



Conference Call Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: September 19, 2019

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

Re: Final Minutes of the August 14, 2019 Aquatic SWG Conference Call

The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, August 14, 2019, from 10:00 a.m. to 11:00 a.m. Attendees are listed in Attachment A of these conference call minutes.

I. Summary of Action Items

1. Steve Lewis will discuss internally with U.S. Fish and Wildlife Service the appropriate fish size threshold for identifying Bull Trout passing Wells Dam fish ladder count windows as subadults (Item VI-1).
2. Douglas PUD will review juvenile Pacific lamprey data collected at screw traps located upstream of Wells Dam, including: 1) how the data were recorded, which will also be redefined if needed; and 2) trends in the data, if any (Item VI-1).
3. Breean Zimmerman will distribute a link to the Washington State Department of Ecology (Ecology) Total Dissolved Gas proposed rule change, which is available for public comment, and related public meetings (Item VI-5). *(Note: Zimmerman provided the link to Ferguson following the conference call on August 14, 2019, which Kristi Geris distributed to the Aquatic SWG that same day.)*
4. The Aquatic SWG meeting on September 11, 2019, will be held by **conference call** (Item VII-1).

II. Summary of Decisions

1. There were no decisions approved during today's conference call.

III. Agreements

1. There were no agreements discussed during today's conference call.

IV. Review Items

1. There are no items that are currently available for review.

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

The revised draft July 10, 2019 conference call minutes were reviewed. Ferguson said Kristi Geris distributed the revised minutes on August 7, 2019, and said the Yakama Nation (YN) submitted edits after the first revised minutes were distributed and a second revised minutes with YN redlines were distributed by Geris later that same day. Sarah Montgomery (Anchor QEA, LLC) reviewed the edits and asked if any additions or changes are needed to the minutes. Andrew Gingerich noted Donella Miller provided results from white sturgeon genetic sampling efforts at the Yakama Nation hatchery to him via email. He summarized that no fish sampled were determined to be 10N or 12N polyploid fish, but this exchange does not need to be summarized in the meeting notes. Aquatic SWG members present approved the July 10, 2019 conference call minutes, as revised.

Action items from the Aquatic SWG conference call on July 10, 2019, are as follows (note: the following italicized item numbers correspond to agenda items from the July 10, 2019 conference call):

- *Steve Lewis will discuss internally with U.S. Fish and Wildlife Service the appropriate fish size threshold for identifying Bull Trout passing Wells Dam fish ladder count windows as subadults (Item VI-1).*
This action item will be carried forward.
- *Douglas PUD will review juvenile Pacific lamprey data collected at screw traps located upstream of Wells Dam, including: 1) how the data were recorded, which will also be redefined if needed; and 2) trends in the data, if any (Item VI-5).*
This action item will be carried forward.

2. Pacific Lamprey Translocation Update (Chas Kyger):

Chas Kyger said Douglas PUD completed the first of 3 weeks of Pacific lamprey trapping for translocation as of last Friday, August 9, 2019, and the second week of trapping is occurring this week. During the first week, 40 fish were collected at Priest Rapids Dam and PIT-tagged. He said the original intent for these fish was to transfer and release some to the Okanogan

River; however, after discussions with the Colville Confederated Tribes (CCT), it was decided to postpone transfer into the Okanogan River due to the low number of fish collected in the first week. Kyger said the 40 fish were released at Starr Boat Launch. So far in the second week of trapping, 35 fish have been collected. Kyger was optimistic about having enough fish from the second week's effort to transfer some into the Okanogan River as originally planned. He said he will provide another update during the next Aquatic SWG call.

3. 2019 White Sturgeon Monitoring and Evaluation Effort (Andrew Gingerich):

Andrew Gingerich said white sturgeon monitoring and evaluation efforts are currently ongoing for juveniles and adults. For juvenile monitoring, Gingerich said the monitoring is in its fourth week of 5-days-per-week collection. He said 12 lines with 40 hooks each are set overnight. For juvenile indexing, staff use 2 and 4 odd hooks, resulting in a total of 9,600 hooks set so far in the 4-week sampling period. He said staff have caught 365 fish including recaptures, with a rate of 3.8% of hooks capturing fish. He said 340 unique fish were caught (22 fish were recaptured twice and 7 were recaptured three times). He said the second four-week sampling period for juvenile indexing will occur in September 2019, after which he will have a more complete update for the Aquatic SWG.

For adult monitoring and evaluation efforts, Gingerich said staff are currently in the second week of the 4-week session. He said the biggest difference between juvenile and adult sampling is in the gear size used. Like previous years, staff are fishing with four hook sizes—14- (14/0), 16- (16/0), 18- (18/0), and 20-aught (20/0) hooks with 40 hooks per line, randomized along the line. He said in the first 7 days of collection, 114 fish were captured with none being recaptures. Out of 3,364 hooks set, this equates to a 3.4% capture rate, similar to the juvenile capture rate. Gingerich said 99% of the fish being captured on adult gear are actually subadult hatchery fish, mostly 5- and 6-year old fish. He said one question staff have raised this year is whether it makes sense for future monitoring and evaluation efforts to use standardized gear to perform stock assessment on juveniles and adults at the same time rather than separating efforts by hook sizes. He said the adult effort will continue for 2 more weeks for a total of 4 weeks until it is completed in September. He said he will continue to provide updates to the Aquatic SWG.

