

Memorandum

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

Date: March 1, 2023

From: John Ferguson, HCP Coordinating Committees Chairman

cc: Kristi Geris, HCP Coordinating Committees Support

Re: Final Minutes of the January 24, 2023, HCP Coordinating Committees Conference Call

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plan (HCP) Coordinating Committees met by conference call on Tuesday, January 24, 2023, from 12:00 p.m. to 4:00 p.m. Attendees are listed in Attachment A to these conference call minutes.

Action Item Summary

1. Anchor QEA, LLC (Anchor QEA) will send the revised draft December 16, 2022, conference call minutes, as edited by the Yakama Nation (YN), to Andrew Murdoch to address outstanding comments for Washington Department of Fish and Wildlife (WDFW) in tracked changes, so the HCP Coordinating Committees can review the revisions for vote via email or during the next HCP Coordinating Committees conference call on February 28, 2023 (Item I-B). (*Note: Kristi Geris sent the revised minutes to A. Murdoch following the HCP Coordinating Committees conference call on January 24; A. Murdoch provided responses on January 26; and the revised minutes were unanimously approved via email by January 30, 2023.*)
2. Chelan PUD will continue providing Rocky Reach Dam and Rock Island Dam turbine unit maintenance updates as information becomes available (Item I-C).
3. Chelan PUD will verify dates and times the Rock Island Adult Ladder Tailrace Entrance was closed while calculating adult conversion rates for the 2021 Rock Island Dam Confirmation Survival Study (Item I-C).
4. Chelan PUD will provide a synopsis of the engineering options considered to meet the minimum 1.0-foot head differential target at all four entrances at the Rock Island Dam Right Bank Adult Fishway during high spring flows in the Columbia River (Item I-C).
5. Chelan PUD will edit the presentation *2023 Rocky Reach HCP Yearling Chinook Confirmation Survival Study*, as discussed during the HCP Coordinating Committees conference call on January 24, 2023, for distribution to the HCP Coordinating Committees (Item III-B). (*Note: Lance Keller provided the updated presentation to Kristi Geris following the HCP Coordinating Committees conference call on January 24, 2023, which Geris distributed to the HCP Coordinating Committees that same day.*)
6. Chelan PUD will review the presentation *2023 Rocky Reach HCP Yearling Chinook Confirmation Survival Study* with Kirk Truscott, who was unable to attend today's HCP Coordinating Committees conference call (Item III-B).

7. Chelan PUD will distribute for review a draft 2023 Rocky Reach Dam Confirmation Survival Study Statement of Agreement (SOA), the draft *Study Plan to Measure Yearling Chinook Survival through the Rocky Reach Hydroelectric Project in 2023* (2023 Rocky Reach Dam Confirmation Survival Study Plan), appended draft *Statistical Plan for the 2023 Yearling Chinook Salmon Survival Study at Rocky Reach Dam* (Statistical Plan), and draft *Chelan PUD Tagging and Fish Husbandry QAQC Plan for the 2023 Rocky Reach Survival Study* (Tagging and Fish Husbandry QAQC Plan). Rocky Reach HCP Coordinating Committee representatives will contact Lance Keller with questions or comments in order to be prepared to vote on these documents during the HCP Coordinating Committees conference call on February 28, 2023 (Item III-B). (Note: Keller provided these documents, except the SOA, to Kristi Geris on January 31, 2023, which Geris distributed to the Rocky Reach HCP Coordinating Committee that same day.)
8. Chelan PUD will provide the list of recipients who received the draft non-capacity amendment to revise the Rock Island Recreation Plan for the Wenatchee Riverfront Park Development and will obtain clarification on what "improvements" entail, notably with regard to riparian vegetation (Item III-C). (Note: Lance Keller provided this list and clarification on February 15, 2023.)
9. Chelan PUD will review the draft non-capacity amendment to revise the Rock Island Recreation Plan for the Wenatchee Riverfront Park Development with Kirk Truscott, who was unable to attend today's HCP Coordinating Committees conference call (Item III-C).
10. Rock Island HCP Coordinating Committee representatives will submit comments or indication of no comments on the draft non-capacity amendment to revise the Rock Island Recreation Plan for the Wenatchee Riverfront Park Development to Chelan PUD by the review deadline on February 17, 2023 (Item III-C). (Note: the Rock Island HCP Coordinating Committee submitted indication of no comments via email, as follows: National Marine Fisheries Service [NMFS] on February 14; the Confederated Tribes of the Colville Reservation [CTCR] on February 16; WDFW and the YN on February 17; and U.S. Fish and Wildlife Service [USFWS] on February 21, 2023.)
11. Chelan PUD will notify the Rock Island HCP Coordinating Committee when the Rock Island Dam middle fish ladder returns to service from winter maintenance (Item III-D).
12. Douglas PUD will discuss the Wells HCP Coordinating Committee's approval of the SOA *Wells Dam 2023 Bypass Operations and Methods* with Kirk Truscott, who was unable to attend today's HCP Coordinating Committees conference call (Item III-C). (Note: Tom Kahler did this and Truscott provide the CTCR's approval of the SOA via email on January 25, 2023.)
13. Anchor QEA will set a reminder to distribute the draft Douglas PUD 2022 Northern Pikeminnow Removal Annual Report for Wells HCP Coordinating Committee review in May 2023 (Item IV-B). (Note: Kristi Geris set this reminder, as discussed.)

14. Anchor QEA will set a reminder to revisit Wells HCP Coordinating Committee review of the 10-Year Comprehensive Hatchery Program Review Summary Report from the Wells HCP Hatchery Committee in May 2023 (Item IV-B). *(Note: Kristi Geris set this reminder, as discussed.)*
15. Wells HCP Coordinating Committee representatives will be prepared to vote via email on the draft *2023 Total Dissolved Gas Abatement Plan* and appended *Wells Bypass Operating Plan* (GAP/BOP), after the Aquatic Settlement Work Group (SWG) meeting on February 8, 2023, and before the HCP Coordinating Committees meeting on February 28, 2023, so that Douglas PUD can submit the final approved plan to the Federal Energy Regulatory Commission (FERC) by the February 28, 2023, deadline (Item IV-C). *(Note: The Wells HCP Coordinating Committee approved the 2023 GAP/BOP via email on February 13, 2023.)*
16. WDFW will provide Project-specific steelhead overshoot data for HCP Coordinating Committees review for further discussion during a future meeting (Item V-A). *(Note: Chad Jackson provided these data on February 22, 2023, which Kristi Geris distributed to the HCP Coordinating Committees that same day.)*
17. The next scheduled HCP Coordinating Committees meeting is on Tuesday, February 28, 2023, from 12:00 p.m. to no later than 4:00 p.m., and is to be held by conference call (Item VI-B).

Decision Summary

1. Wells HCP Coordinating Committee representatives present approved the SOA *Wells Dam 2023 Bypass Operations and Methods* (Item IV-A). *(Note: the CTCR approved the SOA via email on January 25, 2023.)*
2. The Wells HCP Coordinating Committee approved the 2023 GAP/BOP via email as follows: Douglas PUD on February 9; NMFS and USFWS on February 10; WDFW on February 11; and the CTCR and the YN on February 13, 2023 (Item IV-C).

Agreements

1. There were no HCP Agreements discussed during today's conference call.

Review Items

1. The *2022 Biological Evaluation of the Rocky Reach Juvenile Fish Bypass System Draft Report* and *2022 Rock Island Dam Smolt Monitoring Program and Gas Bubble Trauma Evaluation Draft Report* were distributed to the Rocky Reach HCP Coordinating Committee by Kristi Geris on December 2, 2022, and are available for a 90-day review with edits and comments due to Lance Keller by February 28, 2023.
2. Wells Project Land-Use Permit Application for LUP 644-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on December 27, 2022, and was available for a 30-day

- review with edits and comments due to Tom Kahler by January 26, 2023 (Item IV-D). *(Note: USFWS and the CTCR provided indication of no comments on January 12 and January 25, 2023, respectively; no other comments were received by the review deadline.)*
3. Wells Project Land-Use Permit Applications for LUP 57.0D-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 11, 2023, and was available for a 30-day review with edits and comments due to Tom Kahler by February 10, 2023 (Item IV-D). *(Note: the CTCR provided indication of no comments on January 25, 2023; no other comments were received by the review deadline.)*
 4. Wells Project Land-Use Permit Applications for LUP 136-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 11, 2023, and was available for a 30-day review with edits and comments due to Tom Kahler by February 10, 2023 (Item IV-D). *(Note: USFWS and the CTCR provided indication of no comments on January 12 and January 25, 2023, respectively; no other comments were received by the review deadline.)*
 5. The draft 2023 GAP/BOP was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 12, 2023, and is available for a 30-day review with edits and comments due to Tom Kahler by February 11, 2023 (Item IV-C).
 6. A draft non-capacity amendment to revise the Rock Island Recreation Plan for the Wenatchee Riverfront Park Development was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on January 13, 2023, and is available for a 30-day review with edits, comments, or indication of no comment, due to Lance Keller by February 17, 2023 (Item III-C).
 7. The draft 2023 Wells HCP Action Plan was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 17, 2023, and is available for a 30-day review with edits and comments due to Tom Kahler by February 16, 2023 (Item IV-B).
 8. Wells Project Land-Use Permit Application for LUP 337B-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 20, 2023, and is available for a 30-day review with edits and comments due to Tom Kahler by February 19, 2023 (Item IV-D).
 9. The draft 2023 Rocky Reach and Rock Island HCP Action Plan was distributed to the Rocky Reach and Rock Island HCP Coordinating Committee by Kristi Geris on January 24, 2023, and is available for a 30-day review with edits and comments due to Lance Keller by February 23, 2023 (Item III-A).
 10. Wells Project Land-Use Permit Application for LUP 30-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 31, 2023, and is available for a 30-day review with edits and comments due to Tom Kahler by March 2, 2023.
 11. The draft 2023 Rocky Reach Dam Confirmation Survival Study Plan, appended draft Statistical Plan, and draft Tagging and Fish Husbandry QAQC Plan were distributed to the Rocky Reach HCP Coordinating Committee by Kristi Geris on January 31, 2023, and are available for review with edits and comments due to Lance Keller before the HCP Coordinating Committees conference call on February 28, 2023 (Item III-B).

