

Memorandum

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

Date: February 23, 2021

From: John Ferguson, HCP Coordinating Committees Chairman

cc: Kristi Geris

Re: **Final Minutes of the January 26, 2021, 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 26, 2021, from 9:00 a.m. to 12:00 p.m. Attendees are listed in Attachment A to these conference call minutes.

Action Item Summary

- Chelan PUD will continue providing Rocky Reach Dam and Rock Island Dam turbine unit maintenance updates as information becomes available (Item I-C).
- Douglas PUD will distribute the revised draft plan, *2021 Total Dissolved Gas Abatement Plan*, which will include revisions to the appended *Wells Hydroelectric Project Spill Playbook*, as discussed during today's conference call (Item IV-C). *(Note: Douglas PUD provided a revised draft plan to Kristi Geris following the HCP Coordinating Committees conference call on January 26, 2021, which Geris distributed to the Wells HCP Coordinating Committee that same day.)*
- Chelan PUD will review the 2020/2021 Rock Island and Rocky Reach Adult Fishway Winter Maintenance update with the Yakama Nation (YN) after today's conference call, because Keely Murdoch needed to leave the call early (Item V-G). *(Note: Lance Keller provided this update to Murdoch via email following the HCP Coordinating Committees conference call on January 26, 2021, as discussed.)*
- Anchor QEA will coordinate to add Brandon Kilmer (Douglas PUD Methow Fish Hatchery Supervisor) to the HCP Hatchery Committees secondary email distribution list and provide Kilmer with HCP Hatchery Committees extranet site access, as approved by the HCP Coordinating Committees (Item VI-B). *(Note: Kristi Geris notified Tracy Hillman, Larissa Rohrbach, and Sarah Montgomery of this approval following the HCP Coordinating Committees conference call on January 26, 2021.)*
- The HCP Coordinating Committees meeting on February 23, 2021, will be held at 9:00 a.m., by conference call (Item VI-D).

Decision Summary

- Wells HCP Coordinating Committee representatives present approved the *Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam* (Item IV-D).

Agreements

- HCP Coordinating Committees representatives present agreed to add Brandon Kilmer to the HCP Hatchery Committees secondary email distribution list and provide Kilmer with access to the HCP Hatchery Committees extranet site (Item VI-B).

Review Items

- The draft plan, *2021 Total Dissolved Gas Abatement Plan*, was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 8, 2021. A revised draft plan was distributed by Geris on January 26, 2021. Edits and comments are due to Tom Kahler by February 8, 2021 (Item IV-C).
- The *Draft 2021 Wells HCP Action Plan* was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 20, 2021, and is available for a 30-day review with edits and comments due to Tom Kahler by February 19, 2021 (Item IV-B).
- The draft *Study Plan to Measure Yearling Chinook Survival through the Rock Island Hydroelectric Project in 2021* (2021 Rock Island Dam Survival Confirmation Study Plan) was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on January 21, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by February 22, 2021 (Item V-A).
- The draft *2021 Rocky Reach and Rock Island HCP Action Plan* was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on January 21, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by February 22, 2021 (Item V-B).
- The draft *Statistical Plan for the 2021 Yearling Chinook Salmon Survival Study at Rock Island Dam* was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on January 25, 2021, and is available for review with edits and comments due to Lance Keller by February 22, 2021 (Item V-A).
- The draft 2020 Wells HCP Annual Report was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 5, 2021, and is available for a 30-day review with edits and comments due to Geris by March 5, 2021.
- The draft *2018 Public Utility District No. 1 of Douglas County Northern Pikeminnow Removal and Research Program* was distributed to the Wells HCP Coordinating Committee by Kristi

Geris on February 12, 2021, and is available for a 30-day review with edits and comments due to Tom Kahler by March 12, 2021.

- The draft *2019 Public Utility District No. 1 of Douglas County Northern Pikeminnow Removal and Research Program* was distributed to the Wells HCP Coordinating Committee by Kristi Geris on February 12, 2021, and is available for a 30-day review with edits and comments due to Tom Kahler by March 12, 2021.
- The *Northern Pikeminnow Predator Control Program Rocky Reach and Rock Island Hydroelectric Projects Draft Summary Report 2019* (2019 Northern Pikeminnow Annual Report) was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 16, 2021 (Item V-C).
- The *Northern Pikeminnow Predator Control Program Rocky Reach and Rock Island Hydroelectric Projects Draft Summary Report 2020* (2020 Northern Pikeminnow Annual Report) was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 16, 2021 (Item V-C).
- The *2020 Rock Island Dam Smolt Monitoring Program and Gas Bubble Trauma Evaluation Draft Report* (2020 Rock Island Smolt and Gas Bubble Trauma Evaluation Report) was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 16, 2021 (Item V-D).
- The *2020 Biological Evaluation of the Rocky Reach Juvenile Fish Bypass System Draft Report* (2020 Rocky Reach Juvenile Fish Bypass System Report) was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 16, 2021 (Item V-D).
- The draft 2020 Rock Island HCP Annual Report and draft 2020 Rocky Reach HCP Annual Report were distributed to the Rock Island and Rocky Reach HCP Coordinating Committees by Kristi Geris on February 17, 2021, and are available for a 30-day review with edits and comments due to Geris by March 18, 2021.
- The draft *Rock Island Dam Smolt Monitoring and Gas Bubble Trauma Evaluation Plan 2021* (2021 Rock Island Bypass Monitoring Plan) was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on February 19, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 19, 2021 (Item V-D).
- The draft *2021 Rocky Reach Juvenile Fish Bypass System Operations Plan* was distributed to the Rocky Reach HCP Coordinating Committee by Kristi Geris on February 19, 2021, and is

available for a 30-day review with edits and comments due to Lance Keller by March 19, 2021 (Item V-D).

- The draft *2021 Fish Spill Plan, Rock Island and Rocky Reach Dams Public Utility District No. 1 of Chelan County* (2021 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 23, 2021, and is available for a 30-day review with edits and comments due to Lance Keller by March 23, 2021.

Finalized Documents

- The final *Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam* was distributed to the HCP Coordinating Committees by Kristi Geris following the HCP Coordinating Committees conference call on January 26, 2021 (Item IV-D).

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.

- Lance Keller added: 1) 2019 and 2020 Northern Pikeminnow Reports; 2) 2020 Rock Island Smolt and Gas Bubble Trauma Evaluation and 2020 Rocky Reach Juvenile Fish Bypass System reports; and 3) 2021 Rock Island Bypass Monitoring and 2021 Rocky Reach Juvenile Fish Bypass System Operations plans
- Kristi Geris added: 1) HCP Hatchery Committees Secondary Email Distribution List and Extranet Access – Brandon Kilmer; and 2) Subyearling Chinook Salmon Studies – Quarterly Check-In (February 2021)

B. Meeting Minutes Approval (John Ferguson)

The HCP Coordinating Committees reviewed the revised draft December 15, 2020, conference call minutes. Kristi Geris said all comments and revisions received from members of the Committees were incorporated into the revised minutes. Geris said she also added distribution of the *Draft 2021 Wells HCP Action Plan*, draft 2021 Rock Island Dam Survival Confirmation Study Plan, draft *2021 Rocky Reach and Rock Island HCP Action Plan*, and draft *Statistical Plan for the 2021 Yearling Chinook Salmon Survival Study at Rock Island Dam*, under the Review Items. HCP Coordinating Committees members present approved the December 15, 2020, conference call minutes, as revised. National Marine Fisheries Service abstained because a representative was not present during the December 15, 2020 conference call.

