdoch will provide Kirk Truscott with data on adipose-fin-wire (ad-wire) retention (Item II-B).*

This action item was carried forward.

- *The YN will develop a document summarizing their plans for expanding acclimation areas in the upper Methow, and will provide the document to Kristi Geris for distribution to the Hatchery Committees (Item II-B).*

This action item was carried forward.

- *Keely Murdoch will provide the YN's non-target taxa of concern (NTTOC) model runs to Greg Mackey (Item III-A).*

Murdoch provided Mackey with YN's model runs.

- *Greg Mackey will develop a document that summarizes the NTTOC model runs, and will distribute the document in early 2014 (Item III-A).*

In progress.

- *The Hatchery Committees representatives will provide comments on the Hatchery M&E Plan Tables to Greg Mackey no later than November 11, 2013, for discussion at*
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the Hatchery Committees' meeting on November 20, 2013 (Item III-B).

No comments were received; will discuss further during planned agenda item below.

- *Chelan PUD and Grant PUD will incorporate their respective data into the Hatchery M&E Plan Tables, and will provide the updated tables to Greg Mackey no later than November 11, 2013, for discussion at the Hatchery Committees' meeting on November 20, 2013 (Item III-B).*

Complete.

- *Kristi Geris distributed a meeting invite for a conference call on November 6, 2013, from 10:00 am to 12:00 pm, to discuss Chelan PUD's draft 2014 M&E Implementation Plan (Item IV-B).*

The conference call was held. Catherine Willard provided the revised draft Chelan PUD 2014 M&E Implementation Plan to Geris on November 14, 2013, which Geris distributed to the Hatchery Committees on that same day.

- *Chelan PUD will provide a revised Methow Spring Chinook HGMP for review to Kristi Geris for distribution to the Hatchery Committees no later than October 25, 2013 (Item IV-D).*

This action item was carried forward and is discussed further below.

II. Yakama Nation

A. DECISION: Chewuch Acclimation Plan SOA (Keely Murdoch)

Keely Murdoch said that the draft Chewuch Acclimation Plan SOA was distributed to the Hatchery Committees by Kristi Geris on October 30, 2013. Greg Mackey said that Douglas PUD had since incorporated the statement, "...contingent upon the subsequent approval by the Hatchery Committees for the use of the pond for coho and Chelan PUD spring Chinook." He said he wanted the SOA to be clear about the Hatchery Committees approving the use of the pond for coho and Chelan PUD spring Chinook. Bill Gale said he thought the SOA was also supposed to be contingent on the development of broodstock collection and protocols to ensure that Chelan PUD's program is part of the conservation program, and does not use safety net fish. Murdoch said she understood that broodstock collection would be addressed in Chelan PUD's Spring Chinook HGMP; and therefore, did not need to be included in the Chewuch Acclimation Plan SOA. Mike Tonseth agreed there is still the issue of how Chelan PUD will acquire broodstock in future years; however, he said this does not preclude the use of safety net fish. He added that if insufficient fish are obtained for a program, safety net fish

have been identified as the fallback—to say that safety net fish will not be used at all is incorrect. Gale agreed, but recommended that the SOA should still be contingent upon developing concurrence on details of the HGMP. He added that the SOA is agreeing on a portion of the HGMP, while agreement has not yet been reached on other components. He said it seems that the agreements are not in sequence. Murdoch acknowledged that the timeline is somewhat disjointed and explained that this is how permitting and contracting came together. The Hatchery Committees also agreed to incorporate the statement, “...contingent upon the YN and Douglas PUD arriving at a lease agreement...,” into the draft SOA.

Lynn Hatcher asked if it had been determined whether coho and spring Chinook would be commingled or separated by a net. Murdoch said that coho will not be ready for acclimation until 2016 and so those types of decisions will be discussed based on numbers and size of each species at that time. Murdoch also recalled that two SOAs had previously been discussed—the other regarding the use of Douglas PUD’s facility. She noted that the second SOA would memorialize a change in use for the facility following a final lease agreement between Douglas PUD and the YN.

