



Conference Call Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: November 13, 2019

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

Re: Final Minutes of the October 9, 2019 Aquatic SWG Conference Call

The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, October 9, 2019, from 10:00 a.m. to 11:30 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 update the table presented during the Aquatic SWG conference call on October 9, 2019, titled, *Table 2. Last detection of DCPUD lamprey translocations in 2018 and 2019*, to more clearly organize the data by upstream-to-downstream detection location and to separate out summer/fall versus spring detections (Item VI-2).
3. The Colville Confederated Tribes (CCT) will verify the timing of the false positive detection of Northern Pike in the Okanogan River using eDNA (Item VI-5).
4. The Aquatic SWG meeting on November 13, 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. Notification that juvenile and adult Pacific Lamprey literature reviews and document libraries are available for review was distributed to the Aquatic SWG by Kristi Geris on October 25, 2019.

V. Documents Finalized

1. The Final 2017 Douglas PUD Pikeminnow Removal Annual Report was distributed to the Aquatic SWG by Kristi Geris on October 22, 2019. The final report was approved by the Wells Habitat Conservation Plan Coordinating Committee after no disapprovals were received prior to the 60-day review deadline on March 28, 2019.

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. Patrick Verhey added an update on the Washington Department of Wildlife (WDFW) Fish and Wildlife Commission's upgrading Northern Pike to a prohibited level 1 species from a prohibited level 3 species.¹

The revised draft September 11, 2019 conference call minutes were reviewed. Kristi Geris said the revised draft minutes and a second revised draft minutes were both distributed to the Aquatic SWG on October 2, 2019. Geris said the second revised minutes included additional edits from the Yakima Nation (YN), which are shown in tracked changes. Geris said there is one outstanding comment remaining to be discussed, which requests clarification on one of the YN's edits. Ralph Lampman and the Aquatic SWG discussed and agreed on the following edits on page 6 of the second revised minutes:

He said available genetic data from the Columbia River Inter-Tribal Fish Commission indicate that the majority of adults spend about 5 to 6 years in the ocean and they have confirmed that very few return to freshwater after 3 to 4 years in the ocean.

Geris said all other edits and comments received from members of the Aquatic SWG were incorporated into the revised minutes. Aquatic SWG members present approved the September 11, 2019 conference call minutes, as revised. (Note: Breean Zimmerman provided Ecology's approval of the revised minutes via email prior to the Aquatic SWG conference call on October 9, 2019.)

Action items from the Aquatic SWG conference call on September 11, 2019, are as follows (note: the following italicized item numbers correspond to agenda items from the September 11, 2019 conference call):

¹ Under Washington Administrative Code (WAC) Chapter 220-640 for Invasive/Non-Native Species.

- *Andrew Gingerich will edit the Aquatic SWG revised draft August 14, 2019 conference call minutes, Washington State Department of Ecology (Ecology) Total Dissolved Gas (TDG) Proposed Rule Change discussion, as discussed, and will provide the edits to Breean Zimmerman for review and approval, prior to sending to Kristi Geris for finalizing and distribution to the Aquatic SWG (Item VI-1).*

Zimmerman provided revised text to Geris on September 13, 2019, which Geris incorporated into the final August 14, 2019 conference call minutes and distributed to the Aquatic SWG that same day. Zimmerman provided additional clarification to Geris on September 19, 2019, which Geris incorporated into a revised final August 14, 2019 conference call minutes and distributed to the Aquatic SWG that same day.

- *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 upload passive integrated transponder (PIT)-tag data from the Douglas PUD 2019 Pacific Lamprey translocation effort to the PIT Tag Information System (PTAGIS) and will provide a list of the tag file names and notification of the upload to the Aquatic SWG once the data are available (Item VI-2).*

Andrew Gingerich uploaded these data to PTAGIS and provided a list of tag file names to Kristi Geris on September 27, 2019, which Geris distributed to the Aquatic SWG that same day.

2. 2019 Pacific Lamprey Translocation PTAGIS File and Detection Summary (Andrew Gingerich):

Andrew Gingerich said a notification that 2019 Pacific Lamprey translocation data were uploaded to PTAGIS, along with the PTAGIS file, was distributed to the Aquatic SWG by Kristi Geris on September 27, 2019. Gingerich said shortly after this notification was distributed, he received confirmation from PTAGIS that the data were successfully uploaded, as shown in Table 1 in the *Aquatic SWG Conference Call 10/9/2019 Andrew Gingerich Notes* document (Attachment B), distributed to the Aquatic SWG by Geris prior to the Aquatic SWG conference call on October 9, 2019.

