



Meeting Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: March 14, 2019

From: John Ferguson, Chair (Anchor QEA, LLC)

Re: Final Minutes of the February 20, 2019 Aquatic SWG Meeting

The Aquatic Settlement Work Group (SWG) met in-person at Wells Dam in Azwell, Washington, on Wednesday, February 20, 2019, from 9:15 a.m. to 3:00 p.m. Attendees are listed in Attachment A of these meeting minutes. A tour of the Wells Dam west fish ladder and Wells Fish Hatchery White Sturgeon Facility was held in the morning, and the regular monthly meeting was held in the afternoon.

I. Summary of Action Items

1. Kristi Geris will begin forwarding the Wells Dam fish salvage memorandums to the Aquatic SWG each year that Tom Kahler (Douglas PUD Wells Habitat Conservation Plan [HCP] Coordinating Committee Representative) provides annually to the Wells HCP Coordinating Committee (Item VII-5). *(Note: Geris forwarded the 2018/2019 salvage memorandums to the Aquatic SWG following the meeting on February 20, 2019.)*
2. The Aquatic SWG meeting on March 13, 2019, will be held by **conference call** (Item VIII-2).

II. Summary of Decisions

1. Aquatic SWG members present approved the *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report* (Item VII-3). *(Note: Breean Zimmerman provided the Washington Department of Ecology's [Ecology's] approval of the report via email prior to the meeting on February 20, 2019.)*
2. Aquatic SWG members present approved the *2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149* (Item VII-4). *(Note: Breean Zimmerman provided the Ecology's approval of the plan via email prior to the meeting on February 20, 2019.)*

III. Agreements

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

IV. Review Items

1. A draft 2019 Aquatic Settlement Agreement Action Plan was distributed to the Aquatic SWG by Kristi Geris on February 7, 2019. Douglas PUD will request approval of the plan during the Aquatic SWG meeting on March 13, 2019 (Item VII-5).
2. A draft Wells Fish Hatchery Brood Year (BY) 2019 White Sturgeon Rearing Plan was distributed to the Aquatic SWG by Kristi Geris on November 29, 2018. A revised draft plan was distributed to the Aquatic SWG by Geris on February 12, 2019. Douglas PUD will request approval of the plan during the Aquatic SWG meeting on March 13, 2019 (Item VII-6).

V. Documents Finalized

1. The final *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report* was distributed to the Aquatic SWG by Kristi Geris on March 2, 2019 (Item VII-3).
2. The final *2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149* was distributed to the Aquatic SWG by Kristi Geris on March 2, 2019 (Item VII-4).

VI. Wells Dam Tour

1. Wells Dam Fish Ladder, Collection Gallery, and Wells Dam Fish Hatchery/White Sturgeon Rearing (All):

Aquatic SWG members and others in attendance toured the dewatered west fish ladder and collection gallery, watered up east fish ladder, and Wells Dam Fish Hatchery and White Sturgeon rearing at Wells Dam. Afterwards, the Aquatic SWG discussed the tour, notably observations in the collection gallery regarding maintenance to potentially improve Pacific Lamprey passage at Wells Dam (reducing gaps in horizontal- [floor] and vertical-oriented [wall] auxiliary water supply diffuser gratings). The Aquatic SWG reviewed the Final Wells Dam Fishway Field Velocity Testing Memorandum (Attachment B), which was originally distributed to the Aquatic SWG on May 24, 2011, and was redistributed to the Aquatic SWG by Kristi Geris during the meeting on February 20, 2019. General agreement was expressed that there were several gaps where Pacific Lamprey could potentially access the area behind the diffuser gratings; however, closing all of the gaps could increase water velocities through the remaining open area of the diffuser gratings. The gratings were designed to create low water velocities so as to not falsely attract salmonids and Pacific Lamprey to the flow entering the collection gallery through the gratings.

Douglas PUD indicated that they plan to reduce as many gaps as possible in the collection gallery during the 2018/2019 winter fishway maintenance outage and finish any remaining

maintenance in the collection gallery and fish ladders during subsequent winter outages, as necessary.

VII. Summary of Discussions

1. Welcome, Review Agenda, Meeting Minutes Approval, and Review of Action Items (John Ferguson):

John Ferguson welcomed the Aquatic SWG members (attendees are listed in Attachment A) and reviewed the agenda. Ferguson asked for any additions or changes to the agenda. No additions or changes were requested by Aquatic SWG members. Ferguson added a reminder about the upcoming draft *2018 Aquatic Settlement Agreement Annual Report* for review.

