

FINAL MEMORANDUM

To: Wells, Rocky Reach, and Rock Island HCPs
Coordinating Committees

Date: July 29, 2014

From: Michael Schiewe, Chair

Cc: Kristi Geris

Re: Final Minutes of the June 24, 2014 HCPs Coordinating Committees Meeting

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plans (HCPs) Coordinating Committees met at Rock Island Dam in eastern Washington, on Tuesday, June 24, 2014, from 9:00 am to 2:00 pm. Attendees are listed in Attachment A of these meeting minutes.

ACTION ITEM SUMMARY

- Lance Keller will obtain clarification from Brett Bickford (Chelan PUD) about statements attributed to Bickford in the draft May 27, 2014, Coordinating Committees meeting minutes, regarding Chelan PUD's Rock Island Powerhouse 2 Unit Efficiency Curve; Kristi Geris will incorporate any necessary revisions and will distribute the meeting minutes as final (Item II-A). *(Note: Bickford provided clarification to his statements via email on June 25, 2014, which Geris incorporated into the draft May 27, 2014 meeting minutes and distributed to the Coordinating Committees that same day.)*
 - Kristi Geris will contact Julene McGregor (Douglas PUD Information Systems Staff) to request read-only access to the final document library on the HCP Coordinating Committees Extranet site for Aaron Beavers (National Marine Fisheries Service [NMFS]), as approved by the Coordinating Committees (Item II-C). *(Note: Geris sent an email to McGregor on June 25, 2014, requesting access for Beavers, as discussed.)*
 - Lance Keller will provide Kristi Geris with key dates and values regarding the Rocky Reach Turbine Unit 2 (C2) rotor crack repair for incorporation into the meeting minutes (Item V-B). *(Note: Keller provided Geris with this information on June 26, 2014.)*
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- Lance Keller will provide Chelan PUD draft comments on the Entiat Pilot Milfoil Control Project to Kristi Geris for distribution to the Coordinating Committees (Item V-C). *(Note: Keller provided these comments to Geris on June 25, 2014, which Geris distributed to the Coordinating Committees that same day.)*

DECISION SUMMARY

- There were no decisions during today's meeting.

AGREEMENTS

- Coordinating Committees representatives present agreed to provide Aaron Beavers (NMFS engineer) read-only access to the final document library on the HCP Coordinating Committees Extranet site (Item II-C).

REVIEW ITEMS

- Kristi Geris sent an email to the Coordinating Committees on June 20, 2014, notifying them that the draft Wells Hatchery Adult Handling Facility 60% Design documents are out for a 60-day review period, with comments due to Tom Kahler and Greg Mackey by Monday, August 18, 2014 (Item III-A).

DOCUMENTS FINALIZED

- The final Douglas PUD 2013 Pikeminnow Program Annual Report was distributed to the Coordinating Committees by Kristi Geris on June 25, 2014 (Item III-B).

I. Site Tour

Chelan PUD reviewed the newly installed denil structures and slide gates during a site tour of the left and right ladders at Rock Island Dam.

II. Welcome

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

- Lance Keller added a Rocky Reach 2013 broodstock collection update.
- Tom Kahler added a 2013 Douglas PUD Pikeminnow Program Annual Report update.

A. Meeting Minutes Approval (Mike Schiewe)

The Coordinating Committees reviewed the revised draft May 27, 2014 meeting minutes. Kristi Geris said that there were two items remaining to be discussed regarding statements attributed to Brett Bickford regarding Chelan PUD's Rock Island Powerhouse 2 Unit Efficiency Curve. Lance Keller said that he will obtain clarification from Bickford, and will provide Geris with any necessary edits, which Geris will incorporate into the revised minutes and distribute as final. Geris said that other all comments and revisions received from members of the Committees were incorporated in the revised minutes. Coordinating Committees members present approved the May 27, 2014 meeting minutes, as revised. *(Note: Bickford provided clarification to his statements via email on June 25, 2014, which Geris incorporated into the draft May 27, 2014 meeting minutes and distributed to the Coordinating Committees that same day.)*

B. Last Meeting's Action Items (Mike Schiewe)

Action items from the Coordinating Committees meeting on May 27, 2014, and follow-up discussions, were as follows: *(Note: italicized item numbers below correspond to agenda items from the May 27, 2014 meeting.)*

- *Chelan PUD and Kristi Geris will coordinate to redistribute comments submitted by Chelan PUD on the Entiat Pilot Milfoil Control Project, and also distribute the responses received from the Chelan County Noxious Weed Control Board (CCNWCB; Item II-B).*

Geris distributed past meeting minutes excerpts and associated documents to the Coordinating Committees on June 2, 2014.

- *Chelan PUD will notify the Coordinating Committees when the next public comment period is scheduled for the Entiat Pilot Milfoil Control Project (Item II-B).*

Lance Keller provided this information to Geris on June 9, 2014, which Geris distributed to the Coordinating Committees that same day.

