FINAL

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ANCHOR QEA

Memorandum

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

Date: December 5, 2018

From: John Ferguson, HCP Coordinating Committees Chairman

cc: Kristi Geris

Re: Final Minutes of the October 23, 2018 HCP Coordinating Committees Meeting

The Wells, Rocky Reach, and Rock Island Hydroelectric Projects Habitat Conservation Plan (HCP) Coordinating Committees met at the Grant PUD Office in Wenatchee, Washington, on Tuesday, October 23, 2018, from 10:00 a.m. to 1:30 p.m. Attendees are listed in Attachment A to these meeting minutes.

Action Item Summary

- Douglas PUD will further review run-timing data for wild and hatchery yearling Chinook salmon with regard to Wells Dam bypass operation dates and will report back to the HCP Coordinating Committees (Item I-C).
- Lance Keller will review subyearling Chinook salmon sampled at the Rocky Reach Juvenile Sampling Facility (RRJSF) during the summer spill season at Rocky Reach Dam, to determine the following: 1) whether the index samples collected represent overall passage trends based on passive integrated transponder (PIT)-tag detections in the bypass across the season, notably during high-flow years such as that experienced in 2018; and 2) whether any adjustments are needed while also maintaining continuity with historical data in the Columbia River Data Access in Real Time database (DART; Item I-C).
- Chelan PUD will provide a final timeline for repairing Rocky Reach Dam Turbine Unit C1 hub seals to Kristi Geris for distribution to the HCP Coordinating Committees (Item I-C).
- Tom Kahler will determine the final outcome of the Wells Project Land-Use Permit Application for Wells Tract 115 and will report back to the HCP Coordinating Committees (Item I-C).
- Tracy Hillman (HCP Tributary Committees Chairman) will provide additional information regarding design and implementation funding for the Icicle Creek Boulder Field Passage Project (Item II-A). *(Note: Hillman provided this information following the meeting on October 23, 2018, which Kristi Geris distributed to the HCP Coordinating Committees that same day.)*
- Tom Kahler will provide the Final 2010 Wells Project Survival Verification Study Report (Bickford et. al 2011[1]) to Kristi Geris for redistribution to the HCP Coordinating Committees

[1] Bickford, S.A., T. Kahler, J.R. Skalski, R.L. Townsend, R. Richmond, S. McCutcheon, and R. Fechhelm, 2011. *Project Survival Estimates for Yearling Chinook Migrating through the Wells Hydroelectric Project, 2010. 2010 Spring Migrant Survival Verification Study.* Prepared for Public Utility District No. 1 of Douglas County. June 2011.

(Item III-A). *(Note: Kahler provided this report following the meeting on October 23, 2018, which Geris distributed to the HCP Coordinating Committees that same day.)*

- Tom Kahler will consult Shane Bickford (Douglas PUD HCP Policy Representative) about the following: 1) the impetus for selecting study fish release locations at the mouths of the Methow and Okanogan rivers (versus farther upstream) for Douglas PUD survival verification studies; and 2) if and how the Wells HCP can be amended or modified based on new data (Item III-A).
- Lance Keller will consult Alene Underwood (Chelan PUD HCP Policy Representative) about if and how the Rock Island and Rocky Reach HCPs can be amended or modified based on new data (Item III-A).
- Andrew Gingerich will determine whether a draft Douglas PUD Spill Prevention Control and Counter Measures (SPCC) Plan is available in tracked changes to clearly show updates in the current draft for review (2018) compared to the last Federal Energy Regulatory Commission (FERC)-approved final plan (2013) and will provide this redlined draft to Kristi Geris for distribution to the HCP Coordinating Committees (Item III-B). *(Note: Gingerich provided a list of changes between the two plans to Geris on November 9, 2018, which Geris distributed to the HCP Coordinating Committees that same day.)*
- Greer Maier (Upper Columbia Salmon Recovery Board [UCSRB] Chief Scientist) will provide the Draft UCSRB Hydropower Background Summary email, including the Doodle Poll request to schedule the next Integrated Recovery Technical Advisory Group (IRTAG) meeting, to Kristi Geris and Denny Rohr (Priest Rapids Coordinating Committee [PRCC] Facilitator) for distribution to the HCP Coordinating Committees and PRCC, respectively (Item IV-A). *(Note: Maier provided this email to Geris and Rohr following the meeting on October 23, 2018. Geris distributed this email to the HCP Coordinating Committees that same day.)*
- Lance Keller will determine the threshold whereby operations at Rock Island Dam under summer spill operations begin to shift from Powerhouse 2 and spill to Powerhouse 1 (Item V-B).
- Kristi Geris will coordinate with Sarah Montgomery (HCP Hatchery Committees support staff) and Julene McGregor (Douglas PUD Information Systems Staff) to add Bill Towey (Chelan PUD Senior Fisheries Scientist) to select HCP Hatchery and Coordinating Committees email distribution lists and provide Towey with visitor access to the HCP Hatchery and Coordinating Committees extranet sites (Item V-D). *(Note: Geris contacted Montgomery and McGregor, as discussed, following the meeting on October 23, 2018.)*
- The HCP Coordinating Committees meeting on December 4, 2018, will be held in-person at the Grant PUD Wenatchee Office in Wenatchee, Washington (Item VI-A).

Decision Summary

- The Rocky Reach and Rock Island HCP Coordinating Committees representatives present approved the 2018 HCP Rocky Reach and Rock Island Fish Spill Program Report, as revised (Item V-C). *(Note: Jim Craig provided U.S. Fish and Wildlife Service [USFWS] approval of the report via email on November 20, 2018.)*

Agreements

- HCP Coordinating Committees representatives present agreed to add Bill Towey, Chelan PUD Senior Fisheries Scientist, to select HCP Hatchery and Coordinating Committees email distribution lists and provide Towey with visitor access to the HCP Hatchery and Coordinating Committees extranet sites (Item V-D).

Review Items

- The draft 2020 Wells Project Survival Verification Study Plan was distributed to the HCP Coordinating Committees by Kristi Geris on September 24, 2018. The draft plan is available for a 63-day review with edits and comments due to Tom Kahler by Tuesday, November 27, 2018 (Item III-A).
- A Douglas PUD SPCC Plan was distributed to the HCP Coordinating Committees by Kristi Geris on October 3, 2018. This plan is available for a 30-day review with edits and comments due to Tom Kahler by Friday, November 2, 2018 (Item III-B).
- A Wells Project Land-Use Permit Application for a Joint-Use Dock on Tract 75 was distributed to the HCP Coordinating Committees by Kristi Geris on November 13, 2018. This application is available for a 60-day review with edits, comments, or indication of no comments due to Tom Kahler by Monday, January 14, 2018.
- A Wells Project Land-Use Permit Application for a Joint-Use Dock (Repo LLC) was distributed to the HCP Coordinating Committees by Kristi Geris on November 13, 2018. This application is available for a 60-day review with edits, comments, or indication of no comments due to Tom Kahler by Monday, January 14, 2018.
- The Statement of Agreement (SOA), *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*, was distributed to the HCP Coordinating Committees by Kristi Geris on November 20, 2018. Chelan PUD will request approval of this SOA during the HCP Coordinating Committees meeting on December 4, 2018.
- A Wells Project Land-Use Permit Application for a Single-Use Dock (LeSage) was distributed to the HCP Coordinating Committees by Kristi Geris on November 29, 2018. This application is available for a 60-day review with edits, comments, or indication of no comments due to Tom Kahler by Monday, January 28, 2018.

