



# Conference Call Minutes

## Aquatic Settlement Work Group

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**To:** Aquatic SWG Parties

**Date:** August 14, 2019

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

**Re:** Final Minutes of the July 10, 2019 Aquatic SWG Conference Call

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The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, July 10, 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 (USFWS) 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-5).
3. The Aquatic SWG meeting on August 14, 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 June 12, 2019 conference call minutes were reviewed. Kristi Geris said Larissa Rohrbach (Anchor QEA, LLC) distributed the revised minutes with all edits in redline strikeout on July 3, 2019. Geris said she redistributed the revised minutes today before the call on July 10, 2019, with all revisions accepted and outstanding comments addressed in redline strikeout. Aquatic SWG members present approved the June 12, 2019 conference call minutes, as revised. The Washington Department of Ecology (Ecology) and Colville Confederated Tribes (CCT) abstained, because representatives of theirs were not present during the June 12, 2019 meeting. *(Note: Steve Lewis provided USFWS approval of the minutes via email following the Aquatic SWG conference call on July 10, 2019.)*

Action items from the Aquatic SWG conference call on June 12, 2019, are as follows (note: the following italicized item numbers correspond to agenda items from the June 12, 2019 conference call):

- *Breean Zimmerman will determine the definition, history, and Ecology's interpretation of the "reasonable and feasible measures" clause in the Wells Project Clean Water Act (CWA) 401 Certification (Item VI-1).*  
Zimmerman said she believes the "reasonable and feasible measures" clause is similar to a cost-versus-benefits analysis as it relates to measures and alternatives described in a 401 certification; i.e., how big of a gain will be achieved? She added that the burden is on the facility to demonstrate how measures and alternatives are reasonable and feasible, or not. She said she thought a guidance document existed on this; however, she was unable to locate such a document or a formal definition of the clause. Andrew Gingerich said Douglas PUD has no further questions on this topic.
- *Steve Lewis will discuss internally with U.S. Fish and Wildlife Service (USFWS) 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.
- *Laura Heironimus will provide a recently developed best management practices plan for a condition of genome duplication, or autopolyploidy, to Kristi Geris for distribution to the Aquatic SWG (Item VI-3).*

- Heironimus provided the plan, *A Management Plan for Spontaneous Autopolyploidy in Cultured White Sturgeon (Acipenser transmontanus) in the Lower Columbia and Snake River Impoundments*, to Geris following the conference call on June 12, 2019, which Geris distributed to the Aquatic SWG that same day.
- *Douglas PUD will consult with Jason McLellan and the Colville Confederated Tribes (CCT), Andrea Schreier (University of California, Davis [UC Davis]), Joel Van Eenennaam (UC Davis), and Paul Anders (Cramer Fish Sciences/University of Idaho) regarding sampling White Sturgeon in the Wells Reservoir for the presence of autopolyploidy (Item VI-3). This will be discussed during today's conference call.*
  - *Kristi Geris will add to the Aquatic SWG July 10, 2019 conference call agenda a discussion about Pacific Northwest National Laboratory's (PNNL's) newly developed Eel and Lamprey Acoustic Tag (ELAT) and its potential use in future Douglas PUD Pacific Lamprey studies (Item VI-6).*
- Geris added this item to the agenda, as discussed.

## **2. Well Fish Hatchery Brood Year 2019 White Sturgeon Collection Update (Andrew Gingerich):**

Andrew Gingerich said yesterday morning on July 9, 2019, Douglas PUD obtained 1,604 larval White Sturgeon from Jason McLellan and the CCT, which were collected during the previous night from July 8 to July 9, 2019. Gingerich said this is the first batch of fish transported to Wells Fish Hatchery in 2019. He said the fish were acclimated once on site and will be started on feed this morning on July 10, 2019. He said Douglas PUD is interested in obtaining additional larval White Sturgeon, if possible; however, it is recognized these fish are in high demand. He said Douglas PUD will continue coordinating with McLellan and the CCT regarding the availability of additional larvae.

McLellan said the CCT have fished 15 consecutive nights now. He said there have been two pulses of larvae. He said the first pulse occurred during the last week of June 2019 and was relatively small. He said the second pulse, also not large, peaked on the night of July 8, 2019, and is declining as of last night on July 9, 2019. He said there have been unseasonably cold river temperatures, which may be delaying spawning to a degree or maybe protracting spawning. He said colder river temperatures may also be causing the smaller pulses. He said 15,000 larvae in total have been collected, including: 4,000 larvae sent to Sherman Creek Hatchery; 1,600 larvae to Wells Fish Hatchery; 212 to the Spokane Tribe of Indians; and the remaining went to the CCT mark and release translocation program. McLellan noted the balancing act among multiple interests for these fish. He said to date, the CCT have supplied 75% of the hatchery requests for the upper Columbia River basin. He said based on agreements with co-managers, the CCT have currently met obligations for the early season and are now trying to make up numbers for the CCT mark and release translocation program.