Jayson Wahls asked, regarding Section 2.1 Fish Transportation Procedures of the Chewuch Acclimation Plan, if the YN anticipated that WDFW would be hauling and pumping the fish. He added that currently, WDFW is not equipped for these tasks at Carlton. Alene Underwood said that the lease agreement between Chelan PUD and Grant PUD will detail how the transfers will occur.

The Chewuch Acclimation Plan SOA was approved, as revised, by the HCP Hatchery Committees representatives present. Mackey distributed the edits to the SOA as discussed during the meeting, and the YN provided the final Chewuch Acclimation Pond SOA (Attachment B) to Geris on November 21, 2013, which Geris distributed to the Hatchery Committees that same day.

III. Chelan PUD

A. DECISION: Carrying Capacity SOA (Alene Underwood)

Alene Underwood said that a memorandum from the JFP (Attachment C) regarding their concerns about the draft SOA on the use of juvenile M&E data for estimating carrying capacity was distributed to the Hatchery Committees by Kristi Geris on November 18, 2013. She also reminded the Hatchery Committees that Chelan PUD provided a draft Juvenile Carrying Capacity SOA that was distributed to the Hatchery Committees by Geris on November 5, 2013. She said although it has been made clear that there is no interest in moving forward with the SOA, because the SOA has already been distributed, she requested an official vote for the record. She said she would also like to discuss the JFP concerns regarding the SOA in more detail to be sure she is clear on their reasoning.

Keely Murdoch said that the YN is not opposed to collecting and using juvenile salmonid data to develop a carrying capacity estimate. She said the main issue is the proposed linkage made to mitigation levels, considering that carrying capacity estimates will likely increase in the next years. She added that if the link to mitigation is removed, an SOA would not be needed. Murdoch also added that if the goal is to capture how carrying capacity can help adaptively manage programs, she suggested that the M&E Plan would be the appropriate avenue to address the issue. She said that as currently written, the YN does not support the draft Juvenile Carrying Capacity SOA. Catherine Willard asked if Murdoch could provide examples of how carrying capacity data have been used to adaptively manage in the past. Murdoch said, for example, that carrying capacity data were used when considering adult spawning escapement to establish the split between safety net and conservation fish in the Chiwawa. She said that Tracy Hillman also used carrying capacity estimates during the 5-year analysis to correct for density dependence when comparing Chiwawa to reference streams. She added that while developing the Spring Chinook Management Plan carrying capacity was discussed, including how carrying capacity could be used to estimate escapement goals. She said they discussed that, as more data are obtained, escapement goals should be modified, and that conservation program splits may also be revisited.

Kirk Truscott said that the Colville Confederated Tribes (CCT) does not support the draft Juvenile Carrying Capacity SOA; and added that the CCT's primary concerns are similar to those expressed by the YN. He also added that hatchery mitigation levels based on juvenile

production is inconsistent with the HCP that utilizes average adult returns and SARs as the basis for calculating mitigation obligations and agreed that using carrying capacity to help structure hatchery programs is a better use of those data.

Mike Tonseth said that WDFW does not support the draft Juvenile Carrying Capacity SOA and agreed with the YN's and CCT's sentiments regarding the linkage to mitigation. He also noted that the SOA speaks to a single approved estimate for a non-specified program, rather than describing a method for estimating carrying capacity.

Lynn Hatcher said that NMFS does not support the draft Juvenile Carrying Capacity SOA and he agreed with the concerns regarding the link to mitigation. However, he noted that he liked the possibility of the monitoring program that required handling fewer fish. He said the proposed genetics work in the combined Chelan PUD and Grant PUD plan would be covered under the current permit; however, it could not be completed *in lieu* of individual trapping within the tributaries. Underwood clarified that Chelan PUD is not proposing to remove the Chiwawa smolt trap and added that at this point in time, references to genetics have been removed from the draft Chelan PUD 2014 Hatchery M&E Implementation Plan. Tonseth said the proposed genetics work would require a proof of concept period. He added that the Hatchery Committees would probably be supportive of a genetics sampling program running concurrent with the tributary trapping effort; however, as Hatcher indicated, not in lieu of the tributary effort. Murdoch agreed that a feasibility study would be needed. She also cautioned that losing data on parr migrants versus yearling migrants in the tributaries may result in some loss of resolution regarding differential survival and how to adaptively manage based on those data.