Finalized Documents

- There are no documents that have been recently finalized.

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 additions or changes were requested.

B. Meeting Minutes Approval (John Ferguson)

The HCP Coordinating Committees reviewed the revised draft September 25, 2018 meeting minutes. Kristi Geris said all comments and revisions received from members of the HCP Coordinating Committees were incorporated into the revised minutes. Geris said she also noted completion of a few action items and updated distribution of review items. She said Jim Craig provided USFWS approval of the minutes via email prior to the meeting on October 23, 2018. HCP Coordinating Committees members present approved the September 25, 2018 meeting minutes, as revised.

C. Last Meeting Action Items (John Ferguson)

Action items from the HCP Coordinating Committees meeting on September 25, 2018, and follow-up discussions, were as follows. *(Note: italicized text corresponds to agenda items from the conference call on September 25, 2018):*

- *Douglas PUD will further review run-timing data for wild and hatchery yearling Chinook salmon with regard to Wells Dam bypass operation dates and will report back to the HCP Coordinating Committees (Item I-C).*
  Tom Kahler said this document is still undergoing internal review and will hopefully be available for HCP Coordinating Committees review by the next meeting on December 4, 2018. This action item will be carried forward.
- *Tom Kahler will establish a system to remind the Wells HCP Coordinating Committee to routinely revisit using spring Chinook salmon as the study species for the Wells Project 2030 Survival Verification Study to ensure this is written into the next Section 10 permits for the Wells Project (Item I-C).*
  Kahler said he and Andrew Gingerich will complete this action item.
- *Lance Keller will review subyearling Chinook salmon sampled at the Rocky Reach Juvenile Sampling Facility (RRJSF) during the summer spill season at Rocky Reach Dam, to determine: 1) whether the index samples collected represent overall passage trends based on passive integrated transponder (PIT)-tag detections in the bypass across the season, notably during high*

flow years such as that experienced in 2018; and 2) whether any adjustments are needed while also maintaining continuity with historical data in the Columbia River Data Access in Real Time database (DART; Item I-C).

Keller said this action item is still in progress. This action item will be carried forward.

- *Chelan PUD will compare fish spill coverage data from 2011 and 2012 to data from 2018 and will report back to the HCP Coordinating Committees (Item III-A).*
  This action item will be discussed during today's meeting.
- *Chelan PUD will update the draft 2018 HCP Rocky Reach and Rock Island Fish Spill Program Report to report consistent data for Rocky Reach and Rock Island fish spill programs and a more detailed explanation of spill coverage and will provide a revised draft report for HCP Coordinating Committees review (Item III-A).*
  Lance Keller provided a revised report to Kristi Geris on October 19, 2018, which Geris distributed to the HCP Coordinating Committees that same day.
- *Lance Keller will provide the test results from the engineered trunnion seals for Rocky Reach Unit C1 as soon as the results are available (Item III-B).*
  Keller provided an update to Kristi Geris on October 16, 2018, which Geris distributed to the HCP Coordinating Committees that same day.
- *Chelan PUD will provide a final timeline for repairing Rocky Reach Dam Turbine Unit C1 hub seals to Kristi Geris for distribution to the HCP Coordinating Committees (Item III-B).*
  This action item will be discussed during today's meeting and will also be carried forward.
- *Tom Kahler will discuss with Beau Patterson (Douglas PUD Land Use Specialist) the Colville Confederated Tribes (CCT) and the Yakama Nation (YN) comments on the Wells Project Land-Use Permit Application for Wells Tract 115 and will report back to the HCP Coordinating Committees (Item IV-A).*
  Kahler said the comments received from the CCT and the YN were noted and Douglas PUD will likely approve the permit application, as proposed. He said because this application addresses an upland feral orchard with no effect on HCP Plan Species, comments received by the Wells HCP Coordinating Committee are weighted differently than if the application applied to, for example, in-water or riparian zone work with potential impacts to HCP Plan Species. He said maintaining good relations between Douglas PUD and shoreline residents is also a factor. Kirk Truscott asked if no action is expected from Wells HCP Coordinating Committee comments, then what was the point in having the Wells HCP Coordinating Committee review the application? Kahler said the Wells HCP includes a requirement which states, "When making land use or related permit decisions on Project owned lands that affect reservoir habitat, the District shall consider the cumulative impact effects in order to meet the conservation objectives of the Agreement, requirements of the FERC license, and other applicable laws and regulations. The District further agrees to notify and consider comments

from the Parties to the Agreement regarding any land use permit application on Project owned lands." Kahler said Truscott's comment raises an interesting question and said there may be certain items the Wells HCP Coordinating Committee does not care to review. Truscott said the CCT do not want to review documents if it will be a waste of time. Keely Murdoch added, however, that the Wells HCP Coordinating Committee would want to decide if review will be a waste of time. John Ferguson said the first question would be whether Plan Species are involved. Kahler said perhaps in the future, Douglas PUD can present these types of documents as such. Truscott said if Douglas PUD presents a proposal which does not affect Plan Species, this suggests a high probability Douglas PUD will default to the original proposal anyway. Kahler said this is not necessarily true for all proposals. Andrew Gingerich said, for example, there may be a situation where Douglas PUD rejects a land-use permit and it will be of value to let the landowner know Douglas PUD consulted with the appropriate agencies, these agencies are highly qualified, and these are the reasons why the permit was rejected. Gingerich said he suspects this is why this language was included in the Wells HCP. Truscott said he is still interested in knowing what Douglas PUD's final decision was regarding Wells Project Land-Use Permit Application for Wells Tract 115. Kahler said the application is still not closed; rather, there has only been a motion to accept the original proposal. He said he does not know what the Douglas PUD Board of Commissioners has provided in terms of comments. Kahler said he will determine the final outcome of the Wells Project Land-Use Permit Application for Wells Tract 115 and will report back to the HCP Coordinating Committees.

- *Kristi Geris will notify Tracy Hillman (HCP Hatchery Committees Chairman), Denny Rohr (Priest Rapids Coordinating Committee [PRCC] Facilitator), and Grant PUD office building staff that the HCP Coordinating Committees meeting in December 2018 will be held via conference call on December 18, 2018, if needed (Item V-A).*
  Geris provided this notification, as discussed.

