

Memorandum

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

Date: January 27, 2019

From: John Ferguson, HCP Coordinating Committees Chairman

cc: Kristi Geris

Re: Final Minutes of the December 4, 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, December 4, 2018, from 10:00 a.m. to 1:00 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: 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).
- 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 I-C).
- Lance Keller will revise the Statement of Agreement (SOA), *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*, as discussed, and will provide the final SOA to Kristi Geris for distribution to the HCP Coordinating Committees (Item II-A). (*Note: Keller provided the final SOA to Geris on December 5, 2018, which Geris distributed to the HCP Coordinating Committees that same day.*)
- Kristi Geris will coordinate with Tracy Hillman (HCP Tributary Committees Chairman) and Julene McGregor (Douglas PUD Information Systems Staff) to add Mary Mayo (Douglas PUD

Support Staff) to select HCP Tributary Committees email distribution lists and provide Mayo with administrator access to the HCP Tributary Committees extranet site, as approved by the HCP Coordinating Committees (Item IV-A). (Note: Geris contacted Hillman and McGregor, as discussed, on December 5, 2018, and Mayo was added to the distribution lists and extranet site.)

- Tom Kahler will inquire internally about measures Douglas PUD plans to employ to reduce fish size at release for the Douglas PUD 2020 Survival Verification Study, including what fish size might be achieved, and will report back to the HCP Coordinating Committees (Item IV-E).
- Tom Kahler will inquire internally about alternative start and end dates for the Douglas PUD 2020 Survival Verification Study to ensure the release schedule matches the run timing of target species as much as possible and will provide different scenarios for consideration to the HCP Coordinating Committees (Item IV-E).
- The HCP Coordinating Committees meeting on December 18, 2018, will be held **in-person** at the Grant PUD Wenatchee Office in Wenatchee, Washington (Item V-B).

Decision Summary

- The Rock Island HCP Coordinating Committee representatives present approved the SOA, *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*, as revised (Item II-A).
- The Wells HCP Coordinating Committee representatives present approved the Douglas PUD Spill Prevention Control and Counter Measures (SPCC) Plan, as revised (Item IV-C).

Agreements

- HCP Coordinating Committees representatives present agreed to add Mary Mayo to select HCP Tributary Committees email distribution lists and provide Mayo with administrator access to the HCP Tributary Committees extranet site (Item IV-A).

Review Items

- A Wells Project Land-Use Permit Application for a Joint-Use Dock on Tract 75 (Gebbers Farm) 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 an indication of no comments due to Tom Kahler by Monday, January 14, 2019 (Item IV-D).
- A Wells Project Land-Use Permit Application for a Joint-Use Dock on Tract 1131 (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 an indication of no comments due to Tom Kahler by Monday, January 14, 2019 (Item IV-D).

- 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 an indication of no comments due to Tom Kahler by Monday, January 28, 2019 (Item IV-D).
- A Draft 2018 Post-Season Bypass Report and Passage-Dates Analysis was distributed to the HCP Coordinating Committees by Kristi Geris on December 14, 2018, which is available for a 60-day review with edits and comments due to Tom Kahler by Tuesday, February 12, 2019.
- A Draft 2017 Pikeminnow Report was distributed to the HCP Coordinating Committees by Kristi Geris on December 14, 2018, which is available for a 30-day review with edits and comments due to Lance Keller or Scott Hopkins (Chelan PUD) by Monday, January 14, 2019.
- The revised draft 2020 Wells Project Survival Verification Study Plan was distributed to the HCP Coordinating Committees by Tom Kahler on December 18, 2018. A final revised draft plan for approval was distributed to the HCP Coordinating Committees by Kristi Geris on January 15, 2019. Douglas PUD will request approval of this plan during the HCP Coordinating Committees meeting on January 22, 2019 (Item III-E).
- A Draft 2018 Wells HCP Action Plan was distributed to the HCP Coordinating Committees by Kristi Geris on January 16, 2019, which is available for a 30-day review with edits and comments due to Tom Kahler by Friday, February 15, 2019.
- A draft 2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149 was distributed to the HCP Coordinating Committees by Kristi Geris on January 21, 2019 and is available for review with edits and comments due to Douglas PUD by Monday, February 11, 2019.

Finalized Documents

- The final 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 December 5, 2018 (Item II-A).
- The Final Douglas PUD SPCC Plan was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018 (Item IV-C).
- The Final 2018 Rock Island and Rocky Reach HCP Action Plan was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.
- The Final 2017 Rocky Reach Juvenile Fish Bypass System Report was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.
- The Final 2017 Rock Island Smolt and Gas Bubble Trauma Evaluation Report was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.
- The Final 2018 Rock Island Bypass Monitoring Plan was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.

- The Final 2018 Rocky Reach Juvenile Fish Bypass System Operations Plan was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.
- The Final 2018 HCP Rocky Reach and Rock Island Fish Spill Program Report was distributed to the HCP Coordinating Committees by Kristi Geris on December 11, 2018.