Bill Gale said that the U.S. Fish and Wildlife Service (USFWS) does not support the draft Juvenile Carrying Capacity SOA and agreed that the link to mitigation was an issue for everyone. He said another pressing issue is that the SOA does not link to M&E. He added that the methodology in the SOA is integral in M&E; however, he would prefer to first have a robust discussion on M&E, and then discuss how the SOA fits in—not the other way around.

Truscott suggested making carrying capacity a task in the M&E Plan, and Underwood said that estimating carrying capacity is already covered under Objective 2 of the M&E Plan. She said the purpose of the SOA was intended to address the next step—how will these data be best used. Tonseth said that certain program areas can be identified where these data may be applied, such as setting adult escapement levels in tributaries and resizing conservation programs. He added that carrying capacity is a moving target, and Underwood agreed that carrying capacity is dynamic. Tonseth said, however, he is concerned that an SOA does not allow things to be dynamic because it locks those in agreement into a single position; whereas, the M&E Plan allows more flexibility.

Underwood summarized that several ideas have been shared regarding carrying capacity, and now agreement needs to be reached that addresses the collective views. Murdoch suggested developing carrying capacity further in Objective 2 of the M&E Plan. She said for example, that in the Analytical Framework, monitoring questions were identified, and from those questions and hypotheses were developed. She also suggested that carrying capacity could be addressed in a stand-alone document because it relates directly to the hatchery program. Underwood asked if carrying capacity is based around questions, will that limit the flexibility of estimating carrying capacity? Murdoch said that she thinks the questions could be stated to allow flexibility. Underwood said that ultimately, Chelan PUD would like assurance that those data planned to be collected, as outlined in the draft Chelan PUD 2014 Hatchery M&E Implementation Plan, will be used as intended. She also asked how this can be structured to show that progress is being made.

Greg Mackey said that the hypotheses in the M&E Plan are set up in terms of how a hatchery program is performing. He added that estimating carrying capacity is not a hypothesis; rather, it is more like an action. He said he believes that estimating carrying capacity is already embedded in Objective 1 of the M&E Plan and added, however, that he does not believe the M&E Plan is structured to state how data will be used. He suggested inserting a separate objective stating that carrying capacity will be estimated. He said that in the recent recalculation of hatchery production, methods derived from the Biological Assessment and Management Plan (BAMP 1998) were known as the “BAMP approach.” He explained the BAMP approach as a “thought experiment,” where SARs of hatchery programs were used to back-calculate how many natural-origin smolts must have passed through a given project to

produce the number of natural-origin adult returns that were observed. This estimate of natural origin smolts as derived through the BAMP approach must always be below the carrying capacity of juvenile production for a population. Therefore, if all the data are correct, the carrying capacity should be equivalent to the upper limit of an estimate of smolts that are calculated using the BAMP approach. Murdoch questioned whether this was true, and Mackey said that it is mathematically true and that carrying capacity and SARs are hard to estimate—neither are perfect. Gale said all of those caveats are the reasons why he is reluctant to link carrying capacity to mitigation levels.

Gale said that in terms of moving forward for Chelan PUD, he suggested tabling this topic for now, as it does not need to be resolved for 2014, and addressing other M&E actions that need to be addressed. Underwood said that she does not want to lose momentum on this issue and added that Chelan PUD is trying to determine the most efficient data collection methods. She also added that knowing how these data will be used may inform how to better collect these data in the future. She said that with every month that goes by there is less time to adaptively manage these things; in order to realistically meet the July 2014 deadline for the 2015 Implementation Plan, this discussion needs to continue.

Tonseth said the JFP's recommended path forward is to move in the direction of incorporating carrying capacity into the M&E Plan. He added that he understands that Chelan PUD is still interested in establishing an agreement regarding how those data will be used. Underwood said that if incorporating carrying capacity into the M&E Plan does not work, she would like to discuss what other options are available.