12. The draft *Rock Island and Rocky Reach Anadromous Fish Agreements and Habitat Conservation Plans 2023 Comprehensive Progress Report* was distributed to the Rock Island and Rocky Reach HCP Coordinating Committees by Kristi Geris on February 10, 2023, and is available for a 60-day review with edits and comments due to Lance Keller by April 25, 2023.
13. The draft *Rock Island Dam Smolt Monitoring and Gas Bubble Trauma Evaluation Plan 2023* (2023 Rock Island Bypass Monitoring Plan) was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on February 10, 2023, and is available for a 30-day review with edits and comments due to Lance Keller by March 13, 2023.
14. The draft *2023 Rocky Reach Juvenile Fish Bypass System Operations Plan* (2023 Rocky Reach Juvenile Sampling Facility Protocol) was distributed to the Rocky Reach HCP Coordinating Committee by Kristi Geris on February 10, 2023, and is available for a 30-day review with edits and comments due to Lance Keller by March 13, 2023.
15. The draft *2023 Fish Spill Plan, Rock Island and Rocky Reach Dams Public Utility District No. 1 of Chelan County* (2023 Rock Island and Rocky Reach Fish Spill Plan) was distributed to the Rock Island and Rocky Reach HCP Coordinating Committees by Kristi Geris on February 15, 2023, and is available for a 30-day review with edits and comments due to Lance Keller by March 17, 2023.
16. The draft 2022 Wells HCP Annual Report was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 20, 2023, and is available for a 75-day review with edits and comments due to Geris by May 5, 2023 (Item VI-A).
17. Wells Project Land-Use Permit Application for LUP 303A-01 was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 21, 2023, and is available for a 30-day review with edits and comments due to Tom Kahler by March 23, 2023.

Finalized Documents

1. The final 2023 GAP/BOP was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 13, 2023 (Item IV-C).

I. Welcome

A. Review Agenda (John Ferguson)

John Ferguson welcomed the HCP Coordinating Committees and reviewed the agenda. Ferguson asked for any additions or changes to the agenda. No revisions were requested by HCP Coordinating Committees representatives. Ferguson added a reminder about the 2022 HCP Annual Reports.

B. Meeting Minutes Approval (John Ferguson)

The HCP Coordinating Committees reviewed the revised draft December 16, 2022, conference call minutes. Kristi Geris said all comments and revisions received from members of the Committees were

incorporated into the revised minutes. She also added distribution of Douglas PUD's draft 2023 Wells HCP Action Plan and Wells Project Land-Use Permit Application for LUP 337B-01 under *Review Items*.

Keely Murdoch clarified a statement she made under *Item V-A. Rock Island Relicensing Plan Species Topic: Protection for Natural-Origin Chinook Salmon – Chelan PUD Feedback*. She clarified that a lot of hatchery-origin yearling summer Chinook Salmon are released later than spring Chinook Salmon, which then skews the 95% yearling curve later than the spring Chinook Salmon curve would be. These edits were incorporated.

Geris said there are also a number of outstanding comments to address under *Item VII-A. Rock Island Relicensing Plan Species Topics – Steelhead Overshoots*. These comments are from Douglas PUD regarding Andrew Murdoch's presentation. Chad Jackson suggested sending these comments to A. Murdoch to address because he is not yet on the call. John Ferguson said Anchor QEA will send these revised draft December 16, 2022, conference call minutes, as edited by the YN, to A. Murdoch to address outstanding comments for WDFW in tracked changes, so the HCP Coordinating Committees can review the revisions for vote via email or during the next HCP Coordinating Committees conference call on February 28, 2023. (*Note: Geris sent the revised minutes to A. Murdoch following the HCP Coordinating Committees conference call on January 24, and A. Murdoch provided responses on January 26, 2023.*)

HCP Coordinating Committees representatives approved the December 16, 2022, conference call minutes, as revised, via email as follows: Douglas PUD, NMFS, and WDFW on January 27; Chelan PUD and the CTCR on January 29; and U.S. Fish and Wildlife Service and the YN on January 30, 2023.

C. Last Meeting Action Items (John Ferguson)

Action items from the HCP Coordinating Committees conference call on December 16, 2022, and follow-up discussions were as follows (*Note: Italicized text corresponds to agenda items from the conference call on December 16, 2022*):

1. *Chelan PUD will continue providing Rocky Reach Dam and Rock Island Dam turbine unit maintenance updates as information becomes available (Item I-C).*
This action item will be discussed during today's conference call and will also be carried forward.
2. *Chelan PUD will verify dates and times the Rock Island Adult Ladder Tailrace Entrance was closed while calculating adult conversion rates for the 2021 Rock Island Dam Confirmation Survival Study (Item I-C).*
This action item will be carried forward.
3. *Chelan PUD will provide a synopsis of the engineering options considered to meet the minimum 1.0-foot head differential target at all four entrances at the Rock Island Dam Right Bank Adult Fishway during high spring flows in the Columbia River (Item I-C).*

This action item will be carried forward.

4. *Douglas PUD will distribute a draft SOA to change the timing of Wells Dam bypass operations, beginning in 2023 and going forward, for a vote in January 2023; this change in operations will be reflected in the 2023 Wells Bypass Operating Plan for a vote in February 2023, before the plan is due to Washington State Department of Ecology (Ecology) on February 28, 2023 (Item III-B).*

Tom Kahler provided the draft SOA for review on December 19, 2022, which was distributed to the Wells HCP Coordinating Committee by Kristi Geris that same day.

5. *Wells HCP Coordinating Committee representatives will contact Douglas PUD with questions, if any, about the draft SOA to change the timing of Wells Dam bypass operations prior to the HCP Coordinating Committees conference call on January 24, 2023 (Item III-B).*

Tom Kahler said no comments or questions were received. He noted that he reviewed the bypass operation discussions with Chad Jackson before distributing the draft SOA.

6. *WDFW will distribute weblinks to access the codes for the models and simulations discussed in the steelhead overshoot presentation during today's HCP Coordinating Committees conference call (Item VII-A).*

Andrew Murdoch provided these weblinks, which were distributed to the HCP Coordinating Committees by Kristi Geris on December 19, 2022.

II. HCP Hatchery and Tributary Committees Update

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

Tracy Hillman updated the HCP Coordinating Committees on the following actions and discussions that occurred during the HCP Tributary Committees meeting on January 12, 2023:

- *Review of HCP Tributary Committees' Policies and Procedures:* The Committees are in the process of reviewing their Policies and Procedures. They will update language in Section 6.7 (Project Reimbursements) to reflect the Committees' decision that sponsors should not submit invoices requesting reimbursement for services equating to less than \$100 per invoice per month. Invoices shall be submitted quarterly (every 3 months) unless the invoice amount equals or exceeds \$1,000 or it is the final invoice.
- *Budget Amendment and Scope Change:* The Rock Island HCP Tributary Committee received a budget amendment and scope change request from Washington Water Trust on the *Cascade Orchards Icicle Creek Flow Restoration Project*. The sponsor requested additional funding for the project because the cost to construct the project has increased significantly since the construction costs were estimated in 2019. As a result, the sponsor requested an additional \$250,000 from the Rock Island HCP Tributary Committee. Hillman noted that the Committee previously approved \$500,000 for this project (thus, with the additional request, the total would be \$750,000). After review, the Rock Island HCP Tributary Committee decided to table

the budget amendment because, as they understand it, the funding gap may end up being larger than estimated and they prefer that the sponsor submit one budget amendment, not several. In addition, the Committee would like to review the report of examination, which will soon be issued by Ecology. This will help the Committee evaluate whether the benefits of the project justify the additional cost of the project. The Rock Island HCP Tributary Committee did approve the change in sponsorship from Washington Water Trust to Chelan County Natural Resources Department.