II. HCP Tributary and Hatchery Committees Update

A. HCP Tributary and Hatchery 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 October 11, 2018:

- *Time Extension Request*: The Rock Island HCP Tributary Committee received a time extension request from Trout Unlimited (TU) on the Icicle Boulder Field Project. The sponsor is waiting on permits for this project; therefore, the sponsor requested to extend the completion date from September 30, 2018, to December 15, 2019. Once permits are received, TU plans to begin construction next summer. The Rock Island HCP Tributary Committee approved the

time extension request. Kirk Truscott asked if the sources of funding for the project have been identified and recalled previous discussions of multiple sources to help move the project forward. Hillman said the Rock Island HCP Tributary Committee funds what is outlined in the contract with TU. He said he is unsure whether TU has secured all of the funding needed to complete this project. He said he believes TU approached the Bonneville Power Administration (BPA) to help fund; however, he is unsure of the outcome. Tom Kahler said TU is short of what is needed to complete the project. Truscott asked if the Rock Island HCP Tributary Committee funds will in part support the implementation of fish passage at Icicle Boulder Field? Kahler recalled approval of Rock Island HCP Tributary Committee funds was contingent upon the applicants (Icicle-Peshastin Irrigation District and City of Leavenworth) providing a funding match. Kahler asked if this funding decision came back to the Rock Island HCP Tributary Committee to decide whether to fund, or was funding assured if the applicants provided the match? Hillman clarified these are two different projects. He said there is passage at Icicle Boulder Field, and screening of the irrigation district canal and City of Leavenworth canal. He said there has been no further discussion on the latter; therefore, the Rock Island HCP Tributary Committee has not yet made a decision on screening. He said the Rock Island HCP Tributary Committee did approve the passage at Icicle Boulder Field.
John Ferguson asked if HCP Tributary Committees votes need to be unanimous. Hillman said yes and Kahler added that agencies can abstain. Hillman said he will provide additional information regarding design and implementation funding for the Icicle Creek Boulder Field Passage Project. He added that TU would not request a time extension if the project was not already approved. He said there was some level of funding approved; however, he cannot recall how much. Truscott said he is not only interested in design funding, but also dollars to implement. Hillman said he believes the approved funding was for design and implementation. *(Note: Hillman provided additional information regarding design and implementation funding for the Icicle Creek Boulder Field Passage Project following the meeting on October 23, 2018, which Kristi Geris distributed to the HCP Coordinating Committees that same day.)*

- *General Salmon Habitat Program Proposal*: The HCP Tributary Committees received a General Salmon Habitat Program proposal from the YN titled: *Twisp Confluence Habitat Complexity Project*. The purpose of the project is to use large wood to stabilize a bank at the confluence of the Twisp River where bank erosion is threatening sewer line infrastructure for the town of Twisp. The large wood will not only protect the bank from further erosion, it will increase habitat complexity for juvenile and adult salmonids and will prevent the U.S. Army Corps of Engineers (USACE) from riprapping the bank. The total cost of the project is $299,300. The sponsor requested $269,600 from the Plan Species Account Funds. The HCP Tributary Committees did not make a funding decision at this time and asked the YN to secure a cost

share from USACE that is equivalent to the amount USACE would spend on placing riprap along the eroding bank. Given that USACE is willing to stabilize the bank with riprap, the HCP Tributary Committees believe USACE should be able to contribute to the proposed project at the level of their original proposal to the City of Twisp for riprap bank protection. The HCP Tributary Committees are waiting to hear back from the YN on a cost share. Truscott said he thought the HCP Tributary Committees spend a lot of funding on reestablishing natural processes and access to off-channel habitat by removing berms, and now the HCP Tributary Committees are supporting installing riprap? Hillman said in this case, the YN understands there will be some form of bank protection to protect the sewer line structure and the YN are saying it would be better to use wood to create better habitat for salmonids, versus USACE riprapping the bank. He said the HCP Tributary Committees typically do not fund bank protection, but in this situation the bank is going to be protected no matter what. He said if the YN can secure a cost share, the HCP Tributary Committees are opting for wood. He said if there is no cost share the HCP Tributary Committees need to further discuss options. Truscott asked about the stipulation on a cost share. He asked if this would be USACE's responsibility. Kahler said it is difficult to say because USACE offers to riprap in an emergency but not to install large wood. He said this was initially an emergency action. Truscott asked if the agencies can stipulate conditions with an emergency action. Kahler said one can end-dump rock; however, with logs this requires excavation. Kahler said USACE has funds for emergency actions like this; however, the HCP Tributary Committees suspect that USACE is not authorized to pull money from other sources for bank protections outside of emergency conditions.

- *Targeted Solicitations*: The HCP Tributary Committees are in the process of identifying high-priority projects within each of the subbasins (Wenatchee, Entiat, Methow, and Okanogan). Once projects are identified, the Committees will call for proposals. The HCP Tributary Committees will also continue to accept project applications from sponsors anytime during the year. Truscott asked what data sources the HCP Tributary Committees are utilizing to identify high-priority projects? He said the CCT have done work in the Methow River basin, and Carmen Andonaegui (Washington Department of Fish and Wildlife [WDFW]) has also conducted similar work. Truscott said he is curious if this literature and these data sources are being used to develop this list of priorities. Hillman said yes, these sources are being utilized. He said the Upper Columbia Regional Technical Team (UCRTT) has a regional strategy and is currently updating the strategy based on life cycle modeling, the Ecosystem Diagnosis and Treatment tool, and food web modeling in the Methow River basin, among other data sources. Hillman asked Truscott if he is interested in working on this, and Truscott said he was just making sure the HCP Tributary Committees are utilizing these data sources. Ferguson said he believes that Truscott wants to be sure this process is an information-based approach

rather than opinion-based. Truscott said this is correct and added that this is important to the CCT and the YN because these details are required by BPA to participate in cost sharing. Ferguson asked about the Accords process? Truscott said the CCT have signed a 4-year extension of their Accord with BPA. Hillman said the HCP Tributary Committees are relying on the UCRTT who is developing a robust, multi-criteria decision framework for prioritizing enhancement actions. Truscott stated that the HCP Tributary Committees are relying on output from the UCRTT, and Hillman confirmed that to a large degree this is the case.

