



Conference Call Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: May 9, 2018

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

Re: Final Minutes of the April 11, 2018 Aquatic SWG Conference Call

The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, April 11, 2018, from 10:00 a.m. to 12:45 p.m. Attendees are listed in Attachment A of these conference call minutes.

I. Summary of Action Items

1. Ralph Lampman, Steve Lewis, and Patrick Verhey will discuss within the Priest Rapids Fish Forum, Rocky Reach Fish Forum, and Aquatic SWG coordination of regional Pacific Lamprey translocation efforts by Grant, Chelan, and Douglas PUDs (notably trapping timing, number of fish tagged, and release locations in 2018; Item VI-1).
2. Aquatic SWG members will discuss within their respective agencies what to include in the draft Douglas PUD Pacific Lamprey Translocation Statement of Agreement (SOA) and their position on the SOA regarding evaluations and implementation of in-ladder modifications at Wells Dam to be discussed during the Aquatic SWG meeting on May 9, 2018 (Item VI-3).
3. The Aquatic SWG meeting on May 9, 2018, will be held by **conference call** (Item VII-2).

II. Summary of Decisions

1. Aquatic SWG members present approved the *White Sturgeon Supplementation Plan*, as revised, with the Yakama Nation (YN) abstaining (Item VI-2).

III. Agreements

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

IV. Review Items

1. The draft report, *Evaluations of White Sturgeon Supplementation and Management Plan Implementation in the Wells Reservoir, 2014-2017*, was distributed to the Aquatic SWG by Kristi Geris on March 20, 2018. This document is available for a 42-day review with edits and comments due to Andrew Gingerich by May 1, 2018 (Item VI-4).

2. The draft *2017 Aquatic Settlement Agreement Annual Report*, including the draft *2017 Aquatic Nuisance Species Management Plan Annual Report*, *2017 Bull Trout Management Plan Annual Report*, *2017 Pacific Lamprey Management Plan Annual Report*, *2017 Resident Fish Management Plan Annual Report*, *2017 Water Quality Management Plan Annual Report*, *2017 Water Temperature Annual Report* (appended to *2017 Water Quality Management Plan Annual Report*), and *2017 White Sturgeon Management Plan Annual Report*, were distributed to the Aquatic SWG by Kristi Geris on March 20, 2018. These documents are available for a 45-day review with edits and comments due to Andrew Gingerich and Kristi Geris by May 4, 2018 (Item VI-4).
3. A revised draft Pacific Lamprey Translocation SOA was distributed to the Aquatic SWG for review by Kristi Geris on April 5, 2018 (Item VI-3). (*Note: edits from the Washington Department of Fish and Wildlife [WDFW] were distributed on April 5, 2018, and from the YN and U.S. Fish and Wildlife Service [USFWS] on April 11, 2018.*)
4. The draft report, *Adult Lamprey Approach and Passage Study, Wells Dam, 2016-17*, was distributed to the Aquatic SWG by Kristi Geris on April 9, 2018. This document is available for a 30-day review with edits and comments due to Chas Kyger by May 9, 2018 (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 suggested rearranging the order of the agenda to discuss the Pacific Lamprey Translocation SOA after the Decision Item. Aquatic SWG members agreed to this revision. No other additions or changes were requested.

The revised draft March 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, and there are no outstanding edits or questions to discuss. Aquatic SWG members present approved the March 14, 2018 conference call minutes, as revised.

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

- *Steve Lewis will contact Tim Culbertson (Secretary-Manager for Columbia Basin Hydropower) regarding how water managers coordinate and manage forced spill and total dissolved gas (TDG) at Mid-Columbia hydroelectric projects, outside of the former Mid-Columbia Hourly Coordination Agreement (Item VI-1).*

Lewis said he has been unable to reach Culbertson and suggested removing this action item.

- *Ralph Lampman will compile data from the YN Pacific Lamprey Master Plan, including Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and YN translocation and subsequent adult return data with literature references, for Douglas PUD to present to policy staff as technical justification for modifying timing and criteria outlined in the current draft Douglas PUD Pacific Lamprey Translocation SOA (Item VI-3).*

Lampman distributed these data to the Aquatic SWG during the conference call on April 11, 2018.

- *Douglas PUD will develop a revised draft Pacific Lamprey Translocation SOA, which includes edits discussed by the Aquatic SWG, for distribution to the Aquatic SWG for review (Item VI 3).*

Chas Kyger provided a revised SOA to Kristi Geris on April 5, 2018, which Geris distributed to the Aquatic SWG that same day.

- *Ralph Lampman, Steve Lewis, and Patrick Verhey will discuss within the Priest Rapids Fish Forum, Rocky Reach Fish Forum, and Aquatic SWG coordination of regional Pacific Lamprey translocation efforts by Grant, Chelan, and Douglas PUDs (notably trapping timing, number of fish tagged, and release locations in 2018; Item VI-3).*

Lampman said these discussions have begun and will continue. This action item will be carried forward.