The revised draft January 9, 2019 conference call minutes were reviewed. Kristi Geris said all comments and revisions received from members of the Aquatic SWG were incorporated into the revised minutes. Geris said she also updated the Review Items with recently redistributed documents. Aquatic SWG members present approved the January 9, 2019 conference call minutes, as revised.

Action items from the Aquatic SWG conference call on January 9, 2019, are as follows (note: the following italicized item numbers correspond to agenda items from the January 9, 2019 conference call):

- *Douglas PUD will provide a summary of Douglas PUD 2018 Pacific Lamprey translocation efforts, including those in coordination with Grant PUD, the Yakama Nation (YN), and the Colville Confederated Tribes (CCT), within the 2018 Pacific Lamprey Management Plan Annual Report (Item VI-1).*
This will be discussed during today's meeting.
- *Aquatic SWG members will contact Andrew Gingerich if the member is interested in attending a meeting at Wells Fish Hatchery on January 29, 2019, at 10:00 a.m., to be held with Douglas PUD, Wells Fish Hatchery, and CCT staff to discuss Wells White Sturgeon rearing practices in 2019 and beyond (Item VI-1).*
This will be discussed during today's meeting.

2. WDFW ASWG Representation – Laura Heironimus (John Ferguson):

John Ferguson introduced Laura Heironimus who is replacing Chad Jackson as the Washington Department of Fish and Wildlife (WDFW) Aquatic SWG Alternate Representative. Heironimus said she started with WDFW in January 2018. She said her technical expertise is with White Sturgeon, and she is the Columbia River Management Unit Sturgeon, Smelt, and Lamprey Unit Lead for WDFW. She said she previously worked for U.S. Fish and Wildlife Service (USFWS) as a White Sturgeon expert in California. She said her graduate research was

conducted in South Dakota on the development and application of a larval Pallid Sturgeon bioenergetics model.

The Aquatic SWG members introduced themselves and welcomed Heironimus to the Aquatic SWG.

3. DECISION: 2018 Gas Abatement Plan Report (Andrew Gingerich):

Andrew Gingerich said a draft *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report* was distributed to the Aquatic SWG by Kristi Geris on January 18, 2019. Gingerich said this is essentially the same document drafted and distributed for review and approval at the beginning of each year with minor revisions. He said the report discusses water quality compliance for the Wells Project in the previous year. He said comments were due on February 11, 2019, no comments were received, and Douglas PUD is requesting approval of the report, which needs to be filed with the Federal Energy Regulatory Commission (FERC) by February 28, 2019. John Ferguson noted that Breann Zimmerman already provided Ecology's approval of the report via email prior to the meeting on February 20, 2019.

Ralph Lampman asked what changed in the 2018 report from the 2017 report. Gingerich said the compliance and river flow data change each year. He clarified that the water quality criteria (or standards) do not change; however, how well the criteria were met each year changes.

Aquatic SWG members present approved the *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report*. (Note: Zimmerman provided Ecology's approval of the report via email prior to the meeting on February 20, 2019.)

The final *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report* was distributed to the Aquatic SWG by Geris on March 2, 2019.

4. DECISION: 2019 Gas Abatement Plan and Bypass Operating Plan (Andrew Gingerich):

Andrew Gingerich said a draft *2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149* was distributed to the Aquatic SWG by Kristi Geris on January 18, 2019. Gingerich said this is essentially the same document drafted and distributed for review and approval at the beginning of each year. He said this plan describes how Douglas PUD plans to approach spill and river flow to minimize total dissolved gas (TDG) production in the Wells Project. He said comments were due on February 11, 2019, no comments were received, and Douglas PUD is requesting approval of the plan, which needs to be filed with FERC by February 28, 2019. John Ferguson noted that Breann Zimmerman

already provided Ecology's approval of the plan via email prior to the meeting on February 20, 2019.