C. Last Meeting Action Items (John Ferguson)

Action items from the HCP Coordinating Committees meeting on December 15, 2020, and follow-up discussions, were as follows. (*Note: Italicized text corresponds to agenda items from the meeting on December 15, 2020*):

- *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 carried forward.

- *Anchor QEA, LLC (Anchor QEA) will coordinate with the Colville Confederated Tribes (CCT) to arrange a presentation of Reintroduction of Salmon Upstream of Chief Joseph and Grand Coulee Dams, during the HCP Coordinating Committees conference call on January 26, 2021, and will notify the Yakama Nation (YN) once these plans are confirmed (Item I-C).*

Kristi Geris emailed the CCT with the proposed date and time for this presentation, Casey Baldwin (CCT) confirmed this plan works for his schedule, and Geris notified the YN that these plans are confirmed. This will be discussed during today's conference call.

- *Douglas PUD will communicate to the Columbia River Inter-Tribal Fish Commission (CRITFC) the discussions regarding Jeff Fryer's (CRITFC) annual request to tag sockeye salmon at Wells Dam that took place during the HCP Policy Committees conference call on October 6, 2020 (i.e., not conducting additional sampling for sockeye salmon until a thermal barrier has set up in the Okanogan River), and during the HCP Coordinating Committees conference call on October 27, 2020 (i.e., stipulate in the next request letter, a request that sockeye salmon sampling periods are concurrent with both spring and summer Chinook salmon trapping operations) (Item I-C).*

Tom Kahler said he emailed Jeff Fryer and Fryer replied that he is good with this plan. Kahler said Fryer asked about dates for spring and summer Chinook salmon sampling and that Fryer's preference is to coincide with Washington Department of Fish and Wildlife (WDFW) sampling, regardless.

- *Chelan PUD will update the Rock Island Dam overview figure that was shared during the HCP Coordinating Committees conference call on December 15, 2020, to include more details such as turbine unit, spillway, and spill gate labels, as well as a legend (Item III-A).*

Lance Keller provided this updated figure to Kristi Geris on December 30, 2020, which Geris distributed to the HCP Coordinating Committees that same day.

- *Anchor QEA will set a reminder for June 2021 to consider scheduling an HCP Coordinating Committees in-person meeting at Rocky Reach Dam following completion of the Visitor's Center renovation (tentatively set for June 2021; Item III-D).*

Kristi Geris set this reminder, as discussed.

- U.S. Fish and Wildlife Service (USFWS) will provide a vote via email on the 2020 Wells Post-Season Bypass Report and Passage-Dates Analysis no later than Friday, December 18, 2020 (Item IV-B).

USFWS approved the document via email following the HCP Coordinating Committees conference call on December 15, 2020.

II. Colville Confederated Tribes

A. PRESENTATION: Reintroduction of Salmon Upstream of Chief Joseph and Grand Coulee Dams (Casey Baldwin)

Casey Baldwin shared the presentation, *Reintroduction of Salmon Upstream of Chief Joseph and Grand Coulee Dams*, (Attachment B), which was distributed to the HCP Coordinating Committees by Kristi Geris following the HCP Coordinating Committees conference call on January 26, 2021. Baldwin said he appreciates the opportunity to share this presentation with the PUDs and HCP Committees, and recalled he also shared this presentation with the HCP Hatchery Committees last October 2020.

Slide 1 of Attachment B

Baldwin started the presentation by recognizing the coauthors and agencies who have participated in this work, as listed on this slide.

Slides 2 to 4 of Attachment B

Baldwin reviewed the project area, noting that the majority of the historical anadromous habitat is located within Canada but the CCT's work is focused on accessing potential habitat within the United States. Baldwin also described the three forums involved in this work, as noted on Slide 4.

Slide 5 of Attachment B

Baldwin said this effort involves a 4-phase approach. He said Phase I is complete and Phase II is underway.

John Ferguson asked about a timeline for Phase II. Baldwin said there is still a lot of uncertainty around this. He said currently, the forums are developing a Phase II Strategic Implementation Plan at the recommendation of the Independent Scientific Advisory Board. He said this document outlines a 15-year plan but includes an array of implementation that relies on level of effort, feasibility, and funding.

Slides 6 to 14 of Attachment B

Baldwin summarized that Phase I included identifying donor stocks, risk assessment, habitat assessments, review of fish passage technologies, life cycle modeling, and recommended future studies.

Baldwin explained that 40 stocks across five species were evaluated, scored, and ranked based on six criteria, and ultimately summer/fall Chinook salmon and sockeye salmon were selected for feasibility testing in Phase II because these species are unlisted, productive, readily available, and the lowest risk to downstream and upstream populations.

Baldwin said next, a model used by the National Oceanic and Atmospheric Association (NOAA) was updated to quantitatively evaluate spawning potential from high to low, including quantifying habitats across areas. He said additionally, a 2-D hydraulic model using depth, velocity, substrate, and channel-bed slope (based on assumptions about redd size and fish per redd) was used to evaluate how many potential redds could be supported in two areas: Transboundary Reach and Lake Rufus Woods. He said the results indicated more than 1,200 miles of potential habitat exists in the United States, as summarized on Slide 10. He said these results were combined with EDT modeling (or Ecosystem Diagnosis and Treatment modeling) to estimate low and high spawner capacity estimates for each species, which ranged from about 51,000 to 838,000 fish. He said there was also an evaluation of juvenile rearing capacity, primarily for sockeye salmon and based on zooplankton availability. He said these results found that there is potential to support a lot of juvenile sockeye salmon in Lake Roosevelt (12 to 48.5 million fish).

Baldwin said a baseline management scenario was built on a set of assumptions, as described on Slide 11. He said the model was populated with these assumptions and current harvest rates were applied. He said baseline results showed an estimated 41,000 pre-harvest adults, 24,000 harvested adults—most of which occur downstream—which allowed for an adult escapement of 14,000 fish. He noted that variance modeling was also conducted with different bypass options, and that there is variation around the estimates for survival. He also reviewed harvest assumptions as outlined on Slide 12.

Baldwin said the evaluation of fish passage potential mostly focused on what is implemented at other high-head facilities. He said for juvenile passage, the most promising seemed to be the floating surface collectors like the one at Baker Lake. He said for adult passage, trap-and-haul is effective, and the Whooshh salmon cannon also shows potential to move fish over dams quickly and at relatively low costs and uses less water, versus salmon ladders. He said the salmon cannon might be pursued in Phase II.

Baldwin reviewed the Phase I study conclusions as outlined on Slide 14.