- *Chas Kyger will provide the design drawings and 3D model for the Pacific Lamprey low-level entrance box and design drawings for the Wells Dam fishway entrance gate slots to Kristi Geris for distribution to the Aquatic SWG (Item VI-3).*

Kyger provided the drawings following the conference call on March 14, 2018, which Geris distributed to the Aquatic SWG that same day.

2. DECISION: White Sturgeon Supplementation Plan (Broodstock and Breeding) (Andrew Gingerich):

Andrew Gingerich said the draft *White Sturgeon Supplementation Plan* was distributed to the Aquatic SWG by Kristi Geris on February 21, 2018, for a 37-day review with edits and comments due to Gingerich by close-of-business on March 28, 2018. Gingerich said edits were received from the Colville Confederated Tribes (CCT) and WDFW on March 27 and April 4, 2018, respectively. Gingerich said the CCT provided mostly editorial comments and requests for clarification, which were incorporated as requested. Gingerich said the organization of the document was not changed in the interest of remaining consistent with

preceding documents. He said WDFW comments were more about the general program, which he feels Douglas PUD adequately addressed through revisions and those that were captured in the revised draft. The revised draft *White Sturgeon Supplementation Plan* was distributed on April 4, 2018.

Aquatic SWG members present approved the *White Sturgeon Supplementation Plan*, as revised, with the YN abstaining.

3. Pacific Lamprey Translocation Statement of Agreement (Chas Kyger):

John Ferguson said a draft Pacific Lamprey Translocation SOA was distributed to the Aquatic SWG for review by Kristi Geris on March 13, 2018. Ferguson said following discussions during the Aquatic SWG meeting on March 14, 2018, a revised draft Pacific Lamprey Translocation SOA was distributed to the Aquatic SWG for review by Geris on April 5, 2018. Ferguson said revisions included: 1) re-evaluation in 5 years instead of 7 years; and 2) a minimum conversion rate of 18% instead of 35%, in addition to 500 Pacific Lamprey counted at Wells Dam. He said edits to the revised draft SOA were received from WDFW on April 5, 2018, and from the YN and USFWS prior to the meeting on April 11, 2018.

Ferguson said one revision from WDFW was to change, "The Aquatic SWG agrees that Douglas PUD will translocate..." to "The Aquatic SWG approves the Douglas PUD request to translocate..." Ferguson said this revision seems to pose the Aquatic SWG versus Douglas PUD instead of moving forward together in this SOA; therefore, Ferguson suggested considering omitting the revision.

Chas Kyger further elaborated on the key changes in the revised draft Pacific Lamprey Translocation SOA. He said the duration of the translocation effort before re-evaluation was shortened, as requested by the Aquatic SWG. Kyger said Douglas PUD's initial suggestion of 7 years was based on the duration implemented by other translocation programs; however, Douglas PUD can be supportive of the revision to 5 years, with the opportunity to extend translocation efforts based on re-evaluation. He said regarding the two trigger points, the preference for "and" instead of "or," is based on concerns about future run sizes being very low with a conversion rate that is high enough to meet the trigger (18%) but not high enough to produce an adequate sample size for evaluating passage behavior and performance.

Kyger said he was unable to obtain support to implement modifications to the Wells Dam fishways while conducting translocation because Douglas PUD Commissioners and managers are not ready to support modifications until empirical data are available that identify a reason to make these modifications. He said additionally, there are limitations built into the Wells Dam FERC License and *Pacific Lamprey Management Plan* about modifying the fishways without

the ability to study the modifications within a 1-year period. He said these limitations are largely connected to risks to ESA-listed salmonids. Kyger said this decision does not preclude the Aquatic SWG from planning modifications and developing study plans to be ready to implement and evaluate fishway modifications when adequate data become available.

Andrew Gingerich recalled that a few years ago Douglas PUD installed fiberglass boxes (lamprey entrance boxes) in the reopened low-level fishway side entrances of the Wells Dam collection galleries (referred to as the C-channel). He said installation of these boxes was outside the scope of the *Pacific Lamprey Management Plan* but Douglas PUD went ahead and implemented the action based on the Aquatic SWG's recommendation. However, to date, Douglas PUD has been unable to test the effectiveness of the boxes because fish apparently are not using these side entrances (no Pacific Lamprey have been detected on the PIT-tag detectors within the boxes). He said from management's perspective, this is an example of putting the cart before the horse, which is where management's discomfort over implementing fishway modifications without an empirical basis for the need stems from. He said Douglas PUD is confident regarding passage metrics associated with ESA-listed species and implementing something that has the potential to hinder salmonid passage is not desirable.