- *Coordinating Committees representatives will provide Kristi Geris with a list of individuals from their respective organization that plan to attend the site tour part of the Coordinating Committees June 24, 2014 meeting at Rock Island Dam, no later than Wednesday, June 18, 2014 (Item II-D).*

This was accomplished.

C. HCP-CC Distribution List and Extranet Site Access Approval (Mike Schiewe)

Mike Schiewe said that Bryan Nordlund requested, via email, Coordinating Committees approval to provide Aaron Beavers access to the HCP Coordinating Committees Extranet site. Schiewe explained that the Coordinating Committees have recently transitioned to a SharePoint file sharing system, and Nordlund's request follows the new formal process that was agreed upon by the Coordinating Committees to keep track of which non-HCP representatives have access to the HCP Extranet sites. Nordlund said that Beavers will serve as engineering support to Scott Carlon, and having direct access to the HCP Coordinating Committees Extranet site will be helpful. Coordinating Committees representatives present agreed to provide Beavers read-only access to the final document library on the HCP Coordinating Committees Extranet site. Kristi Geris said that she will contact Julene McGregor to request read-only access to the final document library on the HCP Coordinating Committees Extranet site for Beavers, as approved by the Coordinating Committees. *(Note: Geris sent an email to McGregor on June 25, 2014, requesting access for Beavers, as discussed.)*

III. Douglas PUD

A. Wells Hatchery Modernization 60% Design – Adult Handling Facility (Greg Mackey)

**Note: this agenda item is also documented in a stand-alone memorandum.*

Greg Mackey said that Kristi Geris sent an email to the Coordinating Committees on June 20, 2014, notifying them that the draft Wells Hatchery Adult Handling Facility 60% Design Report and the associated site plans (Attachment B) are available for a 60-day review period,

with comments due to Tom Kahler and Mackey by Monday, August 18, 2014. Mackey also provided the Wells Hatchery Adult Handling Facility 60% Design Overview Drawing (Attachment C), which Geris distributed to the Coordinating Committees via email following the meeting on June 26, 2014. Mackey said that although the Wells Hatchery Modernization is a voluntary action and was not a requirement of the Federal Energy Regulatory Commission (FERC) license, Douglas PUD's FERC License still requires agency review of many actions, such as this one. He explained that the new Adult Handling Facility review falls under the jurisdiction of the HCP Coordinating Committee because it involves fish passage. These meeting minutes will serve as the consultation record for the Adult Handling Facility, which is a component of the Wells Hatchery Modernization.

Mackey reviewed Attachment C, an overview of the hatchery grounds, noting the location of the existing Hatchery Building and existing raceways. He said that a new Adult and Early Rearing Incubation Building will be constructed. He pointed out the old spawning channel, which is approximately 1 mile long and winds back and forth, ultimately connecting to the volunteer channel. He said that the spawning channel did not perform as expected when built back in the 1960s. The hatchery was converted to a more standard hatchery shortly thereafter and the spawning channel was then used for water conveyance, only. The water system is being rebuilt for the hatchery; therefore, the channel will be demolished as part of the Modernization project. The footprint of the channel will be used as building sites for some of the new infrastructure. He said that most existing infrastructure at the hatchery will remain, and several new facilities will be constructed. He said that construction is planned to start in 2015, and construction plans were designed so that Wells Hatchery can remain fully operational throughout the duration of the construction. He noted the adult volunteer channel that begins at the southeast corner of the site and runs along the east perimeter to the existing trapping and spawning facilities. He said that the existing trapping and spawning facilities will be removed and the adult volunteer channel will be truncated and connected to a new fish ladder that will lead to the new Adult Holding, Spawning and Surplus Facility (i.e., "Adult Handling Facility").

Mackey reviewed page 1 of Attachment B, noting that the existing adult volunteer channel is located to the south, and will be connected to the new ladder, with a new upwell to supply

water to the channel. He pointed out the main building, holding ponds, crowding channel, fish ladder, and transfer pipes and truck loading area. He said that the truck loading area located to the east of the new Adult Handling Facility was designed to facilitate direct loading of fish to trucks (water to water transfer). He said that the series of horizontal pipes located on the east side of the facility allow fish to be returned to each of the six holding ponds, and he added that the larger ponds are for summer Chinook salmon, while the smaller ponds are for steelhead and spring Chinook salmon. He also noted that the hatched-colored pipe connected to the west corner of Pond 6 is connected to the Wells Dam west ladder trap. He said that each pond is equipped with an automatic crowder that moves west to east, into another crowder channel that leads into the building. This allows the fish held in any of the adult ponds to be crowded into the new Adult Handling Facility.

