



Meeting Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: May 10, 2017

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

Re: Final Minutes of the April 13, 2017, Aquatic SWG Meeting

The Aquatic Settlement Work Group (SWG) met at Douglas PUD Headquarters in East Wenatchee, Washington, on Thursday, April 13, 2017, from 9:00 to 10:00 a.m. Attendees are listed in Attachment A of these meeting minutes.

I. Summary of Action Items

1. There were no Actions Items discussed during today's meeting.
2. **The location and duration of the Aquatic SWG meeting on May 10, 2017, is TBD (Item VII-1).**

II. Summary of Decisions

1. Aquatic SWG members present approved the 2017 Aquatic Settlement Agreement (ASA) Action Plan, with the Colville Confederated Tribes (CCT) abstaining (Item VI-2).

III. Agreements

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

IV. Review Items

1. Kristi Geris sent an email to the Aquatic SWG on March 1, 2017, notifying them that the draft report, *Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016*, is available for a 60-day review with edits and comments due to Andrew Gingerich by Monday, May 1, 2017.
2. Kristi Geris sent an email to the Aquatic SWG on March 21, 2017, notifying them that the following documents are available for a 45-day review period: Draft 2016 ASA Annual Report, Draft 2016 Aquatic Nuisance Species Management Plan Annual Report, Draft 2016 Bull Trout Management Plan Annual Report, Draft 2016 Pacific Lamprey Management Plan Annual Report, Draft 2016 Resident Fish Management Plan Annual Report, Draft 2016 Water Quality Management Plan Annual Report, Draft 2016 Water Temperature Annual Report, and Draft

2016 White Sturgeon Management Plan Annual Report. Edits and comments are due to Geris and Douglas PUD by Friday, May 5, 2017 (Item VI-3).

V. Documents Finalized

1. There are no documents that have been recently finalized.

VI. 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 other changes to the agenda. No additions or changes were requested.

The revised draft March 8, 2017, conference call minutes were reviewed. Emily Pizzichemi said all comments and revisions received from members of the Aquatic SWG were incorporated into the revised minutes and there are no outstanding edits or questions to discuss. Aquatic SWG members present approved the March 8, 2017, conference call minutes, as revised.

Action items from the last Aquatic SWG conference call on March 8, 2017, are as follows (note: the following italicized item numbers correspond to agenda items from the March 8, 2017, conference call):

- *Anchor QEA will distribute a summary outlining Aquatic Settlement Agreement (ASA) documents available for review (Item VI-3).*
Kristi Geris distributed this summary to the Aquatic SWG on March 16, 2017.
- *Anchor QEA will contact Tracy Hillman (Rocky Reach Fish Forum [RRFF] Facilitator) and Chelan PUD to gauge interest in co-sponsoring the upcoming Pacific Lamprey Regional Workshop (Item VI-6).*
John Ferguson began these discussions with Hillman on March 9, 2017.
- *A Pacific Lamprey Subgroup of the Aquatic SWG will convene on April 12, 2017, at 10:00 a.m. at Douglas PUD Headquarters in East Wenatchee, Washington, to further discuss: 1) the 2016 Pacific Lamprey Study Update; 2) the Pacific Lamprey Study Alternative Actions document; 3) historical Pacific lamprey conversion rates from the count window at Rocky Reach Dam to Wells Dam and Wells Project operation and flow data; and 4) the U.S. Fish and Wildlife Service (USFWS) proposal for planting Pacific lamprey within the Wells Dam fishway, as a means to test a pheromone hypothesis (Item VI-6).*
This action item occurred yesterday, April 12, 2017, as discussed.

- *A Pacific Lamprey Regional Workshop will be held on April 13, 2017, at 10:00 a.m. at Douglas PUD Headquarters in East Wenatchee, Washington, following the monthly Aquatic SWG meeting (Item VI-6).*

This action item will occur today, April 13, 2017, as discussed.

- *Douglas PUD will inquire with Grant PUD regarding when the acoustic tags implanted in 2016 Grant PUD Pacific lamprey study fish will come back online from sleep mode (Item VI-6).*

Andrew Gingerich said the acoustic tags for the 2016 Grant PUD Pacific lamprey study came back online from sleep mode in March 2017.

- *Douglas PUD will verify the expected battery life for the acoustic tags implanted in 2016 Douglas PUD Pacific lamprey study fish (Item VI-6).*

Andrew Gingerich said the acoustic tag batteries implanted in the Douglas PUD Pacific lamprey study fish are anticipated to last another 2 to 3 weeks.

- *Douglas PUD will conduct mobile tracking efforts in the Rocky Reach Reservoir prior to the expected expiration of battery life for the acoustic tags implanted in 2016 by Douglas PUD and Grant PUD Pacific lamprey study fish (Item VI-6).*

This will be discussed during the Pacific Lamprey Regional Workshop. (Note: Douglas PUD confirmed mobile tracking of the 2016 tagged fish was conducted prior to expiration of tag battery life; very few tags were detected during several mobile tracking efforts.)