Murdoch said she believes that the M&E Plan goes to great lengths to describe how data are used. She added, however, that the part that was missing following the last Comprehensive Report, was going back through the results of the 5-Year Comprehensive Report, and making changes to the hatchery program, as needed. She recalled that the consensus was that since the hatchery programs were substantially reduced in size after recalculation, the reduction alone may address identified problems in the 5-year Analytical Report, such as the reduction of stray rates that might correspond to reductions in mitigation programs. Murdoch recommended that the results of the 5-year reports should be reviewed, as initially intended, and as needed, make adaptive changes to the hatchery programs.

Mike Schiewe said that the general consensus seems to be leaning towards incorporating carry capacity in the context of the M&E Plan. He recalled that the current revision of the M&E Plan was a combination of the former Hatchery M&E Analytical Framework and Conceptual Plan, and suggested starting there. Mackey noted that a compilation of carrying capacity estimates from the literature with analyses specific to these populations is already included in the M&E Plan Appendices, and he said that Hillman's analysis of Upper Columbia spring Chinook is also included in the appendices. Hatcher asked if a few other items were inserted into the appendices including recovery goals and Thomas Cooney's work on intrinsic potential. Mackey said that yes, these were included and he was seeking that type of input so that a collection of knowledge-to-date can be incorporated into the M&E Plan Appendices.

Schiewe recalled the key people who were involved in developing the current iteration of the M&E Plan, including Mackey, Andrew Murdoch, Hillman, Keely Murdoch, Todd Pearsons, and Josh Murauskas; he asked if it makes sense that this same group, to the extent possible, convene to incorporate carrying capacity. He added that at this time, this is a Chelan PUD document and the Grant PUD document on carrying capacity to be presented in their Hatchery Subcommittee meeting needs to be acknowledged as separate. Todd Pearsons suggested combining everything related to carrying capacity into the appendix, so that the body of the M&E Plan does not need to be revised. Schiewe suggested convening a small group including Catherine Willard, Mackey, Keely Murdoch, Hillman, Andrew Murdoch, Matt Cooper, and Pearsons. Gale requested that the entire Hatchery Committees are also included on meeting requests for this small group. Chelan PUD agreed to take the lead on moving forward with development of the Hatchery M&E Plan Appendices and incorporating information on carrying capacity estimates. The Committees agreed that the M&E workgroup would be open to all Committees members, as had been previously done.

B. DECISION: Chelan PUD 2014 Hatchery M&E Implementation Plan (Alene Underwood)

Alene Underwood said that the revised draft Chelan PUD 2014 M&E Implementation Plan was distributed to the Hatchery Committees by Kristi Geris on November 14, 2013. This version addresses comments discussed during the Hatchery Committees' conference call that was held on November 6, 2013. She reminded the Hatchery Committees that page 2 of the

revised plan explains what methods in the plan differ from previous years; and that the plan was also organized differently than in the past. She noted that Catherine Willard and Keely Murdoch worked together on reformatting, as recommended during the Hatchery Committees' conference call on November 6, 2013. Murdoch said that after working with Willard, the new revisions adequately addressed her concerns regarding the new format. Underwood reviewed the other revisions made to the plan and a few additional, minor revisions were requested that were made in the draft. Since the changes discussed during the meeting were not substantial, the Hatchery Committees representatives present approved the Chelan PUD 2014 Hatchery M&E Implementation Plan, contingent upon incorporating revisions as discussed. Chelan PUD provided a RLSO and final version (Attachment D) of the final Chelan PUD 2014 Hatchery M&E Implementation Plan to Geris on November 22, 2013, which Geris distributed to the Hatchery Committees that same day.

C. Sockeye M&E Discussion (Alene Underwood)

Alene Underwood recalled the commitment that Chelan PUD made during recalculation to monitor the natural sockeye population. She said that Viable Salmonid Population (VSP) parameters were used to develop the most appropriate M&E program in moving forward and that based on preliminary feedback, a draft addendum will be developed and distributed. Mike Tonseth asked about the timeline for approval, and Underwood said that the addendum needs approval by February 2014. Tonseth expressed concern that the M&E Implementation Plan is being fragmented. He explained that there are new requirements for inclusion in the annual broodstock protocols, which include all M&E activities, release locations/plans, and site based operational protocols (e.g., Tumwater Dam), and are also due to the Hatchery Committees for review in February 2014. Underwood said that she does not believe there is anything drastic that will affect the protocols.