Mackey reviewed page 2 of Attachment B. He said that the new Adult Handling Facility will serve many purposes, including as a handling facility for west ladder-trapped and volunteer channel-trapped fish, a spawning facility, a monitoring and evaluation (M&E) facility, an area for surplus excess fish, and a facility for adult management. Mackey explained that when fish enter the new Adult Handling Facility from the adult volunteer channel, they enter via the new fish ladder (i.e., "Fishway") that is located to the south into two trap holding pools with false weirs, enabling staff to work fish from one pool while trapping the other., and then up to approximately 20 fish at a time are crowded into a pipe that leads to the electronarcosis (EN) unit. Mackey explained that the EN unit uses low voltage direct current (DC) voltage to sedate fish, and recovery is almost instantaneous, versus an electroanesthesia (EA) system that uses higher alternating current (AC) voltage to "stun" a fish. He said that the Wells HCP Hatchery Committee thoroughly discussed this aspect of the design, and support using EN. He added that there were also requests to include the capability of a back-up anesthetic method. He said that the facility will be able to use a variety of chemical anesthetics as backup to the EN unit. He noted that with EN, non-target species can be returned to the river immediately with minimal handling, while target fish can be sent to the CO₂ anesthetic tank, to monitoring and evaluation, trucks, or to holding ponds. He said that fish entering the new Adult Handling Facility from the holding ponds can be diverted directly to the CO₂ tank or EN unit, depending on operational needs. CO₂ is preferred for spawning or surplus, while EN would be used for monitoring and evaluation

and initial sorting from the west ladder trap. Lastly, Mackey added that the design for the spawning and workup area was structured after the setup at Winthrop National Fish Hatchery (NFH): everything is on casters and can be easily moved to accommodate different tasks.

Mackey briefly reviewed pages 3, 4, 5, and 6 of Attachment B, which depict the outside of the new Adult Handling Facility, a side profile of the Fishway, a structural partial plan for the holding ponds, and a structural partial plan for the Fishway, respectively. He recalled an earlier discussion with Bryan Nordlund on preventing fish held in the ponds from jumping at the water discharge from the fish return pipes and minimizing the velocity of fish entering the ponds from the return pipes and noted that HDR engineers have worked to address these issues. Nordlund asked if, when using the west ladder trap, sorting must be completed in the new building, or if it can be completed at the trap. Mackey replied that the west ladder trap is operated by “live” trapping, so workers can choose which fish to trap and which to pass upstream at the trap. Once fish are in the Adult Handling Facility, they can be further sorted with much greater attention to detail (using marks, tags, etc.). Mackey also said that both well water and surface water will supply the hatchery, and that clean hatchery water will be discharged through the adult volunteer channel rather than the facility drain to enhance homing to the facility. Nordlund asked if, when using a chemical anesthetic such as tricaine methane sulfonate (MS 222), the effluent will be isolated so as to not drain into the same channel as other effluent. Mackey said that waste water will drain to a settling pond, and he will check on having the effluent from chemical anesthetic tank(s) drain into the settling pond. Nordlund suggested rerouting MS 222 water to a holding area for evaporation.

Nordlund also cautioned that there can be a learning curve on how to properly use CO₂ for fish. Mackey said that, realizing the EN unit is not optimal for some tasks, such as spawning or surplus fish, the CO₂ tank can be used instead. However, CO₂ is not intended to be used on fish prior to being identified as broodstock. In other words, trapped wild fish or other non-target fish would be sorted using EN and sent to the proper destination with as little effect on the fish as possible. He added that separate recovery tanks can also be installed, if needed, or one tank can be used as a recovery tank while the other is in use as an aesthetic tank. Nordlund agreed that 2-step anesthesia is a good idea. He then asked how

many and what species of fish typically enter the volunteer channel, noting that he is curious about capacity issues. Mackey said that the surplus pond, which would be one of the largest holding ponds depicted on page 1 of Attachment B, is designed to hold at least 600 fish at one time. He added that there is a fair amount of free board within each pond, so they can be filled deeper to increase capacity, if needed. Nordlund asked if fish from the west ladder trap will be metered so as to not overflow Pond 6, and Mackey replied that they will be. Mackey added that Pond 6 is designed to hold at least 200 fish, which is more than the number that would be trapped at the west ladder in any one day. He also added that if, somehow, Pond 6 does become full, trapping would be halted. He explained that trapping typically ends at 8:00 p.m., the next day trapped fish are sorted, and then trapping does not commence until the following day.

Jeff Korth asked if Douglas PUD has considered building additional rearing ponds on the other side of the site. Mackey said that there will already be one extra pond; however, there is not enough room to build any more ponds. He said that Douglas PUD originally planned to construct the new Adult Handling Facility closer to the dam; however, this was not possible due to dam safety considerations. He added that locations that allowed linking the new Adult Handling Facility into the volunteer channel were constrained and there would be no space to add more ponds.

Korth also suggested considering the recent upgrades at Priest Rapids Dam, including the complications that arose from those modifications. Mackey said that Douglas PUD and Wells Hatchery WDFW staff toured the Priest Rapids facility, noting the upgrades, and pros and cons of these upgrades. He also added that much of the Adult handling Facility design was based on upgrades at Winthrop NFH, which work very well. Mackey said that the fish and staff flow in the Wells design have been carefully thought out in collaboration with the WDFW staff. He also noted that the design team is aware of the issues encountered with the crowders at the Priest Rapids Hatchery.