Laura Heironimus asked if there is any indication to the age structure of wild fish collected, even though there have been few wild fish caught. Gingerich said when any wild white sturgeon is collected, staff take a fin ray and DNA clip. He said there are no DNA sampling requirements in Douglas PUD's plans, but the samples are maintained in case they are needed for future studies led by other organizations. He said most of the fish collected are

from the 2011 and 2012 brood years, and wild fish that are being handled often have been collected previously.

Jason McLellan asked whether wild fish are tagged with acoustic tags. Gingerich said wild fish have been tagged with acoustic tags in the past. He said this year, staff are prepared to tag more fish with V16 acoustic tags, but none have been tagged yet in 2019 because no untagged wild adults have been caught. He said the V16 acoustic tags have a 10-year duration and the goal is for fish to have an active tag while spawning. For this reason, he said staff are only considering tagging fish longer than 3 feet in length (likely 6-year-old fish) but prefer tagging at least 10-year-old fish because males are not likely to be reproductively mature until about age 15. He said this size decision criteria means that tag burden is less of an issue for the fish and there is a higher chance to collect spawning information before the tag dies.

4. Wells Dam Fish Hatchery Brood Year 2019 White Sturgeon Rearing Update (Andrew Gingerich):

Andrew Gingerich said the CCT have been collecting white sturgeon larvae in Lake Roosevelt for brood year 2019 rearing efforts. He said two batches of larvae have been delivered to Wells Fish Hatchery to date, which he summarized as follows:

- Batch 1: The first batch of larvae comprised 1,604 fish delivered on July 9, 2019. Gingerich said so far, this batch has experienced 66% survival, with mortality rates decreasing to around zero to five fish per day as the fish have grown. He said the fish are growing quickly and were being initially fed around 30% of their body weight, and now are being fed approximately 20% of their body weight each day.
- Batch 2: The second batch of larvae comprised 490 fish delivered on July 24, 2019. This batch saw relatively high early mortality rates that have decreased as fish grew, similar to the first batch.

In total, Gingerich said 2,094 larvae were delivered to Wells Fish Hatchery in July 2019, and as of August 13, 2019, 1,504 remain on station (72% survival). He said results of the rearing efforts to date are encouraging. He said one change from previous years is that hatchery staff are grading the fish more aggressively. He said because the fish are being reared on warm temperatures that match river temperatures more closely, and with high feed rates, size discrepancies between fish in the same tank appear within 1 to 2 weeks. He said separating fish by size more frequently appears to have increased survival rates. He attributed this to instances where larger fish may be hoarding food or bullying smaller fish.

Gingerich added that Douglas PUD fish health staff, fish culturists, and he travelled to Cranbrook, British Columbia, where the Freshwater Fisheries Society of BC rears white

sturgeon. They also visited the Bonner's Ferry, Idaho facility where the Kootenai Tribe of Idaho rears white sturgeon. In Cranbrook, BC, staff collect wild eggs and larvae and rear both in the hatchery environment. The Kootenai Tribe's facility hosts a direct gamete program, where adults are brought into the facility for a more conventional approach to broodstock crossing. Gingerich said one important difference between these programs is that with a direct gamete program, females brought into the hatchery may produce hundreds of thousands of eggs. He said compared to programs at Wells Fish Hatchery and at Cranbrook, there is more leeway for errors and mortality because there are so many eggs available. Gingerich said this visit is part of a wider effort to help staff rear fish and share knowledge across other white sturgeon programs in the region. He summarized that the 2019 broodstock collection and culturing efforts have been successful to date (with 72% survival) but there are still risks ahead.

5. Washington State Department of Ecology Total Dissolved Gas Proposed Rule Change (Andrew Gingerich):

Andrew Gingerich said Ecology is in the process of modifying the rule that Douglas PUD follows regarding total dissolved gas (TDG) standards during the fish spill season, including standards in the tailrace as well as for the next downstream dam. He said the impetus for the rule change is that Bonneville Power Administration and the U.S. Army Corps of Engineers have been asked to accommodate high spill volumes at lower Snake and lower Columbia river dams in accordance with the 2019–2021 Spill Operation Agreement to increase smolt-to-adult return rates for salmonids. Increasing spill volumes would likely violate existing TDG standards, so Ecology plans to modify the standards to provide two compliance options. Gingerich said he reviewed a version of the draft proposed rule change, and summarized the two options as follows:

- Option 1 is to operate under the existing TDG standards during the bypass season, as Douglas PUD is accustomed to.
- Option 2 is to use modified TDG standards that allows a project to spill more with up to 125% TDG in the tailrace calculated over the average highest 2 hours in any day.

Gingerich said Ecology is seeking feedback on the proposed rule change at upcoming meetings, such as on September 16, 2019, in Vancouver, Washington, and September 19, 2019, via webinar. He said he brought this topic to the Aquatic SWG because changes to the TDG rules could affect Douglas PUD's 401 certification, license obligations, and 10-year TDG Attainment Plan.