Ralph Lampman said he is disappointed. He said these suggested improvements have already been implemented at other dams and Wells Dam is behind the curve. He said he sees no need for an extensive study to implement these "low hanging fruit" improvements, which will help Pacific Lamprey passage and should not affect salmonid passage. He said additionally, requiring that 500 Pacific Lamprey be counted at Wells Dam before upstream passage evaluations can be initiated seems too high of a standard to include in this SOA. He suggested establishing a minimum number of 200 to 300 fish and a maximum "not to exceed" number. He said he would like to translocate as many fish as possible during the allotted time period. He said he thought this was already discussed last month and suggested translocating up to a maximum of 1,000 fish each year. He said the YN want to reach agreement; however, it seems the discussion is now moving away from what the Aquatic SWG discussed last month.

Gingerich said Douglas PUD has no discomfort or objection to changing to 500 to 1,000 fish. Jason McLellan asked, why use a range? He said a range leaves room for additional debate and suggested choosing one number, such as 1,000 fish, to be clearer. Gingerich said Douglas PUD originally targeted 500 fish because this was the average fish count during a year when Wells Dam had a decent count, based on existing data. Lampman also noted the footnote stating if 500 fish are not met in 1 year, the balance will be supplemented in

following years. He suggested including a sentence in the Statement section of the SOA in lieu of this footnote. Kyger agreed. Ferguson summarized that the maximum is 1,000 fish and the minimum is 500 fish; and if 500 fish are not reached, the balance will be collected in following years. Lampman further clarified that trapping will occur until 1,000 fish or 15 days are reached. Kyger agreed this is correct. McLellan suggested simply stating to target transporting 1,000 fish or however many fish are trapped in 15 days.

Lampman said he is unsure if 1,000 fish is the best number and asked what the Aquatic SWG thinks about targeting 1,500 fish? Patrick Verhey questioned how much the habitat can support. He added logistically, can Grant PUD trap enough fish to achieve everyone's targets? Ferguson agreed with Verhey's comment about biological constraints with regard to habitat and productivity in the Methow River Basin. Ferguson also added that these targets may not be supported by the run size. Gingerich suggested avoiding discussing how much the habitat can support because currently, there are no data to support these discussions. He said 1,000 fish is a large number based on historical data. He also noted that other translocation efforts are targeting less than 1,000 fish per year and there has only been one year since Douglas PUD started counting Pacific Lamprey where more than 1,000 fish were counted.

Ferguson asked how the Aquatic SWG feels about conducting translocation and then re-evaluation in 5 years. Lampman said if there are no passage improvements planned during translocation, the YN cannot support waiting 5 years before re-evaluation. Gingerich said Douglas PUD views 5 years as a minimum based on data shared by Aaron Jackson (CTUIR). Gingerich noted that this 5 years also has jump-off points; and said for example, if next year Pacific Lamprey counts double and conversion rates improve, re-evaluation begins before 5 years. He also noted that Portland General Electric (PGE) is implementing an 8-year program based on Douglas PUD's discussions with Nick Ackerman (PGE) and a presentation on ladder modification at PGE projects that Lampman shared with the Aquatic SWG.

Lampman said there is a need to implement the low hanging fruit improvements at Wells Dam, which have already been implemented at other Projects. He said a study is not needed to make these types of improvements. He said Wells Dam is not the second, not the third, but the last, Mid-Columbia Project to make these improvements. He said a full-scale study will inform what further improvements can be implemented at Wells Dam; however, these basic improvements need to be completed now. Ferguson asked what Lampman thinks about the jump-off points. Lampman said these jump-off points will not be reached if these basic improvements are not implemented at Wells Dam.

Gingerich suggesting considering the bigger picture of translocating 5,000 fish upstream of Wells Dam and having a study design ready to evaluate. He said he cannot see the biological risk of heading down this logical path. Lampman said he understands what Gingerich is saying; however, the YN do not want basic ladder improvements to be the topic of discussion in 5 years. Lampman said the larger modifications should be ready to be discussed at that time. He said postponing the basic improvements postpones everything else.

Verhey could not recall statistically significant results that showed installation of the low hanging fruit improvements at Grant and Chelan PUD facilities were directly correlated with improved Pacific Lamprey passage. He also suggested researching if there is risk associated with not implementing these low hanging fruit improvements. Lampman said he believes before these passage improvements were implemented, passage rates at Grant and Chelan PUD projects were 50 to 70%. He said he is unsure when these rates shifted; however, now, passage rates are clearly in the 85 to 95% range. He said it is unclear whether the improved passage rates are directly related to the improvements, but there is clearly improvement in passage through the fish ladders. Gingerich said it is unclear whether these low hanging fruit modifications are related to improved passage rates because pre- and post-tests have strengths and weaknesses, and they also come with an overall increase in run size as measured by counts at Bonneville Dam. He asked if improved passage rates are just a result of additional fish in the system and increased pheromone or some other mechanism being overlooked or poorly understood?