- *General Salmon Habitat Program Application:* Last month, Cascade Fisheries submitted an application titled *Twisp to Carlton Reach Side Channel Project*. The purpose of the project was to conduct alternatives analyses and prepare a 30% design for a 0.15-mile-long side channel located at river mile 35.5 on the Methow River. The total cost of the project was \$107,502. The sponsor requested \$73,772 from HCP Plan Species Account Funds. In December 2022, the Committees tabled this project and requested additional information from the sponsor. The sponsor attended the HCP Tributary Committees' meeting on January 12, 2023, and addressed questions and concerns raised by the Committees. It was clear from the discussion that the sponsor needs to do additional work to determine the feasibility of the project. For example, the sponsor still needs to reach out to several landowners that could be affected by the project. Therefore, the Committees asked the sponsor to redraft the proposal and request funding to do a geomorphic and technical feasibility study, which includes more extensive landowner outreach. Thus, the Committees agreed to not fund the 30% design and asked the sponsor to submit an application requesting funding to conduct the feasibility study.
- *Joint HCP Tributary Committees and PRCC Habitat Subcommittee Items:* Carlos Polivka (U.S. Forest Service) shared a presentation on monitoring fish use of floodplain habitat in the Entiat subbasin. The purpose of the presentation was to describe results from recent monitoring work and discuss the need for additional monitoring. Specifically, Polivka outlined a study plan that would assess: 1) which juvenile life stages and species are using different off-channel habitat types on floodplains when activated; 2) how much stranding occurs across different restoration types and which species and life stages are stranded; 3) whether new abundance and growth/survival data would change life cycle model predictions; 4) whether long-term data would change life cycle model predictions; and 5) whether responses of fish to treatments within other subbasins (e.g., Wenatchee River basin) are consistent with those in the Entiat subbasin. Polivka intends to submit a proposal to the Committees seeking funding for the additional monitoring work.
- *Upper Columbia Salmon Recovery Board Floodplain Science Workshop:* The Upper Columbia Salmon Recovery Board (UCSRB) is hosting a Floodplain Science Workshop on January 24, 2023. In the past, the HCP Tributary Committees have agreed to contribute financially to UCSRB conferences. This year, the Committees agreed to contribute \$500 from each Plan Species Account to the workshop (\$1,500 total).

- *Next Meeting:* The next meeting of the HCP Tributary Committees will be on February 9, 2023.

Hillman updated the HCP Coordinating Committees on the following actions and discussions that occurred during the HCP Hatchery Committees meeting on January 18, 2023 (*Note: Joint HCP Hatchery Committees/Priest Rapids Coordinating Committee Hatchery Subcommittee items are noted by "joint," Wells HCP Hatchery Committee items are noted by "Wells," and Rock Island and Rocky Reach HCP Hatchery Committees items are noted by "Rock Island/Rocky Reach":*):

- *2023 Broodstock Collection Protocols (joint):* The PUDs and WDFW are working on the 2023 Broodstock Collection Protocols. The first draft should be available for Hatchery Committees' review by early February 2023. The 2023 Broodstock Collection Protocols are due to NMFS on April 15, 2023.
- *Okanagan Sockeye Salmon Obligation SOA (Rock Island/Rocky Reach):* Chelan PUD submitted an SOA titled *Chelan PUD's Okanagan Salmon Obligation Through Release Year 2041*. The SOA outlines Chelan PUD's obligations to achieve No Net Impact (NNI) for Sockeye Salmon. Obligations will be achieved through funding and implementation of the Okanagan Subbasin Sockeye Salmon Reintroduction program from 2021 through 2041. Both the Rock Island and Rocky Reach HCP Hatchery Committees approved the SOA.
- *2023 Wells HCP Action Plan (Wells):* The Wells HCP Hatchery Committee reviewed the hatchery portion of the draft *2023 Wells HCP Action Plan*. Members will provide their comments to Douglas PUD before the HCP Coordinating Committees conference call on January 24, 2023. Hillman noted that one edit was made during the HCP Hatchery Committees meeting.
- *Next Meeting:* The next meeting of the HCP Hatchery Committees will be on February 15, 2023.

III. Chelan PUD

A. Draft 2023 RI/RR HCP Action Plan (Lance Keller)

Lance Keller reviewed the HCP Coordinating Committees portion of the draft *2023 Rocky Reach and Rock Island HCP Action Plan*, which was distributed to the Rocky Reach and Rock Island HCP Coordinating Committee by Kristi Geris following the HCP Coordinating Committees conference call on January 24, 2023. Keller said most activities are typical, except the *2023 Rocky Reach Yearling Chinook Confirmation Survival Study*, where releases are estimated to kick-off in mid-April 2023 and continue into mid-May 2023, depending on fish collected. Additionally, the *2023 Rock Island Subyearling Chinook Behavior Study* is tentatively on the calendar, but these dates may shift depending on the migration. Chelan PUD hopes to share data from last year soon. All other items are typical annual activities. This draft action plan is available for a 30-day review with edits and comments due by February 23, 2023.

John Ferguson asked if Chelan PUD plans to request approval of this plan during the HCP Coordinating Committees meeting on February 28, 2023, and Keller said yes.

B. 2023 Rocky Reach Dam Confirmation Survival Study (Lance Keller)

Lance Keller shared the presentation, *2023 Rocky Reach HCP Yearling Chinook Confirmation Survival Study* (Attachment B), which was distributed to the HCP Coordinating Committee by Kristi Geris following the HCP Coordinating Committees conference call on January 24, 2023. Keller reviewed the bullets on each slide and provided additional details, as follows.

Slide 1

Keller said the purpose of this presentation is to walk through this study design that will measure yearling Chinook Salmon survival through the Rocky Reach Project. This presentation is a high-level preview of three documents that will be available for review: 1) the draft 2023 Rocky Reach Dam Confirmation Survival Study Plan, compiled in conjunction with Blue Leaf Environmental/LGL Limited and Dr. John Skalski (University of Washington, Columbia Basin Research); 2) the appended draft Statistical Plan, compiled by Skalski; and 3) the draft Tagging and Fish Husbandry QAQC Plan. The individual documents go into further detail on each topic. Chelan PUD also plans to distribute an SOA memorializing approval of the three documents.

Slide 2

Keller said previous Rocky Reach juvenile survival studies were conducted from 2003 to 2011, and Phase III (Standard Achieved) was met for yearling Chinook Salmon, steelhead, and Sockeye Salmon. The 2023 study, which will use yearling Chinook Salmon as the representative species, is a 10-year confirmation survival study. The presentation today only covers the juvenile study plan and not the adult conversion component.

Slide 3

Keller said a triple release-recapture design will be used, which is slightly different than a paired release design in that a triple release design includes a separate release into the Rocky Reach Juvenile Fish Bypass (RRJFB) surface collector to measure route-specific passage (RSP) survival or that route of passage. This is not a required evaluation; rather, Chelan PUD is interested in this level of resolution. In addition, 74 tags will be deployed simultaneously for a tag life evaluation. The goal is to handle fish as equally as possible. For example, Chelan PUD is working with landowners located adjacent to the Wells Dam tailrace release site and the Rocky Reach Dam tag site (that the HCP Coordinating Committees toured last summer) to create transportation routes from the collection site to the respective tag sites at Wells Dam and Rocky Reach Dam that both entail approximately 50 minutes of transport time. This timing was also designed so that tailrace releases reach the downstream array at Kirby Billingsley Hydro Park in East Wenatchee, Washington (Hydro Park) at about the same time.

Slide 4

Keller said, similar to the 2021 Rock Island Dam Confirmation Survival Study (2021 Rock Island CSS), this study will use Juvenile Salmonid Acoustic Telemetry System (JSATS) tags. The previous Rocky Reach studies used Hydroacoustic Technology Inc. (HTI) equipment, which performed excellently in the immediate hydro environment. However, JSATS has comparable tag technology that is smaller in size. Therefore, Chelan PUD made the pivot to JSATS in 2021 and will continue to use this tag technology in 2023. A total of 34 receivers deployed, each equipped with a hydrophone, including 14 shore-based and 20 offshore autonomous receivers that can be deployed at any depth.

Slide 5

Keller said RSP survival will be calculated. During the evaluation, operators will target 0% spill. In the event that operators do have to spill due to high river flow, Skalski will remove these fish from the survival estimate. Researchers in the California system experienced issues with detecting JSATS in confined environments, which is what the surface collector is. Therefore, study fish will be dual tagged with passive integrated transponder (PIT) tags and the PIT detector in the surface collector will be used as a secondary means of detection should fish choose that passage route. At Units 1-2/bypass screens (first bullet on Slide 5), it is difficult to detect a signal when fish enter the headbox system, and it is more difficult here than at the surface collector. For the 2023 effort there will not be a way to differentiate fish passing via this route. Historically, only approximately 5% to 8% of the study fish have used this route. Detection arrays at Hydro Park and the Rock Island Dam boat restriction zone (BRZ) will be used as downstream detection gates to calculate project survival.

Slide 6

Keller said these are examples of the two offshore autonomous receiver deployments. The deployment on the left will be attached to anchored surface floats in the forebay. The deployment on the right will be attached to the BRZ line and suspended below the water surface on cables.

Slide 7

Keller said these are the five locations of the offshore autonomous receivers at the BRZ at Rocky Reach Dam, which will detect fish entering the forebay.