- *Site Visits*: The HCP Tributary Committees identified completed projects to visit next year. There are 10 to 12 projects that members would like to see. The HCP Tributary Committees will coordinate with project sponsors and landowners to identify a date for the tours, which will likely be in late summer or early fall 2019.
- *Next Meeting*: The next meeting of the HCP Tributary Committees will be on November 8, 2018, if necessary. *(Note: due to lack of agenda items, the HCP Tributary Committees will not meet in November; if necessary, the HCP Tributary Committees will meet on December 13, 2018.)*

Hillman updated the HCP Coordinating Committees on the following actions and discussions that occurred during the HCP Hatchery Committees meeting on October 17, 2018 (*note: joint HCP Hatchery Committees/PRCC Hatchery Subcommittee items are noted by "joint"*):

- *National Marine Fisheries Service (NMFS) Consultation (joint)*: NMFS provided the HCP Hatchery Committees with the Draft Environmental Assessment for Upper Columbia River Steelhead and Summer/Fall Chinook Salmon Programs. Comments are due to NMFS by November 2, 2018.
- *Presentation: Orcas and Hatchery Production (joint):* Eric Kinne (WDFW) provided a presentation to the HCP Hatchery Committees titled, "Southern Resident Killer Whales." Kinne described the current status, range, and diet of the Southern Resident Killer Whale population and noted that Chinook salmon can make up 96% of the whales' diet. He also described the Governor's Executive Order, which established a Task Force charged with developing an action plan. The Task Force set up three working groups: vessels, contaminants, and prey groups. The prey group identified actions for habitat restoration and protection, predation, hatcheries, harvest, hydropower, and food webs. Modeling determined that lower Columbia, upper Columbia, and Snake River Chinook salmon are important prey for the whales. Thus, among other things, the working group is looking for opportunities to increase hatchery production within existing facilities. The goal is to increase fish production by 50 million fish coastwide. Following the presentation, the HCP Hatchery Committees discussed issues associated with managing the proportion of hatchery-origin spawners and proportionate natural influence, variable ocean conditions, No Net Impact calculations, permitting, Endangered Species Act constraints, broodstock availability, and costs. Hillman said the

HCP Hatchery Committees will continue discussing this topic pending more information from the Task Force. Ferguson asked if Kinne's presentation is available for distribution. Hillman said it is uploaded on the HCP Hatchery Committees extranet site and he can also email Ferguson a copy. Ferguson asked if density dependence was discussed. Hillman said yes, related to variable ocean condition.

- *Conservation Program Size (joint):* The HCP Hatchery Committees are looking at the possibility of revising the size of the conservation programs. Only the allocation of production between the conservation and safety net programs may change (total hatchery production will not change). Keely Murdoch (YN HCP Hatchery Committees Representative) shared with the HCP Hatchery Committees the work she and Mike Tonseth (WDFW HCP Hatchery Committees Representative) are doing to estimate the size of the conservation programs. Murdoch and Tonseth resurrected the tool used during the No Net Impact recalculation, updated several but not all of the parameters with recent data, and ran it for the Nason spring Chinook salmon program. The HCP Hatchery Committees are reviewing the tool and its outputs and will look to populate all the model parameters with the most recent information. Discussion on this topic will continue over the next few months.
- *Next Meeting*: The next meeting of the HCP Hatchery Committees will be on November 15, 2018.

III. Douglas PUD

A. Douglas PUD 2020 Verification Survival Study Plan (Tom Kahler)

Tom Kahler recalled, the draft 2020 Wells Project Survival Verification Study Plan was distributed to the HCP Coordinating Committees by Kristi Geris on September 24, 2018. The draft plan is available for a 63-day review with edits and comments due to Kahler by Tuesday, November 27, 2018. John Ferguson said Douglas PUD will request a vote for approval during the HCP Coordinating Committees meeting on December 4, 2018. Kahler asked the Wells HCP Coordinating Committee if there are questions at this time.

Kirk Truscott said one possible issue is the assessment of potential differences between treatment and control groups relative to physiological conditions (e.g., injuries and disease). He recognized that there is a need for this but how it relates to the run at large without producing a bias one way or another is a question. He said a survival estimate is being determined by testing control groups consisting of the best of the best, when clearly the run at large will have something less robust. He said, for example, average fish size is different across species and even within species for natural-origin versus hatchery-origin fish. He said size can matter, for example, if large summer Chinook salmon (summers) are released, then would result in a survival estimate that is biased high. He also noted that this draft 2020 Wells Project Survival Verification Study Plan includes a fair number of references on this; however, not all of these references are included in the reference section. He said

the referenced Bickford et. al 2011 report might provide more information. Kahler clarified that the Bickford et. al 2011 report is the last survival report (i.e., Final 2010 Wells Project Survival Verification Study Report). Truscott said the question is how to avoid biasing high and low, or how to ensure the two study groups are representative of the run at large fish. Kahler clarified that there will be no size grading during tagging; rather, all fish set aside for the study will be used. He said fish will go into common vessels following handling and tagging (which will include the full range of fish sizes available), and only immediately prior to release will fish be randomly assigned to release containers, and those containers will be randomly assigned to release location. Truscott asked about the fish per pound at release, noting that the condition factor for hatchery fish will likely be different than for at large in-river migrants. He also asked about feeding regimes to obtain length targets. Kahler said the Bickford et. al 2011 report includes details on the size ranges used in 2010, and he anticipated that the details in that report would answer many of the questions posed today.

Keely Murdoch said Truscott made good comments and she has similar concerns; however, she is also unsure how to easily resolve these issues. Murdoch said she also has concerns about what these survival studies may and may not represent. She said these fish are representing hatchery yearling summer Chinook salmon, which can match the size of hatchery spring Chinook salmon, but how representative of natural fish is of question and the run timing is different. She said some data are indicating that wild fish are entering the system early. She asked if these survival studies are representing these wild fish? She recognized that the HCPs do not stipulate between hatchery- and natural-origin fish; however, she said at the core, the HCPs are about protecting natural-origin fish. She said she is unsure how to resolve these questions, but she believes it is important to address these questions and begin thinking and talking about them.

Ferguson said Truscott and Murdoch noted several variables embedded in these survival studies, and he asked the HCP Coordinating Committees for preferences on how to proceed in shaping these tests to be as representative of the run at large as possible.

Kahler said the idea behind this study design, as in all previous efforts, is to minimize the effect of the study on the behavior of the fish. He said really the careful study design is to provide a study that is just testing how fish behave without introducing study effects. He said Truscott and Murdoch raise an interesting question—are the sizes representative of the run at large? He said however this is addressed should be in a manner that does not introduce bias.