He said he believes there will be two more pulses of larvae in the next couple of weeks, and if so, this should meet all larvae needs including providing additional fish to Wells Fish Hatchery. He said, however, if requirements are not met for upper Columbia River hatcheries and the CCT translocation program, there may not be additional fish for Wells Fish Hatchery (limited to 1,600 fish currently). McLellan noted that if survival at Wells Fish Hatchery is 30%, this should meet the stocking requirements for 2020 and also make up the shortfall from 2019. He said with the techniques implemented at Wells Fish Hatchery, he believes meeting the requirements with the existing 1,600 fish on station is reasonable to achieve. He also understands about wanting a safety net of fish, and the CCT are trying to accommodate this.

John Ferguson asked how much longer do the CCT plan to collect larvae? McLellan said the effort was scheduled for 21 nights and the CCT have completed 15 nights to date. He said it may take another 10 to 12 nights, however, to capture the remaining pulses. He said the CCT are trying to shift funds around to fish until the second pulse drops off.

Ferguson asked how many fish were brought on station in 2019? Gingerich said there were about 1,900 larvae brought on station last year. He said 1,600 larvae will be the lowest number brought on station; however, he agreed with McLellan that if 30% survival is achieved this allocation should be sufficient to meet target. Gingerich said Douglas PUD understands the competing needs and recognizes the huge effort that goes into collection. He said he appreciates all the work McLellan and the CCT have put into this effort.

### **3. Spontaneous Autopolyploidy in Wild-Caught White Sturgeon Larvae and Natural Extant Population (Andrew Gingerich):**

Andrew Gingerich said has not yet contacted Andrea Schreier, Joel Van Eenennaam, or Paul Anders directly; however, he has discussed this topic with Jason McLellan and Lance Keller (Chelan PUD) who have been also discussing this topic within the Rocky Reach Fish Forum. Gingerich said he provided a summary email about these discussions, which Larissa Rohrbach distributed to the Aquatic SWG on June 26, 2019. Gingerich said in summary, because the Douglas PUD White Sturgeon Supplementation Program now relies exclusively on larval collection from Lake Roosevelt and spontaneous autopolyploidy documented in wild-origin fish is very low, Douglas PUD's position is that risk within the Douglas PUD program is low. He caveated that in the early years of the Lake Roosevelt recovery program, the extant population within Lake Roosevelt was supplemented using a direct gamete approach; however, this method has not been used in recent years. He said some of these early released fish are now reproductively mature and have the potential to have odd copies of genes; however, this has not been documented. He said Douglas PUD has not tested for autopolyploidy in fish collected by the CCT to date, and at this point, Douglas

PUD is not proposing to do so because the risk is so low and because the program now exclusively relies on wild-caught larval fish.

McLellan said he has been in communication with Schreier and the CCT are considering screening fish in the upper Columbia River basin for 10N fish (i.e., fish with 10 copies of each chromosome). He said as Gingerich mentioned, direct gamete-origin fish were utilized in Lake Roosevelt and the upper Columbia River programs from 2001 to 2010 and since that time, only wild-caught larvae have been used in those programs. He said autoploidy had not been identified in Columbia River White Sturgeon until after the switch to a wild larvae program had occurred. He said crews had not yet captured a ripe or flowing male and reproductive female until this year when a Canadian crew captured a male that was flowing. He said there is also now an indication from histology and blood plasma that hatchery fish, particularly male fish, from these earlier releases are just reaching sexual maturity with the potential to spawn in the near future. He said, therefore, the CCT wants to start screening hatchery fish in the upper Columbia River basin for abnormal numbers of chromosomes to get a handle on it and to determine whether it is occurring. He said there is also interest in collecting blood samples from all wild fish to establish a baseline on the presence of 12N wild fish. He said these data to date are based on a small sample size.

John Ferguson asked what this screening entails? McLellan said the screening involves collecting blood samples that are then run through a calibrated coulter counter and a validation process. He said few labs can do this and the CCT are looking to purchase a coulter counter to conduct the processing themselves and avoid relying on labs. He said Schreier also expressed a willingness to help with this effort, and as soon as the CCT can locate funding they plan to start screening.

Gingerich added that approximately 21,000 White Sturgeon have been stocked in the Wells Reservoir since 2014, and about 2,600 of those fish (brood year 2013) came from direct gamete-origin fish. He said the balance came from the larval-origin program. He said the direct gamete-origin fish are also easily identified because they have left 15, 16, and 17 scute marks, while the rest of the fish have right scute marks.

#### **4. Water Forecast and Runoff Update (Andrew Gingerich):**

Andrew Gingerich said the April to September forecast for Grand Coulee Dam is at 82% of average and ranked 54 of the most recent 59 water years.<sup>1</sup> He said the 120-day forecast for the Okanogan River is 57% and the Methow River is 55% of normal.<sup>2</sup> He said the only basin

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<sup>1</sup> Northwest River Forecast Center Water Supply Period Rankings Table for Grand Coulee Dam ([https://www.nwrfc.noaa.gov/water\\_supply/ws\\_ranking.cgi?id=GCDW1](https://www.nwrfc.noaa.gov/water_supply/ws_ranking.cgi?id=GCDW1))

<sup>2</sup> <https://www.nwrfc.noaa.gov/rfc/>

close by that is worse off is Chelan Falls, which is at 36% of average. He noted that Chelan Falls is below the Wells Project, but he noted this value because it is so low. He said the mainstem Columbia River is close to 82% of normal, thanks to the upper basin. He said a positive note is that total dissolved gas (TDG) performance is very good this year. He said once the fish bypass season ends, Douglas PUD will provide an update on TDG standards and compliance for the 2019 season.