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. The following revisions were requested:

- Lance Keller added: 1) Rocky Reach and Rock Island Adult Fishway Maintenance updates; and 2) Upper Columbia Salmon Recovery Board (UCSRB) Hydropower Summary Report
- Tom Kahler added: 1) HCP Tributary Committees Email Distribution List and Extranet Access request for Mary Mayo; 2) Wells Dam Fishway Maintenance update; and 3) Wells Project Land-Use Permit Applications available for review

B. Meeting Minutes Approval (John Ferguson)

The HCP Coordinating Committees reviewed the revised draft October 23, 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 updated distribution of review items. Lance Keller said he has one additional edit under the Rock Island Dam Powerhouse 1 Maintenance Update. Keller clarified 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. Geris said this edit will be incorporated into the final minutes. HCP Coordinating Committees members present approved the October 23, 2018 meeting minutes, as revised. U.S. Fish and Wildlife Service abstained, because a U.S. Fish and Wildlife Service representative was not present during the meeting on October 23, 2018.

C. Last Meeting Action Items (John Ferguson)

Action items from the HCP Coordinating Committees meeting on October 23, 2018, and follow-up discussions, were as follows. (*Note: italicized text corresponds to agenda items from the conference call on October 23, 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).*

This action item will be carried forward.

- *Lance Keller will review subyearling Chinook salmon sampled at the 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 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 DART (Item I-C). This action item will be carried forward.*
- *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). This action item will be discussed during today's meeting and will also be carried forward.*
- *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). This action item will be carried forward.*
- *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).
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 2011¹) to Kristi Geris for redistribution to the HCP Coordinating Committees (Item III-A).
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).
This action item will be discussed during today's meeting.*
- *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).
This action item will be carried forward.*
- *Andrew Gingerich 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 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).*

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.

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 (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).*

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).* Keller said during summer spill operations when river flow passing Rock Island Dam reaches roughly 140,000 cubic feet per second (140 kcfs), the total number of units online at Rock Island Dam shifts from 8 units to 9 units (operations shift from Powerhouse 2 spill only to also include some operation of Powerhouse 1). He said caveats to this shift include unit efficiency curves and whether the reservoir is draining or filling.
- *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).*

Geris contacted Montgomery and McGregor, as discussed, following the meeting on October 23, 2018.

II. Chelan PUD

A. **DECISION: Statement of Agreement, Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021 (Lance Keller)**

Lance Keller said the 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.

Keller said this SOA was drafted to be straight forward and include an explanation of the driver behind this proposed deferment. He then welcomed edits or comments on the draft SOA.

Kirk Truscott suggested adding to the end of the Agreement Statement, "and allow for testing under representative project operations in 2021." Keller said he can make this edit, as requested.

The Rock Island HCP Coordinating Committee representatives present approved the SOA, *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*, as revised. Keller will revise the SOA, as discussed, and will provide the final SOA to Geris for distribution to the HCP Coordinating

Committees. (Note: Keller provided the final SOA [Attachment B] to Geris on December 5, 2018, which Geris distributed to the HCP Coordinating Committees that same day.)

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

Lance Keller said there are no significant updates to report at this time because Rocky Reach Dam mechanics are working out schedules for unit work and maintenance, fishway outages, and crew schedules to be able to complete the dismantling of Turbine Unit C1. He said he will have another update on this progress during the next HCP Coordinating Committees meeting.

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

Lance Keller said Rock Island Dam Powerhouse 1 maintenance was in a holding pattern until the SOA, *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*, was approved by the Rock Island HCP Coordinating Committee. Keller said he will report approval of the SOA to the Rock Island Dam Maintenance Superintendent; the next steps will include submitting change orders and setting the maintenance schedule moving forward.

D. Rocky Reach and Rock Island Adult Fishway Maintenance Updates (Lance Keller)

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

Rock Island Dam

Keller recalled there are three adult fish ladders at Rock Island Dam, which allows operators to maintain fish passage at one fish ladder while the other two ladders are offline for maintenance. He said having three fish ladders also provides a longer maintenance window, which typically starts around December 1 and ends around February 28 each year.

Keller said the right adult fish ladder at Rock Island Dam was taken offline for annual winter maintenance on December 3, 2018, and a fish rescue was conducted in the upper ladder that same day. He said a fish rescue was planned for the lower ladder, as well; however, the gates installed at the exits allowing the fishway to drain down to an elevation equal to the tailwater did not seal well and the lower ladder did not fully drain in time to conduct a fish rescue. He said a fish rescue is planned for the lower ladder tomorrow, December 5, 2018.

Jim Craig asked if fish encountered in the fishway are netted out, and Keller said yes. Keller further explained that the upper fish ladder is all orifice passage and crews climb through each orifice during the rescue. He reviewed the species recovered from the upper fish ladder, as follows:

Species	Stage/Length	Clip	Count
Chinook salmon	adult	ad-present	1

Species	Stage/Length	Clip	Count
	juvenile	ad-present	10
Steelhead	juvenile	ad-present	6
		ad-clipped	2
Coho salmon	juvenile	ad-present	12
Pikeminnow	NR	NA	23
Sucker	NR	NA	1
Chiselmouth	NR	NA	9