Slide 8

Keller said the green dots represent receivers mounted on the face of Rocky Reach Dam. The green dot on the far left is the pump station. Receivers will be mounted up and down the face of the project to evaluate RSP via turbine routes. A receiver will also be mounted off the northwestern corner of the spillway. If fish pass on river-left, a receiver will be mounted at the covered boat dock near the east bank structure (far right on Slide 8). The orange dots represent the offshore anchored deployments described on Slide 7. The red dots are offshore barge deployments, which are based on

the successes of the *Rock Island Subyearling Chinook Behavior Study*. These receivers will be time synced by GPS, will provide real-time data, and will send data over a cellular modem that feeds directly into a database. During the *Rock Island Subyearling Chinook Behavior Study*, these barges survived 308,000 cubic feet per second river flow and continued collecting data when other receivers broke loose from their rigging and were ultimately lost. Additionally, this is a much quieter location for detecting fish and deploying anchors.

Slide 9

Keller said a mix of "a" and "b" will be used in the Hydro Park area, with both using ATS autonomous receivers. The "a" deployment is a tethered connection to the shore, then the line is sunk to reduce vandalism or theft. The "b" deployment is anchored on the river bottom and also has an acoustic release between the anchor and the receiver. Attached pencil floats prevent the deployment from being pinned down and remain in an orientation that is facing the surface. When it is time to extract the receivers, a signal decouples the acoustic unit and the autonomous receiver from the anchor and the pencil float brings the gear to the surface. This is similar to what was implemented for the *Rock Island Subyearling Chinook Behavior Study* and 2021 Rock Island CSS.

Slide 10

Keller said this is the deployment in the Hydro Park area. Five receivers will be deployed in a staggered fashion to help with detection efficiency.

Slide 11

Keller said this is a similar deployment as was done for the *Rock Island Subyearling Chinook Behavior Study* and the 2021 Rock Island CSS. Six receivers will be attached to the forebay BRZ line at Rock Island Dam. There have been no issues with this deployment and previous deployments have yielded 100% detection efficiency.

Slide 12

Keller said this study will use the model SS400 injectable JSATS tag. However, the tags will not be injected; rather, tags will be inserted by incision and one suture will be used to seal the wound. Tags will be programmed at a 3-second ping rate and, given that ping rate, have an expected 48-day battery life and weigh 0.21 gram in air. This battery life was exceeded for the 2021 Rock Island CSS, where most tags lasted 75 days and some lasted 90 days. Tag life was so good that Skalski did not need to apply a tag correction factor to the data in 2021. Study fish will also receive a Biomark PIT tag. This is the conventional PIT tag used to mark all hatchery releases. The tags come in single-use needles. Chelan PUD specified that one tag lot was manufactured by the same technician to minimize study variables. If there is an issue with the tags, all tags were handled by the same individual. There were no tag issues with tags delivered for the 2021 Rock Island CSS.

Slide 13

Keller said all study fish will be collected at the RRJFB during the daily index sampling. Index sampling is typically conducted from 0800 to 1100 hours, but sampling will continue to 1400 hours if needed to meet daily collection targets. The target fish length is similar to the 2021 Rock Island CSS, which represented approximately 92% of the 2021 outmigration. Studies prior to 2021 targeted collecting study fish in the 140 to 220 millimeters (mm) size range, which represented approximately 66% of the outmigration. This size range requirement was due to the tag burden associated to the larger-sized HTI tags used in the earlier studies. Targeting fish in the 120 to 225 mm size range in 2023 will encompass more of the general size range of the juvenile yearling Chinook Salmon outmigration, based on historical data. All fish will be inspected for descaling, injuries, disease, using the same criteria as was used for previous studies. He recalled the main reason for rejecting fish in past studies was due to the presence of a PIT tag, which also indicates the fish was previously handled. There were very few rejections of study fish from the sample population for the reasons listed on Slide 13. The wider range in length for 2023 provides Chelan PUD with confidence that sample targets for the study can be met.

Slide 14

Keller recalled a question from Kirk Truscott about fish being targeted for collection and the tendency to select larger fish. Keller said one individual, the Rocky Reach Juvenile Sampling Facility Foreman, Dennis Litchfield, will collect all study fish. There will also be a post-hoc evaluation comparing the lengths and weights of study fish to run-of-river fish. The graph on the left of Slide 14 shows fish selected by Foreman Litchfield for the 2021 Rock Island Confirmation Survival Study, and the graph on the right shows run-of-river fish observed on the same collection days. Litchfield was selecting smaller fish for the study compared to run-of-river fish, on average. The message here is that Chelan PUD remembers these discussions, which will be considered during the study in 2023.

Slide 15

Keller reviewed the schedule and timing of study fish handling, as described on this slide. He noted that recent research indicates that the more holding time is minimized, the better, and this results in less bias introduced to all release groups.

Slide 16

Keller recalled that HCP Coordinating Committees toured the Rocky Reach Tagging Site last summer. He reviewed the tagging procedures outlined on this slide and noted that the procedures are described in much more detail in the Tagging and Fish Husbandry QAQC Plan. He said the anesthetic (MS-222) concentration will be adjusted based on water temperature and fish response. The tagging team consists of one tagger, one person transporting the fish, and one person recording data.

Slide 17

Keller said these are images showing where the incision will be made. The bottom photograph is a JSATS tag but is not the model being used in this study. The model for this study is similar in size to a PIT tag—slightly larger but still small compared to previous acoustic tags used in 2011. The same tagger team used in the 2021 Rock Island CSS, Pacific Northwest National Laboratory and LGL Limited, will be used for this study.

Slide 18

Keller reviewed the post-tagging process and noted that once a fish is moved from the anesthetic bucket to the tagging table, another fish is moved to the anesthetic bucket, so the process is continuous.

Slide 19

Keller said a private landowner, located downstream from the Carpenter Island Boat Launch, is letting Chelan PUD use their dock. For the 2011 study, the tag site was at Beebe Park, which required a longer boat trip to the release location than what is planned for 2023. Skalski did not find any biases with the extended boat trip, but Chelan PUD wanted to reduce trip time. After releasing fish, the boat operator will provide as much time as possible for fish to move away from the boat before reengaging the motor.

Slide 20

Keller said test replicates will be released in the Wells Dam tailrace at the 1,000-foot mark, same as the 2003 to 2011 studies. In the lower left corner of Slide 20 is Carpenter Island and the blue dot illustrates the upstream location, and below that is the proposed Wells Dam tag site.

Slide 21

Keller said this is the control fish release location in the Rocky Reach Dam tailrace, at the 1,000-foot mark, and is the same as was used in previous Rocky Reach phase designation studies. This is also the release location for 2021 Rock Island CSS treatment fish. This is where the Rocky Reach Project ends and Rock Island Project starts. The location is in line with the juvenile outfall, which allows the triple release study design to estimate survival through that exact route for the RSP survival calculation.

Slide 22

Keller said the north and south surface collector releases will occur 20 to 30 minutes before the tailrace release, and the timing needs to be accurate, so these fish do not exit the tailrace before mixing with the control group. Additionally, releases need to occur between index sampling events so that study fish are collected during index efforts in the next hour following release.

Slide 23

Keller said the tagging and release schedule for this Rocky Reach evaluation is slightly different than previous studies, partly due to increased replicate counts. Previous studies included 15 control, 15 test, and 15 surface collector replicates. Skalski advised to increase this to 18 replicates to equalize the tagging effort among all three taggers. In this schedule, on April 19, 2023, WD01 is the first test replicate (collected on April 17). Each test replicate will consist of 23 fish. RR01 will be released 72 hours later. Essentially, there will be 3 days in a row of test replicates, with the first control/surface collector replicates occurring after a 72-hour lag. Collection of study fish will begin when there is an uptick of study fish at the sampling facility. Once initiated, collection will occur continuously every day through the end of the study period. As in previous studies, collection will be targeting run-of-river fish in the middle 80% of the yearling run.

Slide 24

Keller said Chelan PUD will keep the gear deployed as long as possible but hopes to extract gear by early June 2023, which provides time to remove the gear before summer spill is initiated. Blue Leaf Environmental, Inc., is estimating there will be upwards of 2 million datapoints, so processing the data will likely take through July 2023, after which Chelan PUD hopes Skalski can present the data to the Rocky Reach HCP Coordinating Committee in Q4 2023.

Discussion

Keller said he will edit this presentation, as discussed during today's meeting, for distribution to the HCP Coordinating Committees. *(Note: Keller provided the updated presentation to Geris following the HCP Coordinating Committees conference call on January 24, 2023, which Geris distributed to the HCP Coordinating Committees that same day.)*

Keely Murdoch said she is concerned about the double-tagging, which based on the data indicates a 50% increase in tag burden and limits the fish available to tag. She understands the length requirements are now allowing the use of smaller fish compared to previous studies. She recognizes this improvement. However, she thinks the ultimate goal should be to represent the run at large. By eliminating the smallest of fish in the 100 to 120 mm size range, this eliminates a greater proportion of the natural-origin fish. She would prefer not to double-tag the fish and instead potentially collect even smaller fish. Also, regarding testing with no spill and removing fish during intermittent periods of spill, she thinks it would be useful to understand survival with spill, although she is unsure there would be a large enough sample size to evaluate this.

