

FINAL MEMORANDUM

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

Date: March 22, 2016

From: John Ferguson, HCP Coordinating Committees
Chairman

Cc: Kristi Geris

Re: Final Minutes of the February 23, 2016, HCP Coordinating Committees Meeting

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plans (HCPs) Coordinating Committees met at the Radisson Gateway Hotel, in SeaTac, Washington, on Tuesday, February 23, 2016, from 9:30 a.m. to 11:30 a.m. Attendees are listed in Attachment A to these meeting minutes.

ACTION ITEM SUMMARY

- Chelan PUD will discuss with Dr. John Skalski (Columbia Basin Research) possibly adjusting the Data Access in Real Time (DART) database outputs to better capture the early portion (prior to June 1) of the annual subyearling Chinook salmon counts at the Rock Island Bypass (Item I-C).
 - John Ferguson will communicate developing details about the 2016 Subyearling Chinook Salmon Workshop to the Coordinating Committees during the monthly Coordinating Committees meetings (Item I-C).
 - Tracy Hillman (BioAnalysts, HCP Hatchery and Tributary Committees Chairman) will provide a paper on imprinting of hatchery-reared salmon by Andy Dittman (National Marine Fisheries Service [NMFS] Science Center), published in *Fisheries* last March 2015, to Kristi Geris for distribution to the Coordinating Committees (Item II-A). (*Note: this paper was distributed to the Coordinating Committees by Geris on February 24, 2016.*)
 - Lance Keller will notify the Coordinating Committees when the Rocky Reach Dam Adult Fish Ladder is back online from annual winter maintenance and fully operational (Item III-E). (*Note: Keller provided notification that the Rocky Reach Dam Adult Fish Ladder was returned to service on March 9, 2016, which Geris*
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distributed to the Coordinating Committees that same days)

- Lance Keller will provide updates on receipt and installation of the refurbished sluice gate, RO4, as well as notify the Coordinating Committees when the Rock Island Dam right fish ladder is back online from annual winter maintenance and fully operational (Item III-E). *(Note: Keller provided notification of receipt of the refurbished sluice gate on March 3, 2016, and that the Rock Island Dam Right Fish Ladder was returned to service on March 9, 2016, which Geris distributed to the Coordinating Committees those same days.)*
- Lance Keller will provide the combined generation capacity of Rock Island Dam Powerhouses 1 and 2, minus Units B-1, B-2, B-3, and B-4 in Powerhouse 1, and Unit U-3 in Powerhouse 2, to Kristi Geris for distribution to the Coordinating Committees (Item III-G). *(Note: Keller provided these data on March 21, 2016, which Geris distributed to the Coordinating Committees that same day.)*
- Lance Keller will provide an update on the Rock Island Dam Powerhouse 2 Unit U-3 inspection, during the Coordinating Committees meeting on March 22, 2016 (Item III-G).
- Lance Keller will provide the schedule for repairing Rock Island Dam Powerhouse 1 Unit B-2, to Kristi Geris for distribution to the Coordinating Committees (Item III-G).
- Tom Kahler will verify the estimated completion date for the Wells Hatchery Modernization, and will provide photographs discussed during today's meeting to Kristi Geris for distribution to the Coordinating Committees (Item IV-A). *(Note: Kahler provided the photographs to Geris on February 24, 2016, and verified the estimated completion date on February 29, 2016, which Geris distributed to the Coordinating Committees those same days.)*
- Tom Kahler will notify the Coordinating Committees when the Wells Dam east fish ladder is back online from annual winter maintenance and fully operational (Item IV-B).
- **The Coordinating Committees meeting on March 22, 2016, will be held in-person at the Radisson Hotel in SeaTac, Washington (Item VI-D).**

DECISION SUMMARY

- The Rocky Reach and Rock Island HCP Coordinating Committees representatives
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present approved the 2016 Rocky Reach and Rock Island HCP Action Plans, as revised (Item III-A).

AGREEMENTS

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

REVIEW ITEMS

- Kristi Geris sent an email to the Coordinating Committees on February 8, 2016, notifying them that the Draft 2015 Wells HCP Annual Report was available for a 30-day review, with edits and comments due to Geris by Monday, March 7, 2016 (Item VI-B).
 - Kristi Geris sent an email to the Coordinating Committees on February 11, 2016, notifying them that the Draft 2016 Rocky Reach and Rock Island Fish Spill Plan was available for a 32-day review, with edits and comments due to Lance Keller by Monday, March 14, 2016 (Item III-B).
 - Kristi Geris sent an email to the Coordinating Committees on February 11, 2016, notifying them that the Draft 2016 Rocky Reach Juvenile Fish Bypass Operations Plan was available for a 32-day review, with edits and comments due to Lance Keller by Monday, March 14, 2016 (Item III-C).
 - Kristi Geris sent an email to the Coordinating Committees on February 11, 2016, notifying them that the Draft 2016 Rock Island Bypass Monitoring Plan was available for a 32-day review, with edits and comments due to Lance Keller by Monday, March 14, 2016 (Item III-D).
 - Kristi Geris sent an email to the Coordinating Committees on February 18, 2016, notifying them that the Draft 2015 Rocky Reach and Rock Island HCP Annual Reports were available for a 30-day review, with edits and comments due to Geris by Wednesday, March 16, 2016 (Item VI-B).
 - Kristi Geris sent an email to the Coordinating Committees on March 11, 2016, notifying them that the Draft 2016 Broodstock Collection Protocols were available for review, and that Tom Kahler intends to request Wells HCP Coordinating Committee approval of the document during the Coordinating Committees meeting on March 22, 2016.
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- Kristi Geris sent an email to the Coordinating Committees on March 19, 2016, notifying them that the Draft Statement of Agreement (SOA) for Modified Wells Dam Trapping for Bull Trout in 2016 was available for review, and would be further discussed during the Coordinating Committees meeting on March 22, 2016.