Notes:

ad: adipose

NA: not applicable

NR: not reported

Keller said the recovered adult Chinook salmon was female, not PIT-tagged, and was in prime shape. He said the fish was not scanned for a coded wire tag (CWT), and he recalled a few years ago similar fish were encountered during a fish rescue. Chad Jackson recalled hearing about oddities during fish rescues before and said it would be interesting to collect photographs of these fish. Keller said this may be challenging but is possible. He said Thad Mosey (Chelan PUD Senior Fish Biologist) maintains a tracking sheet of these oddities encountered over the years. Andrew Gingerich asked if the fish might have been from Lake Chelan? Keller said this fish had too much body mass to be from Lake Chelan and said he believes it was anadromous. Jackson suggested in future years, considering securing authority to lethally take these fish to determine what they are. Jim Craig also suggested at least collecting genetic samples. Keller agreed this is a possibility and recalled encountering hatchery-origin *O. mykiss* between 12 and 18 inches in length during fish rescues for the 2017/2018 winter maintenance outages. He said Mike Tonseth (Washington Department of Fish and Wildlife [WDFW] HCP Hatchery Committees Representative) requested approval from the HCP Hatchery Committees to lethally remove these fish to determine what they are. Keller said the HCP Hatchery Committees approved this request on February 21, 2018, and Chelan PUD coordinated with Tonseth before this current fish rescue in case *O. mykiss* between 12 and 18 inches long were again encountered. Keller said, however, none of these fish were encountered when the right ladder was dewatered this year. He said all juvenile steelhead encountered were less than 12 inches in length and had no CWT or PIT tag. He said steelhead will be measured and scanned for CWTs and PIT tags during rescues in the other two fish ladders at Rock Island Dam and the Rocky Reach Dam fish ladder.

Keller noted that typically, only 1 to 3 pikeminnow are encountered, so this year was fairly high in terms of numbers. He said no fish were large in size; rather, they were all within 10 to 14 inches in length.

John Ferguson asked about Pacific lamprey, and Keller said no Pacific lamprey were encountered during this fish rescue. Keller said if Pacific lamprey are encountered, it is typically in the lower ladder.

Keller said when fish rescues are conducted, lockout tagout clearances are required. He said the upper fish ladder only has a few clearance points; however, the lower fish ladder has about 52 clearance points, which requires some time to get through. Ferguson asked which fish ladder is scheduled next for maintenance? Keller said he believes the middle fish ladder is next and then the left fish ladder. He said both ladders require minimal maintenance this outage and will occur after January 1, 2019. He said Biomark will also be on site to investigate a "noise" issue with the PIT-tag detection system.

Rocky Reach Dam

Keller said the adult fishway at Rocky Reach Dam will be taken offline for annual winter maintenance after the holidays around January 2 or 3, 2019. He said maintenance and inspections should be routine and straight forward, and the fishway should be back online before February 28, 2019.

E. Upper Columbia Salmon Recovery Board Hydropower Summary Report (Lance Keller)

Lance Keller recalled that Greer Maier, UCSRB Chief Scientist, presented on the UCSRB Hydropower Summary Report during the last HCP Coordinating Committees meeting on October 23, 2018. Keller said the IRTAG then convened on November 29, 2018, and Chelan PUD felt the meeting was positive. He said Maier is approaching the final draft phase to present to UCSRB. He said this window for comments is rapidly closing. He said there were action items from the IRTAG meeting to provide additional background information, and overall, the report is headed in a good direction.

John Ferguson asked when the deadline for comments is. Tom Kahler said Maier is leaving on vacation soon and she wanted to distribute the final draft before she leaves. Keller agreed and recalled the schedule is fairly aggressive. Keely Murdoch suggested submitting comments as soon as possible. Kahler said the next UCSRB meeting is on December 13, 2018, and he believes Maier would like to have comments before then; however, this may not be feasible. Ferguson suggested contacting Maier about a comment deadline.

Ferguson asked who is represented on the IRTAG. Keller said he, Murdoch, Kahler, and Peter Graf (Grant PUD) participate on the committee; and Murdoch added that Maier encouraged everyone in the local fish forums and committees to participate. Keller said there was good representation at the last IRTAG meeting, including National Marine Fisheries Service (NMFS), WDFW, Bonneville Power Administration, and Grant, Chelan, and Douglas PUDs, among others.

III. HCP Tributary and Hatchery Committees Update

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

Tracy Hillman reported that the HCP Tributary Committees did not meet in November 2018 and will next meet on December 13, 2018, when the HCP Tributary Committees will review six General Salmon Habitat Program proposals.

Hillman updated the HCP Coordinating Committees on the following actions and discussions that occurred during the HCP Hatchery Committees meeting on November 15, 2018 (*note: joint HCP Hatchery Committees/PRCC Hatchery Subcommittee items are noted by "joint"*):