Slides 15 to 31 of Attachment B

Baldwin summarized that Phase II includes coordination and planning, including seeking funding and finishing the Phase II Strategic Implementation Plan. He said in parallel with Phase II, the CCT are conducting "Cultural and Educational" releases. He explained that during the development of Phase I work it was recognized early on that the phased approach would not meet all tribal needs, particularly in the short-term. He said in 2019, the CCT hosted a series of ceremonies using adult surplus hatchery fish from Wells Fish Hatchery. He said these ceremonies included speeches from dignitaries, sharing of traditional foods, drummers, and distribution of fish to meaningful and different areas across the reservation. He noted that all hatchery fish received pathogen sampling prior to release, per WDFW fish health protocol. He said tribal members, including kids and elders, had the opportunity to release these fish; and he noted that this was the first time in 80 years that anadromous salmon were in the waters near Kettle Falls. He said additionally, fish with acoustic and passive integrated transponder (PIT) tags were released to Lake Rufus Woods to evaluate performance. He said in 2020, there were no ceremonies due to COVID-19; however, there were still a number of fish releases as noted on Slide 24. He also reviewed Spokane Tribe Cultural and Educational releases that took place in 2017, 2019, and 2020, as described on Slides 25 to 28, notably that 50 adults were released to Tshimakain Creek, which is upstream of dams with no adult passage structures. He noted that a few fish released well-upstream of Grand Coulee Dam migrated to the ocean and have returned to the Columbia River, including one that returned to Chief Joseph Hatchery (Slide 26). He also reviewed Coeur d' Alene Tribe Ceremonial releases that took place in 2019 and 2020, as described on Slides 29 to 31. He also noted that the 2020 releases included some surplus fish from Leavenworth National Fish Hatchery.

Slides 32 to 33 of Attachment B

Baldwin recognized the current partners and support, notably Douglas PUD, for providing surplus fish and accommodating the CCT's needs for holding, testing, and tagging fish. He said the quote on Slide 33 is a great reminder about the purpose behind this effort, why it is so important, and what these tribes have lost along the way in a developing society.

Discussion

Andrew Gingerich asked if there are two hydropower projects above Grand Coulee Dam that fish need to pass to reach Tshimakain Creek. Baldwin said yes, both are Avista hydropower projects. Ferguson asked if there is no fish passage whatsoever at both projects. Baldwin said he has not reviewed the data, but a consultant helping with Phase II work said it looks like both dams have a high percentage of spill during the migration period, so it is likely these projects are fairly fish-friendly during the juvenile outmigration; however, there is no adult passage at both projects. He said he understands Avista's Federal Energy Regulatory Commission (FERC) license agreement

includes a clause indicating that Avista could consider fish passage mitigation if anadromous fish were brought back to the Spokane River.

Ferguson asked, with so much dependent on funding, what funding sources have been contemplated? Baldwin said he thinks the hope was to include an ecosystem-based function as part of the modernized Columbia River Treaty to generate a pathway to funding, but his understanding is this is not currently being discussed. He said some work might be funded through the Bonneville Power Administration and the Northwest Power and Conservation Council, the Spokane Tribe, and the Coeur d' Alene Tribe; however, for the most part future funding pathways are not yet clear. He said currently, funding is coming from tribal and state sources. He said Governor Inslee's Southern Resident Orca Task Force produced funding for WDFW to participate and contribute; however, COVID-19 has impacted state funding.

Keely Murdoch asked, in Phases II to IV, is the plan to continue using surplus fish from Wells Fish Hatchery as the main source of broodstock or are there plans to use fish from other hatcheries? Baldwin said he thinks in the long-term, there will be a need to access additional fish based on availability at Wells Fish Hatchery.

Baldwin said he appreciates everyone's time, and as this effort develops, he will be glad to present further updates to the HCP Committees.

III. 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 conference call on January 14, 2021:

- *Upper Beaver Creek Discussion:* The Methow Salmon Recovery Foundation discussed the Upper Beaver Creek Project with the Committees. The purpose of the discussion was to update the Committees on current design concepts and seek feedback on the eastern floodplain component of the project. This discussion was in response to the Committees' requirement to be engaged in the development of the project. Once the sponsor provides additional information on the eastern floodplain component of the project, the Committees will provide feedback to the sponsor. At this time, the Committees are interested in reconnecting the eastern floodplain. Hillman noted that the eastern floodplain was not part of the original proposal.
- *Lower Chiwawa River Discussion:* The U.S. Bureau of Reclamation and Chelan County Natural Resources Department (CCNRD) provided an update on their evaluation of the Lower Chiwawa River. The purpose of the discussion was to update the Committees on potential

restoration opportunities on the Lower Chiwawa River and to gauge the Committees' interest in pursuing restoration actions on the Lower Chiwawa River. This discussion was in response to the Committees' requirement to be engaged in the development of potential projects on the Lower Chiwawa River. Because the scale of the project area has expanded from 4.3 miles to 14 miles, CCNRD will provide the Committees with a request for scope change in February 2021.

- *Chewuch River Mile 4.2 Enhancement Project:* The HCP Tributary Committees revisited the Chewuch River Mile 4.2 Enhancement Project submitted by the YN last year. Recall that the HCP Tributary Committees elected not to fund the project as designed but indicated interest in discussing the project further with the YN. In addition, to better understand the regulatory constraints at the proposed restoration site, the Committees invited Washington State Department of Ecology (Ecology) to the HCP Tributary Committees meeting on December 10, 2020. Since the discussion with Ecology, the Committees were unsure whether the YN reengaged with Ecology on the possibility of reconnecting features on the floodplain. Because the YN was dismissed from this agenda topic, the Committees will discuss this project with the YN during the HCP Tributary Committees meeting on February 11, 2021 to learn whether the YN reengaged with Ecology, and if so, the Committees will reconsider the proposal.
- *Plan Species Account Deposits:* The PUDs will deposit funds into each of the Plan Species Accounts. Chelan PUD will deposit \$817,905 into the Rock Island Plan Species Account and \$387,375 into the Rocky Reach Account by the end of January 2021. Douglas PUD will deposit \$296,984.42 into the Wells Account by the end of January 2021. Once the deposits are made, the Committees will calculate unallocated balances within each account to inform the Committees and project sponsors of the total funds available.
- *Next Meeting:* The next meeting of the HCP Tributary Committees will be on February 11, 2021.

Hillman updated the HCP Coordinating Committees on the following actions and discussions that occurred during the HCP Hatchery Committees conference call on January 20, 2021 (*note: joint HCP Hatchery Committees/PRCC 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"*):

- *Upper Columbia Life History and Management Model Presentation (joint):* Mark Sorel (NOAA Fisheries, University of Washington) gave a presentation titled, *An Integrated Population Model for Wenatchee Spring Chinook Salmon*. Sorel provided an overview of the model and how it differs from other models developed for Wenatchee River populations. Unlike other models, his is an integrated model in that it incorporates data for density dependence, life history diversity (i.e., tracks alternative juvenile life history pathways), variability, and population

viability. The purpose of the model is to support decisions regarding hatchery supplementation and habitat restoration efforts. Sorel hopes to have a working model available next year. He concluded his presentation by asking the Committees for input on what outputs would be useful, identifying management scenarios to be evaluated with the model, and whether the Committees would be interested in participating in workshops to help develop this information. The Committees indicated an interest in working with Sorel on model development and identifying management scenarios.