FINALIZED DOCUMENTS

- The Final 2016 Wells Dam Gas Abatement Plan and Bypass Operating Plan that was approved by the Wells HCP Coordinating Committee on January 26, 2016, and the Aquatic Settlement Work Group on February 10, 2016, was distributed to the Coordinating Committees by Kristi Geris on February 29, 2016.

I. Welcome

A. Review Agenda (John Ferguson)

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

- Lance Keller added an update on Rock Island Dam Powerhouse 2 Unit U-3 to Chelan PUD's existing update on Rock Island Dam Powerhouse 1 Units B-1 to B-4.
- Scott Carlon added a discussion on: 1) fishway inspections; and 2) Coordinating Committees meeting location.
- Ferguson added an update on the Draft 2015 HCP Annual Reports.

B. Meeting Minutes Approval (John Ferguson)

The Coordinating Committees reviewed the revised draft January 26, 2016, meeting minutes. Kristi Geris said all comments and revisions received from members of the Committees were incorporated into the revised minutes. She said she also added the Draft 2015 Rocky Reach and Rock Island HCP Annual Reports under the review items. Coordinating Committees members present approved the January 26, 2016, meeting minutes, as revised.

C. Last Meeting Action Items (John Ferguson)

Action items from the Coordinating Committees meeting on January 26, 2016, and follow-up discussions, were as follows. (*Note: italicized text corresponds to agenda items from the meeting on January 26, 2016*):

- *Douglas PUD will revise the Subyearling Chinook Salmon Life-history Study dates in the draft 2016 Wells HCP Action Plan, as discussed, and will provide the final plan to Kristi Geris for distribution to the Coordinating Committees (Item III-A).*

Tom Kahler revised the plan, as discussed, and provided the final plan to Geris on January 27, 2016, which Geris distributed to the Coordinating Committees that same day.

- *Douglas PUD will consider revising the historical flows language in the Draft 2016 Wells Dam Gas Abatement Plan (GAP) and Bypass Operating Plan (BOP), as discussed, and will provide the final plan, when available, to Kristi Geris for distribution to the Coordinating Committees (Item III-B).*

The historical flow language was revised, as requested, as distributed to the Coordinating Committees by Geris on February 10, 2016.

- *Douglas PUD will provide photographs of the lamprey entrance boxes installed in the low-level entrances at Wells Dam to Kristi Geris for distribution to the Coordinating Committees (Item III-C).*

Tom Kahler provided a photograph of the lamprey entrance boxes to Geris on January 29, 2016, which Geris distributed to the Coordinating Committees that same day.

- *Chelan PUD will discuss with Dr. John Skalski (Columbia Basin Research) possibly adjusting the DART database outputs to better capture the early portion (prior to June 1) of the annual subyearling Chinook salmon counts at the Rock Island Bypass (Item IV-A).*

This action item will be carried forward.

- *Chelan PUD will add expected dates to receive Hatchery and Genetic Management Plan (HGMP) permits from NMFS to the Draft 2016 Rocky Reach and Rock Island HCP Action Plans, as discussed, and will provide the revised draft plans to Kristi Geris for distribution to the Coordinating Committees. Chelan PUD will request approval of the revised draft plans during the Coordinating Committees meeting on February 23, 2016 (Item IV-B).*

Lance Keller updated the draft action plans, as discussed, and provided the revised draft plans to Geris on February 22, 2016, which Geris distributed to the Coordinating Committees that same day. Alene Underwood (Chelan PUD HCP Hatchery Committees Representative) provided second revised draft action plans to Geris on

February 23, 2016, which Geris distributed that same day, prior to the meeting. This will be further discussed during today's meeting.

- *Chelan PUD will develop a trip report regarding progress on the refurbishing of the Rock Island Dam right fish ladder sluice gate, RO4, following a site visit to the contractor's facilities in Massachusetts, and will provide the report to Kristi Geris for distribution to the Coordinating Committees (Item IV-C).*

Lance Keller provided a trip report to Geris on February 22, 2016, which Geris distributed to the Coordinating Committees that same day.

- *Chelan PUD will summarize potential operations scenarios for the Rock Island Dam right fish ladder operating with a bulkhead installed in place of the sluice gate, RO4, including potential effects on salmonid passage past the dam, and will provide the summary to Kristi Geris for distribution to the Coordinating Committees (Item III-C).*

This will be further discussed during today's meeting.