Catherine Willard reviewed a draft table of Chelan PUD's proposed Lake Wenatchee sockeye salmon M&E activities (Attachment E). Underwood said that Chelan PUD has not yet determined who will complete the work and added that in the past, the proposed work has been completed by WDFW in coordination with other work they were already doing.

Lynn Hatcher asked if PIT-tag detection arrays would be used to monitor adult escapement, and Underwood said that they would not propose anything other than PIT-tags. Bill Gale

asked if redd surveys have been conducted that could be used for comparison, and Mike Schiewe recalled that Chelan PUD has developed a report that speaks to this. Underwood said that Chelan PUD will provide reports comparing and evaluating sockeye salmon escapement estimates based on spawning ground surveys and PIT-tag detections of returning adults to Kristi Geris for distribution to the Hatchery Committees. Keely Murdoch recalled that at the time of those surveys, there were questions about detection efficiency and the need for multiple detection arrays. She suggested gaining a better idea of the current array configurations to determine if they need updating in terms of detection efficiency. Kirk Truscott suggested that adult monitoring metrics such as pre-spawn mortality, timing, and success do not need to be collected each year; rather, those are important metrics to monitor every few years. Tonseth also noted that gender composition needs to be collected.

Murdoch recalled that when the decision was made to discontinue the sockeye hatchery program, it was agreed that sufficient M&E would continue to determine if sockeye need to be supplemented. She suggested considering what data are needed to make those types of decisions in a decade. Willard noted that those data that are being proposed to be collected will allow estimation of the same metrics used to determine supplementation levels in the past.

Tonseth said that the big change for 2014 is the change in location of the White River array, and added that the detection efficiency of the new location needs to be ground-truthed with ground surveys. Schiewe asked if the array in the Little Wenatchee River is also changing, and Tonseth replied that it is not. Tom Kahler noted that the Columbia River Inter-Tribal Fish Commission (CRITFC) data on sockeye smolt production are also available; Murdoch said that she is unsure how those data will fit into this effort. She explained that monthly collections of zooplankton and phytoplankton are ongoing (excluding during the winter). She added that those data being collected speak more to food base and densities. She said that also, three times each year, Department of Fisheries and Oceans (DFO) Canada conducts hydroacoustic surveys and trawls to obtain densities and distributions of fry in Lake Wenatchee. She said that DFO is investigating factors that affect productivity, and then they compare these factors to other sockeye lakes. Underwood said that she understood that DFO was planning to obtain estimates of outmigrants from Lake Wenatchee; last year, they indicated that funding may be discontinued. Murdoch said that at this point, efforts are still

moving forward. Kahler added that the DFO acoustic and trawl surveys for fry, parr, and pre-smolt abundance estimates are the source of the CRITFC data on smolt production that he mentioned (above). He said that those surveys correspond with the surveys that ONA conducts in Osoyoos Lake (for DFO) and that DFO conducts in sockeye lakes throughout Canada; and thus, those data should provide reliable and acceptable smolt-production estimates. He believes CRITFC has five more years of funding for these surveys and the limnology work.

Underwood said that as a next step, Chelan PUD will provide a draft Sockeye Addendum to the final Chelan PUD 2014 Hatchery M&E Implementation Plan to Geris for distribution to the Hatchery Committees.

D. Similkameen Pond Production Update (Alene Underwood)

Alene Underwood announced that there had been high mortality in Chelan PUD's 166,000 (166k) summer Chinook program being reared at Similkameen Pond. She said that staff culled roughly 8,000 of the 2012 broodstock due to high enzyme-linked immunosorbent assay (ELISA) titers and about 160k were transferred to Similkameen from Eastbank in October 2013; then over the past week and a half, an additional 30k to 35k were lost to unknown causes. Jayson Wahls explained that the fish were bloated, but no diagnosis had been made. Mike Tonseth asked if staff looked at the feed, and Wahls replied that they did. He added that the fish were not eating well. Underwood said that Chelan PUD is now at about 78% of the program. *(Note: Underwood provided an update via email on December 3, 2013, that the program was estimated to be around 117k total, or 43k loss.)* She said she will update the Hatchery Committees as more information becomes available.