Keller said regarding spill, Skalski does produce survival estimates through each passage route and can look at project survival holistically. The intention is to measure survival under the conditions specified in the HCP (no spring spill) and not influence estimated project survival in 2023 due to any marked fish that select the spillway as a passage route during any forced spill that occurs, which is

why in the past Skalski has removed fish from the spillway route in the juvenile survival estimate. K. Murdoch asked whether the data are shown both ways. Keller said this is correct. K. Murdoch said that was good because it seems the goal should be to measure survival as the project operates, and in some years, there may be spill. Keller said historically, RSP survival through the spillway has been 100%.

Keller said regarding tag burden, previously, the 0.48-gram HTI tag was the smallest of its kind. Now, there is the 0.21-gram JSATS tag. The JSATS tag is lighter but it is also longer, which could impact the fish's organs. On Slide 14, the run-of-river graphic shows there are some fish below the 120 mm threshold, but not many. Then considering the other selection criteria such as descaling and the presence of a PIT tag, this may exclude even more fish. He understands K. Murdoch's concern, but based on 2021 data, there was not a large portion of smaller-sized fish, and he does not believe targeting smaller fish will add much to the sample size. K. Murdoch said that excluding the smaller fish disproportionately excludes the natural-origin fish. Keller asked if K. Murdoch is suggesting to not PIT tag study fish to acoustically tag smaller fish? K. Murdoch said, yes, these studies should be striving to better represent all fish passing the project. Keller said unfortunately, excluding PIT detection complicates detection at the surface collector and estimating survival through that route of passage. Without good detection capabilities at the surface collector and RRJFB, based on previous studies, this means RSP and RSP survival could not be assigned to approximately 48% of study fish. This is something that would need to be contemplated. K. Murdoch asked, when contemplating this triple release, are all fish double-tagged or just the surface collector releases? Keller said all fish released in the study, test or control, are dual tagged. Fish that select the surface collector passage route get detected at the RRJ PIT array in the north and south channel, but acoustic technology does not work well in that environment. If these fish do not have PIT tags, there is no way of telling if fish passed via Unit C1, Unit C2, or the surface collector structure. Andrew Murdoch pointed out that wild fish collected in tributary rotary screw traps are less than 110 mm in length, indicating that even if the minimum size threshold is reduced to 110 mm, 100% of the wild fish will likely be excluded from the study.

A. Murdoch asked whether Chelan PUD has ever released study fish in the Entiat River. Keller said no, but there have been releases at the mouth of the Wenatchee River in 2010, during Rock Island studies. Chelan PUD thought there might be a difference in survival between fish passing through the entire reservoir versus those that entered the reservoir at the Wenatchee River, but Skalski found no statistical difference in project survival for those release sites, which surprised Keller. The evaluation looked at the proportion of fish arriving at Rock Island that originated above Rocky Reach versus the Wenatchee River and apportioned release numbers accordingly. A. Murdoch said he asked because Rocky Reach Dam is significant to the Entiat with regard to inundation.

K. Murdoch asked what the process is for moving forward. Keller said he plans to review this presentation with Kirk Truscott, who was unable to attend today's meeting. He plans to distribute the three study documents for review, obtain approval of the three documents, and also capture Rocky Reach HCP Coordinating Committee approval of the three documents in a standalone SOA. It would be helpful to obtain approval during the next meeting. Ferguson summarized that Chelan PUD will distribute for review a draft 2023 Rocky Reach Dam Confirmation Survival Study SOA, draft 2023 Rocky Reach Dam Confirmation Survival Study Plan and appended draft Statistical Plan, and draft Tagging and Fish Husbandry QAQC Plan. The Rocky Reach HCP Coordinating Committee representatives review the documents, contact Keller with questions or comments, and to be prepared to vote on these documents during the HCP Coordinating Committees conference call on February 28, 2023. *(Note: Keller provided these documents, except the SOA, to Geris on January 31, 2023, which Geris distributed to the Rocky Reach HCP Coordinating Committee that same day.)*

C. Rock Island Recreation Plan Conceptual Amendment – Wenatchee Riverfront Park Development (Lance Keller)

Lance Keller said a draft non-capacity amendment to revise the Rock Island Recreation Plan for the Wenatchee Riverfront Park Development was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on January 13, 2023.

Keller said Jeff Osborn (Chelan PUD License Compliance Specialist) requested that this amendment be distributed to the Rock Island HCP Coordinating Committee for review and consultation before submittal to FERC. The amendment proposes 12 improvement projects for Wenatchee Riverfront Park, including widening trail sections, safety improvements for cyclists, a splash pad, seating nodes, a small play area, among other things. All projects are outlined in Exhibits A and B of the amendment, including descriptions and figures. Keller read the following from the amendment: "This non-capacity amendment seeks Commission approval for amending the Project Recreation Plan to bring new recreational facilities and amenities into the existing boundary of the Wenatchee Riverfront Park and be made part of the license." He encouraged the Rock Island HCP Coordinating Committee to review the amendment and let him know of any questions or concerns. Chelan PUD does need evidence of consultation, so if Committee members have no comments, he requested that members provide indication of no comments.

Keely Murdoch asked if this is separate or part of the plans to build another bridge and reroute roads. Keller said he thinks those plans are part of the Confluence Parkway improvements, which are separate from this. Keller shared, on WebEx, Exhibit B of the amendment, which is composed of figures of the proposed improvements. All projects are located well downstream of the Horan Natural area or Confluence Park, and the majority are also upland from the shoreline.

K. Murdoch said, as an HCP Coordinating Committees Technical Representative, she can comment on impacts to Plan Species; however, this does not include consultation with the YN, such as for

cultural resources. Keller said that this was correct and consultation with the Rock Island HCP Coordinating Committee is only regarding Plan Species. The amendment does include a section on archaeological and historic resources, and he does not believe Rock Island HCP Coordinating Committee representatives are the only people to receive this amendment for review. Keller said he will provide the list of recipients who received the amendment. *(Note: Keller provided this list on February 15, 2023.)*

Scott Carlon asked if any of the projects involve riparian vegetation removal or disturbance. Keller said the only language he saw regarding vegetation was "improvements," and he can also obtain clarification on what "improvements" entail. Carlon asked, separate from the HCP, does this amendment require a NMFS consultation? Keller said he does not believe so because there is no proposed in-water work. *(Note: Keller provided this clarification on February 15, 2023.)*

Keller said he will also review this amendment with Kirk Truscott, who was unable to attend today's HCP Coordinating Committees conference call. John Ferguson said Rock Island HCP Coordinating Committee representatives will submit comments or indication of no comments on this amendment to Chelan PUD by the review deadline on February 17, 2023. *(Note: the Rock Island HCP Coordinating Committee submitted indication of no comments via email, as follows: NMFS on February 14; the CTCR on February 16; WDFW and the YN on February 17; and USFWS on February 21, 2023.)*

D. 2022/2023 Rocky Reach and Rock Island Adult Fishway Winter Maintenance Update (Lance Keller)

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

Rock Island Dam

Keller said the status of ladders has not changed since the last update. The right and middle fish ladders are still dewatered. He expects the middle ladder to be returned to service in the next 7 days, and then the left ladder will be dewatered, a fish rescue will be performed, and maintenance will be completed. All ladders will be rewatered by February 28, 2023. He said he will notify the Rock Island HCP Coordinating Committee when the Rock Island Dam middle fish ladder returns to service from winter maintenance.

Rocky Reach Dam

Keller said the lower portion of the Rocky Reach Dam adult fish ladder was dewatered on January 17, 2023, which was a challenge this year due to aging components, and required coordination with multiple disciplines at the District to complete. A fish rescue was performed that same day, as follows:

Rocky Reach Dam Adult Fishway – Fish Rescued	Lower Fishway January 17, 2023
Mountain Whitefish	20
Adult Pacific Lamprey	7
Juvenile Lamprey	1
Redside Shiner	4
Ad-present Chinook Salmon Jack	1
Ad-present Chinook Salmon Smolt	2
Ad-present steelhead/rainbow trout (less than 10 inches)	5
Ad-clipped steelhead/rainbow trout (less than 10 inches)	3
Ad-present steelhead/rainbow trout (greater than 10 inches)	1
Sucker	1
Sandroller	1
Sculpin	1
Crayfish	2

Note:
 Ad: adipose fin

Keller said rescued fish were released according to agreements reached at the last meeting (i.e., upstream or downstream of the dam based on life stage). He noted that the number of fish rescued this year was less than typical and said this possibly could be due to dewatering the upper fishway then leaving the lower fishway watered up with the entrance gates open for 1.5 months. He guessed a lot of fish volitionally left the ladder during this time. Lastly, a cold spell briefly paused the joint crack repairs, but these efforts have since resumed and are on schedule to be completed during this maintenance outage.

E. Rock Island Dam Powerhouse 1 Maintenance Update (Lance Keller)

Lance Keller said work continues on Turbine Unit B3, and the estimated return-to-service is Q1 2024.