- *Chelan PUD will provide weekly reports on the progress of repairing and installing the Rock Island Dam right fish ladder sluice gate, RO4, to Kristi Geris for distribution to the Coordinating Committees (Item IV-C).*

Lance Keller provided weekly reports, as requested, on February 4, 16, and 22, 2016, which Geris distributed to the Coordinating Committees those same days. This will be further discussed during today's meeting.

- *Chelan PUD will notify the Coordinating Committees when the last denil structure is removed from the Rock Island Dam fishways (Item IV-D).*

Lance Keller provided a notification that denil removal was completed to Kristi Geris on February 16, 2016, which Geris distributed to the Coordinating Committees that same day. This will be further discussed during today's meeting.

- *John Ferguson will discuss with Denny Rohr (Priest Rapids Coordinating Committee [PRCC] Facilitator) possibly holding both the PRCC and Coordinating Committees June 2016 meetings on June 21, 2016, and holding the 2016 Subyearling Chinook Salmon Workshop the next day on June 22, 2016 (Item V-A).*

Ferguson discussed the topic with Rohr following the Coordinating Committees meeting on January 26, 2016. This will be further discussed during today's meeting.

- *John Ferguson will communicate developing details about the 2016 Subyearling Chinook Salmon Workshop to the Coordinating Committees during the monthly*
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Coordinating Committees meetings (Item V-A).

This will be further discussed during today's meeting, and will also be carried forward.

- *Kristi Geris will contact Julene McGregor (Douglas PUD Information System Staff) to request member access to the HCP Hatchery Committees Extranet site for Deanne Pavlik-Kunkel (Grant PUD), as approved by the Coordinating Committees, and will coordinate with Sarah Montgomery (HCP Hatchery Committees support staff) about adding Pavlik-Kunkel to the requested HCP Hatchery Committees email distribution lists (Item VI-A).*

Geris contacted McGregor and Montgomery following the Coordinating Committees meeting on January 26, 2016, about getting Pavlik-Kunkel Extranet access and on the distribution lists.

II. HCP Tributary and Hatchery Committees Update

A. HCP Tributary and Hatchery Committees Update (Tracy Hillman)

Tracy Hillman reported that the HCP Tributary Committees did not meet in February 2016 due to lack of agenda items, and plan to meet next on March 10, 2016. Hillman noted that the Rocky Reach, Rock Island, and Wells Plan Species Accounts all received funding allocations, and specific details will be discussed during next month's update.

Hillman updated the Coordinating Committees on the following actions and discussions that occurred at the last HCP Hatchery Committees meeting on February 17, 2016:

- *Imprinting and Homing Presentation and Discussion:* The HCP Hatchery Committees have long been discussing how to improve homing fidelity of spring Chinook salmon to the Chewuch River. The HCP Hatchery Committees invited Andy Dittman to share his presentation titled, "Effects of Hatchery Rearing and Release Practices on Olfactory Imprinting and Homing." Early studies indicated imprinting was associated with increased thyroxin during the smoltification stage; however, Dittman has been researching sequential imprinting, which involves imprinting throughout the embryo stage to the juvenile rearing stage. Results from the Yakima River Spring Chinook Salmon Supplementation Program may help explain homing fidelity issues in the upper Methow Basin. Dittman says fish stray naturally due to various causes, such as age (older fish stray more than younger fish), memory loss, and exhaustion. This
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straying naturally occurs in natural-origin recruits and also hatchery-origin recruits (HORs). However, depending on how HORs are reared, stray rates may increase. One study found that stray rates are low when fish are released at a location at which they were reared or at distances greater than 47 kilometers from that location. Related to sequential imprinting, fish in the Chewuch River are migrating up the Methow Basin and picking up stronger cues from the Methow Fish Hatchery, so they pass the Chewuch River. Similar findings have been observed in the upper Yakima Basin. Strategies to decrease straying include: 1) incubating fish in natural or distinct waters; 2) embryonic imprinting; 3) artificial imprinting cues (however, morpholine and phenyl ethyl alcohol used for this are hazardous chemicals); 4) out-of-basin rearing and transporting fish to acclimation sites far from rearing location; and 5) monitoring release timing. Prior to Dittman's presentation, the Hatchery Evaluation Technical Team drafted a study plan to improve homing fidelity based on sequential and embryonic rearing. However, at this point, there are several issues with the plan, and Chelan PUD, Douglas PUD, and the Yakama Nation (YN) are working to resolve them for HCP Hatchery Committees' review. Hillman said Dittman recently published these findings, as presented to the HCP Hatchery Committees, in *Fisheries* last March 2015, and he will provide the paper to Kristi Geris for distribution to the Coordinating Committees. (*Note: this paper [Attachment B] was distributed to the Coordinating Committees by Geris on February 24, 2016.*)