Gingerich said Table 2 in Attachment B is the same 2019 Pacific Lamprey translocation detection summary table that was distributed to the Aquatic SWG by Geris on October 8, 2019. He said Table 2 is a summary of the PIT-tag detection history for Pacific Lamprey PIT-tagged and translocated under the Douglas PUD translocation program, to date. He said the data indicate that Pacific Lamprey movement occurs both immediately following release and after overwintering in the spring. He said Table 2 includes fish released in 2018 and 2019. He recalled a much stronger Pacific Lamprey run in 2018, which resulted in many more fish from

Grant PUD compared to 2019. He said additionally, Table 2 includes the initial detections and following spring detections for fish released in 2018; therefore, in terms of movement, Table 2 shows a more complete picture for fish released in 2018 than it does for fish released in 2019. He said the first column in Table 2 reports either a PIT-tag detection location or release location. He said, for example, the second column in Table 2 shows that in 2018, a total of 70 fish were released at Brewster Boat Launch, which is located on the mainstem Columbia River about 12 river miles (RMs) upstream of the confluence of the Methow and Columbia rivers, which is about 8 RMs upstream of Wells Dam. He said of these 70 fish, 47 fish were never detected again; 12 fish were detected downstream at the Lower Methow PIT-tag array (LMR), which is located about 1 to 2 RMs up the Methow River; 4 fish were detected at the Methow River at Carlton detection location (MRC), which is located about 10 RMs up the Methow River; 2 fish were detected in the Chewuch River above Winthrop (CRW); and 5 fish were detected upstream in the Okanogan River (OKL), which is located about 14 RMs up the Okanogan River. He reiterated that Table 2 shows the last point of detection for these fish, and each fish is represented once. He explained the color shading, as follows: green is the Okanogan River Basin, blue is the Methow River Basin, and orange is the mainstem Columbia River. He said dark shading represents a release location and light shading represents a detection location. He caveated that Table 2 represents PIT-tag detection data only, which have limitations. He said these are good data; however, detection probability is not perfect. He said the detection probabilities likely fluctuate seasonally with varying river flow and also from basin to basin. He said there is no detection in the mainstem Columbia River except for at the Rocky Reach Juvenile Fish Bypass System, and there are more detection sites in the Methow River Basin than in the Okanogan River Basin. Lastly, Gingerich reviewed seven takeaway messages about Table 2 (as described on page 3 in Attachment B) and asked the Aquatic SWG for questions or comments.

Ralph Lampman complimented Gingerich on Table 2. Lampman suggested for clarity, organizing the first column by upstream-to-downstream locations and also separating out summer/fall versus spring detections. He said he believes a lot of movement in the Similkameen River was downstream during spawning season, which may be post-spawn drifting movement. He said this could be better interpreted if summer/fall and spring detections were distinguished in the table. Gingerich agreed separating out summer/fall versus spring detections would be beneficial. He said regarding the first column of Table 2, he and John Rohrbach (CCT) tried ordering this column from the farthest upstream location to the lowest downstream location. Lampman noted a couple of locations that seemed switched around. Gingerich agreed, and said Douglas PUD will update Table 2 to more clearly organize the data by upstream-to-downstream detection location and to separate out summer/fall versus spring detections.

John Ferguson asked Lampman, relative to other known data, do the data in Table 2 seem unusual in any way or are these fish behaving differently than expected? Lampman said the fish released at Brewster that turned around, traveled downstream, and then up the Methow River is unusual. He said fish typically move upstream after release. He said this could be related to low pheromones in the water, but it is difficult to say for certain. He said fish released in Salmon and Omak creeks that have been detected in these tributaries but nowhere else might be spawning at locations between detection arrays, but again, it is difficult to say for certain. He said the number of fish released in 2019 that have been detected to date in the Methow River seems low compared to previous year release; however, there may be more detections during spring 2020.

Gingerich agreed it is difficult to conclude anything about the unaccounted fish to date. He said this could be an artifact of detection probability or fish may have been predated upon by avian, sturgeon, or other predators. He noted the surprisingly high detection rate of fish released at the mouth of the Methow River in 2018, where 90% of these fish were accounted for after release.

Patrick Verhey recalled that the Pacific Lamprey translocation Statement of Agreement (SOA)² stipulated a goal of translocating a minimum of 500 fish per year. He asked if the target of 500 fish is not met, will the difference be included in the target for the following year? Gingerich said this is a good point and Douglas PUD will try targeting more fish next year; however, it really depends on the size of the adult migration each year. He said only translocating 150 fish toward the SOA goal of 500 fish was a disappointment this year, and Grant PUD experienced the same issues due to the run size this year. He said trapping efficiency at Priest Rapids Dam was as expected; however, the run was not strong.