Nordlund asked how many staff will be required to crowd fish out of the holding ponds and then also crowd them into the appropriate tank. Mackey said that only one staff person will be needed to operate the crowders to move fish into the building. Nordlund also asked about

the Y-pipe that is depicted in the handling area of page 2 of Attachment B, and Mackey clarified that this pipe allows fish to be sent back to the river from two locations within the facility, with the two pipes joining in a “Y.”

Mackey asked that the Coordinating Committees contact him or Kahler with questions as they arise. He added that no additional workshops are planned for the HCP Hatchery Committees; however, Mike Schiewe reminded the Coordinating Committees that the HCP Hatchery Committees have already thoroughly reviewed the hatchery components of the design at the Master Plan stage and the 30% design stage.

B. 2013 Douglas PUD Pikeminnow Program Annual Report Update (Tom Kahler)

Tom Kahler recalled that Kristi Geris sent an email to the Coordinating Committees on April 21, 2014, notifying them that the draft Douglas PUD 2013 Pikeminnow Program Annual Report was out for a 60-day review period, with comments due to Kahler by Friday, June 20, 2014. He said that comments were received and incorporated into the draft report. The final Douglas PUD 2013 Pikeminnow Program Annual Report was distributed to the Coordinating Committees by Geris on June 25, 2014.

IV. NMFS

A. Tumwater Trap Operations (Bryan Nordlund)

Bryan Nordlund recalled that a few years ago, the Hatchery Committees agreed to a fish passage monitoring program at the Tumwater Dam fish ladder. He said that the program included monitoring passive integrated transponder (PIT)-tagged adults moving in, and exiting, the ladders. Nordlund asked if this has continued and if there is a monitoring report available that documents the results.

Alene Underwood (Chelan PUD) explained that fish passage issues were first discovered at Tumwater Dam in 2010. She said in 2011, the first report documenting these issues was developed and submitted to NMFS and the U.S. Fish and Wildlife Service (USFWS). She said in subsequent years, fish passage monitoring at Tumwater Dam continued. She said that the Hatchery Committees agreed to a protocol to monitor fish passage delays at weirs 15 and 18, and for every 10 fish, the median delay could not exceed 48 hours. She said that if delays

exceeded 48 hours, all trapping would cease immediately and fish would be allowed to pass the dam via the ladder until such time that the median passage time is less than 24 hours. She said that one such exceedance occurred in 2011, and trapping was temporarily halted, as planned. She said in 2011, Chelan PUD provided weekly Tumwater Dam fish passage reports to the HCP Hatchery Committees; however, in 2012 and 2013, the frequency of reporting decreased. She said that although reporting to the HCP Hatchery Committees decreased, ongoing coordination with NMFS and USFWS has remained consistent. She said that Chelan PUD has decided to return to providing weekly Tumwater Dam fish passage reports to the HCP Hatchery Committees each Friday; she added that Chelan PUD will now also regularly coordinate with the Washington Department of Fish and Wildlife (WDFW).

Nordlund explained that his questions were triggered because he noticed that additional funding was awarded for the Reproductive Success Study (RSS). Underwood said that initially, sampling natural-origin recruits (NORs) at Tumwater Dam was only supposed to occur up until 2018; she noted that sampling involved 100% of the run. She said that now, from here forward, because adult management requires managing for percent hatchery-origin spawners (HORs), which requires handling all fish anyway, the thought is to capitalize on this for the RSS and to extend the sampling of HORs to 2018 as well. She said that the Operations Plans and time frames will not change, noting that the trap will be staffed 24 hours per day, 7 days per week (24/7) until July 15, 2014 (began on June 16, 2014). She added that after sockeye appear at Tumwater around mid-July, trapping will be limited to 3 days per week and up to 16 hours per day. Nordlund emphasized that the priority for Tumwater operations needs to be passing NORs to the spawning grounds, and Underwood assured him that Chelan PUD will continue monitoring Tumwater Dam to avoid delays.

Nordlund also recalled that in the 1990s, the primary purpose of Tumwater Dam was to trap sockeye, and the facility was used sparingly for trapping Chinook salmon. He said that the trapping structure at Tumwater Dam is small—appearing to be (although not verified) either a 15-inch denil or steep pass, and that passage data indicate a marked difference between jack and adult passage rates. *(Note: Nordlund later noted that per Josh Murauskas, analysis of Data Access in Real Time PIT-tag data indicate that with 100% trapping of Chinook, adult Chinook were significantly obstructed from passing the site, as compared to Chinook jacks*

(24.4% versus 4.7%, $P < 0.01$). Since tail beat amplitude at burst speed is about 40% of a salmon's body length (per Powers and Orsborne), Murauskas expects that the larger salmon's tail will more readily strike the sides of the trapping ladder and interrupt burst speed, causing passage to either be impaired or fail. If a fish was precisely migrating on the centerline of the trapping ladder, this means that any fish greater than about 36-inch body length will have migration impaired. Similarly, if a smaller fish migrates off of the centerline, its tail could strike the sides of the trapping ladder.) Nordlund said that fish are relying on their burst velocity to pass. He suggested considering increasing the size of the trapping ladder. He asked if Grant PUD brood collection relies on trapping at Tumwater Dam, as well, and Underwood replied that they do. Underwood added that Chelan PUD uses the facility less than others. She also noted that in 2015, Chelan PUD has budgeted for a study to investigate the size of the denil at Tumwater Dam.