Ralph Lampman asked what changed in the 2019 plan from the 2018 plan. Gingerich said again, the plan is nearly identical to the 2012 document with minor revisions each year. He said in 2013 and 2014, the Spill Playbooks moved from concentrating spill through Spillway 7 to Spillways 5 and 6 due to the prolonged rebuild of Turbine Unit 7. He said since 2015, the Spill Playbooks returned to concentrating spill through Spillway 7, and given the high level of compliance achieved over the last 4 years, no changes were proposed for the 2019 Spill Playbook. He said the biggest change in 2019 is, in the absence of the former hourly coordination process, new forebay elevation sensors will be installed to improve incoming river flow predictions and hopefully prevent unnecessary spill. He said in 2018, there were about 11 spill events that might have been avoided with improved forecasting based on a post-bypass analysis of operations. He said Douglas PUD senior operators and resource staff coordinated and discussed more effective forecasting options, which are also captured in the 2019 plan.

Lampman asked about the new direction from Ecology regarding allowing more spill or a higher percentage of TDG? John Ferguson said Ecology has issued a draft Environmental Impact Statement for review that, if approved, would adjust the fish waivers so that the forebay TDG requirement is removed in 2020 and therefore, matches the current waiver in Oregon. He said additionally, the tailrace TDG limit will increase. Gingerich clarified that in 2019, Ecology is considering a rule that will likely remove the downstream forebay TDG requirement and may increase the tailrace requirement in 2020. He also clarified that these adjustments to state standards are likely to only apply to federal projects in the lower Snake and Columbia rivers. He said language exists in the Washington Administrative Code that allows for facilitation of a test and temporary modification to the standards. He said entities interested in testing options for higher smolt survival are proposing more spill to hopefully result in less turbine-route fish passage and higher spillway-route fish passage. He said he is unsure what the final standards will be, but they are likely to change in 2019 and again in 2020 depending on what Ecology decides. He said the proposed adjustments also include a revision to how the 12C-High standard (12 highest consecutive hourly readings in any one 24-hour period) is calculated. He said the way the regulation is currently written, a project can receive two violations for the same event if it occurs across midnight, and the revision will treat each day separately (will not receive two violations for the same event). Gingerich said ultimately, PUD-operated projects are not included in this test, and Ferguson noted that Zimmerman indicated that Douglas PUD can petition to be included in the test, if desired.

Gingerich said he does not believe Douglas PUD is planning to provide comments or petition to be included in the test; however, Douglas PUD is tracking this topic.

Aquatic SWG members present approved the *2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149*. (Note: Zimmerman provided the Ecology's approval of the plan via email prior to the meeting on February 20, 2019.)

The final *2019 Total Dissolved Gas Abatement Plan Wells Hydroelectric Project FERC Project No. 2149* was distributed to the Aquatic SWG by Geris on March 2, 2019.

5. 2019 Aquatic Settlement Agreement Action Plan (Andrew Gingerich):

Andrew Gingerich said a draft 2019 Aquatic Settlement Agreement Action Plan was distributed to the Aquatic SWG by Kristi Geris on February 7, 2019. Gingerich said Douglas PUD drafts a similar document each year, which is organized by each Aquatic Settlement Agreement resource management plan. He said the document speaks to the protection, mitigation, and enhancement measures found under each management plan. He said this is a planning document which outlines actions to complete throughout the year and provides the Aquatic SWG an opportunity to review and provide comments. He said this document is not a FERC requirement; rather, it is a helpful tool for Douglas PUD and the Aquatic SWG. He said Douglas PUD will request approval of the document, but also recognizes this is a living document subject to change throughout the year.

Gingerich noted under the Water Quality Management Plan section, the item to scope, track, and develop as necessary is the National Pollutant Discharge Elimination System (NPDES) permitting for the Wells Project. He said this is not a FERC requirement but is something that has been ongoing internally. He said in late 2018, Douglas PUD received an Intent to Sue from Columbia Riverkeeper. He said the document suggests that Douglas PUD should obtain a NPDES permit for Wells Dam, which for non-federal projects like Wells Dam, is issued by Ecology. He said Douglas PUD is in the process of undergoing scoping for obtaining a NPDES permit for Wells Dam. He clarified that Douglas PUD already owns a NPDES permit for Wells Fish Hatchery (for fish effluent) and a Clean Water Act Section 401 Water Quality Certification for Wells Dam (as required by Douglas PUD's FERC License). He said Douglas PUD was under the impression that the 401 Certification is all encompassing for water quality requirements at Wells Dam. He explained that a NPDES permit addresses known repeated point source discharges of pollution. He said in the case of Wells Dam, this could include river temperature pollution from the cooling systems or potential discharges of oil products to the river. He clarified that a NPDES permit allows for small discharges of pollutants. Further, Douglas PUD has conducted monitoring to verify oil is not being discharged to the

river; and also, Douglas PUD uses what is called an, “environmentally acceptable lubricate,” or EAL, which is more environmentally friendly than a traditional lubricant.

