



# Conference Call Minutes

## Aquatic Settlement Work Group

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**To:** Aquatic SWG Parties

**Date:** January 9, 2019

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

**Re:** Final Minutes of the December 12, 2018 Aquatic SWG Conference Call

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The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, December 12, 2018, from 10:00 to 11:00 a.m. Attendees are listed in Attachment A of these conference call minutes.

### I. Summary of Action Items

1. Douglas PUD will continue communicating to the Aquatic SWG coordination with Wells Dam mechanical staff regarding inspection of the diffuser grating spacing in the Wells Dam collection gallery during the 2018/2019 Wells Dam winter maintenance period (Item VI-1).
2. Douglas PUD will provide a document summarizing Douglas PUD 2018 Pacific Lamprey translocation efforts, including those in coordination with Grant PUD, the Yakama Nation (YN), and the Colville Confederated Tribes (CCT), to Kristi Geris for distribution to the Aquatic SWG (Item VI-1).
3. Aquatic SWG members will contact Andrew Gingerich if the member is interested in attending an in-person meeting in January 2019 with Douglas PUD, Wells Fish Hatchery, and CCT staff to discuss Wells Brood Year (BY) 2019 White Sturgeon rearing practices (Item VI-4).
4. The Aquatic SWG meeting on January 9, 2019, will be held in-person at Wells Fish Hatchery (Item VII-2). *(Note: due to unexpected delays in dewatering the Wells Dam fishway for annual winter maintenance, the Aquatic SWG meeting on January 9, 2019 will now be held by **conference call** and the Aquatic SWG meeting on February 13, 2019 will be held in-person at Wells Fish Hatchery, as distributed to the Aquatic SWG by Kristi Geris on December 19, 2018.)*

### 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. A draft Wells Fish Hatchery BY2019 White Sturgeon Rearing Plan was distributed to the Aquatic SWG by Kristi Geris on November 29, 2018. This draft plan is available for review and will be further discussed during future meetings (Item VI-4).

## 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. Ferguson added an update on the *2018 Aquatic Settlement Agreement Annual Report* review schedule.

The revised draft November 14, 2018 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 added distribution of the Final Douglas PUD Spill Prevention Control and Counter Measures Plan under Documents Finalized. Aquatic SWG members present approved the November 14, 2018 conference call minutes, as revised. The Washington Department of Ecology (Ecology) and the CCT abstained, because representatives were not present during the November 14, 2018 conference call.

Action items from the Aquatic SWG conference call on November 14, 2018, are as follows (note: the following italicized item numbers correspond to agenda items from the November 14, 2018 conference call):

- *Douglas PUD will continue communicating to the Aquatic SWG the coordination with Wells Dam mechanical staff regarding inspection of the diffuser grating spacing in the Wells Dam collection gallery during the 2018/2019 Wells Dam winter maintenance period (Item VI-2).* Chas Kyger said the winter maintenance outage dates keep getting pushed back. He said the plan now is to dewater the first (east) fishway next week. He said the Mechanical Foreman at Wells Dam confirmed all needed supplies have been received to perform the repairs to the diffuser grating spacing. Kyger said the mechanical crew has also reviewed the photographs Ralph Lampman provided, and the crew knows Kyger is available to help with the inspections. Kyger offered to host a tour of the collection gallery after the work is complete if anyone is interested. He said this potentially can occur during the Aquatic SWG

meeting on January 9, 2019, or it can be a separate tour date. This action item will be carried forward.

- *Douglas PUD will provide a document outlining husbandry practices, including feeding regimes, to implement during future White Sturgeon rearing at Wells Fish Hatchery to Kristi Geris for distribution to the Aquatic SWG (Item VI-5).*

Andrew Gingerich provided this document to Geris on November 29, 2018, which Geris distributed to the Aquatic SWG that same day.