- *Okanagan Sockeye Salmon Annual Program Summary Presentation (joint)*: Ryan Benson (Okanagan Nation Alliance [ONA]) gave a presentation titled, *Skaha Lake Sockeye Re-introduction Program Update*. Benson provided a summary of sockeye salmon hatchery operations including a description of broodstock collection, spawning, rearing, and release operations. In 2019, all hatchery sockeye salmon fry were released into Okanagan Lake for the first time. In 2020, most of the fry were released into Skaha Lake. Benson reported that in 2020, ONA experienced record escapements of adult sockeye salmon to the Penticton Channel and Shingle Creek. Total escapement to the Okanagan Basin in 2020 was 85,700 fish. Benson also described ONA's monitoring efforts and provided results from those efforts. Lastly, he talked about the Okanagan Lake Program, including releases of fry into Okanagan Lake, passage at Penticton Dam, and finalization of the ONA monitoring and evaluation (M&E) plan.
- *Broodstock Collection Protocols (joint)*: The HCP Hatchery Committees are updating the broodstock collection protocols. The Committees have identified important issues to cover in the 2021 broodstock collection protocols and identified who will lead the writeup of certain sections of the protocols. A draft of the protocols will be provided to the Committees before the HCP Hatchery Committees meeting on February 17, 2021.
- *COVID-19 and M&E Activities (joint)*: Each member of the HCP Hatchery Committees discussed the effects of COVID-19 on their respective M&E activities. Nothing has changed since last month.
- *Chiwawa Spring Chinook Broodstock Collection (Rock Island/Rocky Reach)*: Chelan PUD discussed future spring Chinook salmon broodstock collection efforts at the Chiwawa Weir and Chelan PUD's proposed efforts to meet PNI targets and minimize Bull Trout encounters and handling at the weir. Chelan PUD has met with WDFW and intends to meet with USFWS on possibly constructing a bypass for Bull Trout at the trap box. Current infrastructure at the trap box may allow for Bull Trout passage and thus minimize Bull Trout handling. Chelan PUD will provide additional updates at future meetings.
- *2021 Rock Island and Rocky Reach HCP Action Plans (Rock Island/Rocky Reach)*: Chelan PUD provided the HCP Hatchery Committees with the draft 2021 Rock Island and Rocky Reach HCP Action Plan. The Committees are reviewing the hatchery component of the plan and will

provide comments to Chelan PUD before the HCP Hatchery Committees meeting on February 17, 2021.

- *Steelhead Egg Sampling for Baseline Conditions (Rock Island/Rocky Reach)*: Chelan PUD reported it intends to collect a total of 600 steelhead eggs, comprising 100 eggs each from three hatchery-origin and three natural-origin steelhead. These eggs will be used to establish a thiamine baseline for Wenatchee steelhead. Studies in California and Oregon have shown that eggs with low levels of thiamine suffer higher mortalities. Thiamine will be tracked over time to see if it declines within the Wenatchee steelhead population. Hillman noted that thiamine is also Vitamin B1. John Ferguson said thiamine is in the feed given to hatchery fish, so hatchery-origin fish are getting thiamine from the mother and from their feed in the hatchery. He said this means hatchery-origin fish could have a higher concentration of thiamine compared to wild-origin fish, and he asked if the study is establishing a difference in these baseline concentrations? Hillman said this might be true provided the fish is not breaking down Vitamin B1. He said the study will look at thiamine concentrations in hatchery-origin fish, which may be higher compared to wild-origin fish based on feed. He said after 1 to 2 years in the ocean, the Vitamin B1 concentrations might be more alike, and this is partly what will be examined in both hatchery and wild fish to establish a baseline.
- *Secondary Email Distribution List (administration)*: Grant PUD requested the addition of Brandon Kilmer to the secondary email distribution list¹. The HCP Hatchery Committees approved the addition of Kilmer to the secondary email distribution list.
- *Next Meeting*: The next meeting of the HCP Tributary Committees will be on February 17, 2021.

IV. Douglas PUD

A. 2020/2021 Wells Dam Winter Maintenance (Tom Kahler)

Tom Kahler said the west fishway at Wells Dam is currently out-of-service and is planned to be back in service by the end of today, January 26, 2021, or tomorrow, January 27, 2021. He said equipment will then be moved to the east fishway, which is scheduled to be dewatered on Monday, February 1, 2021. He said dewatering will begin in the fish ladder portion and then a fish salvage will be conducted. He said normally, dewatering of the collection gallery follows the next day; however, this year it will be postponed for 1 day. He explained that there have been issues with achieving a good seal on one set of bulkheads necessary for dewatering the collection gallery; therefore, on Tuesday, February 2, 2021, a diver is scheduled to identify the issue and hopefully crews can rectify the issue, so the collection gallery can be dewatered on Wednesday, February 3, 2021. He said the east fishway will receive the longer outage this year.

¹ Receives final HCP documents only.

B. 2021 Wells HCP Action Plan (Tom Kahler)

Tom Kahler said the *Draft 2021 Wells HCP Action Plan* was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 20, 2021, and is available for a 30-day review with edits and comments due to Kahler by February 19, 2021. Kahler reminded the Wells HCP Coordinating Committee that this action plan is not a requirement of the Wells HCP; rather, it is a reference document that outlines plans for the year. He said the action plan is organized by HCP Committee and is reviewed by each respective Committee. He asked that Committee members review the plan and comment if they find errors, something is missing, or there are questions. He said Douglas PUD will request approval of the action plan during the HCP Coordinating Committees meeting on February 23, 2021.

C. 2021 Total Dissolved Gas Abatement Plan (Andrew Gingerich)

Andrew Gingerich said the draft plan, *2021 Total Dissolved Gas Abatement Plan*, was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 8, 2021, and is available for a 30-day review with edits and comments due to Tom Kahler by February 8, 2021. John Ferguson said Douglas PUD will request approval of the document during the HCP Coordinating Committees meeting on February 23, 2021.

Gingerich reminded the Wells HCP Coordinating Committee that there is a requirement in Douglas PUD's Clean Water Act Section 401 Water Quality Certification to vet this document with the Aquatic Settlement Work Group and Wells HCP Coordinating Committee. He said after this document was distributed, he discovered an error in Table 3.

Table 3. 2020 TDG Compliance Summary.

		Compliance
May - April - June	Wells Tailrace 125% - Mean 12 Highest Hourly / Day	
	Non-compliant days	<u>54*</u>
	Total days	90
	DCPUD compliance	<u>9495.46%</u>
	Wells Tailrace 126% - Two Consecutive Hourly Values	
	Non-compliant days	<u>54*</u>
Total days	90	
DCPUD compliance	<u>9495.46%</u>	
July & August	Wells Tailrace 125% Hourly Standard	
	Non-compliant days	1
	Total days	61
	DCPUD compliance	98.4%
	Wells Tailrace 120% 12C-High Standard (one day)	
	Non-compliant days	3
Total days	61	
DCPUD compliance	95.1%	
Rocky Reach Forebay 115% 12C-High Standard (one day)		
Non-compliant days	10	
Total days	61	
DCPUD compliance	83.6%	
Jan - Mar & Sept - Dec	Wells Tailrace <110% Standard	
	Non-compliant days	4
	Total days	211
DCPUD compliance	98.1%	