John Ferguson recalled discussing last month the Okanogan River reaching 22°C, and he asked if this thermal block has dissipated? Gingerich said he heard the thermal barrier has since lifted, which is good news for the 13,000 Sockeye Salmon recently counted passing Wells Dam.

**5. PNNL's ELAT and Future Douglas PUD Pacific Lamprey Studies (Ralph Lampman):**

Ralph Lampman suggesting beginning discussions about how and when to conduct juvenile Pacific Lamprey studies at Wells Dam. He said a juvenile tag is now available, designed by PNNL. He said PNNL is in the process of contracting a vendor to produce the tags in higher quantities; although, he believes PNNL is currently capable of producing enough tags for a pilot-scale study. He said early results using the tags in the Yakima River Basin have been promising. He said there was decent detection during the first year of testing, the second year is producing good data on migration behavior, and 2020 will be the final year for this 3-year study. He said the battery life for this tag is about 30 days with a 3-second burst rate, which is an improvement over past models (5-second burst rate). He said fish source needs to be discussed and how to obtain them. He said the screw traps above Wells Dam historically have not produced many fish. He said Option B is to use other fish. He said the closest source is McNary Dam or a tributary off the Yakima River. He suggested not waiting for fish to show up in the screw traps upstream of Wells Dam because he does not believe this will happen soon enough.

Andrew Gingerich asked how the screw trap counts were affected on the Umatilla River after 6 to 7 years of implementing the translocation program? He said it seems the presence of juveniles increased, and Lampman said they did notably in the lower Umatilla River.

Lampman said now, he believes 5,000 to 10,000 juveniles are being tagged per year (after 18 years of translocation). *(Note: Lampman later added that in 2018, in the Yakima River Basin, the YN captured over 5,000 juveniles, after 6 years of translocation.)*

Lampman said the efficiency of a screw trap and what life stage ends up in a screw trap is highly variable depending on the setup, so it is difficult to know for sure what and how many fish a trap will produce. He recommended not relying solely on screw traps for study fish due to these issues.

John Ferguson asked Douglas PUD to provide a refresher on Section 4.2 of the *Pacific Lamprey Management Plan*. Chas Kyger said it essentially says a juvenile Pacific Lamprey downstream passage study will be conducted when tag technology, statistical rigor, and study fish upstream of Wells Dam are adequate. Kyger said he suspects the ongoing Douglas PUD translocation program will boost numbers upstream of Wells Dam.

Lampman asked what threshold needs to be reached to start a study? Gingerich said he would need to consult with Dr. John Skalski (Columbia Basin Research) before answering this question because there are a lot of assumptions and factors that go into defining a statistically rigorous study. Gingerich said the good news is less study fish are needed when using acoustic tags compared to passive integrated transponder tags, as far as detection probability.

Lampman said a lot of assumptions needed to define a statistically rigorous study can be addressed by conducting pilot studies. Gingerich agreed a lot can be learned from pilot studies, and he noted a lot has already been learned through preliminary studies conducted by PNNL and the Yakama Nation. Kyger said Douglas PUD needs to look closer at the screw trap data to have a better sense of what can be done as far as a pilot or full-scale study.

Ferguson asked about the locations of the screw traps upstream of Wells Dam, and Kyger said there are several. Kyger added that the recordkeeping for some have not differentiated between life stages, which should be corrected moving forward. He said the Washington Department of Fish and Wildlife (WDFW) operates the screw traps under various hatchery monitoring and evaluation programs. Lampman asked if WDFW can provide an annual summary of catch each year, and Kyger said a summary for Pacific Lamprey is provided; however, this summary may not fully differentiate between life stages of Pacific Lamprey.

Ferguson asked Lampman about his thoughts on the quality and performance of these juvenile acoustic tags. Lampman said last year the tags were good, but this year there was a small number with glitches that PNNL has since fixed. He said the tags seem to be improving in quality each year.

Douglas PUD will review 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. Ferguson said this action item will keep this discussion on future agendas.

Lastly, Lampman noted he distributed an updated Pacific Lamprey literature review prior to the Aquatic SWG conference call on July 10, 2019.

## **VII. Administration**

### **1. Upcoming Meetings (John Ferguson):**

The Aquatic SWG meeting on August 14, 2019, will be held by **conference call**.

Other upcoming meetings include September 11 and October 9, 2019 (TBD).

## **List of Attachments**

Attachment A List of Attendees



**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
Breean Zimmerman	Aquatic SWG Technical Representative	Washington 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