Ralph Lampman asked if Douglas PUD can combine the NPDES permit for Wells Fish Hatchery with a permit for Wells Dam. Gingerich said unfortunately not and explained that there are two types of permits: general or individual. He said the Wells Fish Hatchery permit is a general permit, which covers numerous agencies and hatcheries in Washington State. He said in the case of hydropower projects, Ecology is headed down a path of issuing individual permits that only cover the individual project. He said conversely, in Idaho, there is a draft general NPDES permit being considered that will cover numerous hydropower projects. He said currently, in Washington, there are no hydropower projects that have an NPDES permit.

Lampman asked about NPDES requirements for the lower river dams. Gingerich said federal projects are typically regulated by the Environmental Protection Agency; however, Ecology may regulate those projects through a similar process. He said the lower river projects are not required to have a 401 certification like the PUD-owned projects do, which is one objection to this lawsuit. Lampman asked if Douglas PUD obtained a NPDES permit will Columbia Riverkeeper drop the lawsuit. Gingerich said he is unsure.

Jason McLellan asked about the NPDES permit for Wells Fish Hatchery when the hatchery was operated by WDFW. Gingerich said when Douglas PUD took over operations of the hatchery, the existing WDFW NPDES permit for the hatchery was transferred to Douglas PUD.

Gingerich also noted that under the Aquatic Nuisance Species Management Plan section Chas Kyger will be working on Northern Pike activities, which will be further discussed in the coming months. Gingerich said Douglas PUD is already conducting environmental DNA monitoring for Northern Pike, and other program details are continuing to evolve as regional discussions are ongoing.

Ferguson clarified under the Annual Report and Webpage section of the action plan that the draft 2018 Aquatic Settlement Agreement Annual Report will be distributed for review on March 22, 2019, not on March 15, 2019 as currently shown.

Lampman asked under the Pacific Lamprey Management Plan section if there is a report associated with the ladder salvage during winter maintenance activity? Kyger said this activity is a requirement under the Pacific Lamprey Management Plan; however, to date, no adult Pacific Lamprey have been found during winter maintenance activities at Wells Dam. He said if adult Pacific Lamprey are found during winter maintenance activities, these fish will be released upstream of Wells Dam and documented in the Pacific Lamprey Management Plan Annual Report.

Ferguson said there is also a memorandum that is distributed to the HCP Coordinating Committees each year summarizing the fish salvaged during annual winter maintenance activities. McClellan asked if this memorandum can also be distributed to the Aquatic SWG. Geris said she will begin forwarding the Wells Dam fish salvage memorandums to the Aquatic SWG each year that Tom Kahler provides annually to the Wells HCP Coordinating Committee. *(Note: Geris forwarded the 2018/2019 salvage memorandums to the Aquatic SWG following the meeting on February 20, 2019.)*

Lampman also asked about the draft juvenile and adult Pacific Lamprey passage and survival literature reviews. Kyger said the document libraries for the juvenile and adult Pacific Lamprey literature reviews are now available for download from the Aquatic SWG extranet site and the summary documents will be distributed for review in March or April 2019, following the review periods for the numerous annual reports. Lampman asked if Chelan PUD has conducted a similar review. Kyger said he is unsure about Chelan PUD, but Grant PUD has completed a Pacific Lamprey literature review consisting of a table with abstracts of each report that was reviewed. He said Douglas PUD built upon Grant PUD's approach and located the actual source documents, which are in the document libraries on the extranet site.

Gingerich said Douglas PUD will request approval of the draft 2019 Aquatic Settlement Agreement Action Plan during the Aquatic SWG meeting on March 13, 2019.