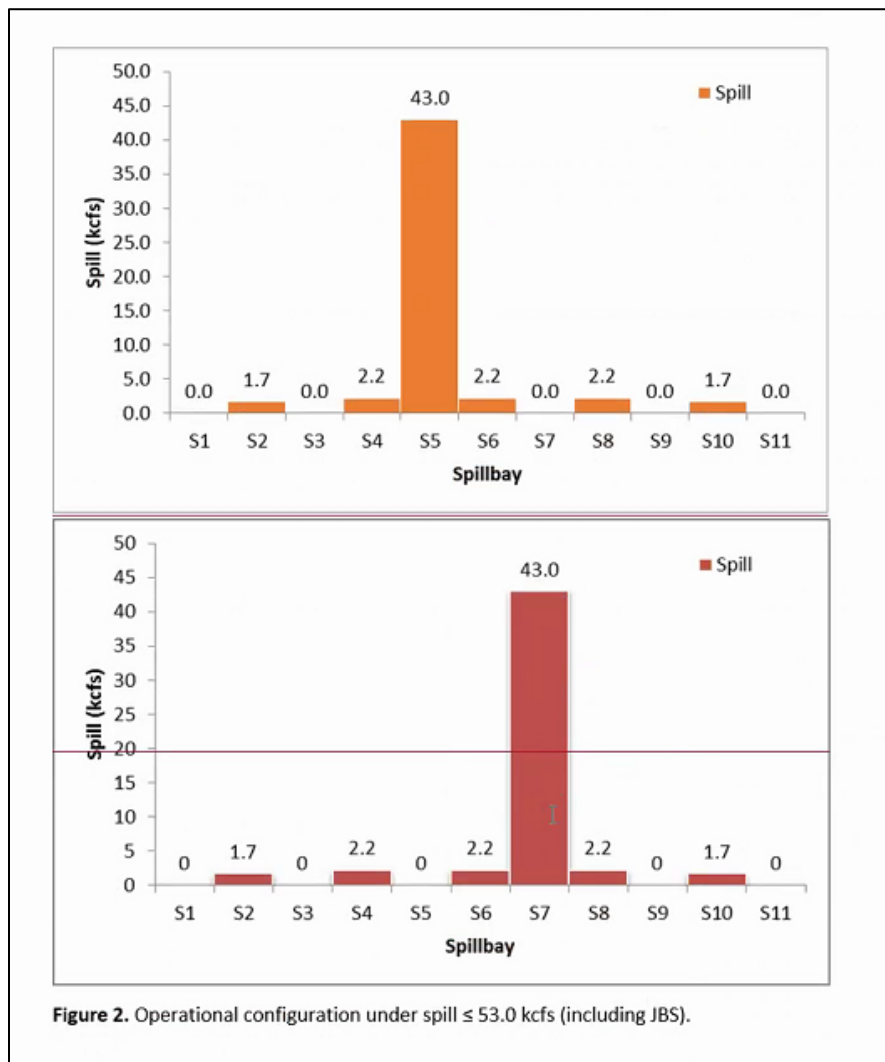
*7Q10 flows occurred on 1 day reducing non-compliant days from 5 to 4.

Gingerich projected and explained the revisions to Table 3, and said he wanted to note these revisions because these edits were not included in the version that was distributed.

Gingerich said he also wanted to note that this draft plan goes hand-in-hand with the *Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam*, because the *Wells Bypass Operating Plan* (as appended to the *2021 Total Dissolved Gas Abatement Plan*) includes language about the bypass operation periods at Wells Dam. He recalled that Douglas PUD is proposing no change to the spring bypass period, which starts on April 9, but changing the late summer bypass end date from August 19 to 10 days earlier on August 9. He said this proposal is based on the past 9 years of data which show bypass operations at Wells Dam have

ended as many as 39 days past the day when 95% of the subyearling Chinook salmon migration had passed the dam and as short as 10 days past the 95th percentile of the migration.

Gingerich said lastly, in addition to providing bypass passage to Plan species, Douglas PUD also has a goal to reduce total dissolved gas production at Wells Dam. He said historically, the gas abatement plan and appended spill playbook have been written to concentrate spill through Spillway 7 during high river flow because this has resulted in good TDG compliance. He said, however, the Wells Dam Superintendent recently indicated that Spillway 7 is in need of repair and requested that this spillway not be used during the 2021 bypass season. Gingerich said the proposal is to move concentrated spill from Spillway 7 to Spillway 5. He said it is preferable to concentrate spill in the midsection of Wells Dam, based on TDG testing that showed higher TDG levels when spill is concentrated toward the edges of the plant. He said Figure 2 in the *Wells Hydroelectric Project Spill Playbook* (as appended to the *2021 Total Dissolved Gas Abatement Plan*) shows the proposed configuration.



Ferguson asked if this change to the operational configuration will apply only to the 2021 bypass season and then change back to the usual configuration for the 2022 bypass season. Gingerich said after each bypass season, Douglas PUD reviews TDG performance. He said he does not expect a significant change; however, as of now, the plan is to shift spill back to Spillway 7 in 2022, but this depends on the TDG performance data and maintenance of the spillway.

Kirk Truscott asked if this change to the operational configuration will affect the *Wells Bypass Operating Plan*. Gingerich said the bypass functionality will remain the same. Tom Kahler added that there is one edit to Table 1 in the *Wells Bypass Operating Plan*, which shows the preferred order of removal of flow barriers when discharge increases.

Table 1. Schedule for removal of spillway flow-barriers (bypass barriers) to accommodate flood flows and load rejections.

Inflow Forecast (kcfs)	Bypass Barriers Removed
Up to 200	None
200 – 240	Spillway 6
240 – 275	Spillways 6, 8
275 – 310	Spillways 4, 6, 8
310 – 350	Spillways 4, 6, 8, 10, & preset gates 10, 11 to spill excess of 312 kcfs
350 – 400	Spillways 4, 6, 8, 10, & preset gates 1, 10, 11 to spill excess of 312 kcfs
400 – 450	All Spillways (2, 4, 6, 8, 10)

Truscott asked if Douglas PUD foresees any variances in juvenile fish passage efficiencies, notably with not using Spillway 7 and using Spillway 5 instead (i.e., shifting flow from one side of the project to another). Kahler said Douglas PUD does not foresee this changing anything. He said this is the same configuration as has been implemented in the past during overhaul of the generator for Turbine Unit 7. He said the Wells HCP Coordinating Committee approved this configuration for one or two bypass seasons during that overhaul; however, Douglas PUD did not evaluate for any differences in fish use of spillways or bypass efficiency. He said additionally, this level of detail is not available in past passage studies. Truscott asked which spillway houses the PIT tag detection system, and Kahler said Spillway 2.

Gingerich said Douglas PUD will distribute the revised draft plan, *2021 Total Dissolved Gas Abatement Plan*, which will include revisions to the appended *Wells Hydroelectric Project Spill Playbook*, as discussed during today's conference call. He said Douglas PUD needs to submit the final plan to FERC by Friday, February 26, 2021, which is the impetus for requesting approval of the plan by the HCP Coordinating Committees meeting on February 23, 2021. He said Douglas PUD is also proposing to keep the original comment deadline of February 8, 2021, so edits and comments can be addressed, and a second revised plan can be distributed for approval, if needed. (Note: Douglas

PUD provided a revised draft plan to Geris following the HCP Coordinating Committees conference call on January 26, 2021, which Geris distributed to the Wells HCP Coordinating Committee that same day.)