F. Rocky Reach Dam Turbine Units Maintenance Update (Lance Keller)

Lance Keller reported that maintenance crews formulated a plan to gain back the contingency timeframe on Turbine Unit C5 that was impacted due to bridge crane hook repair ahead of the 2023 Rocky Reach Confirmation Survival Study. The estimated return-to-service date for Turbine Unit C5 is early March 2023, and this date is holding. Crews just started the commissioning of Turbine Unit C5 to return the unit to commercial service.

Chelan PUD will continue providing Rocky Reach Dam and Rock Island Dam turbine unit maintenance updates as information becomes available.

IV. Douglas PUD

A. DECISION: SOA, Wells Dam 2023 Bypass Operations and Methods (Tom Kahler)

Tom Kahler said the draft SOA, *Wells Dam 2023 Bypass Operations and Methods*, was distributed to the Wells HCP Coordinating Committee by Kristi Geris on December 19, 2022, and was available for a 30-day review with edits and comments due to Kahler by Wednesday, January 18, 2023. Kahler said no comments or questions were received, and he asked whether there are any questions or edits to discuss before voting to approve. No questions were expressed, and John Ferguson polled Committee members.

Wells HCP Coordinating Committee representatives present approved the SOA *Wells Dam 2023 Bypass Operations and Methods*.

Kahler said he will discuss approval of this SOA with Kirk Truscott, who was unable to attend today's HCP Coordinating Committees conference call. (*Note: Kahler did this, and Truscott provide the CTCR's approval of the SOA via email on January 25, 2023.*)

B. Draft 2023 Wells HCP Action Plan (Tom Kahler)

Tom Kahler said the draft *2023 Wells HCP Action Plan* was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 17, 2023, and is available for a 30-day review with edits and comments due to Kahler by February 16, 2023. Kahler reviewed the Coordinating Committee section of the action plan, as follows:

1. Juvenile Fish Bypass

Kahler said this encompasses the SOA that was just approved (Item IV-A), and the 2023 GAP/BOP will be discussed next (Item IV-C). The dates are when the District needs to have these various steps completed.

2. Annual Monitoring of Juvenile Migration Run Timing

Kahler said Douglas PUD will still complete a post-season analysis, even with the new methodology for determining dates for bypass termination.

3. Fishway Outage Schedule for Fishway Inspection, Maintenance, and Fishway Projects

Kahler said this is fishway maintenance. The west ladder date is for the next winter outage (2023/2024).

4. Fishway Ladder Counts

Kahler said these are routine ladder counts.

5. Review and Approval of 2023 Hatchery Broodstock Collection Protocol

Kahler said the draft 2023 Broodstock Collection Protocols are due in the HCP Hatchery Committees next week. The date when the Wells HCP Coordinating Committee receives the protocols might change, but these are the ideal dates. The NMFS submittal date is a requirement.

6. Pikeminnow Control Program

Kahler said he has the draft *Douglas PUD* 2022 Northern Pikeminnow Removal Annual Report ready to distribute, but per discussions about the timing of review and approval of HCP documents,¹ he plans to postpone Wells Coordinating Committee review to a time that is not critical for other documents, such as HCP annual reports and bypass operating plans. Once these documents are finalized, he will distribute the pikeminnow report for review.

John Ferguson said Anchor QEA will set a reminder in May 2023 to distribute the draft *Douglas PUD* 2022 Northern Pikeminnow Removal Annual Report for Wells HCP Coordinating Committee review. (Note: Geris set this reminder, as discussed.)

7. Avian Protection Plan

Kahler said this is bird hazing.

8. HCP Annual Report

Kahler said this is the 2022 Wells HCP Annual Report production schedule that Anchor QEA developed.

9. 2023 NNI Progress Report (per Wells HCP §6.9)

Kahler recalled that *Douglas PUD* requested a deferment on this submittal² because the District has not yet received necessary progress reports on the FWMT from Canadian collaborators.

10. Annual CRITFC Request for Sockeye Tagging at Wells Dam

Kahler said he has not yet received this request from Jeff Fryer (Columbia River Inter-Tribal Fish Commission); he typically receives this request in March.

11. Review 10-Year Comprehensive Hatchery Program Review Report and Summary Report from Hatchery Committee

Kahler said this Wells HCP Coordinating Committee review is discretionary. Historically, the HCP Coordinating Committees have deferred review of Committee-specific documents to that respective Committee. However, he thinks it might be useful for the Wells HCP Hatchery Committee

¹ During the HCP Coordinating Committees conference call on March 23, 2021, HCP Coordinating Committee representatives present agreed to the proposed modifications to the timing of review and approval of HCP documents (Attachment D to the meeting minutes).

² This was discussed during the HCP Coordinating Committees meeting on September 27, 2022.

to present this report to the Wells HCP Coordinating Committee and then let them decide if they want to review the document.

Ferguson asked who would provide this presentation. Kahler said this has not yet been determined. This has been a lengthy process. The HCP Hatchery Committees started working on various chapters back in 2020, then COVID-19 complicated things, and then hatchery recalculation was happening. There was a concern regarding the number of chapters to review at that time, and the chapters were distributed to the HCP Hatchery Committees on a staggered schedule over multiple months in 2021 as they were completed. All comments were received around late 2021 or early 2022, and it has been a process incorporating and finalizing the document. The chapters are based on monitoring and evaluation (M&E) objectives and include multiple Plan Species. The HCP Hatchery Committees asked the PUDs to collate the document chapters into separate species-specific reports, so some chapters are now in multiple reports. Kahler said he just finished formatting the last chapter and still needs to collate those into a comprehensive steelhead report (started by Greg Mackey, the former Douglas PUD HCP Hatchery Committees Representative). Kahler said Grant PUD is working on some species reports and is nearly finished. All chapters are produced by the PUDs, but the HCP Hatchery Committees will produce the Summary Report. Kahler said that because this has taken so long to produce, Kirk Truscott requested to hear a presentation on the salient findings of this 10-year program review. Kahler was thinking this presentation would be helpful to bring to the HCP Coordinating Committees.

Keely Murdoch said this was a concern she had and clarified that the 10-Year Comprehensive Hatchery Program Review Report is not an HCP Hatchery Committees report. The HCP Hatchery Committees had an opportunity to review the various chapters. It has been quite a while since the Committees reviewed these chapters, even a couple of years. What she remembers about the chapters she reviewed and discussed within the HCP Hatchery Committees, is that these chapters, in some cases, were making recommendations that had not been vetted or discussed by the HCP Hatchery Committees, so these were not HCP Hatchery Committees recommendations. It was made clear to her that this 10-Year Comprehensive Hatchery Program Review Report was a PUD report and not an HCP Hatchery Committees report, and that HCP Hatchery Committees review was a courtesy. She has not seen how (or whether) her comments were addressed. That said, the HCPs do require the HCP Hatchery Committees to produce a Summary Report, which is the next step, as she understands it. The Summary Report would be an HCP Hatchery Committees document that has HCP Hatchery Committees consensus and HCP Hatchery Committees recommendations, not the 10-Year Comprehensive Hatchery Program Review Report.

Kahler said yes, these are good clarifications. The HCP Hatchery Committees' Summary Report is what he envisioned presenting to the HCP Coordinating Committees (perhaps provided by

Tracy Hillman?). Kahler would also recommend providing everything to the HCP Coordinating Committees so they can decide what level of review they wanted to do.

Ferguson said April 2023 sounds aggressive, and Kahler agreed. He referred to the following portions of the hatchery section of the action plan:

1. Implement 5-Year Hatchery Monitoring and Evaluation (M&E) Plan

e. Draft 2023 implementation plan to HC – September 2023

f. HC approval of final 2023 implementation plan – November 2023

Kahler said these should read “2024” implementation plan. He said Douglas PUD needs to update their Hatchery M&E Plan before they can produce the 2024 Implementation Plan (which functions as the annual scope of work for implementing the M&E Plan for the calendar year). However, he hoped to wait to start the update until after the completion of the 10-Year Comprehensive Hatchery Program Review Report because that report is to inform the HCP Hatchery Committees in their update of the M&E Plan. If the dates slide on the Summary Report, other actions under the hatchery section will slide, as well.

Ferguson said Anchor QEA will set a reminder to revisit Wells HCP Coordinating Committee’s review of the 10-Year Comprehensive Hatchery Program Review Report and the Summary Report from the Wells HCP Hatchery Committee, in May 2023. *(Note: Geris set this reminder, as discussed.)*

Ferguson said this action plan will also be added as a decision item on next month’s agenda.

C. Draft 2023 GAP/BOP (Tom Kahler)

Tom Kahler said the draft 2023 GAP/BOP was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 12, 2023, and is available for a 30-day review with edits and comments due to Kahler by February 11, 2023.

Kahler said Andrew Gingerich is simultaneously moving this document through the Aquatic SWG. Kahler recalled that the annual GAP/BOP describes how Douglas PUD plans to meet total dissolved gas requirements in the Wells Project. It includes bypass operations and the Spill Playbook, which is given to the Wells Dam operators. The Wells HCP Coordinating Committee’s responsibility is to review and approve of the BOP. The only changes from last year include: 1) the bypass operation end date will now be determined by Program RealTime, as described in the SOA that was just approved today; and 2) Spillway 7 maintenance is now complete, so the Spill Playbook will return concentrating spill through Spillway 7 instead of Spillway 9, as was done last year during the Spillway 7 outage.