Jeff Korth said that he discussed this issue with Andrew Murdoch (WDFW), and Murdoch indicated that he has never observed a Chinook salmon that was unable to pass the denil at Tumwater Dam. Korth also noted the increasing abundance of summer Chinook salmon passing Tumwater Dam, and Underwood suggested that this could be because trapping does not occur 24/7 during a majority of the summer Chinook run.

Nordlund suggested the potential of using Priest Rapids Coordinating Committee No-Net-Impact (NNI) funds to replace the Tumwater trapping ladder, if based on future or existing PIT-tag data, passage delay or selective passage remains a problem. Underwood said that Grant PUD has already offered those funds for this purpose, and planning is underway for this effort. Nordlund added that he believes the steppass at Priest Rapids Dam is the same order of size as the trap ladder at Tumwater Dam; however, the difference might be that of a primary versus secondary passage route.

V. Chelan PUD

A. Rocky Reach 2013 Broodstock Collection Update (Alene Underwood and Catherine Willard)

Lance Keller introduced Chelan PUD's HCP Hatchery Committee Technical Representative and Alternate, Alene Underwood and Catherine Willard, respectively, whom Keller said would provide an update on Chelan PUD's Rocky Reach 2013 broodstock collection progress.

Underwood recalled that last April 2013, Chelan PUD provided a presentation for the Coordinating Committees about the Rocky Reach Trap 2013 Pilot Study. She said that the Rocky Reach Trap 2014 Pilot Study was slightly different in that target fish were trapped using existing PIT-tag arrays and also a newly installed PIT-tag array, and a sort-by-code function and a predetermined library of PIT-tag codes. She said that Chelan PUD's Methow spring Chinook salmon obligation included 38 NOR broodstock; she noted that Chelan PUD already knew there were not enough PIT-tagged NORs in the system to meet this target, and so HORs were also targeted. Underwood said that based on results of the 2013 Pilot Study, trap improvements were made, including: 1) replacing the solid trap door with a grated or perforated trap door; 2) adding underwater lighting; 3) installing an electrical control pendent to give the two operators the opportunity to operate the door depending on visibility; 4) painting the trap floor white; and 5) installing additional cameras. She added that to test the efficacy of the sort-by-code system, a visual and auditory system was also installed, which functioned as planned. She said that Willard will review a summary of results. Underwood added that fish passage at Rocky Reach Dam was continuously open and available throughout this pilot trapping effort, except for when fish were actively being trapped.

Willard provided the Coordinating Committees with a Rocky Reach Trap 2014 Pilot Summary (Attachment D), which Kristi Geris distributed to the Coordinating Committees via email following the meeting on June 27, 2014. Willard said that trapping occurred for 28 days from May 7 to 9, 2014, and from May 12 to June 5, 2014. She noted that active trapping occurred on 25 of those days, as no target fish were detected on 3 days. She said that 106 PIT-tagged out-migrating smolts were detected as returning adults at the Rocky Reach Trap, 25 of which were trapped, including: 21 Methow HORs; two Chewuch NORs; one presumed Methow NOR (genetic testing will be used to confirm); and one Chiwawa HOR (stray). She added that the single Chiwawa stray that was trapped was also the only one detected at Rocky Reach (see Table 1 in Attachment D). She said that the core trapping time periods were modified based on fish detections through the ladder (see Table 2 in Attachment D), but typically, trapping efforts did not occur later than 7:00 p.m. because of reduced daylight conditions. She said there were a total of 43 trapping attempts (including the 25 successful

traps), opposed to 34 trapping attempts that were achieved during the 2013 Pilot Study. Willard also noted that there were three trapping mortalities, including one adipose fin (ad-) absent and two ad-present fish. She said that the ad-absent mortality was discovered as an old carcass that was likely impinged at some point during trapping. She said that the two ad-present mortalities were caught on video footage, which was reviewed to confirm the cause of death. She said that one was impinged against the ladder wall when the trap door opened during a compressor test. She added that during that time, the water was turbid and the impinged fish was not seen. She said that the other ad-present mortality was a non-target fish that was impinged in the door closure area while trapping a target fish. She noted that the two NOR mortalities and the three trapped NORs will be subtracted from the NOR allowance for the Chewuch tangle netting effort, leaving 33 NORs to target.