- *Bob Rose will ask Ralph Lampman (Yakama Nation [YN]) if Lampman is available to attend the Pacific Lamprey Regional Workshop on April 13, 2017 (Item VI-6).*

Lampman attended the Pacific Lamprey Regional Workshop via conference line.

2. DECISION: 2017 Aquatic Settlement Agreement Action Plan (Andrew Gingerich):

Andrew Gingerich explained that the action plan is something Douglas PUD completes annually. He said the action plan is not a binding agreement nor is it filed with the Federal Energy Regulatory Commission (FERC). He said the action plan helps Douglas PUD prepare for activities under each aquatic resource management plan. He said Kristi Geris sent an email to the Aquatic SWG on February 21, 2017, notifying them that the Draft 2017 ASA Action Plan was available for review. Gingerich added that the action plan contains information about what actions could occur regarding Pacific lamprey passage in 2017. He said Douglas PUD is asking for approval from the Aquatic SWG under the umbrella that the plan is adaptive and not binding.

Aquatic SWG members present approved the 2017 ASA Action Plan. Kirk Truscott (CCT) abstained.

3. Documents Out for Review (Emily Pizzichemi):

Emily Pizzichemi said Douglas PUD requested this agenda item to take the opportunity to review for the Aquatic SWG what ASA documents are currently available for review.

Pizzichemi said during the last Aquatic SWG meeting on March 8, 2017, Patrick Verhey requested a summary document outlining deadlines for the several documents available for review. Pizzichemi said, as requested, Kristi Geris distributed a 2017 Aquatic SWG Document Review Checklist to the Aquatic SWG on March 16, 2017.

Pizzichemi said an updated checklist was also distributed to the Aquatic SWG by Geris on March 21, 2017 (Attachment B). John Ferguson reviewed Attachment B.

4. Brood Year 2016 Wells Fish Hatchery White Sturgeon Rearing Update (Andrew Gingerich):

Andrew Gingerich reviewed data showing the hatchery tanks along with number of fish and fish size. He said currently, there are approximately 7,000 fish at Wells Fish Hatchery and fish size is on track with very few mortalities.

Gingerich said Douglas PUD will stock 5,000 white sturgeon in 2017 as part of the first four years of the white sturgeon supplementation program. Gingerich noted that there are approximately 1,500 to 2,000 surplus fish that still need to be tagged and planted in Rufus Woods Reservoir per Washington Department of Fish and Wildlife (WDFW) and tribal preferences. Chad Jackson (WDFW) said he thought the surplus fish would have been tagged by now and guessed that perhaps Douglas PUD is waiting for the fish to get larger. Gingerich said typically, capacity begins to become an issue around this time of year. He said historically, Douglas PUD has stocked 5,000 fish on June 1 and 2 and the remaining fish were surplus. Kirk Truscott asked if surplus stocking would take place before stocking, and Gingerich said surplus stocking would take place prior to stocking the 5,000 fish. He added that the plan is to tag all the surplus and the Wells Program fish. He said stocking will begin after the fish health results are processed and received, which usually takes 4 weeks.

Gingerich said on April 3 and 4, 2017, Douglas PUD conducted an experimental colony scan of the rookery at the confluence of Okanagan River and the Columbia River, using a passive integrated transponder (PIT)-tag detector that codes the tags but does not collect them. He said WDFW conducted a similar scan in 2016. He said collectively between 2016 and 2017, Douglas PUD has coded out 2,300 unique PIT tags, some of which were very old, some of which were very recent, and most of which were salmonids. He said 329 unique white sturgeon tags were also located, of which 90% had been stocked by Douglas PUD in the last 3 years and 10% by Chelan and Grant PUDs. Gingerich said this is still qualitative work and

Douglas PUD is working with Dave Robichaud (LGL Limited) to improve the statistical analyses and potentially improve the white sturgeon survival estimate following stocking. Gingerich asked Robichaud if there is utility and value in the data. Robichaud replied that the data could be used to tighten the bounds on survival estimates if nothing else. Gingerich said herons and cormorants have been observed at this rookery; however, he is uncertain if the birds will deposit feces and the tags at the nest site, moreover detection probability is unknown so the estimate is likely conservative. He said even though the data are a conservative estimate, they may be able to demonstrate size selectivity, which can help inform at which size to stock fish. He said Douglas PUD salmon leads have these data, which will be provided to the CCT, as well, per Truscott's request. Gingerich said the rookery is not identified as a bird predation site according to PTAGIS. Patrick Verhey said this rookery is the predominant rookery in terms of Douglas PUD stocking concerns. He also said there have been pelicans and other piscivorous birds observed at the site. Robichaud said he would be surprised if the herons were doing much of the predation because they tend to feed in shallow waters. John Ferguson said that he agrees unless it is predominantly young-of-the-year fish that are being eaten. Bob Rose asked if Douglas PUD plans to continue to detect PIT tags on the rookery. Gingerich said Douglas PUD is considering this and that early April is a good time of year to conduct the coding because there is not a lot of undergrowth but yet the snow has melted. Gingerich said that they can almost compare the 2016 data to the 2017 data to develop a tool to estimate tag detection efficiency. In the future, they might consider developing a grid system or something more technical for standardizing the survey.