- *Douglas PUD will provide a document summarizing Douglas PUD 2018 Pacific Lamprey translocation efforts, including those in coordination with Grant PUD, the YN, and the CCT, to Kristi Geris for distribution to the Aquatic SWG (Item VI-7).*

Andrew Gingerich reminded the Aquatic SWG about the Douglas PUD 2018 Pacific Lamprey translocation effort summary table that was distributed to the Aquatic SWG by Geris on September 12, 2018. Gingerich said this table describes the 671-fish translocation effort, including dates and release locations. He said this table will be inserted into the *2018 Pacific Lamprey Management Plan Annual Report*, along with additional details where needed. Gingerich said, however, he believes the summary table distributed on September 12, 2018 largely addresses Ralph Lampman's request (i.e., this action item). This action item will be carried forward.

## 2. **BY2018 Wells White Sturgeon Rearing at Wells Fish Hatchery (Andrew Gingerich):**

Andrew Gingerich said as of December 11, 2019, there were about 101 to 102 White Sturgeon on station at Wells Fish Hatchery. He noted as previously discussed, this is about 225 fish under program. He said fish are separated by size into three tanks, as follows:

Rearing Tank	Number of Fish	Fish Per Pound	Mean Fish Mass (grams)
1	40	8.7	52.0
2	42	14.3	32.0
3	20	36.1	12.5

Gingerich said these fish sizes are within the range of BY2017 fish, as measured on December 11, 2017, and the size distribution is tighter for the BY2018 fish. He said fish on station are in good condition and mortalities are down to about one per week. He said there are a few pinhead fish that may not make it; however, he is confident the other remaining fish will reach 200 grams per fish, or greater, by release. He said hatchery staff will continue sampling the fish every 2 weeks to be sure to reach the size target at release.

**3. BY2019/2020 Wells White Sturgeon Stocking Target (Andrew Gingerich):**

Andrew Gingerich said with 101 to 102 fish currently on station, there will likely be just under 100 fish come late-May to early June 2019, when BY2018 fish will be stocked in the Wells reservoir. He said this is well-short of 325 fish (as stipulated in the Statement of Agreement [SOA], *Wells Reservoir White Sturgeon Supplementation 2018-2022*, approved by the Aquatic SWG on January 11, 2017). Gingerich said to makeup for this shortfall, Douglas PUD is proposing to stock 550 BY2019 fish in 2020, which would include the 325 fish target for 2020 plus the 225 fish that were not stocked in 2019.

John Ferguson suggested discussing this today with the goal of making a decision in January 2019. He said the two topics to consider include: 1) number of fish to stock and in which years; and 2) does this decision need to be memorialized in an SOA or will the meeting minutes be adequate?

Jason McLellan said the CCT support stocking an additional 225 fish in 2020 and an SOA should not be required; rather, capturing the decision in the meeting minutes should suffice.

Chad Jackson agreed with McLellan and suggested including in the meeting minutes language explaining that if there is a shortfall in program these numbers will be added to the following year's release target. Jackson also suggested documenting this decision in the *2018 Aquatic Settlement Agreement Annual Report*.

Breean Zimmerman said Ecology concurs with the CCT and Washington Department of Fish and Wildlife (WDFW) and has nothing further to add.

Ferguson suggested, considering U.S. Fish and Wildlife Service and the YN are not present, holding off an official decision until the Aquatic SWG meeting on January 9, 2019. Gingerich said Douglas PUD agrees.

**4. Brood Year 2019 Wells White Sturgeon Rearing Plan (Andrew Gingerich):**

Andrew Gingerich said a draft Wells Fish Hatchery BY2019 White Sturgeon Rearing Plan was distributed to the Aquatic SWG by Kristi Geris on November 29, 2018. Gingerich said this is a 3-page document that focuses on modifications to White Sturgeon rearing at Wells Fish Hatchery from 2018 to 2019. He said the three key differences include: 1) placing arriving fish directly into round Combi tanks instead of shallow troughs; 2) warming water temperatures earlier to mimic temperatures found in White Sturgeon natal waters; and 3) relying on an Otohime diet. He said comments on the draft document have been received from the CCT, and Douglas PUD is still welcoming additional comments.