6. BY2018 Wells White Sturgeon Rearing at Wells Fish Hatchery (Andrew Gingerich):

Andrew Gingerich recalled touring White Sturgeon rearing at Wells Fish Hatchery immediately prior to the meeting and summarized the BY2018 White Sturgeon fish sizes currently on site, as follows:

Number of Fish	Fish Per Pound	Mean Fish Mass (grams)	Feeding Rate (% body weight)	Tank Water Temperature (°F)
39	2.2	206	2.0	57
39	2.3	197	2.5	60
21	7.5	60	5.5	62

Gingerich noted that the two groups of larger sized fish have tighter means in terms of fish mass compared to the group of smallest fish. He recalled the size target is to rear all fish to 200 grams or larger, which he believes will be achieved for all fish except perhaps for a few from the group of smallest fish. He also recalled the stocking target of 325 fish; however, he said in 2019, there will likely be closer to 98 fish stocked in the Wells Reservoir. He said regarding the group of smallest fish, Jason McLellan suggested moving the fish from the shallow circulars to the deep tanks or separating the larger from the smaller fish.

Laura Heironimus said in her experience, grading out smaller fish to grow separate from larger fish and increasing water temperature consistently improves fish growth. Gingerich agreed and said there is space to separate the fish out.

John Ferguson summarized that approximately 95 to 98 Wells BY2018 White Sturgeon will be released in the Wells Reservoir in June 2019. Gingerich said this is correct and recalled during the Aquatic SWG meeting on January 9, 2019, the Aquatic SWG approved a plan to stock 550 (+/-) BY2019 White Sturgeon in the Wells Reservoir in 2020, which includes the 325 fish program target for 2020 plus the 225 fish (or balance of) shortfall in 2019.

Gingerich said there have been zero losses in the last 20 days. Ralph Lampman asked about the cause for the high mortality in Wells BY2018 White Sturgeon. Gingerich said the exact cause is unknown; however, he guessed fish may have become symptomatic, partly due to stress from the water temperatures and feed type. He said fish were initially put on a fairly cool water temperature and fed a diet that might not have been as advantageous as desired, which then made the fish susceptible to other things such as inflated swim bladder and *Columnaris*.

Gingerich recalled, to address fish health concerns with White Sturgeon rearing, a draft Wells Fish Hatchery BY2019 White Sturgeon Rearing Plan was distributed to the Aquatic SWG by Kristi Geris on November 29, 2018. A revised draft plan was distributed to the Aquatic SWG by Geris on February 12, 2019. Gingerich said the plan was intended to be a bulleted list of what will change in terms of rearing to reach program goals. He said comments were received from WDFW (Chad Jackson) and the CCT (Matt Howell and McLellan). He said additionally, Douglas PUD, Wells Fish Hatchery, and CCT staff met in-person to discuss and improve the plan. Gingerich said there are three key changes outlined in the plan: 1) instead of starting fish on cold water to facilitate feed training, initial rearing water temperatures will be matched with river temperatures (approximately 60°F); 2) instead of starting fish in shallow raceways, fish will be initially held in shallow inserts in the Combi tanks; and 3) fish will be fed otohime once feeding is initiated. Gingerich said also in previous years, hatchery staff have waited about 2 weeks to introduce feed while fish were monitored for signs of expelling a vent plug, which is a sign they have absorbed their yoke sack and can begin exogenous feeding. He said these larval-origin fish are collected right when the fish are ready to start to feed exogenously, so hatchery staff will now introduce feed immediately.

Gingerich said Douglas PUD will request approval of the draft Wells Fish Hatchery BY2019 White Sturgeon Rearing Plan during the Aquatic SWG meeting on March 13, 2019.

7. 2018 Pacific Lamprey Translocation Summary (Chas Kyger):

Chas Kyger displayed the 2018 Douglas PUD Pacific Lamprey Translocation Summary (Attachment C) that was distributed to the Aquatic SWG by Kristi Geris on September 12, 2018. Kyger recalled that the summary includes the number of fish released at the different release locations in 2018, percentages of the total, and the release dates. He said this information will be included in the 2018 Pacific Lamprey Management Plan Annual Report, which will be distributed for review as appended to the 2018 Aquatic Settlement Agreement Annual Report. Andrew Gingerich said the passive integrated transponder (PIT) tag codes will be included, as well.

RD Nelle (USFWS) asked if all translocated fish in 2018 were collected at Priest Rapids Dam, and Kyger said yes. Ralph Lampman asked if the actual release number can replace the "X" in the table to parse out individual releases at the same locations, and Gingerich said this can be done.