E. Methow Spring Chinook HGMP Update (Alene Underwood)

Alene Underwood said that the Methow Spring Chinook HGMP is still under development. She estimated that it will be another month before Chelan PUD will have a draft ready. She said a suite of long-term options are being considered for their 60k Methow spring Chinook program, including potential options with Douglas PUD, or maybe conducting another pilot study at the Rocky Reach Adult Trap for broodstock. Keely Murdoch asked about the results from the Rocky Reach Adult Trap Pilot Study that was conducted in May 2013, and Underwood said that Chelan PUD will discuss the Rocky Reach Adult Trap Pilot Study

Results at the Hatchery Committees' meeting on December 18, 2013. Mike Schiewe recalled the Coordinating Committees' and Hatchery Committees' concerns with the pilot as they related to passage issues and genetic appropriateness, respectively. Bill Gale recalled that at one point a sort-by-code system was discussed and noted that if Chelan PUD is considering moving in that direction, discussions should take place soon to allow adequate time to install infrastructure, if needed. Keely Murdoch noted that a sort-by-code system may be a work-around for turbidity issues; Gale added that the system would also help alleviate USFWS's concerns with handling Entiat fish. Murdoch also suggested coordinating with U.S. Geological Survey (USGS) who is already PIT-tagging fish originating in the Methow. Underwood said that Chelan PUD has multiple options to consider and hopes to have a discussion at the next committee meeting. Underwood said she will provide a revised Methow Spring Chinook HGMP for review to Kristi Geris for distribution to the Hatchery Committees as soon as it is available.

IV. NMFS

A. HGMP Update (Lynn Hatcher)

Lynn Hatcher said that on September 20, 2013, Permits 1196, 1395, and 1497 were extended with an indefinite end date. He said that hatchery consultations are scheduled to be complete by summer 2014. He said that Craig Busack is now working only on spring Chinook programs in the Okanogan and Methow. Amilee Wilson is working on the steelhead programs in those basins.

Hatcher said for Okanogan spring Chinook, the Section 10(j) Environmental Assessment (EA) will be complete by spring 2014; currently, Busack is working on the Biological Opinion (BiOp) for holding and transporting spring Chinook from the Methow to the Okanogan. Hatcher said that the Federal Register Notice (FRN) will be out in December 2013. He said that because Chelan PUD's Methow Spring Chinook HGMP is not completed, it will not be included in the FRN. He said the time schedule for completion of the Methow spring Chinook and steelhead permits is set for June 2014, and added that the Okanogan spring Chinook 10(j) will be completed by April 2014.

Mike Tonseth said, regarding the Section 10(j) EA, he thought since 200k spring Chinook were released this fall, there would be no spring Chinook to release in spring 2014. Hatcher

said that NMFS promised the CCT the Section 10j would be complete in spring 2014, regardless, and confirmed, however, that the Section 10j would have no implication for 2014 releases.

Hatcher said that the Wenatchee steelhead draft BiOp and Section 10 permits have been reviewed and should be complete by December 2013. He added that a Fishery Plan still needs to be completed, and Tonseth said that the JFP is still working on it. Hatcher said that Amilee Wilson indicated that the non-listed summer/fall Chinook programs are now the lowest priority for consultation after a recent meeting with the HGMP applicants in the upper Columbia stressed the need to address the steelhead and spring Chinook permits.

Bill Gale asked about Methow steelhead. Gale said that USFWS is concerned about permit coverage for Winthrop NFH steelhead winter and spring activities prior to receiving a new permit. He added that the Service's steelhead program coverage had lapsed and was concerned that the Service would be without coverage until the new permit was issued. Hatcher said that he will check on permit coverage for new activities conducted at Winthrop NFH.

Hatcher said that NMFS is planning to complete USFWS's Leavenworth program by December 31, 2013, and noted that there was an issue with the terms and conditions. He said the coho BiOp was distributed on November 15, 2013, and added that the coho program should be complete by the end of January 2014.