Gingerich said additionally, Douglas PUD plans to setup an in-person meeting in January 2019 with Douglas PUD, Wells Fish Hatchery, and CCT staff to discuss Wells BY2019 White Sturgeon rearing practices, review the draft rearing plan, and discuss White Sturgeon rearing, culture, and experiences, in general. Gingerich welcomed Aquatic SWG members to participate in the meeting. He said after discussing the draft plan in-person, Douglas PUD will request approval of the document in February or March 2019.

John Ferguson asked if Aquatic SWG members are interested in participating in this meeting? Chad Jackson said WDFW will contact Gingerich about this in-person meeting outside of this conference call. Breean Zimmerman said Ecology does not need to participate in this meeting, but can coordinate with the Aquatic SWG, as needed. Gingerich noted that the outcome of the meeting will be reflected in the revised draft plan for approval.

Ferguson suggested that Aquatic SWG members contact Gingerich if the member is interested in attending an in-person meeting in January 2019 with Douglas PUD, Wells Fish Hatchery, and CCT staff to discuss Wells BY2019 White Sturgeon rearing practices.

**5. 2018 Total Dissolved Gas Summary (Andrew Gingerich):**

Andrew Gingerich said a *Wells Hydroelectric Project Total Dissolved Gas 2018 Annual Report* (Attachment B) was distributed to the Aquatic SWG by Kristi Geris on December 11, 2018. Gingerich said Douglas PUD prepares this presentation annually for the U.S. Army Corp of Engineers (USACE), as required under the USACE Biological Opinion. He said Grant and Chelan PUDs also participate each year and discuss total dissolved gas (TDG) monitoring that takes place in the Columbia and Snake rivers. He noted that USACE focuses mainly on data quality and completeness, and not so much on the actual compliance. He said the data included in Attachment B will also be included in the *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report*, which will be distributed for Aquatic SWG review in January 2019. Gingerich reviewed Attachment B, as follows:

Slide 2 of Attachment B

Gingerich said Douglas PUD monitors TDG at four different locations: Washburn Island, Wells Dam forebay, and two locations in the Wells Dam tailrace, including one back-up logging sensor. He said the photograph on this slide is from June 2011 when river flow passing Wells Dam was averaging 259,000 cubic feet per second (259 kcfs). He said similar conditions were experienced last May 2018, when river flow passing Wells Dam averaged 266 kcfs, which was the highest river flow since the dam was commissioned in 1967.

Slide 3 of Attachment B

Gingerich said this slide outlines the year-round TDG criteria required by Ecology. He noted that Ecology is currently in the midst of considering a modification to these standards during the fish spill period. He said the modification is based on a request from parties who are interested in having USACE-operated dams spill to higher gas caps with the hopes to increase smolt survival, and smolt-to-adult ratios in the long run. He said language exists in the Washington Administrative Code which allows for such a temporary modification. He said the Environmental Impact Statement (EIS) is out for review with comments due to Ecology by the end of this week. He said he wanted to notify the Aquatic SWG of this modification in case members are interested in following its progress. He said he believes this will likely be approved, which may mean one or more of the criteria on this slide could change at downstream projects.

Breean Zimmerman said if Aquatic SWG members have questions she can reach out to Bryson Finch, Ecology's Water Quality and Hydropower Lead Scientist, who has been working closely on this EIS. Zimmerman said essentially, Ecology is considering higher TDG levels, per requests, and the EIS is a combination of different options.

John Ferguson asked if Ecology approves a modification, does this automatically supersede the TDG criteria for Wells Dam? He also asked if the *Aquatic Settlement Agreement* is automatically updated or is coordination with the Federal Energy Regulatory Commission required? Zimmerman said there may be language included in the *Aquatic Settlement Agreement* or Douglas PUD Clean Water Act Section 401 Water Quality Certification (401 certification) that stipulates what happens if Ecology approves a rule modification; however, she is unsure without reviewing the documents. Gingerich said he suspects there is some flexibility with the proposed modification, including potentially a narrow scope in terms of geography or spatial application. He said the modification may only apply to select projects and not necessarily affect upstream or Mid-Columbia River projects. Ferguson asked if the modification might only apply to federal projects, and Gingerich said yes and only in the lower Columbia River (i.e., not Grand Coulee or Chief Joseph dams).