Bryan Nordlund asked if it is possible that the trap door could be causing some of the injuries to fish that have been observed earlier at Wells Dam. Willard said that Chelan PUD considered this as well, and based on the injuries sustained to the three mortalities at the Rocky Reach Trap, Chelan PUD does not believe the trap door could be the cause of the other fish injuries. She went on to explain that the Rocky Reach Trap door “squished” the fish, opposed to creating the slice marks observed on the other injured fish. Nordlund said that it may be possible that the trap door sliced a passing fish and went undetected. He added that sea lions may be the culprit for most injuries, but others are hard to explain, and he suggested improvements to the trap door to prevent potential fish injuries. Underwood said that Chelan PUD has discussed installing an additional camera that would provide a visual of the upstream side of the trap (behind the trap door). She added, however, that there is nothing on the trap door itself that could scrape because the edges are rounded. She also noted that a large number of fish injuries persisted after Chelan PUD ceased operating the trap, and also the number of trapping attempts versus the number of fish injuries did not match up. Nordlund said that he liked the idea of installing an additional camera to view upstream of the gate area. He suggested also considering installing an upstream crowding gate that crowds non-target fish out of the gate closure area while a trap gate traps the target fish. He also suggested putting a “stopper” on the gate pneumatically operated gate shaft, preventing complete closure and reducing the potential for a fish to be pinched between the ladder wall and the trap gate. Underwood said that Chelan PUD staff have suggested

installing a downstream gate, and that they will also continue to consider potential causes of the fish injuries, and ultimately, what modifications can alleviate these concerns for future studies.

Mike Schiewe asked if the fish that were detected but not trapped were passing during trapping hours or when the trap was not being operated, and Willard replied that it was both. Keller added, however, that most of the missed fish were passing when the trap was not being operated. Underwood said that a much more comprehensive analysis is planned for these data, which will include these types of evaluations.

Nordlund said that, overall, he really liked the utility of the Rocky Reach Trap because it does not appear to delay fish passage, and added that it is a useful tool although still requires adaptive management for prototype development. Jeff Korth asked if Chelan PUD has any ideas on how to improve the efficiency of the trapping events, adding that he thought the results could have been better. Underwood said that improving trapping efficiency may be difficult. She added that fish behavior was unpredictable, noting that the fish would move up and down the ladder or move through the window area in groups; and Underwood noted that they wanted to avoid trapping multiple fish at the same time. She said that if a bull trout was observed, staff were instructed to not attempt trapping at all. She added that last year, a list of improvements was developed, and the same will be done this year to help improve trapping efficacy in future years. Willard added that Chelan PUD is considering trapping in two different shifts.

Korth asked how many NORs were detected of the 106 target fish detected, and Willard replied that there were 17 NORs detected. Korth also asked what tag codes were uploaded to the sort-by-code library, and Underwood said that all fish that have been PIT-tagged in the Methow over the past 5 years, except Twisp fish and jacks were uploaded into the library. Underwood said that there is a lot of room for improvement, but Chelan PUD was still very pleased with the outcome of this year's pilot.

B. Rocky Reach C2 Rotor Crack Repair (Lance Keller)

Lance Keller recalled that a few years ago, Rocky Reach engineers rehabilitated the turbine units at Rocky Reach Dam, including installing wedge carriers on each unit, and during these improvements, rotary cracks were discovered in multiple units. Keller recalled that C2, one of the smaller units at Rocky Reach Dam, provides the primary attraction flow to the cul-de-sac area near the Rocky Reach forebay. He said that repairs to C2 were originally scheduled to begin on July 3, 2014; however, Rocky Reach engineers have requested an earlier outage starting June 30, 2014, to perform a blade evaluation. Keller added that C2 is scheduled to be back online in November 2014.

Keller said that the 2014 Rocky Reach Bypass Operations Plan proposes the same alternative operations to be implemented during the C2 outage as those implemented in 2013 when Turbine Unit 1 (C1) was offline for repair. He recalled that alternative operations include three additional Rocky Reach Juvenile Fish Bypass surface collector (SC) pumps to increase flow from 3,000 cubic feet per second (3 kcfs) to 3.3 kcfs into the SC entrances; also, C1 flow will be increased from its normal set-point flow of 12.2 kcfs to a soft-limit flow 15.2 kcfs during the C2 outage. He also noted that normal water velocity through the dewatering screens in the SC channels will increase proportionally to the SC flow-rate increase, and that the same monitoring that was performed during the C1 outage will also be performed during the C2 outage. Keller said that he will provide Kristi Geris with key dates and values regarding the Rocky Reach C2 rotor crack repair, as just discussed, for incorporation into the meeting minutes. *(Note: Keller provided Geris with this information on June 26, 2014.)*

C. Entiat Pilot Milfoil Control Project (Lance Keller)

Lance Keller said that the Notice of Intent, the Discharge Management Plan, and the Integrated Aquatic Vegetation Management Plan (IAVMP) were posted to the HCP Coordinating Committees Extranet site on June 9, 2014, and Kristi Geris notified the Coordinating Committees that same day. Past meeting minutes excerpts and associated documents regarding the Entiat Pilot Milfoil Control Project were also distributed to the Coordinating Committees by Geris on June 2, 2014. Bryan Nordlund noted that Dale Bambrick was addressing this issue for NMFS. Keller said that the comment period for the

herbicide application at Entiat Park ends July 6, 2014. He said that Chelan PUD has already submitted comments, and he will provide those comments to Geris for distribution to the Coordinating Committees. *(Note: Keller provided these comments [Attachment E] to Geris on June 25, 2014, which Geris distributed to the Coordinating Committees that same day.)*