Andrew Gingerich said another consideration to keep in mind is these fish have been handled and have a tag burden. He said based on the literature, regardless of what tag is used, any tag negatively impacts survival of the fish. Truscott agreed and said, how does the study effect negative bias as well as positively bias—it goes both ways. Murdoch said she is unsure this is true because these fish will be raised in-hatchery and PIT-tagging will occur fairly well in advance; therefore, if a fish is in poor

condition at tagging it will likely already be dead before release. She said that is, tag burden would be resolved by the time of release. Ferguson said the treatment and control fish are treated the same, so the difference is project effects (not tagging and handling). He asked if the tagged fish represent the Plan Species in the way the HCP Coordinating Committees want, and Murdoch said yes, if the range of conditions and tagging are spread the same. Kahler said this is the case, and he said he will provide the Final 2010 Wells Project Survival Verification Study Report (Bickford et. al 2011) to Geris for redistribution to the HCP Coordinating Committees, which goes into great detail on how these aspects of the study design are addressed. *(Note: Kahler provided this report following the meeting on October 23, 2018, which Geris distributed to the HCP Coordinating Committees that same day.)*

Ferguson asked what is the next step? Truscott said he is just interested in ensuring that fish are representative in size. Kahler said the plan is to release 15 replicates from mid-April to mid-May 2019, and the Wells HCP Coordinating Committee can discuss if this is representative. Truscott asked at what point in time and what is the process for addressing this situation where fish are released at the mouth of the Okanogan River when project effects extend upstream 15 kilometers. He said those fish, in his opinion, are underrepresented. Kahler asked if there is something about this inundation zone that is different? Truscott said in early- to mid-May, river temperatures are fairly cold for nonnative predators. He said if anything, perhaps migrations are longer. He said walleye, pikeminnow, and small mouth bass feed in fairly cold water; however, water velocity will likely affect their ability to prey on juvenile salmonids. He suggested testing this by calculating relative survival at two release sites. He asked what level of predation is needed to detect differences? He added that he is unsure about sample size requirements to test this. Ferguson said this may require a different study design. Truscott said conceptually this is not different; rather, it is just an additional site. Ferguson said a power analysis would be needed to get at predation questions. Gingerich said cormorants, white sturgeon, and bull trout would be added to the list of predators.

Truscott restated his question as follows: what is the process for discussing and implementing a potential change to the HCPs? He said he is unaware of any language which explains how to change the HCPs. Kahler said he does not believe the topic has come up before. He said SOAs are amendments to the HCPs. Ferguson said another option is to consult the HCP Policy Committees. He suggested asking whether the HCP Coordinating Committees can make this type of change to the HCPs without policy-level approval.

Gingerich said he believes there may be some concern about the Lower Okanogan River Basin. He asked how to separate project effects from other things going on in the lower basin, such as warmer water temperatures, more sediment, and industrial effects. Truscott said this is true for any location. Gingerich said in the Methow River Basin, there is less concern. He asked what makes the

Okanogan River Basin more of a predator location? Truscott said the reservoir is a good location for predators. Murdoch said she is unsure if project effects and non-project effects need to be separated. She said the PUDs are responsible for the zone of influence. She said a lot is happening in the Columbia River the PUDs are not responsible for, including nonnative predators. She said she does not see where this argument makes sense because these things cannot be separated anywhere. Truscott said there must be some way to address this information or certain issues.

Ferguson recalled that comments on the draft 2020 Wells Project Survival Verification Study Plan are due November 27, 2018, with discussion and a vote on December 4, 2018. He suggested considering how representative the study is and reporting this in the comments. He asked if there is room in the schedule to approve the study design and if the representativeness issue needs more thought and discussion, can this be ongoing after the vote? Kahler said from a fish cultural standpoint, Douglas PUD needs to know right away if the Wells HCP Coordinating Committee is seeking a different size trajectory for the fish. He said the study fish are eggs now, so there is time; however, once the fish leave the start tanks Douglas PUD needs to know. Truscott said he doubts the Wells HCP Coordinating Committee will conclude making the fish larger. Kahler said reviewing the Bickford et. al 2011 report may answer questions.

Kahler will consult Shane Bickford (Douglas PUD HCP Policy Representative) about: 1) the impetus for selecting study fish release locations at the mouths of the Methow and Okanogan rivers (versus farther upstream) for Douglas PUD survival verification studies; and 2) if and how the Wells HCP can be amended or modified based on new data. Lance Keller will consult Alene Underwood (Chelan PUD HCP Policy Representative) about if and how the Rock Island and Rocky Reach HCPs can be amended or modified based on new data.

Kahler said the selected release sites may have something to do with release methods. He said Douglas PUD has attempted releases in the Okanogan River and the water is so turbid it put a lot of stress on the fish at release.

B. Douglas PUD Spill Prevention Control and Counter Measures Plan (Andrew Gingerich)

Andrew Gingerich said a Douglas PUD SPCC Plan was distributed to the HCP Coordinating Committees by Kristi Geris on October 3, 2018. Gingerich said Douglas PUD's Clean Water Act Section 401 Water Quality Certification includes a requirement to update a SPCC Plan, and then FERC adopted this into Douglas PUD's FERC License, stipulated consultation with various agencies, and filing within 1 year. Gingerich said Douglas PUD filed the initial Douglas PUD SPCC Plan on October 1, 2013, and FERC approved the plan on January 24, 2014. Gingerich said there is also a requirement to update this document every 5 years or more frequently as necessary. He said Douglas PUD recently updated the plan, which includes feedback from the U.S. Environmental

Protection Agency following a tour of the Wells Project. He said the plan is currently available for a 30-day review with edits and comments due by Friday, November 2, 2018. He said the document is also out for Aquatic Settlement Work Group review, which is important notably because the Washington Department of Ecology is represented in this work group. He said FERC also requires consultation with the Bureau of Indian Affairs and NMFS, who are not represented on the Aquatic Settlement Work Group.

Gingerich said this plan is designed to be a preventative and response document. He said it outlines where oil products are used and stored on site. He said the plan outlines rules to prevent an oil release to the river. He said in the event of an oil spill the plan outlines the steps and approach for dealing with the spill and who to contact.

Gingerich suggested a vote via email following the review period rather than approval waiting until the HCP Coordinating Committees meeting on December 4, 2018. John Ferguson asked what changed in the updated plan versus the original? Gingerich said he is unsure, but Lori Morris (Douglas PUD Safety Specialist) would have the best information on the revisions. Kirk Truscott said a tracked changes version would be nice for an expedited review. Gingerich said he will determine whether a draft Douglas PUD SPCC Plan is available in tracked changes to clearly show updates in the current draft for review (2018) compared to the last FERC-approved final plan (2013) and will provide this redlined draft to Geris for distribution to the HCP Coordinating Committees. Gingerich said Douglas PUD will either request a vote via email, or depending on comments received, may request approval during the HCP Coordinating Committees meeting on December 4, 2018. *(Note: Gingerich provided a list of changes between the two plans to Geris on November 9, 2018, which Geris distributed to the HCP Coordinating Committees that same day.)*

IV. Upper Columbia Salmon Recovery Board

A. Draft UCSRB Hydropower Background Summary (Melody Kreimes and Greer Maier)

Melody Kreimes (UCSRB Executive Director) provided a brief background about UCSRB and the Integrated Recovery effort and introduced Greer Maier (UCSRB Chief Scientist). Maier shared a presentation titled, "UCSRB Integrated Recovery" (Attachment B), which was distributed to the HCP Coordinating Committees by Kristi Geris following the meeting on October 23, 2018.