V. Douglas PUD

A. Douglas PUD 2014 Hatchery M&E Implementation Plan (Greg Mackey)

Greg Mackey said that the draft Douglas PUD 2014 Hatchery M&E Implementation Plan should be ready for distribution by the end of the day. *(Note: Mackey provided the draft Douglas PUD 2014 Hatchery M&E Implementation Plan to Kristi Geris on November 21, 2013, which Geris distributed to the Hatchery Committees that same day.)* He said Douglas PUD has been working closely with Grant PUD on the plan; particularly spring Chinook, which is a departure from the past. He added that, previously, the implementation plan was developed by WDFW and Douglas PUD; however, Grant PUD, as a major sharing partner in the Methow Hatchery, was now more involved in developing the M&E plan. Mackey said

that this year, he and Charlie Snow developed a technical change for steelhead redd counts. He explained that the objectives related to spawning in the M&E Plan are to compare hatchery- versus natural-origin fish. He said that in the Twisp, the M&E crews can collect good data on hatchery and natural origin spawning distribution of steelhead because the fish are Floy-tagged at the weir and can be visually detected on the spawning grounds. In addition, the Twisp is a smaller river and spawner surveys are more effective because visibility tends to hold up longer as the flows increase in the spring. However, in the large rivers such as the Methow mainstem, there is no way to visually identify the origin (hatchery or natural) of spawners, and poor visibility greatly limits the efficiency of finding redds or fish and also curtails the length of time surveys can be accomplished as the flows increase. He said that Andrew Murdoch provided a report where fish are PIT-tagged at Priest Rapids and instream arrays are used to extrapolate how many steelhead of known-origin are coming up different parts of the rivers. He said that Snow proposed to conduct index redd surveys in the lower river, where fish may hold through the winter and not be fully accounted for by PIT-detection arrays. Snow said that standard methods would be employed, and added that the hope is that USGS arrays in the Methow at Winthrop can be used similarly to how the Chewuch and Twisp arrays are used.

Bill Gale asked if only natural-origin fish would be PIT-tagged at Priest Rapids, and Snow clarified that both hatchery- and wild-origin fish would be PIT-tagged. Gale asked how harvest would be accounted for; Snow said that the report that Murdoch provided, which also used Priest Rapids data, accounted for harvest based on creel census estimates. Kirk Truscott asked if steelhead are still PIT-tagged at Wells Dam for stock assessment; Snow confirmed this and added that 6 to 8% of the steelhead run is typically sampled at Wells Dam. He added that those fish should assist in augmenting escapement data sets, but the model used to estimate spawning escapement using the Priest Rapids tagged fish may not allow incorporation of fish tagged at other locations.

Mackey said that Douglas PUD will be developing a new contract with WDFW, and added that the current contract ends December 31, 2013. He said that Douglas PUD was hoping to obtain preliminary comments soon to facilitate completion of the new contract by the end of the year. Gale asked how long the contract would be, and Mackey said it would be a 1-year contract. Hatchery Committees representatives agreed to submit comments on the draft

Douglas PUD 2014 Hatchery M&E Implementation Plan to Mackey no later than Friday, December 6, 2013, and Douglas PUD will be requesting approval of the draft plan at the Hatchery Committees' meeting on December 18, 2013.

B. Hatchery M&E Appendices Tables (Douglas PUD, Chelan PUD, Grant PUD)

This agenda item was previously discussed under review of action items from the last Hatchery Committees' meeting on October 16, 2013, and also under Chelan PUD's carrying capacity agenda item.