- *Methow Spring Chinook Salmon Gene Flow Sliding Scale:* The HCP Hatchery Committees discussed a proposal from Craig Busack (NMFS HCP Hatchery Committees Alternate) to meet gene flow standards, which proposes an overall population goal of proportionate natural influence greater than or equal to 50%, when the natural run size estimated at Wells Dam is greater than or equal to 300 fish, and a total spawner escapement of 500 fish when the natural run size is fewer than 300 fish. Broodstock collection will also be limited to less than or equal to 33% of the natural run, except no natural broodstock will be collected, when the natural run size is fewer than 100 fish. Based on escapement numbers, different equations would be used for the three different categories. The HCP Hatchery Committees will vote on the proposal within the next couple of weeks, and NMFS needs to issue their permit by the end of May 2016.
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- *5-Year Hatchery Monitoring and Evaluation (M&E) Review Planning—Objectives 4, 5, 7, and 1:* This effort is ongoing. All objectives have been reviewed for spring Chinook salmon, and now Catherine Willard (Chelan PUD HCP Hatchery Committees Alternate) is drafting the results. The HCP Hatchery Committees revisited the hatchery replacement rate (HRR) discussion, and decided to use the 40th percentile during a 5-year evaluation period, with the caveats that: 1) they will not be concerned if HRR targets are not achieved in 1 or 2 years, but will become concerned if targets are not achieved in 3 or more years; and 2) each program will have its own HRR target, except Nason Creek (which will use the Chiwawa spring Chinook salmon target because there are no data for the Nason Creek program to calculate its target), and the Methow spring Chinook salmon and Chewuch spring Chinook salmon programs (which will use the higher of their two targets because they both include MetComp stock and should be assessed together). A draft report summarizing the results will be available for review in the next few weeks. Current progress of this review has also met the SOA established for this effort.
 - *NMFS Consultation Update:* No new updates on the Wenatchee Steelhead Biological Opinion (BiOp; it is still with NMFS Legal Counsel). The Methow Spring Chinook Salmon BiOp is pending HCP Hatchery Committees approval of gene flow standards. Once approved, Craig Busack indicated he will attempt to complete the BiOp by May 2016. Jim Craig asked if the Methow Spring Chinook Salmon BiOp will go back to NMFS Legal Counsel review, and Scott Carlon said it would.
 - *2016 Broodstock Collection Protocols:* The Washington Department of Fish and Wildlife (WDFW) provided the Draft 2016 Broodstock Collection Protocols for HCP Hatchery Committees' review. The draft protocols will be discussed during the next HCP Hatchery Committees meeting on March 16, 2016.
 - *2016 Rocky Reach and Rock Island HCP Action Plans:* The Rocky Reach and Rock Island HCP Hatchery Committees approved the hatchery portion of the 2016 Rocky Reach and Rock Island HCP Action Plans.
 - *Wenatchee Summer Chinook Salmon SOA:* The Rock Island and Rocky Reach HCP Hatchery Committees approved Chelan PUD's Wenatchee Summer Chinook SOA. The intent of the SOA is to design a chilled, partial water reuse system for Wenatchee summer Chinook salmon that will help Chelan PUD meet phosphorus discharge
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requirements under the Wenatchee River Total Maximum Daily Load for dissolved oxygen and pH.

- *Brood Year 2014 Methow Spring Chinook Salmon Acclimation:* The YN was interested in operating the Chewuch Acclimation Facility; however, other parties were interested in WDFW operating the facility. WDFW indicated they were unable to hire staff to operate the facility this year, so the YN will operate the Chewuch Acclimation Facility in 2016. WDFW will likely operate the facility in future years.
- *Draft 2016 Steelhead Release Plan:* Chelan PUD provided a Draft 2016 Steelhead Release Plan for HCP Hatchery Committees' review. The plan is essentially identical to last year's plan. The HCP Hatchery Committees will vote on the draft plan at the same time they vote on the gene flow standards in the Methow Basin in a couple of weeks.
- *Next Meeting:* The HCP Hatchery Committees' next scheduled meeting will be on March 16, 2016.

III. Chelan PUD

A. DECISION: Revised Draft 2016 Rocky Reach and Rock Island HCP Action Plans (Lance Keller)
Lance Keller said he coordinated with Catherine Willard to incorporate into the Draft 2016 Rocky Reach and Rock Island HCP Action Plans expected dates to receive Hatchery and Genetic Management Plan permits from NMFS, per Jeff Korth's recommendation during the Coordinating Committees meeting on January 26, 2016. Keller said he provided the revised draft plans to Kristi Geris on February 22, 2016, which Geris distributed to the Coordinating Committees that same day. Keller said Alene Underwood also incorporated a minor clarifying edit and provided second revised draft action plans to Geris on February 23, 2016, which Geris distributed that same day, prior to the Coordinating Committees meeting. Keller said no edits were received from Coordinating Committees representatives on the Coordinating Committees section of the revised draft action plans.

The Rocky Reach and Rock Island HCP Coordinating Committees representatives present approved the 2016 Rocky Reach and Rock Island HCP Action Plans, as revised.

B. Draft 2016 Rocky Reach and Rock Island Fish Spill Plan (Lance Keller)

Lance Keller said Kristi Geris sent an email to the Coordinating Committees on

February 11, 2016, notifying them that the Draft 2016 Rocky Reach and Rock Island Fish Spill Plan was available for a 32-day review, with edits and comments due to Keller by Monday, March 14, 2016. Keller said the plan is largely the same as last year's, with updated numbers. He asked that Coordinating Committees representatives contact him with questions, if needed.

C. Draft 2016 Rocky Reach Juvenile Fish Bypass Operations Plan (Lance Keller)

Lance Keller said Kristi Geris sent an email to the Coordinating Committees on February 11, 2016, notifying them that the Draft 2016 Rocky Reach Juvenile Fish Bypass Operations Plan was available for a 32-day review, with edits and comments due to Keller by Monday, March 14, 2016. Keller said the plan is largely the same as last year's, with updated numbers. He asked that Coordinating Committees representatives contact him with questions, if needed.