Kahler said the approval timing falls between meetings. There could be comments from the Aquatic SWG to incorporate into the document, then the next HCP Coordinating Committees

meeting is on February 28, 2023, when the document is due to FERC. John Ferguson said the Aquatic SWG meets on February 8, 2023, so an email vote would occur after this.

Wells HCP Coordinating Committee representatives will be prepared to vote via email on the draft 2023 GAP/BOP, after the Aquatic SWG meeting on February 8, 2023, and before the HCP Coordinating Committees meeting on February 28, 2023, so that Douglas PUD can submit the final approved plan to FERC by the February 28, 2023, deadline.

The Wells HCP Coordinating Committee approved the 2023 GAP/BOP via email as follows: Douglas PUD on February 9; NMFS and USFWS on February 10; WDFW on February 11; and the CTCR and the YN on February 13, 2023.

The final 2023 GAP/BOP was distributed to the Wells HCP Coordinating Committee by Geris on February 13, 2023.

D. Wells Project Land-Use Permit Applications for LUP 644-01, LUP 57.0D-01, LUP 136-01, and LUP 337B-01 (Tom Kahler)

Tom Kahler said these four LUPs are existing activities that were never officially permitted (landscaping, fences, access points—things of that nature). As described in the distribution emails, he was thinking these types of LUPs were distributed as “notification only” (not a 30-day review), because he was inadvertently lumping these types of LUPs in with another class of LUPs. Recall, there is another class of LUPs that are existing permits, but the land ownership changes. That is, previously permitted land use where there is no change in land use, just a change in land ownership. The Wells HCP Coordinating Committee agreed to decline review of these types of LUPs but requested to receive the LUPs as notification for their records.³

Kahler said unless the Wells HCP Coordinating Committee wishes otherwise, these four LUPs (existing activities that were never officially permitted) are available for a 30-day review. Or if the Committee just wants notification (like the change in ownership LUPs), Douglas PUD is supportive of this, as well. John Ferguson asked what type of documentation is needed from the Wells HCP Coordinating Committee by the 30-day review deadline. Kahler said if no comments are received when the review period passes, Douglas PUD will just proceed with the permitting process. No requests to change these LUPs to “notification only” were expressed.

Wells Project Land-Use Permit Application for LUP 644-01, distributed to the Wells HCP Coordinating Committee by Kristi Geris on December 27, 2022, was available for a 30-day review with edits and comments due to Kahler by January 26, 2023. (*Note: USFWS and the CTCR provided indication of no*

³ HCP Coordinating Committees conference call on March 31, 2021.

comments on January 12 and January 25, 2023, respectively; no other comments were received by the review deadline.)

Wells Project Land-Use Permit Application for LUP 57.0D-01 was distributed to the Wells HCP Coordinating Committee by Geris on January 11, 2023, and was available for a 30-day review with edits and comments due to Kahler by February 10, 2023. *(Note: the CTCR provided indication of no comments on January 25, 2023; no other comments were received by the review deadline.)*

Wells Project Land-Use Permit Application for LUP 136-01 was distributed to the Wells HCP Coordinating Committee by Geris on January 11, 2023, and was available for a 30-day review with edits and comments due to Kahler by February 10, 2023. *(Note: USFWS and the CTCR provided indication of no comments on January 12 and January 25, 2023, respectively; no other comments were received by the review deadline.)*

Wells Project Land-Use Permit Application for LUP 337B-01, distributed to the Wells HCP Coordinating Committee by Geris on January 20, 2023, is available for a 30-day review with edits and comments due to Kahler by February 19, 2023.

E. Final Douglas PUD 2021 Northern Pikeminnow Removal Annual Report (Tom Kahler)

The Douglas PUD 2021 Northern Pikeminnow Removal Annual Report was distributed to the Wells HCP Coordinating Committee by Kristi Geris on November 22, 2022, and was available for a 30-day review with edits and comments due to Tom Kahler by December 22, 2022. The report was approved by the Wells HCP Coordinating Committee on December 22, 2022, after no disapprovals were received prior to the 30-day review period deadline. The draft report that was distributed on November 22, 2022, is considered the final version.

Tom Kahler said the only comments received were from Chad Jackson. Jackson requested to include a map of the Wells Reservoir showing the locations where fishing occurred and a table summarizing total catch metrics, such as mean size, catch per unit effort, and standard deviation for each program. Kahler said Douglas PUD is working with the contractor to incorporate a map and table in future reports, as requested. The map should be no problem, but he is unsure if all the requested data are available for the table.

F. 2022/2023 Wells Dam Fishway Maintenance Update (Tom Kahler)

Tom Kahler said dewatering of the Wells Dam east fishway began on January 4, 2023, and a fish salvage was performed in the ladder. Then normally, mechanics set the bulkhead in the fishway and supplemental water intake to dewater the collection gallery; however, they were unable to get the bulkhead to seal. There was so much water leaking in that mechanics were unable to pump down the gallery. After continued investigation with a remotely operated vehicle, divers were called in and

found an accumulation of sand, gravel, and cobble in the bulkhead slots for one of the intakes. This was cleared out, the collection gallery was dewatered, and a fish salvage was performed. A fish salvage memorandum was sent to Scott Carlon, as distributed to the HCP Coordinating Committees by Kristi Geris on January 17, 2023. Nothing remarkable was observed. Eight Redside Shiners were salvaged, a species not typically encountered.

Per Douglas PUD's steelhead permit, WDFW attends salvage operations to enumerate fish and euthanize any residual hatchery steelhead. This was done on January 4, but the collection gallery was not dewatered until January 16, 2023, which was Martin Luther King Jr. Day, and WDFW was not working in observance of the holiday. Residual hatchery steelhead were observed in the collection gallery, but Douglas PUD staff are not authorized to euthanize these fish, so they were released.

V. Washington Department of Fish and Wildlife

A. Steelhead Overshoots Follow-up and Next Steps (Chad Jackson)

John Ferguson said WDFW initially brought this topic forward as a Rock Island Relicensing Plan Species Topic; however, the presentation and discussions to date have been more on a regional level and pertain to all three HCPs, not just Rock Island. Today's topic is a follow-up to these discussions and an opportunity for WDFW to share their thoughts on a proposed path forward.

Chad Jackson said last month, Andrew Murdoch presented recently published information on the steelhead overshoot issue in the Mid-Columbia River basin. WDFW is interested in addressing this issue through adaptive management, which was being discussed under Rock Island relicensing, which is why this topic was requested under that venue. WDFW would like to figure out how to address this issue in a stepwise fashion. Jackson is not sure whether, in the past, an HCP Coordinating Committees representative has brought up new information through the adaptive management clause. WDFW wants to continue this discussion and would like HCP Coordinating Committees feedback on how to move this forward. Jackson does not want to lose traction on this topic.

Ferguson said, from his perspective, the adaptive management section of the HCPs is pretty open. There is no structured process. It seems the HCP Coordinating Committees have implemented actions under adaptive management. An example is today's SOA to modify Wells Dam bypass operations—Douglas PUD reviewed the data and made a change.

Lance Keller said, thinking back to discussions around adaptive management, Alene Underwood (Chelan PUD Fish and Wildlife Manager) outlined it really well—adaptive management is an application for when there is evidence that phase designation or standards are not met for Plan Species that leads back to looking at the data. Keller said, regarding the presentation provided by A. Murdoch, that Chelan PUD is still processing the information. It seems there were a lot of data

for Priest Rapids Dam but not for anywhere else. He would be interested in hearing what other folks think.

Keely Murdoch said the steelhead overshoot issue is a real concern for the YN, which is why she added it to the Rock Island relicensing topics list. Clearly, this issue is more than just the Rock Island Project. This is new information that was not available when the HCPs were signed. She would like to see the HCP Coordinating Committees work collaboratively to make sure overshoot fish make it back to their natal tributaries. She thinks the HCPs give a fair amount of latitude to adaptively manage based on new information. The HCPs are 50-year agreements. She thinks this is a good test of whether the Parties can adaptively manage the HCPs to address new information.

Tom Kahler said he has a few thoughts on the presentation. First, he submitted comments on the original manuscript from A. Murdoch. Quite a few were addressed, but there were still a few that were inadequately addressed. These were not critical for the publication, but they are critical in how resources are managed up here. Second, something that is concerning is the insinuation that the loss of fish that overshoot is a linear relationship to dams the fish are passing. This relationship does not follow turbine passage events, which would have a different curve. Obviously, overwinter mortality is attributed to dams and natural mortality. Third, there is some level of disagreement regarding implications of overshooting on these nontarget populations. Other than this, he has not had time to really dig into understanding the data well enough to discuss it. One major issue that will need to be addressed is the fact that this directly conflicts with objectives in the HCPs to minimize fallback. The PUDs have requirements in the HCPs to minimize fallbacks, which was the reason for the English et al. studies—concerns about fallbacks. The PUDs have these requirements, then the Parties to the HCPs are asking to provide fallback. He is not sure how to start that discussion or how to get around this conflict, but it is inherent to these discussions.