Breean Zimmerman thanked Gingerich for bringing up the proposed rule change. She added that in addition to complying with the Spill Operation Agreement, adjusting TDG standards

to allow for more spill and consequently higher smolt-to-adult return rates for salmonids supports Southern Resident Killer Whale (SRKW) recovery efforts per recommendations of the SRKW Task Force. Zimmerman said the proposed rule change is available for public review from July 31 to September 26, 2019. She said she will send a link for the proposed rule change and upcoming public meetings to the Aquatic SWG.

Regarding the two options proposed under the new rule, Zimmerman said Option 1 does not change much from current operating standards. She said this includes standards of 115% TDG in the forebay and 120% in the tailrace. However, the proposed rule would change how the average is calculated—currently, there is a consecutive rolling average of hourly TDG values; under the new rule, these will be calculated as an average of the 12 highest hourly readings in a calendar day, relative to atmospheric pressure. Further, the proposed change will allow a maximum TDG saturation level of 125% calculated as an average of the two highest hourly TDG measures in a calendar day during spillage for fish passage. She also noted the TDG criterion throughout the year would still be 110%, except during spill season. She said one change for Douglas PUD under the new rule in Option 1 would be that Douglas PUD would no longer be required to submit a Gas Abatement Plan (GAP) for Wells Dam annually (this is Ecology's way of allowing higher TDG standards during the spill season). She said this requirement is summarized in the proposed rule change.

For Option 2, Zimmerman said an additional detail is that facilities would comply with the 125% maximum TDG standards by conducting biological monitoring for gas bubble trauma (such as is already performed at many mid-Columbia River dams). She said prescribed methods for biological monitoring are summarized in the proposed rule change.

Gingerich said Douglas PUD staff have been discussing the requirements for a GAP Plan under the proposed rule change. He said there is some confusion whether a GAP would be required. He said the 401 certification for Wells Dam requires a GAP, so Douglas PUD will likely still have to produce the plan as the 401 certification is a Federal Energy Regulatory Commission requirement. He said this conversation is ongoing as Douglas PUD weighs the two available options. Gingerich said Douglas PUD staff are generally supportive of the rule change at a technical level because biological data collected at Rocky Reach Dam suggest the 125% TDG standard is conservative. He said other operators and data seem to agree the standards are conservative for salmonids. However, he said few data have been collected for resident fish. He suggested monitoring of resident fish for negative effects of high TDG could be part of a future GAP or biological monitoring plan. He said he cannot speak to the policy aspects of the proposed rule change, but he believes Douglas PUD will be supportive of Option 2 at the policy level as well. He said avoiding TDG exceedances can be expensive for

Douglas PUD. The flexibility allowed under the proposed rule change would allow for short periods of spill that would reduce the time where Douglas PUD has to sell electricity into the market at negative pricing to meet the current tailrace TDG criteria.

John Ferguson asked when the proposed rule might be finalized. Zimmerman said she is not sure how long it will take to finalize the proposed rule, but it perhaps could be final in 2020 or 2021. She said there is a temporary rule change in place for the lower eight dams on the Snake and Columbia rivers through 2021. Gingerich said Ecology's goal is to have a final rule in place for the 2020 spill season but ESA consultation could delay the process. Ferguson said he understands another driver for the process is to align Ecology and the Oregon State Department of Environmental Quality standards, which Zimmerman confirmed.

Ferguson also asked who decides which option will be adopted at each project—Ecology or the project owner? Zimmerman said project owners can default to Option 1 or can decide to use Option 2 with the prescription that biological monitoring be conducted. She said Option 2 likely includes a conversation with Ecology about compliance requirements, but each facility owner would have the flexibility to choose their preferred option. Ferguson said it will be interesting to see how different utility districts and project owners decide which option to use, particularly as it relates to prey availability for SRKW. He thanked Gingerich and Zimmerman for the summary of the proposed rule change and said Douglas PUD will update the Aquatic SWG regarding their decision about which option to pursue if the rule is finalized. He said it sounds like Douglas PUD is supportive of the flexibility provided by Option 2 from a technical and policy perspective, so this may result in changes to documentation and plans pertaining to the Aquatic SWG.

VII. Administration

1. Upcoming Meetings (John Ferguson):

The Aquatic SWG meeting on September 11, 2019, will be held by **conference call**.

Other upcoming meetings include October 9 and November 13, 2019 (TBD).

List of Attachments

Attachment A List of Attendees

Attachment A – Attendees

Name	Role	Organization
John Ferguson	Aquatic SWG Chairman	Anchor QEA, LLC
Sarah Montgomery	Administration/Technical Support	Anchor QEA, LLC
Andrew Gingerich	Aquatic SWG Technical Representative	Douglas PUD
Chas Kyger	Technical Support	Douglas PUD
Breean Zimmerman	Aquatic SWG Technical Representative	Washington State Department of Ecology
Laura Heironimus	Aquatic SWG Technical Alternate	Washington Department of Fish and Wildlife
Ralph Lampman	Aquatic SWG Technical Representative	Yakama Nation
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederated Tribes