3. Wells Fish Hatchery Brood Year 2019 White Sturgeon Rearing and Surplus Update (Andrew Gingerich):

Andrew Gingerich said not a lot has changed since the last update in terms of rearing and mortality. He said Table 3 in Attachment B is a snapshot of a spreadsheet maintained by hatchery staff. He said each row in Table 3 represents a fish tank and fish in all tanks summed equals 1,070 fish. He said 454 divided by fish per pound (FPP in Table 3) equals an estimated average fish size in grams for each tank. He said feed rates have already been reduced in each tank, and dramatically for the larger fish. He said tanks with smaller fish are on 20% feed and the larger fish are down to 2% to 3% feed (i.e., fish are being fed 2% or 3% of their body weight each day). He said, as has been demonstrated in previous years, fish continue to

² Titled, *To translocate adult Pacific Lamprey from Priest Rapids Dam to areas within or upstream of the Wells Project and postpone passage evaluations*, approved by the Aquatic SWG on June 13, 2018, and distributed to the Aquatic SWG by Kristi Geris on June 14, 2018.

convert nicely on smaller rations. He said water temperatures are currently set at 58°F or warmer and he is optimistic the program will meet the target number of fish to stock and also meet the 200-gram fish size threshold and could be larger. He said hatchery staff are continually grading fish, especially in the smaller tanks, because it seems fish respond to the different densities within each tank.

Gingerich said as shown in Table 4 in Attachment B, the program started with 2,072 fish, which were delivered in two batches. He said there are currently 1,070 fish on station, which equals 52% survival for the program to date. He said this is a little lower than was expected this year; however, it is still 10% higher than this program has ever done.

Gingerich said Table 5 in Attachment B is a snapshot of mortalities over the last two weeks of September 2019. He explained that "MT" means "move or transfer." He noted that Tanks 5, 6, 7, and 8 have had zeros for more than 2 weeks. He said these fish have been doing quite well and are an average of 10 grams per fish or better. He said in four tanks, there has not been a single loss in the past 45 days. He said when there is a loss, it has usually been one to three small fish per tank. He said these fish have plenty of space to not compete with each other; rather, these fish are just not converting food rations into body mass.

Gingerich said all of this means that Wells Fish Hatchery is interested in surplus fish in the near-term. He said Jason McClellan had a discussion with the Lake Roosevelt Co-managers (WDFW, Spokane Tribe of Indians, and the CCT), who agreed that any surplus fish will be going to the CCT Resident Fish Hatchery in Bridgeport, Washington, and will eventually be released back into Lake Roosevelt. Gingerich said in the next couple of weeks, Douglas PUD will coordinate with Jill Phillips (the CCT Resident Fish Hatchery Manager) to conduct health screening and pretransfer checks on about 400 fish to be surplus to the CCT Resident Fish Hatchery.

Laura Heironimus asked how it will be determined which fish will be transferred to the CCT facility. Gingerich said this is a good question and explained that in the past, the Aquatic SWG has supported a goal of not keeping just large fish on station for the Wells program. He said the justification is to attempt to represent and maximize a diverse population in terms of genetics and phenotypic expression and minimize selection through hatchery practices. He said Douglas PUD is not obligated to surplus a certain sized fish to another program; however, Douglas PUD is interested in finding a balance between this goal and meeting Douglas PUD's program size and release targets. He said this year, Douglas PUD will keep some small, medium, and large fish on station and feels confident the small- and medium-sized fish can be reared to meet the size threshold agreed upon by the Aquatic SWG at release. He said the surplus fish will likely include the smaller of the fish on station but will

also include some larger fish. He said lastly, hatchery staff are trying to get the surplus fish sizes as close to each other as possible because it can be more difficult upon receiving the surplus fish to continue rearing the fish when there are several sizes. Heironimus asked if Lake Roosevelt also has a 200-gram minimum fish size stocking target, and McLellan said this is correct. Gingerich said surplus about 400 fish will leave about 580 fish on station at the Wells Fish Hatchery to meet the 551-fish stocking target. He said based on previous years, Douglas PUD is confident this target will be met.

4. 2019 White Sturgeon Monitoring and Evaluation Completion Summary (Andrew Gingerich):

Andrew Gingerich said crews have completed the second session of juvenile White Sturgeon indexing. He recalled that the first juvenile sampling session was conducted in July 2019, an adult effort with different hook sizes was conducted in August 2019, and then a second juvenile sampling session was completed in September 2019. He said the reasoning behind conducting two juvenile sessions in the same year is to obtain a within-year survival estimate.