Keller said he also plans to provide the Coordinating Committees a 2015 bypass report that will also cover the previous year that was not reported on due to the Wanapum Drawdown.

D. Draft 2016 Rock Island Bypass Monitoring Plan (Lance Keller)

Lance Keller said Kristi Geris sent an email to the Coordinating Committees on February 11, 2016, notifying them that the Draft 2016 Rock Island Bypass Monitoring Plan was available for a 32-day review, with edits and comments due to Keller by Monday, March 14, 2016. Keller said the draft plan includes a slight change from last year. He said language was incorporated into the draft plan that outlines procedures should the fish trap accumulate too many fish. He explained, when the carrying capacity of the fish trap trough is exceeded, a subsample is collected and incorporated into the DART algorithm, similar to procedures at Rocky Reach Dam. He said, historically, these procedures have been in place verbally, but now they have been added to the plan.

E. Rocky Reach and Rock Island Adult Fish Ladder Winter Maintenance (Lance Keller)

Lance Keller reviewed maintenance updates at Rocky Reach Dam and Rock Island Dam, as follows:

Rocky Reach Dam

Keller recalled that during the Coordinating Committees meeting on January 26, 2016, he notified the Coordinating Committees of adult lamprey discovered beneath a diffuser grating while conducting a fish rescue at Rocky Reach Dam on January 4, 2016. He also recalled that new 3/4-inch grating was ordered to replace the existing 1-inch diffuser grating floor where the lamprey were discovered, and that a possible winter maintenance period extension was discussed, should the new grating not arrive before the normal maintenance period ended. Keller said the materials arrived early, and crews installed the new grating floors in Weirs A10 to A13, as discussed. He said rewatering of the fish ladder began on February 19, 2016, and it should be fully operational by the end of this week. He said he will notify the Coordinating Committees when the Rocky Reach Dam Adult Fish Ladder is back online from annual winter maintenance and fully operational. *(Note: Keller provided notification that the Rocky Reach Dam Adult Fish Ladder was returned to service on March 9, 2016, which Kristi Geris distributed to the Coordinating Committees that same days)*

Jim Craig asked if the 1-inch diffuser grating floor is everywhere in the fish ladder, and Keller replied that it is. Keller added that this was an opportunistic repair, which did not affect hydraulics, but there may be opportunities in the future to replace other grating floors. John Ferguson noted that NMFS requires 1-inch gratings for salmonid passage, so future repairs will need to be further discussed with NMFS.

Rock Island Dam

Keller recalled that the middle ladder at Rock Island Dam was returned to service on December 30, 2015. He said maintenance was then completed on the left ladder, which was returned to service on February 11, 2016. He said the middle and left ladders at Rock Island Dam are now fully operational.

Right Ladder

Keller recalled requesting and obtaining Rock Island Coordinating Committee approval of an extended maintenance outage to March 15, 2016, due to complications with the auxiliary water supply sluice gate, RO4. He also recalled that Chelan PUD has provided various updates and a trip report, as requested.

Keller said, since the last Coordinating Committees meeting on January 26, 2016, Chelan PUD's phone calls and emails to the contractor continued to go unanswered, so Chelan PUD sent an engineer and lead foreman mechanics to Massachusetts for a site visit with the contractor. He said the contractor tried to push the site visit back, but Chelan PUD went anyway. Keller said when the Chelan PUD engineer and mechanics arrived onsite, they discovered the gate was in the state it had been sent. He said while Chelan PUD was onsite, in the following days, significant work was put into refurbishing the gate, and Chelan PUD was confident the shop was indeed operational and progress was being made. Keller said, following the site visit, Chelan PUD and the contractor held daily conference calls and the contractor provided photographs of continued progress. He said the refurbished gate is being picked up today, will be shipped direct freight, and should arrive to Rock Island Dam on March 1, 2016. He said the concrete needed for grouting is already onsite, so once the gate arrives, installation can begin immediately. He said if transport goes as planned and the gate arrives March 1, 2016, Chelan PUD may not need an outage extension past the previous approved extension of March 15, 2016, or need to develop alternate operations scenarios due to the gate not being in place.

Keller recalled how frustrated Chelan PUD was about not even getting a response from the contractor. He said when Chelan PUD asked the contractor about this, the contractor said they did not know what to say, so they chose not to say anything at all. Ferguson asked if there is any risk when the gate arrives that something might be wrong with it. Keller said the refurbishments were straightforward; however, there is always the possibility of something going wrong during shipping. He said he will provide updates on receipt and installation of the refurbished sluice gate, RO4, as well as notify the Coordinating Committees when the Rock Island Dam Right Fish Ladder is back online from annual winter maintenance and fully operational. *(Note: Keller provided notification of receipt of the refurbished sluice gate on March 3, 2016, and that the Rock Island Dam Right Fish Ladder was returned to service on March 9, 2016, which Geris distributed to the Coordinating Committees those same days.)*

F. Rock Island Dam Denil Removal (Lance Keller)

Lance Keller recalled he provided a notification that denil removal was completed to

Kristi Geris on February 16, 2016, which Geris distributed to the Coordinating Committees that same day. Keller reviewed the following removal dates:

Denil structure	Removal date
Right Ladder Left Powerhouse Entrance Denil	January 9, 2016
Right Ladder Tailrace Entrance Denil	January 17, 2016
Left Ladder Denil (and in-ladder modifications)	January 26, 2016

Keller said, prior to February 1, 2016, all denil structures were removed, which was a significant milestone for the whole effort.