D. DECISION: Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam (Tom Kahler)

Tom Kahler recalled first discussing this topic under the 2020 Wells Dam Post-Season Bypass Report and Passage-Dates Analysis discussion during the HCP Coordinating Committees conference call on December 15, 2020. Kahler said as Andrew Gingerich mentioned earlier, the last 9 years of analyses show the Wells Dam bypass was operated 10 to 39 days beyond when subyearling Chinook salmon passage met the 95% migration point, which is the basis for this proposed adjustment. Kahler also recalled that the Wells HCP includes a requirement to re-evaluate bypass timing every 10 years to make sure Douglas PUD is meeting the criteria to provide passage for 95% of the migration for the spring and the summer migrations of juvenile Plan species. He said this was last evaluated in 2011 using the Rocky Reach Dam PIT-tag detection and bypass sampling facilities to estimate passage dates at Wells Dam retrospectively and going forward starting with the 2012 bypass season, and this analysis has continued each year since. He said the next 10-year review of bypass operations is due in 2021 with implementation in 2022; however, given the past 9 years of data, it is unlikely a tenth year of data would change anything the past 9 years of data are not already showing. He said Douglas PUD is proposing to start the adjusted bypass period with the 2021 bypass season instead of waiting for 2022, as described in the draft, *Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam*, which was distributed to the Wells HCP Coordinating Committee by Kristi Geris on January 8, 2021. John Ferguson noted that the last 9 years of data show the Wells Dam bypass was operated from 10 to 39 days beyond the 95% migration point, so advancing the end date 10 days is a conservative approach.

Wells HCP Coordinating Committee representatives present approved the *Statement of Agreement to Adjust the Timing of the Annual Termination of Bypass Operations at Wells Dam*. The final SOA was distributed to the HCP Coordinating Committees by Geris following the HCP Coordinating Committees conference call on January 26, 2021.

V. Chelan PUD

A. 2021 Rock Island Confirmation Survival Study Plan (Lance Keller)

2021 Rock Island Dam Survival Confirmation Study Plan

Lance Keller said the draft 2021 Rock Island Dam Survival Confirmation Study Plan was distributed to the Rock Island HCP Coordinating Committee by Kristi Geris on January 21, 2021, and is available for a 30-day review with edits and comments due to Keller by February 22, 2021.

Keller said as described on page 1 of the draft study plan, this study will measure juvenile project survival using yearling spring-run Chinook salmon as a surrogate for all Plan Species. He said this study uses a paired release approach, utilizing the release of test fish at the upper boundary of the Rock Island Project area (1,000 feet below Rocky Reach Dam) and control fish at the lower boundary of the Rock Island Project area (1,000 feet below Rock Island Dam). Releases will occur temporally to ensure mixing of both test and control releases through a common reach below Rock Island Dam to two downstream detection sites (Crescent Bar located 15 kilometers [km] downstream of Rock Island Dam and Sunland Estates located 31 km downstream of Rock Island Dam). Keller said as described at the bottom of page 1, Blue Leaf Environmental (Blue Leaf) lists five factors that will affect the proportion of the upstream release group that is recorded on the downstream detection arrays. These include: 1) the proportion of study fish that survive the Rock Island Project; 2) the proportion that survive the area between Rock Island and the detection arrays; 3) the proportion that incur premature tag failure (tag life effects); 4) the proportion that succumb to any handling-tagging effects; and 5) the proportion that pass but are not detected by the arrays (tag detection probabilities). Keller said in comparison, the proportion of the downstream release group that is detected will be susceptible to all factors of these same factors except Factor 1, allowing for the calculation of juvenile yearling Chinook salmon through the Rock Island Project area. He said to estimate tag-life effects, there will also be an independent Tag Life Study where tags will be placed in a vessel on continuously flowing river water and monitored until the batteries fail, which will allow Dr. John Skalski (University of Washington, Columbia Basin Research) to develop a tag life curve for the tags used in the survival confirmation study. Keller said Skalski will assess travel times through the study area to calculate the probability of tag failure prior to a fish migrating through the area. Keller said based on these comparisons, a tag correction factor can be applied to estimated survival, if needed.

Keller said as described on page 2 of the draft study plan, route-specific passage will be determined using detection arrays deployed upstream of Rock Island Dam, including identifying what proportion of tagged fish pass via Spillway 1, Powerhouse 1, Spillway 2, or Powerhouse 2. He said the entire acoustic telemetry detection system uses 32 receivers placed in strategic locations, including seven receivers mounted on the face of Rock Island Dam and a number of autonomous receivers anchored in the forebay, which will allow for nearly 100% detection efficiency as fish pass Rock Island Dam. He said additionally, although not a requirement but consistent with past studies, receivers will be placed at the boat restriction zone (BRZ) in the forebay of Rock Island Dam to provide additional resolution on how fish approach the dam, route-specific passage, and to compare to previous study results.

Keller said as shown on page 4 of the draft study plan, Chelan PUD will install a hydrophone connected to an I-beam and trolley mount system so the equipment can be deployed and retrieved

at any time by Chelan PUD or Blue Leaf staff. He said, however, if the divers are not able to install this system, the hydrophone will be installed at a select location for the duration of the study.

Keller said as shown on page 5 of the draft study plan, there will be a number of autonomous, fully contained, acoustic receivers deployed as close to the start of the study as possible, in consideration of battery life. He said these will be anchored in the forebay and attached to a surface buoy. He said two in-river arrays will be deployed near Crescent Bar and Sunland Estates, based on past studies and a recommendation by Skalski. Keller said Blue Leaf reviewed past test and control replicate data and verified there are no biases based on the locations of these arrays. He said these arrays will be fully submerged to eliminate chances of vandalism or theft and will be retrieved at the end of the study. He noted that the receivers will have accurate GPS time stamps and range testing to ensure the arrays are calibrated to coordinate multiple detections to determine when each fish passed the arrays. He said deployment locations and the anchoring system for these arrays are shown on pages 7 and 8 of the draft study plan.

Kirk Truscott asked if there is an opportunity to deploy a receiver at the Rock Island Dam bypass entrance to assess bypass efficiency. Keller said any fish that enters the bypass system will enter the bypass trap, the fish will be identified by the presence of a suture, placed in a separate holding vessel with an acoustic receiver, and coded out to be clear the fish entered the bypass. Truscott asked if all fish that enter the bypass are sampled. Keller said yes, and this is also the case for the juvenile bypass system at Rocky Reach Dam.

Keller said, as described on page 8 of the draft study plan, a tag order was placed for 1,055 Advanced Telemetry Systems (ATS) model SS400 Juvenile Salmonid Acoustic Telemetry System (JSATS) tags. He said this is an injectable tag programed at a 3-second ping rate. He said at this ping rate and overall size of tag, the expected battery life is 48 days. He said the tag is roughly 0.21 gram, which is more than a 50% reduction in tag size compared to the tag used in the previous study that used a 0.5-gram tag by Hydroacoustic Technology Inc. He said of the 1,055 tags, the study proposes to release 555 tags in the Rocky Reach Dam tailrace, 420 tags in the Rock Island Dam tailrace, and the remaining 75 tags will be incorporated in the Tag Life Study. He said this is slightly different than the previous Rock Island Dam Survival Studies where the numbers of test and control fish were the same. He said this study boosts the number of test fish in the Rocky Reach Dam tailrace to ensure the 95% confidence interval is met within a standard error of plus or minus 2.5%. He noted that these JSAT tags were also assigned a certain set of codes that will not be used anywhere else in the Columbia River, and Blue Leaf is randomizing tag selection for each release group or the Tag Life Study.