Gingerich said Table 6 in Attachment B summarizes the entire 12-week indexing effort. He said crews handled a total of 1,103 fish over a 12-week period, including 781 unique fish. He said this equals 60 days of captures, handling an average of about 18 fish per day. He said crews fished 40 hooks per line, 12 lines per day, equaling 480 hooks per day, and almost 30,000 hooks during the 12-week effort. He said based on the number of fish caught, only about 4% of the hooks were catching fish.

Gingerich said he is curious how 4% compares to other efforts and locations. Jason McLellan said the CCT treat each line as a sampling unit and do not go by hook. He said the reason for this is, for example, if crews retrieve a line and there is a hook with no bait, there is no way to know if the bait was lost when the line was set so it did not fish effectively or if the bait was stripped off the hook by another fish. He said the CCT use the same gear configuration as Douglas PUD, and there are areas in Lake Roosevelt where catch per line exceeds 10 fish, which means 45% of the hooks are catching fish. He said, however, there are other areas where the catch rate is much lower and closer to 3%. Gingerich agreed this interpretation of data can be misleading. He said Douglas PUD crews have had lines and days where there are 10 or more fish per 40-hook line, and there are some areas of the reservoir where this catch rate can be predicted. He said 3% is average and does not indicate what is on the lines since catch is not evenly distributed throughout the reservoir. McLellan said the CCT generally fish just under 200 lines per session and catch upwards of 400 fish, so an average of about 2 fish per line. He reiterated, however, some areas have much lower or much higher catch rates.

Laura Heironimus said WDFW also reports fish per line (similar to the CCT). She said for comparison, efforts in The Dalles Reservoir average 12.2 fish per set, while efforts in the Ice Harbor Reservoir only average 1.4 fish per set, so about 2.8% catch per unit effort (CPUE), which is less than the Wells Reservoir. She noted there are higher catch rates farther downstream and WDFW uses different gear in these areas.

Gingerich noted that the Wells Dam forebay from the debris boom upstream to the area around Pateros and Brewster, Washington, has historically had very low catch rates and fish seem to be concentrated upstream of Brewster. He said similarly, during earlier Chelan PUD monitoring and evaluation (M&E) efforts, crews found that White Sturgeon were concentrated closer to the Wells Dam tailrace and only recently have been found in areas closer to Rocky Reach Dam. Heironimus said this may be dependent on the season. She said data from the Ice Harbor Reservoir in 1996 compared across the entire year showed a shift throughout the season. She said this may be due to allocation of resources, water temperature, or river flow.

McLellan asked if these results are consistent with the telemetry data. Gingerich said yes, both datasets indicate a few larger fish in the lower reservoir, but a preference for the upper reservoir, and with most movement in the fall. McLellan said he believes this is common in a reservoir setting and the CCT see the same thing in Lake Roosevelt. He said in terms of densities, the movement patterns of 100 acoustically tagged fish matched the catch. He said he believes that in a true reservoir setting, typically there are a few fish in the lower reservoir and by late summer and early fall when water temperatures are the warmest, fish migrate to the upper reservoir to overwinter. He said this has also been observed in the Wanapum Reservoir, but not in the Priest Rapids Reservoir, which is more of a short, run-of-the-river stretch compared to a true reservoir condition. Heironimus agreed the Priest Rapids Reservoir has more riverine conditions. She said The Dalles Reservoir also resembles run-of-the-river conditions and catch varies by season. She noted that WDFW conducts M&E efforts when catch will be the highest to improve estimates. McLellan also noted that these areas lower in the Columbia River, referred to as Zone 6, have lower densities of fish compared to upstream reservoirs. Gingerich said he has wondered about densities and whether there is more competition to try to occupy marginal habitat.

Gingerich said Table 7 of Attachment B breaks down the M&E effort by session. He said these data will be included in a comprehensive report, which is forthcoming. He noted that the total number of encounters on adult gear were all sub-adults. He said this gear included 14- (14/0), 16- (16/0), 18- (18/0), and 20-aught (20/0) hooks, which is much larger gear compared to the juvenile indexing gear. He also noted more encounters during the second