K. Murdoch said she does not know if there is a conflict. Folks wanted to minimize fallback because there was some level observed at that time, but no one realized where these fish wanted to go. If fish from the Yakima and Snake rivers are trying to fall back, now this is clear, and there should be efforts to help them get back there. Those populations are important to the YN. Snake River steelhead is one of the main constraints on YN fisheries, so the YN wants to make sure these fish get back. There are a lot of implications about how to measure adult survival to date and how to measure conversion rates for fish from upstream populations. This should apply to all adults using whatever project area, but this is not happening. The data now indicate a proportion of adults are not included in the upstream conversion rate, so there is probably even higher mortality than what is being measured. There are also implications for incidental take. She does not know of any project that has Endangered Species Act take coverage for Yakima River and Snake River fish.

Kahler said the PUDs have Biological Opinions (BiOps) for hatchery programs but also BiOps with incidental take for operation of the Projects. These BiOps go into great detail about measuring adult

survival, fallback, and all these types of things. They are thorough consultations, and it would be interesting to look at those. The reason the Wells Project uses known-origin PIT-tagged fish in the survival estimate is because, unlike a Methow-origin fish, one cannot expect that fish from the Yakima River that pass Priest Rapids Dam will continue over subsequent upstream dams to ultimately pass Wells Dam. Further, trying to use those fish in calculations of adult conversions is setting up for confusion. This is why NMFS decided to use in the conversion-rate calculations in the BiOp only known-origin PIT-tagged fish from above the Project.

K. Murdoch said, correct, but there is also language in the HCPs that says, at the time of signing, there was no technology to measure this. In her mind, 98% adult survival is not only for some adults; it is for all adults passing a Project. She thinks it may need to be reconsidered how to measure adult survival for steelhead. Kahler said this was a question back then—how to attribute mortality to a Project. Unless there is a passage event to document it, there is no way to attribute mortality to a Project. K. Murdoch said this is why she thinks every effort should be made to make sure overshoots make it back to natal tributaries.

Scott Carlon said, since A. Murdoch's presentation, he has not had a chance to dive into the data. Carlon agreed with Kahler that it would be helpful to review the BiOps, which he plans to do.

Ferguson asked what folks want to do. It seems WDFW would like this topic to be a recurring agenda item. A lot of questions were raised today. Is there anything more folks want to discuss?

Keller said Chelan PUD would like to take a moment to further review the data. He is also interested in seeing the data that indicate fish are not making it back to natal streams. The HCPs say adaptive management should be a data-driven conversation. Ferguson recalled that A. Murdoch did distribute the steelhead overshoot model codes referenced in his presentation, and Ferguson asked if Keller is requesting something different? Keller said yes, what Chelan PUD recollects from the presentation last month is a lot of data presented was related to Priest Rapids Dam. This topic was raised during Rock Island relicensing discussions, but Chelan PUD has yet to see data pertaining to Rock Island. Talking about actions and next steps, Chelan PUD would like to see data that pertains to the Rock Island Project.

A. Murdoch said WDFW can start preparing raw data or estimated data by Project. This is not a problem. Initially, WDFW just wanted to share a high-level presentation. All the data are there and can be prepared maybe by next month. He said to let him know of specific requests because the data can be summarized in several ways. He understands this is new information that is now estimating abundance and essentially a downstream conversion rate. The fact there is no downstream PIT-tag-detection capabilities is troubling. Kahler is right—it is hard to attribute downstream mortality if there is no passage event. This type of evaluation would be difficult to do with radio tags, and maybe acoustic tags would be more specific to passage. He said WDFW will

provide Project-specific steelhead overshoot data. Once folks review the data, different data can be requested, as needed.

Ferguson asked, to Keller's point, how is it known a fish did not make it back to a natal stream?

A. Murdoch said he can provide detection probabilities within a model context.

Keller said he appreciates this. Chelan PUD is hearing impacts here, effects there, suggesting operational changes; however, no dataset has been shared to support these discussions. The 98% presumed survival of adults is called out in the HCPs, and further efforts to measure adult conversion rate have actually been used in the combined adult and juvenile survival estimates and Phase Designations. At the same time, compensation in the HCPs speaks to unavoidable project mortality through tributary actions and funding. These discussions have started, but he suggested pulling these back and looking through the lens of the HCP agreements.

A. Murdoch said he does not think there is an expectation for Chelan PUD to change operations based on a presentation. That was just an introduction. He has not looked at this information for the last few years. More will be forthcoming. Jackson said this was the purpose for this follow-up—to get the HCP Coordinating Committees' perspective on what to look at next. He does not believe this will be a quick process. He does not think something like this has been pushed through the adaptive management clause. WDFW wants to be sure there is a thorough process to answer questions and reach consensus. As A. Murdoch said, he can start pulling together information. WDFW is sensitive to Kahler's comments. He understands the PUDs are busy with reports. WDFW will put out the data. Everyone can review it in a stepwise approach and hopefully reach resolution. Ferguson agreed and said this topic can be added to next month's agenda. Maybe people have time to review the data, maybe not. *(Note: Jackson provided these data on February 22, 2023, which Kristi Geris distributed to the HCP Coordinating Committees that same day.)*

Kahler said this is regarding a comment on the original manuscript. For example, a fish overshoots and overwinters somewhere in the Upper Columbia River. Then in spring or winter, the fish turns back downstream and migrates to the Yakima or Snake rivers, where it originated, and successfully spawns. Then there are fish that never overshoot, and they overwinter in the Yakima River. There is overwinter mortality for both groups. So, there is some overwinter mortality associated with any fish overwintering in the Upper Columbia River, whether they return or not. How does that compare with overwinter mortality of fish that never overshoot but went into the Yakima or Snake rivers? If those numbers are not different, that is where the question lies. Is there an advantage for fish to overwinter in the Upper Columbia River? How does one get at that? What if fish go to the Upper Columbia River and do better than overwintering in their natal stream? Nobody is talking about this.

A. Murdoch said, in the Snake River, operations are different than in the Upper Columbia River. The conversion rate downstream for Snake River fish is much lower, based on PIT data. Additionally, the

stray rate into the Snake River is higher. Radio telemetry studies found that Snake River fish did not try to migrate downstream; rather, they just swam around in the pool and migrated upstream to spawn in Snake River tributaries. One plausible explanation for this different behavior is the different operations in the Snake River. The result of this occurring over decades is that fish across Idaho and Oregon are genetically homogenized. WDFW is just trying to get fish back to their natal system. He does not know if these fish all die. Kahler said he thinks it needs to be talked about, and he referenced the Feeken et al. (2019) paper. These findings suggest fish may not be benefiting by overwintering in their natal stream. There is cooler water in the Upper Columbia River for part of the season. How do these fish do up here compared to fish that went home? This is something to include in these conversations.

A. Murdoch said he has been hearing about steelhead overshooting since fish were being tagged. He has seen it at all adult ladders. WDFW is not trying to say why. Although, he thinks it is due to warm water temperatures in the Snake River. Maybe overshooting is an adaptive migration strategy to not suffer excessive mortality in natal streams. This is all new information that he is happy to discuss. WDFW is trying to perform a similar analysis in the Snake River, using a similar approach to evaluate ongoing actions to get steelhead back to natal streams. This is a complicated story.

VI. HCP Administration

A. 2022 HCP Annual Reports (John Ferguson)

John Ferguson reminded the HCP Coordinating Committees that Anchor QEA and the PUDs are drafting the 2022 HCP annual reports, which will be available for review in late February and early March 2023. Stay tuned.

The draft 2022 Wells HCP Annual Report was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 20, 2023, and is available for a 75-day review with edits and comments due to Geris by May 5, 2023.

B. Next Meetings (John Ferguson)

The HCP Coordinating Committees meeting on February 28, 2023, is from 12:00 p.m. to no later than 4:00 p.m., and is to be held by conference call.

The HCP Coordinating Committees meetings on March 28 and April 25, 2023, are from 12:00 p.m. to no later than 4:00 p.m., and will be held in-person at Douglas PUD in East Wenatchee, Washington.

List of Attachments

Attachment A List of Attendees

Attachment B *2023 Rocky Reach HCP Yearling Chinook Confirmation Survival Study*

Attachment A
List of Conference Call Attendees

Name	Organization
John Ferguson	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tracy Hillman ^{††}	BioAnalysts
Lance Keller [*]	Chelan PUD
Bill Towey [*]	Chelan PUD
Tom Kahler [*]	Douglas PUD
Andrew Gingerich [*]	Douglas PUD
Scott Carlon [*]	National Marine Fisheries Service
Jim Craig [*]	U.S. Fish and Wildlife Service
Chad Jackson [*]	Washington Department of Fish and Wildlife
Andrew Murdoch [*]	Washington Department of Fish and Wildlife
Keely Murdoch [*]	Yakama Nation

Notes:

* Denotes HCP Coordinating Committees member or alternate

†† Joined for the HCP Hatchery and Tributary Committees update