- *Research on Excess Hatchery-by-Hatchery Steelhead:* In early November 2018, about 21,000 excess Hatchery-by-Hatchery Wenatchee steelhead were brought to the attention of the HCP Hatchery Committees. Chelan PUD suggested using some of these excess fish to evaluate the effects of different temperature regimes on precocial maturation. A sample of 500 steelhead will be reared at each of the three facilities (1,500 fish total among Chelan Fish Hatchery, Eastbank Fish Hatchery, and the Chiwawa Acclimation Facility) from mid-November 2018 until early March 2019. Each facility has a different temperature regime; therefore, there is a unique opportunity to evaluate the effects of temperature on precocial maturation. Steelhead from the three groups will be lethally sampled to assess maturation. John Ferguson asked if the HCP Hatchery Committees approved this request, and Hillman said approval was not required because these fish are surplus to the program.
- *Coho Salmon Acclimation at the Twisp Pond in 2019:* The Yakama Nation (YN) will begin the natural production implementation phase of their coho salmon reintroduction plan in 2019. To support this phase of the reintroduction plan, the YN requested to acclimate 110,000 coho salmon in the Twisp Acclimation Pond during spring 2019. Acclimation densities will remain low and fish are expected to be between 15 to 18 fish per pound upon release. The Wells HCP Hatchery Committee approved the request.
- *Wells Implementation Monitoring and Evaluation Plan:* Douglas PUD provided the Wells HCP Hatchery Committee with the 2019 Wells Hatchery Complex Programs Monitoring and Evaluation Implementation Plan. Comments are due to Douglas PUD on December 10, 2018. For contracting purposes, the Wells HCP Hatchery Committee will approve the plan by December 15, 2018.
- *Update from the Geneticists (joint):* Recall, five independent geneticists are addressing the HCP Hatchery Committees questions on how to monitor the effects of hatchery programs on genetics of natural-origin and hatchery-origin fish. One geneticist indicated that all geneticists are in the process of responding to questions and a draft response document should be available to the HCP Hatchery Committees in early 2019.

- *NMFS Consultation (joint)*: NMFS received and is addressing comments on the draft Environmental Assessment for Upper Columbia River Steelhead and Summer/Fall Chinook Salmon Programs. The draft Environmental Assessment will be available for public comments soon.
- *Next Meeting*: The next meeting of the HCP Hatchery Committees will be on December 19, 2018.

IV. Douglas PUD

A. HCP Tributary Committees Email Distribution List and Extranet Access – Mary Mayo (Tom Kahler)

Tom Kahler said Becky Gallaher (Chelan PUD) uploads Wells HCP Tributary Committees-related documents to the Douglas PUD HCP Tributary Committees extranet site. Kahler said the Douglas PUD Clean Water Act Section 401 Water Quality Certification also requires that these documents be uploaded to the Douglas PUD website. He said Mary Mayo (Douglas PUD Support Staff) will be responsible for uploading documents to the website and needs access to these files. Kahler said the request is to add Mayo to select email distribution lists to receive final agendas, meeting minutes, plans, and reports to upload to the Douglas PUD website.

HCP Coordinating Committees representatives present agreed to add Mayo to select HCP Tributary Committees email distribution lists and provide Mayo with administrator access to the HCP Tributary Committees extranet site. Kristi Geris will coordinate with Tracy Hillman and Julene McGregor to add Mayo to select HCP Tributary Committees email distribution lists and provide Mayo with administrator access to the HCP Tributary Committees extranet site, as approved by the HCP Coordinating Committees. *(Note: Geris contacted Hillman and McGregor, as discussed, on December 5, 2018, and Mayo was added to the distribution lists and extranet site.)*

B. Wells Dam Fishway Maintenance Update (Tom Kahler)

Tom Kahler said the east fishway will be taken offline for winter maintenance next week and will be the longer of the two outages this season. He said a contractor is scheduled to polish the fishway windows during this outage. He said the west fishway will be taken offline for winter maintenance after the east fishway is back in service around mid- to late-January 2019.

Jim Craig asked why window polishing is not part of the routine annual maintenance. Kahler said the windows are routinely cleaned; however, over time the windows become scratched and pitted, which requires the more extensive polishing. Lance Keller said this is the same process for Chelan PUD.

C. DECISION: Douglas PUD SPCC Plan (Andrew Gingerich)

Andrew Gingerich recalled a request by Kirk Truscott to 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 to provide this redlined draft to Kristi Geris for distribution to the HCP Coordinating Committees. Gingerich said he provided a redline version showing the changes between the two plans to Geris on November 9, 2018, which Geris distributed to the HCP Coordinating Committees that same day, along with a note indicating Douglas PUD's intention to request approval of this plan during today's HCP Coordinating Committees meeting. Gingerich said this SPCC Plan was also reviewed and approved by the Aquatic Settlement Work Group and the Washington Department of Ecology.

The Wells HCP Coordinating Committee representatives present approved the Douglas PUD SPCC Plan, as revised. The Final Douglas PUD SPCC Plan was distributed to the HCP Coordinating Committees by Geris on December 11, 2018.

D. Wells Project Land-Use Permit Applications (Tom Kahler)

Tom Kahler recalled that the Wells HCP includes a requirement to consider comments from the Parties to the Agreement regarding any land use permit application on Wells Project owned lands. Kahler reviewed the following Wells Project Land-Use Permit Applications available for comment:

Gebbers Farm and Repo LLC

Kahler said two Wells Project Land-Use Permit Applications (for Gebbers Farm and Repo LLC) were distributed to the HCP Coordinating Committees by Kristi Geris on November 13, 2018, with edits, comments, or an indication of no comments due to Kahler by Monday, January 14, 2019. Kahler noted that Douglas PUD already provided these two joint-use dock permit applications to representatives of the Parties back in 2007 or 2008 and received no comments. He explained that when Douglas PUD updated their land-use policies in 2007, landowners within the city limits of Brewster, Pateros, and Bridgeport would be grandfathered into the old regulations and could continue to apply for new dock permits. He said these landowners need to adhere to the new methods and materials approved under the various dock consulting agencies. He said the Gebbers Farm and Repo LLC applications are outside the city limits of Brewster, Pateros, and Bridgeport, but are on the "yellow list," which means these applications were in the works at the time Douglas PUD created the new land-use policies, and thus could proceed through permitting. He said these applications have been reviewed, as noted above, and permitted by WDFW and the U.S. Army Corps of Engineers, but for some reason they languished, and now they are ready to move forward. He said location maps were provided for both applications. He said the Repo LLC application is located about 0.75 mile upstream of Washburn Island on the Colville Indian Reservation side. He said the Gebbers Farm application is near a location where Douglas PUD experienced highly productive beach seining during their 2011 to 2013 Subyearling Study (referred to as Gebbers Landing). He said Douglas PUD set up net pens just upstream from the Gebbers Farm application location where the landowner proposes to install the dock and beach seined upstream from this location.

Kahler said Douglas PUD has concerns about the Gebbers Landing location because it is a staging location for early subyearlings out of the Okanogan River. He said the Repo LLC location is steep with cobble at the toe and drops off quickly into a fast current. He said schools of fry have been observed along the shoreline in early May, but the distribution of these was patchy.

LeSage

Kahler said a Wells Project Land-Use Permit Application for a Single-Use Dock (LeSage) was distributed to the HCP Coordinating Committees by Geris on November 29, 2018, with edits, comments, or indication of no comments due to Kahler by Monday, January 28, 2019. Kahler said this application is for an existing dock that washed away during the high river flows experienced during spring 2018. He said when Douglas PUD lowered the pool elevation to conduct work on the old channels at the mouth of the Okanogan River, components of the washed-out dock were retrieved and will be reused. He said the float will be reconstructed and instead of a sea anchor system, piles will be installed.

Jim Craig asked if there are restrictions on lighting, and Kahler said he is unsure about electrical restrictions. Kahler said the application materials indicate that activities will conform with the terms and conditions in all overseeing government agencies. Chad Jackson asked about spacing between the slats or boards, and Kahler said these details will conform with WDFW criteria.

Discussion

Scott Carlon asked if these applications have already been through the Joint Aquatic Resource Permit Application review process. Kahler said they have and added that Douglas PUD does not process land-use permit applications until the landowner obtains permits from the U.S. Army Corp of Engineers and a Hydraulic Project Approval from the State. Kirk Truscott said landowners also need to obtain a permit from the tribes to install a dock on tribal land.

Truscott said it seems the U.S. Army Corp of Engineers and tribes permits for the Repo LLC application have expired. Kahler said Douglas PUD will not issue anything until the permits are current.

Kahler said he suspects the Douglas PUD Natural Resource Department will comment on the Gebbers Farm application considering the area is heavily used by early subyearlings. He said the Colville Confederated Tribes also use the beach just upstream for seining. Truscott said there is already in-water habitat present for predators and additional structures are also conducive to predators. Andrew Gingerich said this is also a fishing location and landowners may be requesting no trespassing.

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

Tom Kahler said the draft 2020 Wells Project Survival Verification Study Plan was distributed to the HCP Coordinating Committees by Kristi Geris on September 24, 2018, with edits and comments due

to Kahler by Tuesday, November 27, 2018. Kahler said Douglas PUD received verbal comments during the HCP Coordinating Committees meeting on October 23, 2018, and written comments were received from the YN (Attachment C) and WDFW (Attachment D) on November 21, and 27, 2018, respectively, as distributed to the HCP Coordinating Committees by Geris those same days. Kahler reviewed comments received, as follows:

Fish Size

Kahler said WDFW's first comment is regarding fish size (see page 1 of Attachment D [2.1 Study Fish]). He said the question is how to select a fish size that represents the size range of three spring migrants (yearling Chinook salmon, steelhead, and coho salmon). Kahler distributed a hard copy of a table with fish size ranges (Attachment E), which was also distributed electronically during the meeting on December 4, 2018. John Ferguson noted that the YN had a similar comment regarding fish size (see page 5 of Attachment C [2.1 Study Fish]).

Kahler said the data in Attachment E are from the Methow and Twisp rivers screw traps from 2014 to 2017. He said fish lengths are in millimeters (mm), the combined row is all stocks together, and the bottom row represents fish sizes from the 2010 Wells Project Survival Verification Study. He said numbers with asterisks are estimates. He said Attachment E points out the challenge of selecting a target fish size that represents all stocks, and he noted the means range from S1 Shd (1-salt steelhead) at 84 mm to H Sth (hatchery steelhead) at 189 mm. He said it is not reasonable to match the range of all fish and instead suggested to target matching the range of the study fish (summer Chinook salmon).

Keely Murdoch said she does not disagree with anything Kahler is saying; however, she does believe the HCPs intend to protect both hatchery and wild fish. She said it is the duty of the HCP Coordinating Committees to investigate whether these studies represent wild fish and/or how closely they represent wild fish. She asked within this framework, what can, and cannot the HCP Coordinating Committees do in 2020? She said she believes this is worth discussing further moving forward.