Ferguson asked if Ecology is considering modifying TDG standards in the forebay and tailrace? Zimmerman said yes, that Ecology is currently reviewing the environmental impacts of changing guidance for both the forebay and tailrace.

Slide 4 of Attachment B

Gingerich said this slide is a Google Earth image showing the geographical locations of the TDG monitoring sites. He noted Chief Joseph Dam to the far right and moving downstream to the left is the first monitoring station at Washburn Island. He said this location is not

required by Douglas PUD's 401 certification, but Douglas PUD maintains the monitoring site to have a good idea of gas levels coming into its reservoir; the station is located where there is good mixing of flows from both the powerhouse and spillway compared to the USACE-monitored site located at Chief Joseph Dam. He said the next monitoring station moving downstream is at Wells Dam off pier nose 6 in the forebay. He said lastly, there are two tailrace monitoring sites (one for redundancy) located approximately 1.5 to 2.0 miles downstream from Wells Dam.

Slide 6 of Attachment B

Gingerich said the next few slides show calibration summaries, which compare handheld readings to monitoring site sensor readings. He said calibrations take place monthly throughout the year and data drift on these sensors is low. He noted that these barometric data are reported in millimeters per mercury (mmHg).

Slide 7 of Attachment B

Gingerich described the station locations, as follows:

Monitoring Site	Location
WSBW	Washburn Island
WEL	Wells Dam forebay
WELW	Wells Dam tailrace
WELW2	Wells Dam tailrace (back-up datalogger)

He noted that the temperature readings before and after calibration were within 0.1-degree.

Slide 8 of Attachment B

Gingerich noted that these data are measured in percent and not mmHg. He said the comparisons of percent-TDG saturation pre- and post-servicing are within 1% in most cases.

Slide 9 of Attachment B

Gingerich said these data show little differences between handheld and monitoring station sensor readings.

Slide 10 of Attachment B

Gingerich said this calibration involves removing the sensor from underwater and applying a known pressure on the membrane to determine if the reading is accurate. He said in most cases, the readings were exactly what was expected in mmHg.

Slide 11 of Attachment B

Gingerich said this slide is a summary of the calibration slides. He noted the low deviations from the standard for each metric.

Slide 12 of Attachment B

Gingerich said this slide shows TDG pressure in mmHg. He said the red line represents the redundant sensor in the Wells Dam tailrace (WELW2). He said there were two instances where WELW2 had a torn membrane, which resulted in high mmHg readings. He said this is a good example of why there is a redundant sensor in the tailrace.

Slide 13 of Attachment B

Gingerich noted the servicing visits represented by purple dots. He said calibrations are conducted monthly or more frequently, as needed. He noted the Washburn Island sensor depicted by the grey line and the gap in mid-July 2018 followed by a black line. He said the sensor failed and was pulled for repair.

Slide 14 of Attachment B

Gingerich said this slide shows what the freshet looked like. He noted the spike in May 2018, when average river flow passing Wells Dam reached 266 kcfs, breaking a 49-year record. He recalled the 7-day, 10-year-frequency (7Q10) flood at Wells Dam is 246 kcfs, which was well-exceeded.

Ferguson noted that the peak freshet was 1.5 months early. Gingerich said this is a good point. He said it seems in the last few years there has been higher river flow earlier in the year. He said another thing to note is that in late-February and early March 2018, average river flow was greater than 150 kcfs, which is high for this time of year. He said this is problematic because Douglas PUD relies on experiencing an average river flow of 100 kcfs this time of year to facilitate taking turbine units offline for maintenance. He said he thinks the snow pack late in the year worried the federal projects into drafting hard and fast, which created issues for Wells Dam meeting the 110% water quality standard outside of fish passage season.