5. 2017 Wells Project Water Quality and Water Year Update (Andrew Gingerich):

John Ferguson recalled asking the Aquatic SWG during the meeting on March 8, 2017, if they would like Douglas PUD to continue providing Wells Dam water quality updates and members indicated they would be interested in ongoing updates.

Andrew Gingerich presented, "Wells Hydroelectric Project: 2017 Water Forecast and Total Dissolved Gas Update" (Attachment C). Gingerich said, based on long-term forecasts in March 2017, dam operators released some water from Lake Roosevelt. He said at the end of March 2017, more than 200,000 cubic feet per second (200 kcfs) river flow was being released to Wells Dam, which is twice the river flow typical for March. He said this is problematic because March is typically a low-flow period when turbine units are taken off line for annual maintenance. He said the powerhouse capacity of Wells Dam is 125 to 150 kcfs. Ferguson asked if dam operators are intending to draft Grand Coulee further to create space in the reservoir for flood storage, and if so, how long can this trend of drafting Grand Coulee be expected to continue? Gingerich replied that the target elevation is 1,221 to 1,224 feet at the end of April 2017 and then operations normally change to slow refill. Gingerich

said, based on forecasts, he expects 205 kcfs river flow at Wells Dam to continue through the end of April 2017. He said currently Chief Joseph Dam is >60% spill. He said historically Grand Coulee Dam has had high total dissolved gas (TDG), so dam operators are drafting Grand Coulee Dam by generating power and using Chief Joseph Dam to spill the water and potentially reduce TDG. Gingerich said currently many operators are selling power at a negative price including Douglas PUD. He added that Douglas PUD has three major power purchasers which are required by contract to acquire surplus power generated by Douglas PUD.

Bob Rose asked how bad the TDG is anticipated to get. Gingerich said yesterday TDG was 128% in the Wells Dam tailrace. He said as the water moves through the spillway at Chief Joseph Dam and due to where the gas monitors are located downstream of the dam, TDG detected at Wells Dam is higher than at Chief Joseph Dam. He added that the TDG levels they are experiencing are not good relative to State criteria, which requires that hourly values remain at or below 125% in the Wells Dam tailrace.

Rose asked if Douglas PUD has considered how climate change will affect the frequency in these high TDG values. Gingerich said the conversation has come up but is not very active right now. He said Douglas PUD is currently considering what to do to address the immediate issue, such as taking fewer units offline for maintenance during March to accommodate the increased spring flows. He said Douglas PUD is on a 10-year compliance schedule for TDG. He added that Douglas PUD is not only concerned with the State requirements but also for the biology of the fish in the reservoir. He said Douglas PUD is required to monitor juvenile fish migrating through the Rocky Reach Juvenile Fish Bypass System every day after a high TDG value is observed in the Wells Dam tailrace. Douglas PUD has been doing this for a week with no signs of gas bubble trauma. Patrick Verhey offered to put Douglas PUD in touch with the WDFW climatologist (Lynn Helbrecht) to discuss an action statement approach and potentially put together a white paper on the topic.

Kirk Truscott requested data from new monitoring sites. Gingerich said Douglas PUD posts real-time data to the Douglas PUD website as well as the U.S. Army Corps of Engineers website. He said data from Chief Joseph Dam and the Washburn Island monitor are also available online.

Ferguson confirmed that the Aquatic SWG would appreciate a similar detailed water quality review at the meeting on May 10, 2017.

VII. Next Meetings

1. Upcoming meetings (John Ferguson):

A Pacific Lamprey Regional Workshop will be held on April 13, 2017, at 10:00 a.m. at Douglas PUD Headquarters in East Wenatchee, Washington, following the monthly Aquatic SWG meeting.

The location and duration of the next Aquatic SWG meeting on May 10, 2017, is TBD.

Upcoming meetings are as follows: June 14, 2017 (TBD); July 12, 2017 (TBD); and August 9, 2017 (TBD).

List of Attachments

Attachment A List of Attendees

Attachment B 2017 Aquatic SWG Document Review Checklist

Attachment C Wells Hydroelectric Project: 2017 Water Forecast and Total Dissolved Gas Update

Attachment A – Attendees

Name	Role	Organization
John Ferguson	Aquatic SWG Chairman	Anchor QEA, LLC
Emily Pizzichemi	Administration/Technical Support	Anchor QEA, LLC
Andrew Gingerich	Aquatic SWG Technical Representative	Douglas PUD
Dave Robichaud	Observer	LGL Limited
Breean Zimmerman	Aquatic SWG Technical Representative	Washington State Department of Ecology
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Chad Jackson [†]	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Kirk Truscott	Technical Support	Colville Confederated Tribes
Bob Rose	Aquatic SWG Technical Representative	Yakama Nation

[†] Joined by phone