Kahler said if spring Chinook salmon are studied in 2030, study fish will need to be even smaller. Chad Jackson clarified that WDFW's comment was not intended to suggest that Douglas PUD represent the entire size range of spring migrants with the study fish; rather, WDFW thought the average release size would be smaller. Jackson said he believes the actual release size was 160 or 158 mm, and WDFW is wondering if this can be reduced to 134 to 145 mm. Kahler said Douglas PUD is discussing what can be done at Wells Fish Hatchery to hold back fish growth. Jackson said WDFW understands the culture logistics in doing this, and the reason behind 134 mm is based on 2010 sizes at tagging. Kahler said other sizes include size at screw trap collection, which span March to May. He said Douglas PUD tagged 2010 study fish in early March, so there was time to grow. He said the fish

for the physiology monitoring are larger. He noted that in 2010, Douglas PUD truncated tagging size to 100 mm. He said if this is not done with 2020 study fish there will be a broader range.

Ferguson said back to Murdoch's question and when looking at 1SD (one standard deviation away from the mean value) for Comb. (combined stocks), in 2020 is it feasible to achieve the 1SD for Comb. (i.e., 99 to 177 mm) given hatchery practices? Kahler asked if this is attempted, will this affect performance? He said mini jacks cannot be used in the study because they will impact smolt-to-adult return (SAR) data, among other things. Jackson asked if there is a way to slightly push toward the center of the distribution. He agreed it is unreasonable to find a fish size that represents all spring migrants; however, he hopes to get to a size that is closer. Kahler said Douglas PUD plans to talk to Brian Beckman and Donald Larsen (NMFS Northwest Fisheries Science Center) about how to reduce the number of mini jacks.

Kirk Truscott said in a hatchery setting, there needs to be some direction for median size targets and ranges. He said in general, there needs to be a target fish size in fish per pound and fork length, and this needs to be clear for hatchery personnel sooner than later. Kahler said Douglas PUD is currently discussing possibly using circular tanks to raise a leaner fish that will be ready to migrate. He said he hesitates to modify the median target right now; however, Douglas PUD is willing to work toward reducing overall fish size. He said the median target right now is 10 fish per pound. He said Andrew Gingerich looked up all recaptures at the Rocky Reach Juvenile Sampling Facility of Plan Species from above Wells Dam in 2018, and the mean was 137 mm for 200 fish. Kahler also caveated there was a small sample size associated with this mean.

Gingerich reminded the HCP Coordinating Committees that available technical information about PIT-tagged fish indicates there is a burden with these fish, which is supportive of using slightly larger fish. He said these study fish may be slightly larger than the run at large, but this may also be okay given their tag burden. Truscott said from the standpoint of relative survival and comparing two different release groups, he is not sure he agrees with this statement. Gingerich said a PIT-tagged fish passing via turbine passage has a higher percent of mortal injury compared to a fish that is untagged.

Kahler said he will inquire internally about measures Douglas PUD plans to employ to reduce fish size at release for the Douglas PUD 2020 Survival Verification Study, including what fish size might be achieved, and will report back to the HCP Coordinating Committees. Truscott said he does not believe the Colville Confederated Tribes have ever achieved a target release of 10 fish per pound and suggested 115 to 117 mm fork length may be more feasible. Kahler said the study plan does not include details on fish size, and asked if the Wells HCP Coordinating Committee is proposing to include fish size in the plan? Truscott suggested appending a document to the study plan, if necessary.

Pathology, Physiology

Kahler said WDFW's second comment is regarding fish pathology (see page 2 of Attachment D [2.2 Pathology, Physiology]). Kahler said conducting an assessment of relative morphology, physiology, and pathology is consistent with what Douglas PUD has done in the past. He said which model to use has never come into play; rather, if something goes strongly wrong with the study, Douglas PUD wants to understand why. He said if there is a physiology issue, Douglas PUD will have collected the data to detect it. He said if the study fails and needs to be repeated, Douglas PUD wants to understand what went wrong. He said this is how this element of the study design is tracked. Truscott said this also provides information for the HCP Coordinating Committees to consider when asked if this is a valid study. Kahler noted that in 2010, one thing this assessment found is that fish had no mesenteric fat for the first two releases. He said because of this finding of the physiological assessment, Douglas PUD investigated and discovered that hatchery staff had quit feeding the fish, and then instructed hatchery staff to resume feeding. He said this assessment identified an issue and it was resolved for the remaining releases. Kahler said the text in the study plan will be modified to include this explanation.

Precision Objectives and Sample Size

Kahler said WDFW's third comment is regarding whether the planned 2:1 Methow to Okanogan release ratio is reflective of the run-of-the-river fish (see page 2 of Attachment D [3.2 Precision Objectives and Sample Size]). Kahler said this comment raised a question about Chief Joseph Fish Hatchery releases. He said the concern raised was whether the releases of yearling Chinook salmon from Chief Joseph Fish Hatchery directly to the mainstem Columbia River had been incorporated into the ratio calculation. Kahler said he was unsure whether the direct releases to the Columbia River had been included in the calculations but did not believe they had.