John Ferguson asked if there might be any issues with incorporating this translocation data into the Pacific Lamprey Management Plan Annual Report considering that translocation is outside the Aquatic Settlement Agreement and Pacific Lamprey Management Plan. Kyger said he does not see any issues with mentioning that the coordination occurred.

Gingerich asked Lampman how many fish the YN translocated in 2018. Lampman said the YN translocated approximately 200 fish in the fall and approximately 200 in the spring. He said these combined with all translocation efforts and adult counts at Wells Dam equal about 1,200 to 1,300 Pacific Lamprey above Wells Dam in 2018.

Lampman said he thought Douglas PUD was planning to release fish in the mainstem Columbia River, so the YN only released fish in the Methow River and then Douglas PUD also only released fish in the Methow River (note: Douglas PUD provided the CCT with fish planned for release in the Okanogan River and the CCT translocated those fish farther upstream into tributaries of the Okanogan River). Lampman suggested spreading out future releases accordingly.

Gingerich said even if fish were released at Starr boat launch in 2018, there would likely be more detections in the Methow River compared to the Okanogan River. He said typically, subsequent detections have been in the Chewuch River. Ferguson asked if the translocation locations in the tributaries of the Okanogan River are located upstream of the Okanogan River PIT detector? Gingerich said in some cases yes. Ferguson asked then, if Gingerich is implying that no Methow River or Pateros Washington releases are detected on the Okanogan River PIT detector. Gingerich said this is correct but may change over time. He also said the lower Methow array does not span across the entire Methow River and he is unsure

of the detection efficiency for this array. He said the detection efficiency in the fall is fair; however, in the spring it is terrible. He said this is evident by fish detected at Wells Dam and in the Twisp River; however, not in the Methow River (LMR site). Lampman said some 2018 releases have been detected in the Entiat River and at Rocky Reach Dam; however, there have been zero detections in the Okanogan River. He caveated, however, that he has not checked the numbers recently. Gingerich noted that 2 years ago, a few fish released in the Okanogan River were subsequently detected in the Chewuch River.

Gingerich said in 2019, if the Aquatic SWG prefers a release location at Starr boat launch this can be done. He said Douglas PUD understood the request in 2018 to be 70% at the mouth of the Methow River and 30% at the mouth of the Okanogan River. *(Note: Douglas PUD misspoke and meant that the split was 75% at the mouth of the Methow River and 25% at the mouth of the Okanogan River.)*

Lampman asked about spawning habitat in the Okanogan River, and Kyger said there is not much. Ferguson asked what size cobble do Pacific Lamprey prefer for spawning, and Lampman said Pacific Lamprey like a mix of larger and smaller cobble, gravel, and sand.

The Aquatic SWG agreed the exact release locations for the 2019 Pacific Lamprey translocation effort can be further discussed during future meetings.

8. 2018 Pacific Lamprey PTAGIS Query (Andrew Gingerich):

Andrew Gingerich reviewed the PIT Tag Information System website (<https://www.ptagis.org/>) including review of various interrogation sites, how to create a query for an interrogation summary, and how to interpret a data summary.

VIII. Administration

1. 2018 Aquatic Settlement Agreement Annual Report (John Ferguson):

John Ferguson reminded the Aquatic SWG that the draft *2018 Aquatic Settlement Agreement Annual Report* will be distributed for a 45-day review on March 22, 2019.

2. Upcoming meetings (John Ferguson):

The Aquatic SWG meeting on March 13, 2019, will be held by conference call.

Other upcoming meetings include April 10 and May 8, 2019 (TBD).

List of Attachments

Attachment A List of Attendees

Attachment B Final Wells Dam Fishway Field Velocity Testing Memorandum

Attachment C 2018 Douglas PUD Pacific Lamprey Translocation Summary

Attachment A – Attendees

Name	Role	Organization
John Ferguson	Aquatic SWG Chairman	Anchor QEA, LLC
Kristi Geris	Administration/Technical Support	Anchor QEA, LLC
Andrew Gingerich	Aquatic SWG Technical Representative	Douglas PUD
Chas Kyger	Technical Support	Douglas PUD
RD Nelle	Technical Support	U.S. Fish and Wildlife Service
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Laura Heironimust†	Aquatic SWG Alternate Representative	Washington Department of Fish and Wildlife
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederated Tribes
Ralph Lampman	Aquatic SWG Technical Representative	Yakama Nation

Notes:

† Joined by phone