G. Rock Island Dam Powerhouse 1 Units B-1 to B-4, and Powerhouse 2 Unit U-3 (Lance Keller)
Rock Island Dam Powerhouse 1 Units B-1 to B-4

Lance Keller recalled he provided an update on Rock Island Dam Powerhouse 1 Units B-1 to B-4 to Kristi Geris on February 11, 2016, which Geris distributed to the Coordinating Committees that same day. Keller recalled that Rock Island Dam Powerhouse 1 Unit B-2 has been out of service for turbine crack repairs since last October 2015. He said repairs consisted of a survey for surface cracks on each of the six turbine unit blades. He said when cracks were discovered, the cracked area was excavated with a grinder, filled with weld material, and then ground smooth back to the original contour of the blade. He said during the initial survey, some of the Unit B-2 blades were determined to be crack-free. He said after identifying and repairing surface cracks in other blades, a follow-up survey was conducted on all the blades, and cracks were found in additional blades in high-stress locations, despite some blades being crack-free during their initial survey (i.e., just sitting in place was causing stress). Keller said these units are old, and the surface cracks have been attributed to corrosion fatigue. He said because Units B-1, B-2, B-3, and B-4 are all similar, and because Chelan PUD was not confident about operating the units until a visual inspection can be completed on each unit, the units were removed from service.

Jim Craig asked if the units were dewatered, and Keller replied that they are not. Keller added that the wicket gates are 100% closed, and the turbine units are unavailable to spin. He said Unit B-3 will be inspected February 29 to March 20, 2016, and if no cracks are discovered, he believes that unit will be made available for generation. He added that having

Units B-1 to B-4 out of service means reduced hydraulic capacity, and if river flow is high, Rock Island Dam may be forced to spill earlier than usual. He said the 2016 Rocky Reach and Rock Island Fish Spill Plan will be implemented as outlined; however, Rock Island Dam may need to spill farther in the outlined spill sequence, and total dissolved gas (TDG) will be closely monitored. He said the Chelan PUD Fish and Wildlife Department does not foresee issues with regard to juvenile and adult fish passage (i.e., unit outages will not compromise fish passage). He added that a TDG probe is in place at Rock Island Dam to obtain readings.

John Ferguson asked about the combined generation capacity of Rock Island Dam Powerhouses 1 and 2, minus Units B-1, B-2, B-3, and B-4 in Powerhouse 1, and Unit U-3 in Powerhouse 2. Keller said this information is not currently available; however, he will obtain it and provide it to Geris for distribution to the Coordinating Committees. *(Note: Keller provided these data on March 21, 2016, which Geris distributed to the Coordinating Committees that same day.)*

Jeff Korth asked about the age of the existing turbine unit blades. Keller said the blades are the originals, which were installed when the dam was constructed in the 1930s. He noted that the units still have wood bearings.

Keller said following the Unit B-3 inspection, Unit B-1 will be inspected March 21 to April 10, 2016, and Unit B-4 will be inspected April 11 to May 2, 2016. He added that he will provide the schedule for repairing Rock Island Dam Powerhouse 1 Unit B-2, to Geris for distribution to the Coordinating Committees.

Rock Island Dam Powerhouse 2 Unit U-3

Keller said rehabilitation efforts on Rock Island Dam Powerhouse 2 Unit U-3 had been ongoing for quite some time, and recently the unit was returned to service. He said, however, staff discovered a trunnion seal failure in the blade hub, which keeps oil in the Kaplan-style blade. He said on February 18, 2016, an oil sheen was observed in the Rock Island Dam tailrace. He said it was obvious where the oil was leaking from, and staff removed Unit U-3 from service. He said over 4 days, approximately 105 gallons of oil were leaked into the river. He said Chelan PUD notified the Washington State Department of

Ecology and the U.S. Environmental Protection Agency, and is now undergoing the necessary processes to address the leak. He added that Rock Island Dam Powerhouse 2 Unit U-3 will be unavailable until the trunnion seal is repaired.

Korth asked how the source of the leak was obvious. Keller explained that, given the Powerhouse operations at that time, staff were able to easily identify which unit was leaking. He added that this issue is unique to Unit U-3, and should not be an issue in the other Powerhouse 2 units. He also said he will provide an update on the Rock Island Dam Powerhouse 2 Unit U-3 inspection, during the Coordinating Committees meeting on March 22, 2016.