juvenile session compared to the first. He said it seems catch rates increase during peak water temperatures and this time of year (September) it seems fish are moving more based on telemetry data. He said Table 7 breaks down encounters into whether fish were captured once, twice, and sometimes three times. He said Table 7 also shows how many unique fish were handled. He noted that this total number is higher than what is presented in Table 6, and the reason is Table 6 shows the number of unique fish across all sessions versus Table 7, which shows unique fish within the single sessions. He said 99% of total fish captured, regardless of gear, were fish Douglas PUD has released in the Wells Reservoir. He said only 1%, or 11 fish, were wild and five of these 11 fish had not been previously handled. He said these fish were indistinguishable from hatchery direct gamete-origin fish, except a couple of fish were a little larger in size, and he added that fish sizes are starting to overlap. He said these fish had no scute mark removal, no PIT-tag, and no 2L scute (i.e., second lateral scute). He said these fish were given a PIT-tag, a DNA fin clip and fin ray were collected, and fish were given a 2L mark. He said Douglas PUD plans to review brood year data for inclusion in the report, and he expects larger fish have been in the reservoir longer. He said Douglas PUD also plans to include adult data in the modeling for survival with a question of whether different fish are recruiting to different gear sizes and types. He said high numbers of hatchery fish captured during M&E efforts in 2018 and 2019 produced a good dataset. He said there is also a question of how to model or account for the likelihood of capture. He said the models assume equal capture probability for fish in a reservoir, but he questioned whether the modeling accounts for this idea of individual capture probability.

Gingerich said Douglas PUD hopes to have a report for review in 2 to 3 months.

5. eDNA Aquatic Nuisance Species Surveillance Update (Andrew Gingerich):

Andrew Gingerich said the last samples of the month were sent to Rocky Mountain Research Center, which is conducting the eDNA analysis for aquatic nuisance species, including Northern Pike. He said results from the last samples have not yet been received; however, once these results are obtained Douglas PUD will draft a summary for review. He said excluding the samples from this month, to date, there have been no positive detections for aquatic nuisance species from the various monitoring locations within the project area and up the Okanogan River. He said there was one sample that tested positive for Northern Pike; however, after discussing the results with Holly McLellan (CCT), it was determined this was a false positive detection. Jason McLellan further explained that as part of the Northern Pike removal program in Lake Roosevelt, catch is distributed to members for consumption. He said a member of the CCT who lives on the Okanogan River received catch from these removal efforts, including 40 Northern Pike. He said the member fileted the fish and dumped the carcasses in the Okanogan River and then Douglas PUD crews collected a water sample

downstream of this location that came back positive for Northern Pike. He said this turned out to be the source of the positive detection and a subsequent sample collected downstream of this location came back negative.

Ralph Lampman asked if anyone notified the member about this, and Jason McLellan said the member was notified, was apologetic, and said it will not happen again. John Ferguson said the good news is this proves the sampling methodology is sensitive. Gingerich agreed and said it is interesting that dead fish still produce a positive result. He said he believes samples were collected on both sides of the river, at the same RM, on the same day, and just one side came back positive. Ferguson asked about the protocol for when a positive detection occurs. Gingerich said Douglas PUD was moments away from notifying WDFW and the Aquatic SWG; however, they decided to first discuss these results with the CCT. He also guessed the lab may have indicated that the CCT also had a positive detection, which prompted Chas Kyger to contact Holly McLellan. Gingerich said before alarming resource managers, Holly McLellan did some research and the CCT worked effectively to get to the bottom of this.

Lampman asked how many days passed between the carcasses being dumped in the river and when the samples were collected. Jason McLellan said he believes it was about 1 month; however, he will verify this timing. Lampman said he is wondering what kind of results might arise over a month from spawned out Pacific Lamprey.

6. Northern Pike (Patrick Verhey):

Patrick Verhey said on September 27, 2019, the WDFW Fish and Wildlife Commission met to consider reclassifying Northern Pike from a prohibited level 3 species to a prohibited level 1 species.³ Verhey said this reclassification was approved. He said one of the stated motivations for reclassification was because as a prohibited level 3 species, failure to stop at a mandatory Aquatic Invasive Species check station results in a gross misdemeanor citation, which is difficult to enforce. He said a prohibited level 1 species results in a Notice of Infraction, a civil penalty, applied to first-time offenders. He said a misdemeanor would not result in a citation. He said another reason for reclassifying Northern Pike as a prohibited level 1 species is this makes Northern Pike a high priority, which helps agencies obtain grants for Northern Pike removal programs.

John Ferguson asked if this rule change went into effect on September 27, 2019. Verhey said he is unsure when the rule change will occur, he just knows it was approved.

³ Under WAC Chapter 220-640 for Invasive/Non-Native Species.

VII. Administration

1. Upcoming Meetings (John Ferguson):

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

Other upcoming meetings include December 11, 2019, and January 8, 2020 (TBD).

List of Attachments

Attachment A List of Attendees

Attachment B *Aquatic SWG Conference Call 10/9/2019 Andrew Gingerich Notes*

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
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
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