Keller said also on page 8 of the draft study plan, Blue Leaf and Chelan PUD are drafting a *Tagging and Fish Husbandry QAQC Plan*, which describes how fish will be handled throughout the tagging

process. He said he hopes to have this draft plan complete by early next week for Rock Island HCP Coordinating Committee review. He said this plan will include a *Tag Plan*, which proposes a collection and tag release schedule. He said fish will be collected at the bypass facility and transported the same day. He said the following day fish will be tagged, and the next day the fish will be released. He said Chelan PUD is working through scheduling and logistics, but the approximate timeframe from tagging to release is about 48 hours, which is based on available literature indicating this is the best timeframe for fish health practices. He said there will be 15 replicates, which results in a 31-day study period. He said the goal is to match the timeframe of the study with the timing of the yearling Chinook salmon run-at-large, with the first replicate occurring around the 10th percentile of the run and last replicate around the 90th percentile of the run. He said yearling Chinook salmon passage rates for the 10th and 90th percentiles at Rock Island and Rocky Reach dams are close, so Chelan PUD does not foresee issues with initiating the study and not meeting sample sizes.

Keller said page 9 of the draft study plan shows the replicate sizes. He noted that replicates will be staggered. He said Blue Leaf will randomize the tags and activate the tags for each replicate at the same time to ensure tag life is the same for both upstream and downstream releases.

Keller said as described on page 10 of the draft study plan, there will be three taggers. He said two taggers, employed by LGL who owns Blue Leaf, worked on the Grant PUD survival study. He said the third tagger is employed by Pacific Northwest National Laboratory (PNNL). He said all three taggers are experienced taggers with strong resumes. He said previous studies have had issues with tagger effects, which is what led to using three taggers based on statistics run by Skalski. Keller said each tagger will tag five replicates, both test and control, throughout the study (e.g., if a tagger tags a Rocky Reach replicate 3, the tagger will tag the Rock Island replicate 3). He said the tagging effort will also be randomized and equally distributed across the study period (e.g., there will not be one tagger for the second half of the study).

John Ferguson asked about the tags being of injectable size but being surgically implanted. Keller said the *Tagging and Fish Husbandry QA/QC Plan* will outline this procedure. He said when the tag was developed, it was designed to be an injectable tag, but requires using a larger gauge needle compared to that used for a conventional PIT tag. He said based on research by PNNL and LGL, there may be decreased tagger effects by making an incision using a scalpel and inserting the tag manually with one suture.

Keller said as described on page 11 of the draft study plan, once the study is complete, the acoustic receivers will be collected and downloaded, and there will be a QA/QC process. He said the goal is to have the detection data to Skalski to begin calculating project survival no later than August 2021. Keller said Blue Leaf will continue drafting the report for review by the Rock Island HCP Coordinating Committee no later than December 2021.

Keely Murdoch asked if it is possible to calculate survival for fish collected in the Rock Island Dam bypass, because historically these fish have had high rates of gas bubble trauma and it would be interesting to know what happens to these fish. Keller said study fish that enter the bypass through the bypass trap will be released and monitored downstream. He said, however, it is not possible to evaluate route-specific survival at Rock Island Dam. He said at Rocky Reach Dam, a triple-release methodology was implemented which relied on a virtual release in the Rocky Reach Dam forebay and additional release data from the bypass system, which allowed Skalski to correct for route-specific survival for Rocky Reach Dam across all available passage routes. He said these data are not available at Rock Island Dam; rather, fish handled through the bypass trap are released and monitored for arrival at the downstream arrays at Crescent Bar or Sunland Estates. He said in previous studies, this sample size has been small (about three fish) and he is not sure anything can be said with a high level of confidence.

Statistical Plan for the 2021 Yearling Chinook Salmon Survival Study at Rock Island Dam

Keller said the draft *Statistical Plan for the 2021 Yearling Chinook Salmon Survival Study at Rock Island Dam* was distributed to the Rock Island HCP Coordinating Committee by Geris on January 25, 2021, and is available for review with edits and comments due to Keller by February 22, 2021. Keller said this statistical plan was produced by Skalski and describes the sample size calculations needed to make sure that precision requirements are met.

Keller noted Table 1 on page 4 of the statistical plan.

Table 1. Detection histories and expected probabilities of occurrences for releases R_1 and R_2 for the acoustic-tag study. Capture histories at Rocky Reach and Rock Island dams denoted as either detected (1) or not detected (0) by location.

Release	Detection History	Expected Probabilities
R_1	11	$S_{11}L_{11}p_{11}P(L_{12} L_{11})\lambda_1 = S_{11}p_{11}L_{12}\lambda_1$
	01	$S_{11}L_{11}(1-p_{11})P(L_{12} L_{11})\lambda_1 = S_{11}(1-p_{11})L_{12}\lambda_1$
	10	$S_{11}L_{11}p_{11}[1-P(L_{12} L_{11})\lambda_1] = S_{11}p_{11}(L_{11}-L_{12}\lambda_1)$
	00	$(1-S_{11})+S_{11}[(1-L_{11})+L_{11}(1-p_{11})-L_{12}(1-p_{11})\lambda_1]$
R_2	11	$S_{21}p_{21}P(L_{22} L_{21})\lambda_2 = S_{21}p_{21}L_{22}\lambda_2$
	01	$S_{21}L_{21}(1-p_{21})P(L_{22} L_{21})\lambda_2 = S_{21}(1-p_{21})L_{22}\lambda_2$
	10	$S_{21}p_{21}[1-P(L_{22} L_{21})\lambda_2] = S_{21}p_{21}(L_{21}-L_{22}\lambda_2)$
	00	$(1-S_{21})+S_{21}[(1-L_{21})+L_{21}(1-p_{21})-L_{22}(1-p_{21})\lambda_2]$

He said the detection history column shows fish that were detected (1) or not detected (0) throughout the entire study range or project area. He said these data points are used in calculating survival and detection probabilities of the arrays.

Keller noted page 5 of the statistical plan, which describes estimating tag life as he previously discussed during review of the draft 2021 Rock Island Dam Survival Confirmation Study Plan (i.e., Tag Life Study). He said Section 3.3 at the bottom of page 5 explains there is no reason to believe an upstream detection of a fish affects the ability to detect the fish on a downstream array, which is a benefit of acoustic telemetry in that fish do not need to be rehandled.

Keller said page 6 of the statistical plan, explains assurances that the test and replicate fish are migrating through a common reach in a similar temporal fashion. He said estimation of tagger effects is explained, including a figure showing equal tagger effect across the study and seasonally.

Keller noted on page 7 of the statistical plan, the section *Standardized Handling of Control and Treatment Releases* is further discussed in the *Tagging and Fish Husbandry QA/QC Plan*. He said specific transport routes will be selected for fish collected at the Rock Island Dam bypass system and fish collected at the Rocky Reach Dam Juvenile Fish Facility to ensure travel time and distance from tagging to release is similar. He said Section 3.4 at the bottom of page 7 describes the cross-year

comparison. He said project survival in 2021 will be compared to estimated survival in 2007 to 2008 and 2010.

Keller said as noted on page 8 of the statistical plan, a new 4-year average project passage survival will be calculated.

Keller said lastly, page 9 of the statistical plan describes route-specific passage proportions.

Keller said this *Statistical Plan for the 2021 Yearling Chinook Salmon Survival Study at Rock Island Dam* is the backbone for 2021 Rock Island Dam Survival Confirmation Study Plan.