IV. Douglas PUD

A. Wells Hatchery Modernization (Tom Kahler)

Tom Kahler handed out photographs depicting progress on components of the Wells Hatchery Modernization. He said he will provide these photographs to Kristi Geris for distribution to the Coordinating Committees after the meeting. *(Note: Kahler provided the photographs [Attachments C to G] to Geris on February 24, 2016, which Geris distributed to the Coordinating Committees that same day.)*

Kahler reviewed the photographs, as follows:

Wells Hatchery Adult-handling Facility Photograph (Attachment C)

Kahler noted a section of the old volunteer channel located behind the new Adult-handling Facility and between the two electrical towers. He said that channel used to run into the foreground of the photograph and terminate in a trap near where the yellow super structure frame is located, and staff would manually sort fish there. He said with the new Adult-handling Facility, fish move up the volunteer channel into the new building, and will be ultimately sorted into one of six ponds. He said five of six ponds are already poured, and the sixth is underway. He said, from those ponds, fish can be guided back to the river or to transport trucks or spawned in the facility. He said the west fish ladder trap will also be piped to the new Adult-handling Facility.

Kahler said Attachment C also depicts a portion of the new utilities corridor located along the dirt pond with the yellow silt curtain. He said all utilities are now located in a single corridor and branch off as necessary. He said, also in Attachment C, the newly installed netting can be seen over one of the ponds. He said netting will be installed on Pond 1 this summer.

Wells Hatchery Adult-handling Facility Close-up Photograph (Attachment D)

Kahler noted the vertical slots in each concrete box where a false weir will be installed, and he said fish will volunteer themselves into the sorting containers. He said the new Adult-handling Facility is scheduled to be fully operational by May 1, 2016, in time for spring Chinook salmon broodstock collection.

Wells Hatchery Utilities Corridor and Dirt Ponds Photograph (Attachment E)

Kahler said the new utilities corridor is located under the row of construction equipment adjacent to the dirt pond.

Wells Hatchery Utilities Corridor and Head Tank Photograph (Attachment F)

Kahler noted the four aboveground concrete raceways and the existing bureau ponds to the right. He said the new Head Tank Facility is the building, with the rows of windows, located in the upper right corner of the photograph.

Wells Hatchery Head Tank Close-up Photograph (Attachment G)

Kahler said all groundwater and surface water are routed through this new facility.

Kahler said, to date, the modernization is on schedule. Jim Craig asked about the total cost of the modernization. Kahler said contracted work only is about \$37 million. He said, however, he is not certain about design, construction supervision, and other costs. John Ferguson asked what the estimated completion date is, and Kahler said he was uncertain, but can find out and let Geris know for distribution to the Coordinating Committees. *(Note: Kahler verified the estimated completion date of August 31, 2017, on February 29, 2016, which Geris distributed to the Coordinating Committees that same day.)*

B. Wells Dam Fish Ladder Maintenance (Tom Kahler)

Tom Kahler said annual winter maintenance on the west fishway at Wells Dam was completed later in the week following the last Coordinating Committees meeting on January 26, 2016. He said the east fishway at Wells Dam was then dewatered for annual winter maintenance the following week. He said a fish rescue was performed, and then maintenance work started right away. He said Biomark was onsite last week installing a passive integrated transponder (PIT)-tag antenna on the lamprey entrance box. He handed out a photograph of the installed PIT-tag antenna on the lamprey entrance box (Attachment H), which he provided to Geris via email on February 24, 2016, and Geris distributed to the Coordinating Committees that same day. He explained that the antenna is the white, circular object attached to the entrance. He said he is unsure if all maintenance is now complete, but will notify the Coordinating Committees when the Wells Dam east fish ladder is back online from annual winter maintenance and fully operational.

Bob Rose asked if the PIT-tag antennas have been tested. Kahler said the antenna installed on the west fishway lamprey entrance box is detecting test tags. He also noted the prerequisite of getting fish to approach and seek to pass Wells Dam via the low-level entrances before they could be detected on the new antennas.

C. Bypass Bay 2 PIT-tag Detection (Tom Kahler)

Tom Kahler said Biomark is still intending to complete construction and installation of PIT-tag detection in Bypass Bay 2 in time for routine bypass operations at Wells Dam, starting at 0000 hours on April 9, 2016. Kirk Truscott asked if those data will be uploaded to the PIT-Tag Information System. Kahler said they will, via a new Wells Dam juveniles site that is separate from the Wells Dam adults site. He added that Douglas PUD has requested that Biomark install the PIT-tag detection system by the last week in March 2016 to allow time to test the system prior to the start of bypass operations.

V. NMFS

A. Fishway Inspections (Scott Carlon)

Scott Carlon said there may be a shift in NMFS staff who administer fishway inspections for the Mid-Columbia hydropower projects. He asked who administers inspections at Wells,

Rocky Reach, and Rock Island dams. Tom Kahler said the Fish Passage Center contracts WDFW to conduct inspections at Wells Dam. Lance Keller said the same is for Rocky Reach and Rock Island dams. Carlon said Aaron Beavers (NMFS) is in charge of conducting inspections now, and for a number of reasons it is difficult for Beavers to get onsite every month, so NMFS is exploring alternative options.

VI. HCP Administration

A. 2016 Subyearling Chinook Salmon Workshop

John Ferguson recalled that Chelan PUD has an SOA that maintained subyearling Chinook salmon in Phase III (Additional Juvenile Studies) until 2016, at which time Chelan PUD needs to annually assess improvements in tag technology and study design to evaluate survival study feasibility (approved by the Rocky Reach and Rock Island HCP Coordinating Committees on June 25, 2013). Ferguson said, since last discussing a 2016 Subyearling Chinook Salmon Workshop during the Coordinating Committees meeting on January 26, 2016, the Priest Rapids Coordinating Committee (PRCC) also agreed to reschedule their June 2016 meeting to June 21 or June 22, 2016, to accommodate the workshop (as previously agreed by the Coordinating Committees on January 26, 2016).