C. Wells Steelhead Broodstock Update (Greg Mackey)

Greg Mackey announced that there was a steelhead broodstock loss at Wells Hatchery on November 17, 2013. He explained that Biomark was on-site PIT-tagging fish, and treated water used to disinfect the tagging equipment was discharged to the parking lot where it ran into a parking lot drain that led into the steelhead holding pond. The drain was thought to be tied into the main drain of the hatchery, but unbeknownst to everyone familiar with the hatchery, this drain had been inadvertently tied into the source water for the steelhead holding pond at some point in the past. Mackey said that 178 of the 200 fish were lost. He said all fish were hatchery-origin, and that the broodstock were for the Columbia Safety-Net and the Okanogan program, and also served as backup collections for the Methow Safety-Net, Twisp and Omak programs, with unneeded backup fish available for the Ringold program. He said Permit 1395 allows trapping of fish from the Wells fishways through November; so to recover the fish, he said Douglas PUD plans to trap as many fish from the Wells fishways and hatchery volunteer channel this fall as possible. Jayson Wahls confirmed that they have already commenced outfall trapping at Wells Hatchery for this purpose, but would not use the Wells ladder traps as they have already winterized them. Mackey cautioned that the Wells programs will be prioritized for broodstock, and that brood would be supplied to Winthrop NFH only once the Wells programs were fulfilled. Bill Gale said he was unsure if steelhead will be volunteering at the Winthrop NFH outfall now, and added that he would be interested in looking at the escapement numbers. He asked Mackey if he thought there will be enough fish to broodstock Douglas PUD's program and Winthrop NFH's program. Mackey said that some surplus steelhead may be trapped at the Twisp weir in spring 2014, and also broodstock may be trapped at the Methow and Winthrop NFH hatchery outfalls in spring 2014. Keely Murdoch asked if it is possible to postpone shutting

down Methow Hatchery collection to obtain more fish, and Mike Tonseth said that shutting down the fishery is already being considered as early as next week. Gale said that he will touch base with Winthrop NFH.

Tonseth asked if NMFS has been notified, and explained that the permit requires that NMFS is immediately notified for any fish kill larger than 10%. Tonseth said that he will provide a letter notifying NMFS of the Wells Dam steelhead fish loss that occurred on Sunday, November 17, 2013. (*Update: Douglas PUD had the drain welded shut to prevent further contaminants from entering the steelhead pond.*)

D. NTTOC Report Status (Greg Mackey)

Greg Mackey said that all model data have been received. He said he still needs to incorporate these data into the database, and will develop a report as previously discussed.

E. Wells Modernization Update (Greg Mackey)

Greg Mackey announced that the Wells modernization will be at 30% design by December 2013. He recalled that a workshop was planned for when the modernization reached 30% design, which he confirmed is still the plan, but has yet to be scheduled.

VI. WDFW

A. Fish Marking Discussion Update (Mike Tonseth)

Mike Tonseth said that he is developing a document summarizing the current status of marking for each Upper Columbia hatchery program, including where agreements currently lie within *U.S. v Oregon* and other management plans. He said the JFP agreed to use this document as a starting point for discussion. The Hatchery Committees representatives present agreed to continue discussions on fish marking schemes after the JFP develop a document summarizing the current status of marking for each program.

VII. HCP Administration

A. Next Meetings

The next scheduled Hatchery Committees' meetings are on December 18, 2013 (Chelan PUD); January 15, 2014 (Douglas PUD); and February 19, 2014 (Chelan PUD).

List of Attachments

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| Attachment A | List of Attendees |
| Attachment B | Final Chewuch Acclimation Plan SOA |
| Attachment C | JFP Memorandum regarding their concerns about the Chelan draft SOA on the use of juvenile M&E data for estimating carrying capacity |
| Attachment D | Final Chelan PUD 2014 M&E Implementation Plan |
| Attachment E | Chelan PUD's proposed Lake Wenatchee sockeye salmon monitoring and evaluation activities |

Attachment A
List of Attendees

Name	Organization
Mike Schiewe	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Alene Underwood*	Chelan PUD
Catherine Willard	Chelan PUD
Greg Mackey*	Douglas PUD
Tom Kahler*	Douglas PUD
Todd Pearsons	Grant PUD
Lynn Hatcher*	National Marine Fisheries Service
Keely Murdoch*	Yakama Nation
Kirk Truscott*	Colville Confederated Tribes
Bill Gale*	U.S. Fish and Wildlife Service
Mike Tonseth*	Washington Department of Fish and Wildlife
Jayson Wahls	Washington Department of Fish and Wildlife
Chris Moran†	Washington Department of Fish and Wildlife
Charlie Snow†	Washington Department of Fish and Wildlife

Notes:

- * Denotes Hatchery Committees member or alternate
 - † Joined by phone
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