B. 2021 Rock Island and Rocky Reach HCP Action Plan (Lance Keller)

Lance Keller said the draft *2021 Rocky Reach and Rock Island HCP Action Plan* was distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on January 21, 2021, and is available for a 30-day review with edits and comments due to Keller by February 22, 2021. Keller said the Rock Island and Rocky Reach HCP Hatchery Committees are currently reviewing the hatchery section of the draft action plan. He noted that under the HCP Coordinating Committees section, new additions include survival confirmation study items for both the Rock Island and Rocky Reach projects.

C. 2019 and 2020 Northern Pikeminnow Annual Reports (Lance Keller)

Lance Keller said Chelan PUD is currently reviewing the draft *2020 Rock Island HCP Annual Report* and draft *2020 Rocky Reach HCP Annual Report*, which are drafted by Anchor QEA. He said during review of these reports, he realized he has not yet distributed the 2019 Northern Pikeminnow Annual Report and now the 2020 Northern Pikeminnow Annual Report is also available. He said he plans to distribute both Northern Pikeminnow annual reports for approval in time to be appended to the final HCP annual reports. He said the Northern Pikeminnow annual reports summarize the results of the Northern Pikeminnow Removal Program for those respective years.

The draft 2019 Northern Pikeminnow Annual Report and draft 2020 Northern Pikeminnow Annual Report were distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and are available for a 30-day review with edits and comments due to Keller by March 16, 2021.

D. 2020 Rock Island Smolt and Gas Bubble Trauma Evaluation Report, 2021 Rock Island Bypass Monitoring Plan, 2020 Rocky Reach Juvenile Fish Bypass System Report, and 2021 Rocky Reach Juvenile Fish Bypass System Operations Plan (Lance Keller)

Lance Keller said the 2020 Rock Island Smolt and Gas Bubble Trauma Evaluation Report, 2021 Rock Island Bypass Monitoring Plan, 2020 Rocky Reach Juvenile Fish Bypass System Report, and 2021 Rocky Reach Juvenile Fish Bypass System Operations Plan will be distributed for review soon.

The draft 2020 Rock Island Smolt and Gas Bubble Trauma Evaluation Report and draft 2020 Rocky Reach Juvenile Fish Bypass System Report were distributed to the Rocky Reach and Rock Island HCP Coordinating Committees by Kristi Geris on February 16, 2021, and are available for a 30-day review with edits and comments due to Keller by March 16, 2021.

The draft 2021 Rock Island Bypass Monitoring Plan and draft *2021 Rocky Reach Juvenile Fish Bypass System Operations Plan* were distributed to the Rock Island and Rocky Reach HCP Coordinating Committees by Geris on February 19, 2021, and are available for a 30-day review with edits and comments due to Keller by March 19, 2021.

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

Lance Keller said work is continuing on Turbine Unit B4. He recalled the return-to-service date has been January 2021; however, this date is looking like it will be the end of February 2021. He noted that the probability of returning Turbine Unit B4 back to service before the Rock Island Dam Survival Confirmation Study is still promising.

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

Lance Keller said the trunnion seal and bushing maintenance associated with Turbine Unit C2 was completed and the unit was returned to service on December 23, 2020. He said the unit was tested for trunnion seal leaks prior to returning to service, no leaks were detected, and now the unit is currently operational. He said this means that for the 2021 juvenile bypass season, both Turbine Units C1 and C2 will be available and the soft-limit set points will be returned to 3,330 cubic feet per second for both surface collector entrances. He said this change in operation will be highlighted in the 2021 Rocky Reach Juvenile Fish Bypass System Operations Plan.

Keller said work is continuing on Turbine Unit C3 and the return-to-service date is still May 2021; although, crews are now ahead of schedule because of what was learned through the small unit trunnion bushing replacements.

Keller said work is continuing on Turbine Unit C7 and the return-to-service date is still March 2021.

G. 2020/2021 Rock Island and Rocky Reach Adult Fishway Winter Maintenance (Lance Keller)

Lance Keller said he will review Chelan PUD's 2020/2021 Rock Island and Rocky Reach Adult Fishway Winter Maintenance update with Keely Murdoch after today's conference call, because Murdoch needed to leave the call early. *(Note: Keller provided this update to Murdoch via email following the HCP Coordinating Committees conference call on January 26, 2021, as discussed.)*

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

Rocky Reach Dam

Keller said the adult fishway has been dewatered since early December 2020, and the return-to-service date is end of February 2021.

Rock Island Dam

Keller said the right fish ladder has been out-of-service since the HCP Coordinating Committees meeting on December 15, 2020. He said the middle fish ladder was dewatered on January 6, 2021, and a fish rescue was performed the same day. He said crews rescued four fish, including two juvenile steelhead (1 adipose fin-present and 1 clipped) and two Pacific Lamprey ammocoetes. He noted that rescuing ammocoetes from the middle fish ladder is unusual and that all fish were returned to the river alive. He said maintenance on the middle fish ladder was routine and the return-to-service date is today, January 26, 2021, so crews can dewater the left fish ladder on January 28, 2021. He said the left fish ladder will receive mostly preventative maintenance and should be a relatively short outage, with a return-to-service date of February 18, 2021. He said all Rock Island Dam fish ladders should be fully operational by the end of February 2021.

VI. HCP Administration

A. COVID-19 Updates (John Ferguson)

John Ferguson asked if there are any updates HCP Coordinating Committees members would like to share regarding impacts of COVID-19 on HCP activities. No updates were shared.

B. HCP Hatchery Committees Secondary Email Distribution List and Extranet Access – Brandon Kilmer (John Ferguson)

John Ferguson said as Tracy Hillman mentioned, Grant PUD requested the addition of Brandon Kilmer, the new Douglas PUD Methow Fish Hatchery Supervisor, to the HCP Hatchery Committees secondary email distribution list.

HCP Coordinating Committees representatives present agreed to add Kilmer to this list and provide Kilmer with access to the HCP Hatchery Committees extranet site. Anchor QEA will coordinate to add Kilmer to the list and provide Kilmer with extranet site access. *(Note: Kristi Geris notified Hillman, Larissa Rohrbach, and Sarah Montgomery of this approval following the HCP Coordinating Committees conference call on January 26, 2021.)*

**C. Subyearling Chinook Salmon Studies – Quarterly Check-In (February 2021)
(John Ferguson)**

John Ferguson reminded the HCP Coordinating Committees that this topic will be on the agenda for the HCP Coordinating Committees meeting on February 23, 2021.

D. Next Meetings (John Ferguson)

The next scheduled HCP Coordinating Committees meeting is on February 23, 2021, to be held by conference call.

The March 23 and April 27, 2021, meetings will be held by conference call or in-person at the Grant PUD Wenatchee Office in Wenatchee, Washington, as is yet to be determined.

VII. List of Attachments

Attachment A List of Attendees

Attachment B *Reintroduction of Salmon Upstream of Chief Joseph and Grand Coulee Dams*

Attachment A
List of Attendees

Name	Organization
John Ferguson	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tracy Hillmant†	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
Kirk Truscott*	Colville Confederated Tribes
Casey Baldwin††	Colville Confederated Tribes
Keely Murdoch*	Yakama Nation
David Blodgett, III††	Yakama Nation

Notes:

- * Denotes HCP Coordinating Committees member or alternate
- † Joined for the HCP Hatchery and Tributary Committees Update
- †† Joined for the presentation, *Reintroduction of Salmon Upstream of Chief Joseph and Grand Coulee Dams*