Slide 2 of Attachment B

Maier recalled this integrated recovery process was first laid out in the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan in 2007. She said UCSRB (the Board) initially set up a report card process and grading system which evaluated different management areas; however, this

process was not well-supported. She said the Board then took another approach geared at compiling information on these different management areas and checking in with resource managers in terms of progress in accomplishing established objectives and goals. She said the Habitat Summary Report is finished (2014), and the Hatchery Summary Report was also just adopted by the Board in December 2017. She reviewed the Integrated Recovery goals and said these are the same goals for this process (Hydropower Summary Report).

Slide 3 of Attachment B

Maier reviewed the process chart. She said resource managers are working together through this process, which involves multiple steps where partners are engaged along the way. She said ultimately these steps feed into a single workplan.

Slide 4 of Attachment B

Maier reviewed the levels of certainty. She said the Board did not want to get into contentious issues in these summaries; rather, these summaries are more about information. She said hydropower was a challenge regarding compiling all the available information because there are so many components to hydropower.

Slide 5 of Attachment B

Maier said one meeting was convened to discuss what direction to take, and the draft Hydropower Summary Report was compiled in coordination with the Mid-Columbia PUDs (Grant, Chelan, and Douglas PUDs), the YN, and the CCT, among others. She said the final draft is on a tight timeline, with final approval targeted for December 13, 2018. She said the approval process will be similar to the Hatchery Summary Report.

Slide 6 of Attachment B

Maier reviewed the reporting timeline, which concludes in 2019/2020 with discussions with partners.

Slide 7 of Attachment B

Maier reviewed priorities for this process. She wants everything to be clear, and for this to be a collaborative process. She said she is not the expert, and she really appreciates the opinions of the HCP Committees members.

Slide 8 of Attachment B

Maier reviewed members of the Hydropower IRTAG. She said hopefully all of these members will be actively involved in the review process. She said a draft Hydropower Summary Report will also be distributed to HCP Coordinating Committees for review.

Slide 9 of Attachment B

Maier said the first draft Hydropower Summary Report was distributed a little while ago. She said the draft was distributed without a lot of preamble and she apologized for this. She requested that reviewers not to get into the weeds on editorial edits; rather, to focus on the technical information, content, missing information, etc. She asked that IRTAG members bring comments and edits back to the next IRTAG meeting in November 2018. She said she will provide the Draft UCSRB Hydropower Background Summary email, including the Doodle Poll request to schedule the next IRTAG meeting, to Geris and Denny Rohr (PRCC Facilitator) for distribution to the HCP Coordinating Committees and PRCC, respectively. *(Note: Maier provided this email to Geris and Rohr following the meeting on October 23, 2018. Geris distributed this email to the HCP Coordinating Committees that same day.)*

Slide 10 of Attachment B

Maier reviewed their next steps. Kreimes reiterated the request for IRTAG members to bring substantive comments to the next IRTAG meeting to be discussed, as opposed to addressing and coordinating comments in writing. She said members can provide comments in redline strikeout; however, she prefers discussing these in-person during the next IRTAG meeting. Greer said the key points at the beginning of the report will be revised after all comments and edits are incorporated. Kreimes said there will not be another draft report distributed until after the next IRTAG meeting. Greer said she will have a list of comments received to date.

V. Chelan PUD

A. Rocky Reach Dam Turbine Unit C1 Update (Lance Keller)

Lance Keller said, as reported during the HCP Coordinating Committees meeting on September 25, 2018, Rocky Reach Dam mechanics received the engineered trunnion seals from the contractor. Keller said Rocky Reach Dam mechanics installed the seals and initial testing occurred from September 29 to 30, 2018. He said the unit was pressurized and inspected for leaks. He said no leaks were detected and the draft tube gate was removed allowing the turbine pit to be occupied by water to a level equal with tailrace water elevation. He said the unit remained in this status over the weekend and was not operational during this time. He said on Monday, October 1, 2018, the unit was dewatered to inspect for loss of oil and no oil leak was found. He said mechanics returned the unit to service with periodic inspections for oil in the tailrace. He said almost 24 hours later, oil loss from the unit was observed and the unit was immediately taken offline.

Keller said Rocky Reach Dam mechanics believe the issue is leaky trunnion seals due to trunnion bushing wear; however, everything is being inspected to verify this is the case. He said the plan forward is to start dismantling the unit to inspect the trunnion bushing seal, which is designed to take up any wear of the bushing. He said mechanics believe the issue may be the bushing itself,

which will be replaced if this is the case. He said mechanics will also be looking for other sources of oil loss during the effort. He said the timeline is tentative; however, current estimates are for Turbine Unit C1 to be returned to service from May to June 2019. He said in order to replace the bushing, mechanics need to dismantle the unit and place the turbine hub on the powerhouse floor. He said the bushing is on order, if not already on site, and the mechanics need to reshuffle other scheduled unit work to complete this fix. He said because of this outcome, it is likely to expect that the 2019 fish bypass season will start without Turbine Unit C1 being in service.

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

Lance Keller said over the past month and a half, Chelan PUD has held one-on-one discussions about this topic with John Ferguson and the individual Rock Island HCP Coordinating Committee representatives. Keller shared five Gantt charts with the Committee. The charts depicted different maintenance timelines for discussion. *(Note: These timelines are tentative and are not available for distribution.)*

Keller said the first Gantt chart shows how Turbine Units B1 to B4 were originally scheduled for repair starting in April 2016. He said these units were very aggressively scheduled and each unit was supposed to be in and out of repair in a little over 1 year, with multiple units being worked on simultaneously. He said based on recent events and safety concerns, Chelan PUD needs to have these units unstacked moving forward. He said the second Gantt chart shows the original schedule for upcoming work, as well as current risks that are present in other Powerhouse 1 units. He explained the color-coding status, as follows:

Color	Definition
Red	Risk of units coming out of service
Yellow	Mothballed
Blue	Dewatering
Green	Work
Purple	Commissioning after maintenance

Keller said the vertical bright blue represents the HCP check-in study scheduled in 2020.

Keller said Chelan PUD has also been closely looking into safety concerns at the Rock Island Dam Powerhouse 1, such as considering how many times staff are tasked with completing repetitive projects in a short time period. He said considering this, among other things, the third, fourth, and fifth Gantt charts show a reworking of the maintenance schedules. He said all maintenance activities for Turbine Units B1 to B4 are now unstacked. He said there is a slight variation for how to address Units B5 and B8. He said the dotted vertical line shows there will be significant work underway when

the survival study is scheduled to take place in 2020. He said one question Chelan PUD is discussing is how these outages will affect powerhouse operations and unit availability during the check-in survival study. He said, therefore, Chelan PUD is considering the need to possibly move the check-in study to 2021, when Project operations will be more representative of its typical operational state. He said the goal is to complete most repairs before May 2021. He said risks have been calculated and incorporated into these schedules, and if Chelan PUD had to choose a schedule it would be the third schedule where three of the small units (Turbine Units B1 to B4) would be online the 2021 survival verification test, as well as addressing the possible risk that is present in Turbine Unit B5.