Keller read Chelan PUD's final comment to the Coordinating Committees, as follows:

"Chelan PUD does not agree that this Discharge Management Plan or the IAVMP, which is part of the Discharge Management Plan has evaluated the compatibility of aquatic herbicide applications with endangered fish species and other fish species as stated in our comments previously. We request that the permit application not be approved until the chemicals proposed in this application are reviewed in-depth by the applicant in consultation with USFWS, WDFW, Washington State Department of Ecology (Ecology), and NMFS."

Tom Kahler asked who the applicant is, and Keller replied that the applicant is the Chelan County Noxious Weed Board (CCNWB) and their consultant, AquaTechnex, LLC. Bryan Nordlund said that he provided this information to Dale Bambrick (NMFS), and Nordlund asked if Bambrick has contacted Chelan PUD. Keller said that he has not, but that he will reach out to Bambrick. Nordlund recalled that this is the same pilot project originally proposed in 2012, but the proposed application area has now grown larger. Keller said that the number of chemicals planned for use has also increased from only Triclopyr triethylamine (TEA), to Triclopyr TEA, Diquat dibromide, Endothall (dipotassium salt), and 2,4-D Amine. Aaron Beavers asked what the purpose of application is, and Keller said that the original purpose of application was to control Eurasian milfoil in swimming areas. Keller said that the CCNWB is also now proposing application in marina areas and also at the mouth of the Entiat, which raises concern for lamprey, sturgeon, and other resident fish.

D. Wanapum Drawdown Update (Lance Keller)

Lance Keller asked the Coordinating Committees if they had any additional questions that were not addressed during the site tour. He also asked if the level of data and communication has been adequate concerning activities at Rock Island Dam as they relate to the Wanapum drawdown. The Coordinating Committees representatives present had no further questions at this time. Keller said that river flows are already dropping off, and that

the target date for the intermediate pool raise (560- to 562-foot range) is still the fourth quarter of 2014, which means the current lowered pool elevation will remain throughout the 2014 fish passage season. Keller said that Chelan PUD will file the Rock Island Interim Fish Passage Plan June 2014 Monthly Report with FERC by July 1, 2014, and will also distribute the report to the Coordinating Committees when it is available. He said that since construction has been completed, Chelan PUD has been in a monitoring mode, which means there is not much to report that is different from last month's progress report. He said, therefore, that Chelan PUD is planning to request modifying submittal deadlines of the monthly reports to occur less frequently, as Grant PUD has already done. He added that if the Coordinating Committees want additional information, Chelan PUD can always accommodate those requests.

VI. Hatchery and Tributary Committees Update (Mike Schiewe)

Mike Schiewe updated the Coordinating Committees on the following actions and discussions that occurred at the last HCP Hatchery Committees meeting on June 18, 2014:

- *Grant PUD Access to Use Excess Production Capacity at Douglas PUD Facilities to Produce Steelhead and Spring Chinook Salmon:* Douglas PUD sought Hatchery Committees approval to allow Grant PUD access to use excess production capacity at Douglas PUD facilities to produce steelhead and spring Chinook salmon. The question that the Hatchery Committees considered was whether Grant PUD's production would affect Douglas PUD's NNI and inundation obligation. The Hatchery Committees approved the request for 2015. Douglas PUD plans to request approval of this access over a 10-year period, rather than annually requesting access, under which the next request for approval of access will fall in line with the next hatchery recalculation.
 - *Hatchery Evaluation Technical Team Non-Target Taxa of Concern (NTTOC) Report Update:* Greg Mackey led the Hatchery Committees' effort to complete the NTTOC Modeling Report, which evaluates interactions between hatchery fish and non-target fish. The project employed the PCD1 ecological risk assessment model. Mackey said that among all interactions modeled, there were only three containment exceedances. He added that these exceedances were modeled to occur in the Columbia River where
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fish behavior is less understood, and subsequently confidence is lowest. He said, therefore, not a lot of weight was put into these exceedances.