Kahler noted that release vessel loading capacity is a constraint in achieving a precise ratio. He said each replicate is approximately 3,300 fish for both treatment and control releases. He said the release barges can only hold a maximum of six release vessels; therefore, for the control releases each release vessel is loaded with 556 fish. He said the split for the Methow and Okanogan rivers needs to be a multiple of 556 because there cannot be partially filled vessels. He said the initial split was not exactly 2:1 but was as close to 2:1 as possible given these logistical constraints. He said next, the Chief Joseph direct releases need to be incorporated and the split recalculated, which will result in a slightly different ratio where more Okanogan fish will be released. Jackson asked how the split will compare to 2010, and Kahler said it will be different than 2010.

Release Timing

Kahler said WDFW's fourth comment is regarding release timing (see page 2 of Attachment D [3.4 Tests of Assumptions]). Kahler said what is proposed is the standard post-hoc analysis used in all

survival studies in the Federal Columbia River Power and Mid-Columbia River systems. He said this consists of a series of tests by Dr. John Skalski (Columbia Basin Research), which compares arrival timing both graphically and statically. Kahler said this is outlined in the 2010 study report. Lance Keller agreed and said there is a test group and an evaluation at a common test point. Murdoch noted that the common test point is at Rocky Reach Dam, and she thinks this can be more specific. She said a lot can happen between Wells Dam and Rocky Reach Dam and asked how to verify the arrival time to the Wells Dam tailrace. Kahler said there is the WEJ (Wells juvenile; Bypass Bay 2) PIT-tag detection site now. Murdoch asked if the WEJ site can be discussed in the study plan, and Kahler said he can do this. He added that this detection site will help inform release timing. Murdoch asked in the absence of these data, how were decisions on release timing made? Kahler said decisions were based on previous studies using freeze branded fish and fyke net data.

Mixing Across the Tailrace

Ferguson said the YN had a comment about mixing across the tailrace (see page 6 of Attachment C [Table 1]). Kahler explained that fish are placed in release containers which release fish across the entire tailrace.

Tests Between Releases

Kahler said WDFW's fifth comment is regarding tests between releases (see page 3 of Attachment D [3.4.1 Tests Between Releases]). Kahler asked if WDFW is requesting to embellish this section, and Jackson said yes. Kahler said he will do this, as requested.

Size Grading

Ferguson said the YN had a comment about size grading (see page 5 of Attachment C [2.1 Study Fish]). Kahler said Murdoch's point in this comment is correct. He said fish are tagged well-before release and what survives to be released should be healthy fish. He said additionally, severely wounded fish after loading into the release containers are netted out. He said other than this, fish do not receive special treatment.

Release Location

Ferguson said the YN had a comment about release location (see page 8 of Attachment C [2.3 Release Locations]). Kahler recalled that Truscott also had this same comment, and said he discussed this comment with Shane Bickford (Douglas PUD HCP Policy Representative). Kahler explained that there is a line of demarcation referred to as the "G line" or inundation zone. He said this line represents a worst-case scenario flood, which is 800 kcfs at Wells Dam combined with extreme flood discharge from the Methow and Okanogan rivers (conditions which have never occurred since the construction of Wells Dam), and Douglas PUD purchased any land within this flood zone boundary (with few exceptions). He said this G line extends about 10.5 miles up the

Okanogan River; however, the actual routine zone of influence under normal runoff conditions does not extend very far. He said additionally, there are logistical constraints of towing a release vessel barge up the Okanogan River. He said Douglas PUD has also experienced challenges with testing releases in the Okanogan River when hooking up to the river water and stressing the fish. He said when the HCPs were negotiated everyone had high ideals and settled on what all could agree to, and these release locations at the mouths of the tributaries were one thing everyone agreed to. Truscott said he still disagrees, and Kahler said he understands.

Run Timing and Study Start and End Dates

Kahler said the YN and WDFW had a number of comments regarding run timing and study start and end dates (see Attachments C and D, respectively). Kahler distributed a hard copies of run timing graphs (Attachment F), which were also distributed electronically during the meeting on December 4, 2018. Kahler said page 1 of Attachment F shows the percent of total detected at Rocky Reach Dam and page 2 of Attachment F shows the cumulative percentage detected at Rocky Reach Dam.

Kahler suggested reviewing page 2 of Attachment F while considering release timing. He noted how closely hatchery and wild Chinook salmon line up, and also that yearling Chinook salmon have a 5-day travel time from Wells Dam to Rocky Reach Dam. He said this travel time can also be shorter, and Keller said he believes it can be as short as 2 to 3 days. Kahler said the mean gets pushed out to 5 days due to variability but agreed that most fish can travel the distance within 2 to 3 days.

Murdoch asked what years are represented in Attachment F, and Kahler said these data include 2010 through 2018. Kahler said this represents 60,000 hatchery steelhead, but the sample sizes of other stocks are smaller.

Kahler said the questions when trying to determine a spread of replicates are how much of the tails is reasonable to include and how can all stocks be replicated. He said these are the same questions for release size.

Murdoch asked when the proposed release dates start, and Ferguson said April 20. Murdoch said it looks like 50% of wild spring Chinook salmon have already passed on or before the survival study even starts. She said she understands the steelhead run is much later; however, this goes back to the Endangered Species Act-listed fish concern that maybe this study should try to encompass more of the wild spring Chinook salmon run. Ferguson noted that the graphs in Attachment F need to shift to the left because they represent detections at Rocky Reach Dam, not Wells Dam. He said based on this shift, he guessed only about 25% of the wild spring Chinook salmon run has passed by April 20.