Keller shared a figure depicting the proportion of fish passing each route at Rock Island Dam during the spring fish passage season under normal project operating conditions where all units and spill bays are available for operation (page 1 of Attachment C), which was distributed to the HCP Coordinating Committees by Kristi Geris on October 24, 2018. Keller explained that Powerhouse 2 is on the left, the center adult fishway is in the middle of the spillway separating Spillway 2 and Spillway 1, and Powerhouse 1 is on the right. He said the majority of river flow approaches the area near Powerhouse 2 and Spillway 2 at Rock Island Dam and given the bathymetry in the forebay and these flow patterns, the majority of fish approach the project from the middle of the spillway to river-right. He said Powerhouse 2 Turbine Unit U1 (green dot closest to spillway river-right) is the first unit to come online and the last unit offline. He said Powerhouse 2 is sequentially loaded from Turbine Unit U1 to river-right until fully loaded. He said Powerhouse 2 operation is the priority during the fish passage season. He said if additional units are brought online after all available units in Powerhouse 2 are operating, Turbine Unit B10 (green dot closest to the spillway on river-left) is the first online in Powerhouse 1, and further unit operation occurs sequentially, moving from Turbine Unit B10 to B1. He said the dots on the spill bays represent modified spill gates, which provide a spill route to fish while not impacting or adding to total dissolved gas (TDG) produced from the spillway. He said most of these modified spill bays are between the center adult fish ladder and Powerhouse 2, while there is one next to Powerhouse 1. He said when considering prioritizing work between Turbine Units B5 and B8 (i.e., if there has to be one unit offline in Powerhouse 1, which would be the case), Chelan PUD would select Turbine Unit B8 to be offline, giving the maintenance priority to Turbine Unit B5. He explained their reasoning is that if fish approach Powerhouse 1 and Turbine Unit B8 is offline, Turbine Units B9 and B10 have the spillway and a modified spill bay right next to these units, which provides fish with a good opportunity to pass the project through the spillway. He said if Turbine Unit B5 is offline, fish that approach the middle of the Powerhouse 1 near Turbine Unit B5 are going to be more likely to pass through a turbine unit than the spillway.

Keller reviewed the route-specific passage percentages presented in Page 1 of Attachment C. He noted that the spring freshet dictates how many units are online and passage percentages can

change across years; however, the majority of juvenile yearling Chinook salmon passage occurs via Powerhouse 2 and Spillway 2 at Rock Island Dam.

Kirk Truscott asked what proportion of fish pass via Turbine Units B10 to B7 in Powerhouse 1. Keller said this resolution is not available for Rock Island Dam. He said he assumes that fish passage via Turbine Units B10 to B7 is higher than via Turbine Units B6 to B4 because the majority of fish are approaching the project from the center to river-right and based on the unit operating sequence of Powerhouse 1, Turbine Units B10 to B7 have a higher probability of operating more than Turbine Units B6 to B4. John Ferguson asked if river flow is higher through Turbine Units B5 to B10, and Keller said yes compared to Turbine Units B1 to B4. Truscott asked if there is any indication of whether subyearlings follow suit, and Keller said no information is available on this. Keller said the majority of fish pass via right-river passage routes and Chelan PUD's preference is to avoid creating gaps in Powerhouse passage routes.

Keller recalled Truscott's past comments that Rock Island Dam's current operations are different than in the past and how can Chelan PUD be certain the current operations are good for fish passage. Keller said the overall powerhouse capacity at Rock Island Dam when all units are available in both powerhouses is 220,000 cubic feet per second (220 kcfs). He said during spring 2018, overall powerhouse capacity at Rock Island Dam was just under 174 kcfs, resulting in additional spill beyond the 10% target due to diminished project capacity. He shared a figure showing Columbia River usable storage (Page 2 of Attachment C). He said as river flow increases at Rock Island Dam, operators have two choices with the incoming water due to a lack of reservoir storage; operators either need to spill or generate. He said with decreased powerhouse capacity, there is only so much that can be generated, and this results in additional hydraulic spill through additional gates, providing additional non-turbine routes for fish. He said if the Project is up against its TDG limits, additional units will be brought online to not further increase TDG levels, even if Chelan PUD has to sell power at negative pricing. He said the early portion of the 2018 subyearling run most likely benefited from additional spill due to higher flows well-above the diminished generational capacity of Rock Island Dam. He said over the last few years, there have been greater contributions in spill due to diminished powerhouse capacity.

Keller said Keely Murdoch brought up a good question about how a shift from 2020 to 2021 would affect recalculation of the HCP hatchery programs. Keller said he spoke with Alene Underwood and Catherine Willard (Chelan PUD HCP Hatchery Committees Representative) and reviewed the Rock Island HCP. Keller said the timelines for the check-in studies and hatchery recalculations are not connected. He said the HCP stipulates that recalculation will occur in 2013 and in 10-year intervals, and the confirmation timeline is based on when Phase III Standards Achieved is reached, which was in 2010 for Rock Island Dam. He said, therefore, these are not connected in terms of a formal

timeline; however, the check-in results do inform recalculation. Murdoch said it would be helpful to have the latest data opposed to the same data from 10 years prior, because this would essentially mean recalculating hatchery programs with the same data for 20 years. She asked if there are no new data is recalculation performed anyway? Keller said there will still be updated smolt-to-adult ratios and other hatchery performance data.

John Ferguson asked about a Rock Island HCP representative water year clause. Keller said yes, Steve Hemstrom has been working on an updated flow duration curve, which he is close to bringing to the HCP Coordinating Committees for decision. Keller recalled this topic came up in 2013, and then the Wanapum Dam incident happened which postponed working on the flow duration curve. He said he believes Douglas PUD also relies on Chelan PUD's flow duration curve. Tom Kahler said Douglas PUD does not have a requirement for a flow duration curve; rather, the Wells HCP includes language that Douglas PUD will consider these data. Kahler said Douglas PUD decided to wait to see what Chelan PUD comes up with.

Keller said another consideration is if the Rock Island Dam check-in study moves to 2021, will the next verification study be conducted in 9 or 10 years? Keller said Chelan PUD would propose it would be in 10 years, because the timeline does not start until results are confirmed. He said, for example, as stated in the Rock Island HCP, if targets are missed Chelan PUD has two additional years to reach targets before a change in phase designation occurs, reinitiating phase designation studies. He said if there are no results until 2022, then the next confirmation study would be 10 years later in 2032.

Keller asked if the Rock Island HCP Coordinating Committee would be supportive of allowing Chelan PUD to defer the check-in study 1 year to 2021? He said an SOA is currently being drafted, but he is curious of Committee members' initial thoughts. Truscott said it makes sense to conduct the study under test conditions that are closest to the normal operating conditions, otherwise the results may be questioned. Murdoch said she agrees with Truscott, that it is worth waiting. Chad Jackson said WDFW supports further discussions about pushing the check-in study from 2020 to 2021; however, he is not yet ready to make a decision. Scott Carlon said NMFS is supportive of moving the study to 2021 to be more representative.