Ferguson said the subgroup planning the workshop has also drafted an agenda, which entails the following five potential agenda topics:

1. Fish Passage Survival Model Updates

Ferguson said the planning subgroup envisioned this topic would be presented by Dr. John Skalski; however, workshop speakers are not yet confirmed.

2. Subyearling Life History

Ferguson said this portion of the workshop could include updates on subyearling Chinook salmon outside of the Mid-Columbia Basin, and he suggested inviting Billy Connor (U.S. Fish and Wildlife Service) to discuss studies in the lower Snake River and someone from the U.S. Army Corps of Engineers, Portland District, to discuss Willamette Reservoir studies. Ferguson noted that, as previously discussed, the planning subgroup built several discussion periods into the agenda to facilitate dialogue with the Coordinating Committees

and PRCC members and offer question and answer opportunities.

3. Study Fish

Ferguson said this section could address behavioral patterns observed in the Mid-Columbia Basin and whether enough study fish could be collected to meet study needs.

4. Tagging Effects

Ferguson said this section would include updates from researchers.

5. Tag Hardware

Ferguson said this section could include updates from vendors and other resources on size, dimensions, weight, tag longevity, and other information for tags currently available in the marketplace. Jim Craig said this section could also include updates from developers on research and development.

Ferguson said the planning subgroup plans to meet again on March 2, 2016, to further discuss the agenda and workshop details. He said there may be a more solid agenda by the next Coordinating Committees meeting on March 22, 2016. He said, with regard to attendees, the planning subgroup thought the previously discussed three to four representatives from each agency may be too many. He said the subgroup wants the workshop to be intimate, where the PRCC and Coordinating Committees can speak freely with researchers and have a good exchange of ideas. He said the bigger the attendance, the less functional the exchange is in a workshop setting. He said the subgroup is now thinking each PRCC and Coordinating Committees representative can invite one or two staff members to join, which will equal about 30 to 35 attendees, plus speakers.

B. Draft 2015 HCP Annual Reports

John Ferguson reminded the Coordinating Committees that Kristi Geris sent an email to the Coordinating Committees on February 8, 2016, notifying them that the Draft 2015 Wells HCP Annual Report was available for a 30-day review, with edits and comments due to Geris by Monday, March 7, 2016. Ferguson said Geris also sent an email to the Coordinating Committees on February 18, 2016, notifying them that the Draft 2015 Rocky

Reach and Rock Island HCP Annual Reports were available for a 30-day review, with edits and comments due to Geris by Wednesday, March 16, 2016.

C. Coordinating Committees meeting location (Scott Carlon)

Scott Carlon asked the Coordinating Committees if everyone is still supportive of holding the monthly Coordinating Committees meetings in Western Washington. He said he now has approval to travel to Wenatchee for Coordinating Committees meetings and wanted to discuss the location of future meetings. The Coordinating Committees supported the arrangement but were open to discuss this further since most members travel to Western Washington to attend the meetings. John Ferguson said he will let Denny Rohr (PRCC Facilitator) know this was briefly discussed.

D. Next Meetings

The next scheduled Coordinating Committees meeting is on March 22, 2016, to be held in-person at the Radisson Hotel in SeaTac, Washington. The April 26, 2016, and May 24, 2016, meetings will be held by conference call, in Eastern Washington, or in-person at the Radisson Hotel in SeaTac, Washington, as is yet to be determined.

VII. List of Attachments

Attachment A	List of Attendees
Attachment B	“Imprinting of Hatchery-Reared Salmon to Targeted Spawning Locations: A New Embryonic Imprinting Paradigm for Hatchery Programs” (Dittman 2015)
Attachment C	Wells Hatchery Adult-handling Facility Photograph
Attachment D	Wells Hatchery Adult-handling Facility Close-up Photograph
Attachment E	Wells Hatchery Utilities Corridor and Dirt Ponds Photograph
Attachment F	Wells Hatchery Utilities Corridor and Head Tank Photograph
Attachment G	Wells Hatchery Head Tank Close-up Photograph
Attachment H	PIT-tag Antenna Installed on Lamprey Entrance Box Photograph

Attachment A
List of Attendees

Name	Organization
John Ferguson	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tracy Hillman††	BioAnalysts
Lance Keller*	Chelan PUD
Alene Underwood†††	Chelan PUD
Tom Kahler*	Douglas PUD
Scott Carlon*	National Marine Fisheries Service
Jim Craig*	U.S. Fish and Wildlife Service
Jeff Korth*†	Washington Department of Fish and Wildlife
Bob Rose*†	Yakama Nation
Kirk Truscott*†	Colville Confederated Tribes

Notes:

- * Denotes Coordinating Committees member or alternate
 - † Joined by phone
 - †† Joined by phone for the HCP Tributary and Hatchery Committees Update
 - ††† Joined by phone for the Chelan PUD agenda items
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