Kahler asked that the Wells HCP Coordinating Committee consider potential release dates. He said there will be replicate releases every day, so 45 total releases. He noted that the tails of these graphs

represent a diminished portion of fish, and if the proposed releases spread out too much into the tails then Douglas PUD will propose to weight the tails.

Ferguson noted how different wild coho salmon are. Murdoch said hatchery coho salmon tend to migrate later than hatchery spring Chinook salmon, and wild coho salmon have more normal (later) migration timing than those forced out of the ponds in May. Ferguson noted that an earlier release timing may affect the representativeness of the study for coho salmon. Murdoch said she thinks Endangered Species Act-listed wild spring Chinook salmon are the bigger issue right now than coho salmon.

The Wells HCP Coordinating Committee discussed various start and end dates to capture certain percentiles of run timing of the different stocks. Ferguson asked if there are logistical issues with shifting the start and end dates up or back (e.g., barge costs, crew). Gingerich said there may be logistical issues with water temperatures, noting that 2 weeks earlier in April in the Columbia River will result in water being colder. He said logistical issues aside, is the Wells HCP Coordinating Committee okay with what an earlier start date means for coho salmon, and in 2030, will the dates be moved around again in hopes of capturing coho salmon? Murdoch said theoretically, in 2030 there will be a higher number of wild coho salmon in the system and there is also discussion of studying spring Chinook salmon, which may more closely mimic the coho salmon run.

Jackson suggested release dates from the 15th to the 85th percentile, capturing 70% of the run. He said this shifts the start and end dates 4 days to the left. Ferguson noted that NMFS uses the middle 90% of the hydrological record when designing fish facilities. Jackson noted that shifting forward also helps with fish size.

Scott Carlon recalled in Grant PUD studies that differential survival occurred later in the season. Gingerich said this could be due to avian predation, and Keller also suggested it could be due to warmer water. Kahler said this was not observed in the Douglas PUD studies; however, for tailrace releases there is more consistent survival later in the run and a few higher survival numbers earlier in the run. He caveated that the latter may not be comparing the same things.

Kahler said he will inquire internally about alternative start and end dates for the Douglas PUD 2020 Survival Verification Study to ensure the release schedule matches the run timing of target species as much as possible and will provide different scenarios for consideration to the HCP Coordinating Committees. He said the current dates encompass about the 35th to 95th percentile, so 60% of the wild spring Chinook salmon run and less than that for hatchery summer Chinook salmon (about 50% of the run). Truscott suggested not losing too much of the wild steelhead run, since this run is not doing so well either. Jim Craig said it seems the consistent message is to shift the start and end dates to capture the more sensitive species.

V. HCP Administration

A. 2018 HCP Annual Reports (John Ferguson)

John Ferguson reviewed upcoming review timelines for the 2018 HCP Annual Reports, as follows:

- 2018 Wells HCP Annual Report due to the Wells HCP Coordinating Committee for a 30-day review on Wednesday, February 6, 2019
- 2018 Rock Island and Rocky Reach HCP Annual Reports due to the Rock Island and Rocky Reach HCP Coordinating Committees for a 30-day review on Monday, February 18, 2019

Kristi Geris noted that the 2018 Wells HCP Annual Report schedule is still a draft pending Douglas PUD approval. Tom Kahler said the proposed schedule is good.

Andrew Gingerich also noted that the 2018 Wells Dam Gas Abatement Plan and Bypass Operating Plan Report and 2019 Wells Dam Gas Abatement Plan and Bypass Operating Plan are due to Washington Department of Ecology each year on February 28. Gingerich said these draft documents will be distributed for review in early January 2019. He recalled that Douglas PUD has a requirement to consult with the Aquatic Settlement Work Group and Wells HCP Coordinating Committee on both of these documents.

B. Next Meetings (John Ferguson)

The next scheduled HCP Coordinating Committees meeting is on December 18, 2018, to be held **in-person** at the Grant PUD Wenatchee Office in Wenatchee, Washington. (*Note: this meeting date was rescheduled from December 25, 2018, to accommodate the holiday.*)

Scott Carlon notified the HCP Coordinating Committees that he will be unable to attend the meeting on December 18, 2018.

The January 22 and February 26, 2019 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.

VI. List of Attachments

Attachment A List of Attendees

Attachment B Final SOA, *Deferment of the Rock Island Project Confirmation Survival Study from 2020 to 2021*

Attachment C 2020 Wells Project Survival Verification Study Plan – YN comments

Attachment D 2020 Wells Project Survival Verification Study Plan – WDFW comments

Attachment E 2020 Wells Project Survival Verification Study Plan – fish size ranges

Attachment F 2020 Wells Project Survival Verification Study Plan – run timing graphs

**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
Jim Craig [*]	U.S. Fish and Wildlife Service
Scott Carlon ^{*†}	National Marine Fisheries Service
Chad Jackson [*]	Washington Department of Fish and Wildlife
Patrick Verhey ^{*†}	Washington Department of Fish and Wildlife
Kirk Truscott ^{*†}	Colville Confederated Tribes
Keely Murdoch [*]	Yakama Nation

Notes:

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Denotes HCP Coordinating Committees member or alternate

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Joined by phone

††

Joined by phone for the HCP Tributary and Hatchery Committees Update