Truscott said he still has questions about whether something needs to be done to assure adequate survival is being obtained, for summer migrants in particular. He asked if Rock Island Dam should be spilling more than 20%? He said most river flow at Rock Island Dam is passed through the powerhouses with 20% spill; however, with a different configuration in the powerhouses, should this be adjusted? He said in his experience, summers are more shoreline-oriented than spring migrants. Kahler said fyke net data at Wells Dam indicate more summers pass Wells Dam at the historic river thalweg (left bank) compared to springers which pass via the right bank. Truscott recalled work for Douglas PUD years ago where summers were not found in the middle of the river. Andrew Gingerich

said seining data from 2013 showed fish feeding at the surface, not migrating. Keller said unfortunately, there is a large data gap here. Truscott asked if there is something more to do? Keller said 20% spill is quite a bit of spill and was determined to be above required levels to meet spring migrant survival targets, as Chelan PUD achieved survival standards under both 20% and reduced 10% spill operations at Rock Island Dam for all spring migrating Plan Species. He said until Phase designation survival studies are conducted for subyearing Chinook salmon this data gap will be present; however, Chelan PUD feels that 20% spill is most likely more than adequate and that a spill reduction may be possible should survival evaluations be possible for subyearling Chinook salmon for the Rock Island Project area in the future. Ferguson pointed out that in recent years runoff has occurred earlier, which results in lower flow during summer and less operation of Powerhouse 1 as Powerhouse 2 and the 20% spill can accommodate the lower flow. Keller said he will determine the threshold whereby operations at Rock Island Dam under summer spill operations begin to shift from Powerhouse 2 and spill to Powerhouse 1.

C. 2018 Rocky Reach and Rock Island Fish Spill Report (Lance Keller and Thad Mosey)

Lance Keller said the draft 2018 HCP Rocky Reach and Rock Island Fish Spill Program Report was distributed for review to the HCP Coordinating Committees by Kristi Geris on September 24, 2018, and a revised report was distributed on October 19, 2018. Keller said changes included consistently reporting Rocky Reach Dam and Rock Island Dam summer spill data. He recalled discussing missing the initiation of summer spill at Rocky Reach Dam to provide spill coverage for 95% of the subyearling run based on dates; however, there was prior biological benefit in the form of hydraulic spill and the Rocky Reach HCP Coordinating Committee was supportive of capturing this biological benefit in the report while preserving the dates when summer spill was turned on and off. He said the Rock Island Dam graph now shows hydraulic spill in a format similar to the Rocky Reach Dam graph. He said the numbers changed slightly, as follows:

Project	Declared Summer Spill	All Spill (including hydraulic spill)
Rocky Reach Dam	May 25 to August 6 – 94.1% coverage	May 18 to August 6 – 96.5% coverage
Rock Island Dam	May 25 to August 14 – 99.3% coverage	May 15 to August 14 – 99.4% coverage

Keller recalled that Chelan PUD had an action item to compare fish spill coverage data from 2011 and 2012 to data from 2018. Keller said in 2011, Rocky Reach Dam spilled from June 4 to August 12 and covered 96.8% of the juvenile outmigration, and the summer spill percentage was 28.5%. He said in 2012, Rocky Reach Dam spilled from May 26 to August 9 and covered 97.2% of the juvenile outmigration, and the summer spill percentage was 38.6%. He said there were no issues of 1 day making a difference for spill in either year. Andrew Gingerich said in 2018, there was a high runoff from March to May. He said 2011 and 2012 has a more normal peak freshet in June and July.

The Rocky Reach and Rock Island HCP Coordinating Committees representatives present approved the 2018 HCP Rocky Reach and Rock Island Fish Spill Program Report, as revised. *(Note: Jim Craig provided USFWS approval of the report via email on November 20, 2018.)*

D. HCP Coordinating and Hatchery Committees Email Distribution List and Extranet Access – Bill Towey (Lance Keller)

Lance Keller said Bill Towey is a relatively new Senior Fisheries Scientist for Chelan PUD. Keller said Towey is a backfill for Steve Hays (Fish & Wildlife Senior Advisor) and is assisting with the HCP committees and fish forums. Keller said Chelan PUD is requesting that Towey be added to the HCP Hatchery and Coordinating Committees email distribution lists and provided access to the respective extranet sites. HCP Coordinating Committees representatives present agreed to add Towey to select HCP Hatchery and Coordinating Committees email distribution lists and provide Towey with visitor access to the HCP Hatchery and Coordinating Committees extranet sites.

Kristi Geris will coordinate with Sarah Montgomery (HCP Hatchery Committees support staff) and Julene McGregor (Douglas PUD Information Systems Staff) to add Towey to select HCP Hatchery and Coordinating Committees email distribution lists and provide Towey with visitor access to the HCP Hatchery and Coordinating Committees extranet sites. *(Note: Geris contacted Montgomery and McGregor, as discussed, following the meeting on October 23, 2018.)*

VI. HCP Administration

A. Next Meetings (John Ferguson)

The next scheduled HCP Coordinating Committees meeting is on December 4, 2018, to be held in-person at the Grant PUD Wenatchee Office in Wenatchee, Washington. *(Note: the HCP Coordinating Committees agreed to reschedule the "November 2018" meeting to accommodate attendance to the annual USACE Anadromous Fish Evaluation Program conference in Portland, Oregon, from November 27 to 28, 2018.)*

The December 18, 2018 meeting will be held by conference call, if needed. *(Note: this meeting date was rescheduled from December 25, 2018, to accommodate the holiday.)*

The January 22, 2019 meeting 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 UCSRB Integrated Recovery Presentation
Attachment C Route-Specific Fish Passage at Rock Island Dam and Columbia River Usable Storage

Attachment A
List of Attendees

Name	Organization
John Ferguson	Anchor QEA, LLC
Kristi Geris	Anchor QEA, LLC
Tracy Hillman††	BioAnalysts
Lance Keller*	Chelan PUD
Tom Kahler*	Douglas PUD
Andrew Gingerich*	Douglas PUD
Scott Carlon*†	National Marine Fisheries Service
Chad Jackson*†	Washington Department of Fish and Wildlife
Kirk Truscott*	Colville Confederated Tribes
Keely Murdoch*	Yakama Nation
Greer Maier***	Upper Columbia Salmon Recovery Board
Melody Kreimes***	Upper Columbia Salmon Recovery Board
Denny Rohr***†	D. Rohr & Associates, Inc.
Peter Graf***	Grant PUD
Tom Skiles***†	Columbia River Inter-Tribal Fish Commission

Notes:

* Denotes HCP Coordinating Committees member or alternate

† Joined by phone

†† Joined by phone for the HCP Tributary and Hatchery Committees Update

*** Joined for Upper Columbia Salmon Recovery Board agenda item