- *Rocky Reach Trap Pilot Update:* Alene Underwood and Catherine Willard presented the same information to the Hatchery Committees that they presented during today's Coordinating Committees meeting.
- *Penticton Sockeye Hatchery:* Alene Underwood reported that the new hatchery will soon come online, and a grand opening will be held in the next couple of months. Chelan PUD is pleased with the progress made to date. The hatchery is jointly funded by Chelan PUD and Grant PUD.
- *Annual Hatchery M&E Implementation Plan Schedule:* This year, the Hatchery Committees agreed that Chelan PUD will submit their draft 2015 Hatchery M&E Implementation Plan to the Hatchery Committees for review by August 2014. Chelan PUD had requested a September due date to coincide with completion of more of the current M&E seasonal activities before planning M&E activities for the following year. This discussion will likely continue.
- *Hatchery and Genetic Management Plan (HGMP) Update:* Lynn Hatcher provided the regular HGMP update from NMFS. Permitting is moving forward, slowly but surely. The slow progress is partly due to the outside scrutiny that has been placed on hatchery programs by legal challenges from environmental groups.
- *Annual Broodstock Collection Protocols:* Lynn Hatcher plans to present a Statement of Agreement in September 2014 requiring Hatchery Committees approval of the annual Broodstock Collection Protocols. This requirement, which will also be incorporated into the new permits, will create a more rigorous review and approval schedule for the annual protocols.
- *Trapping at Tumwater Dam:* Lynn Hatcher discussed the same information with the Hatchery Committees that was presented by Bryan Nordlund during today's Coordinating Committees meeting.

Schiewe updated the Coordinating Committees on the following actions and discussions that occurred at the last HCP Tributary Committees meeting on June 19, 2014:

- *Silver Side Channel Design and Groundwater Monitoring Presentation:* Tom Kahler said that the Cascade Columbia Fisheries Enhancement Group provided a
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presentation on monitoring efforts that were funded by the Tributary Committees, and they also presented designs (also funded in-part by the Tributary Committees) for a restoration project that they intend to complete.

- *Statement of Work Amendment and Time Extension for Nason Creek Upper White Pine Reconnection Project*: The Rock Island Tributary Committee denied the Chelan County Natural Resources Department's request for a time extension and modification to the statement of work to extend the project timeline through the end of August to conduct a field review of the 30% design pole locations and to summarize all actions completed under this project agreement.
 - *Small Projects Program Application for Silver Reach Mining Impacts Evaluation/ Feasibility Study*: The purpose of this project was to evaluate the extent to which heavy metal contamination from local mining activities may affect the feasibility of restoration actions proposed in the Twisp to Carlton Reach on the Methow River. The Tributary Committees are investigating why Ecology has not taken a larger role in this effort, and are also discussing this project with USFWS. This proposal has been tabled until the Tributary Committees hear back from the project sponsor.
 - *Okanagan Nation Alliance Monitoring Proposals*: The Rocky Reach Tributary Committee approved funding for the Penticton Channel Monitoring Spawning Platforms and the Wells Tributary Committee approved funding for the Okanagan River Restoration Initiative Phase II Effectiveness Monitoring Project. Tom Kahler clarified that Chelan PUD and Douglas PUD will provide funding for the approved monitoring projects through their respective Tributary Assessment Funds rather than through the Rocky Reach and Wells Plan Species Accounts.
 - *General Salmon Habitat Program Draft Proposals*: The Tributary Committees solicited full proposals from four of the nine draft proposals received. Tom Kahler said that the Regional Technical Team will make their scoring decisions the day before the next Tributary Committees meeting. He added that this year, driven by the Salmon Recovery Funding Board, the whole process has been moved up 1 month.
 - *Next Steps*: The next Tributary Committees meeting will be held on Thursday, July 10, 2014.
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VII. HCP Committees Administration

A. Next Meetings (Mike Schiewe)

Mike Schiewe said that the next scheduled Coordinating Committees meeting is July 22, 2014, to be held by conference call. The August 26, 2014 and September 23, 2014 meetings will be held either by conference call or in person at the Radisson Hotel in SeaTac, Washington, as is yet to be determined.

B. Bryan Nordlund's Retirement (Mike Schiewe)

Mike Schiewe and the Coordinating Committees thanked Bryan Nordlund for his contributions throughout the years. Schiewe reminded the Committees of a reception honoring Nordlund that will take place later this evening.

List of Attachments

Attachment A	List of Attendees
Attachment B	Draft Wells Hatchery Adult Handling Facility 60% Design Site Plans
Attachment C	Draft Wells Hatchery Adult Handling Facility 60% Design Overview Drawing
Attachment D	Rocky Reach Trap 2014 Pilot Summary
Attachment E	Chelan PUD Draft Comments on Entiat Milfoil Herbicide Treatment

Attachment A
List of Attendees

Name	Organization
Mike Schiewe	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tom Schadt	Anchor QEA, LLC
Lance Keller*	Chelan PUD
Keith Truscott*†	Chelan PUD
Alene Underwood	Chelan PUD
Catherine Willard	Chelan PUD
Tom Kahler*	Douglas PUD
Greg Mackey	Douglas PUD
Jim Craig*	U.S. Fish and Wildlife Service
Steve Lewis†	U.S. Fish and Wildlife Service
Bryan Nordlund*	National Marine Fisheries Service
Scott Carlon*	National Marine Fisheries Service
Aaron Beavers	National Marine Fisheries Service
Jeff Korth*	Washington Department of Fish and Wildlife
Carmen Andonaegui*†	Washington Department of Fish and Wildlife

Notes:

- * Denotes Coordinating Committees member or alternate
- † Joined for the site tour