Slide 15 of Attachment B

Gingerich described the elements in this graph, notably the horizontal black dashed line representing the 120% TDG compliance target in the Wells Dam tailrace and the purple line representing the 7Q10 flood flow for Wells Dam at 246 kcfs. He said when TDG exceeds the 120% TDG standard and river flow also exceeds the 7Q10 flood flow, Douglas PUD's 401 certification is written as such that managing the project for safety is the priority and meeting



TDG standards do not apply. He said, however, when river flow is below the 7Q10 flood flow and TDG exceeds the 120% TDG standard this results in compliance issues.

Slide 16 of Attachment B

Gingerich said this slide shows compliance with the 110% water quality standard outside of the fish passage season. He recalled already discussing the early freshet and reduced unit capacity due to maintenance, which resulted in non-compliance on several occasions in spring 2018. He said the non-compliance in fall 2018 was more related to dam operations and was more preventable. He said Douglas PUD is currently discussing what can be done, operationally, to prevent non-compliance in future years.

Slide 17 of Attachment B

Gingerich said these data will be included in the *Wells Hydroelectric Project Total Dissolved Gas Abatement Plan 2018 Annual Report*, including narration on operational constraints.

Zimmerman said regarding the EIS scoping of the TDG modification, Finch clarified the EIS scoping is intended to be broad and include all projects; however, the short-term modification applies to the lower Columbia River projects and is not intended for the upper river projects. Zimmerman said the three TDG criteria required by Ecology (identified on slide 3 of Attachment B) could change but could also stay the same, and Douglas PUD needs to submit a request to be considered for the short-term modification if the PUD wants to be included in the change.

## **VII. Administration**

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

John Ferguson said the draft *2018 Aquatic Settlement Agreement Annual Report* will be distributed for a 45-day review on March 22, 2019. Douglas PUD will request approval of the report during the Aquatic SWG meeting on May 8, 2019.

### **2. Upcoming meetings (John Ferguson):**

John Ferguson said the Aquatic SWG meeting on January 9, 2019, coincides with the Wells Dam winter maintenance fish ladder outage. He asked Aquatic SWG members if there is interest in convening an in-person meeting and touring Wells Dam afterwards. Jason McLellan said he would be interested in an in-person meeting. Ferguson asked which fishway will be out of service on January 9, 2019, and does it matter for accessing the collection gallery to view the diffuser grating? Chas Kyger guessed the first ladder down will be the ladder that goes through a major overhaul this year (the east ladder), so he is unsure if the diffuser grating will be fixed by January 9, 2019, but it might be. Ferguson asked in terms of mechanical staff, is it feasible to access the collection gallery? Kyger said he already discussed this with the

mechanical staff who indicated they can accommodate a tour again. Andrew Gingerich suggested meeting at Wells Fish Hatchery for the in-person meeting and those who are interested in touring the fish ladder again can stay while others can leave.

The Aquatic SWG meeting on January 9, 2019, will be held in-person at Wells Fish Hatchery. *(Note: due to unexpected delays in dewatering the Wells Dam fishway for annual winter maintenance, the Aquatic SWG meeting on January 9, 2019 will now be held by conference call and the Aquatic SWG meeting on February 13, 2019 will be held in-person at Wells Fish Hatchery, as distributed to the Aquatic SWG by Kristi Geris on December 19, 2018.)*

Other upcoming meetings include: February 13, 2019 (in-person at Wells Fish Hatchery) and March 13, 2019 (TBD).

## **List of Attachments**

Attachment A List of Attendees

Attachment B Wells Hydroelectric Project Total Dissolved Gas 2018 Annual Report

**Attachment A – Attendees**

<b>Name</b>	<b>Role</b>	<b>Organization</b>
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
Breann Zimmerman	Aquatic SWG Technical Representative	Washington Department of Ecology
Chad Jackson	Technical Support	Washington Department of Fish and Wildlife
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederated Tribes