Ferguson asked Lampman what the YN recommend for a different time frame if they cannot support 5 years and the jump-off points? Lampman said it is not necessarily the years the YN cannot support; rather, the YN will not support no improvements at all. He said there has to be some level of improvements implemented right now; and he added that he does not believe it will cost much. He suggested prioritizing where to start. He said he will first need to discuss internally if the YN propose another number of years; however, he reiterated the concern is more about excluding passage improvements for 5 years.

Kyger clarified that Douglas PUD is not opposed to implementing the low hanging fruit modifications. He said the issue is being able to evaluate these improvements, as explicitly stipulated in the *Pacific Lamprey Management Plan*, and clearly showing within 1 year that these modifications resulted in improved passage. He said Douglas PUD wants to avoid implementing modifications that cannot be tested, and then require a FERC license amendment because the modifications become permanent. He said there is risk in not being able to study modifications, in which case the modifications will either need to be undone or a FERC license amendment will be required. Lampman said the other Projects have not

needed to remove the modifications; and he asked if there is flexibility in the requirement for full-scale testing within 1 year? He asked, for example, what about a small-scale PIT-tag study? Kyger said he is unsure about the requirements under Grant and Chelan PUDs' management plans; however, Douglas PUD is required to operate under the Wells Project requirements, which do not allow long-term modifications without them first being tested. Lampman said the modifications have been tested at other dams.

Ferguson summarized three potential next steps: 1) the Aquatic SWG will review wording in the revised draft SOA; 2) Douglas PUD will consider how to support in-ladder modifications, for example, is there a way to adjust or obtain a waiver from what is stipulated in the *Pacific Lamprey Management Plan*; and 3) Douglas PUD needs empirical data verifying the suggested modifications result in improved passage. Ferguson said he is not advocating for any one of these steps; however, these seem to be the options currently under discussion.

Gingerich said one comment on the current revised draft SOA is regarding adding implementation of modifications, versus identifying potential modifications, in the Statement section of the SOA. He said even with 100% Pacific Lamprey passage within the Wells Dam fishways, fish still may not be approaching Wells Dam. He said it is hard to justify making modifications to the fishways when the data indicate that most fish are not coming within 1 mile of the Project. He said even if increased passage at Grant and Chelan PUD projects are a result exclusively of in-ladder modifications, the data still suggest Pacific Lamprey are not approaching Wells Dam. He said these data are why Douglas PUD is supporting translocation. He recalled the goal is to increase pheromone concentrations upstream of Wells Dam to encourage fish to approach the dam so that passage at the Project can be evaluated. He said Douglas PUD appreciates the desire for these improvements; however, based on available data and the Douglas PUD governing documents, obtaining approval for in-ladder modifications right now is difficult and cannot be scientifically justified.

Lampman said in 2017, about 287 Pacific Lamprey passed Wells Dam. He said it is unknown how many fish actually approached Wells Dam, but if numbers are high now there is an opportunity to implement simple modifications to increase passage numbers. He said translocation efforts can continue, but it is best to do everything possible at the dam to increase the number of fish getting over the dam. Gingerich said he does not disagree, but also noted there will be the ability to increase passage numbers just by continuing translocation. He said further, translocation may reveal there is less of a problem at Wells Dam and the issue was really the Aquatic SWG's original hypothesis of lack of pheromones upstream of Wells Dam. Gingerich said perhaps after 5 years of translocation there will be decent Pacific Lamprey counts at Wells Dam, and at that time the Aquatic SWG

can discuss modifications to further increase numbers. Kyger added that Douglas PUD and the Aquatic SWG can begin evaluating and designing modifications and studies so everything is ready to implement once thresholds are met.

Ferguson asked if there is another option for evaluation that does not require approach behavior? He suggested, for example, an in-ladder evaluation using PIT-tagged fish released at the entrance of the fishways to monitor movement up through the fish ladders, before and after ramps are installed. He asked if this type of evaluation is consistent with requirements in the *Pacific Lamprey Management Plan*. Kyger said even if this type of evaluation can be done, this gets back to the original issue. He said if there is 100% passage through the fish ladders, this will not matter if fish do not approach the dam. Gingerich recalled the radio-telemetry study conducted in 2013, when only half of the study fish released in the immediate tailrace approached the dam. He said although the study size was small, these results are discomfoting.

Lampman said translocation and implementing the low hanging fruit modifications within fishways were the premise for this SOA. He said this is what was discussed. Gingerich said he cannot obtain support for in-ladder modifications. He apologized and said he requested the modifications, but could not obtain support from the Douglas PUD Commissioners and managers.

Lampman suggested the following path forward:

- Year 1 and 2—prepare to implement low hanging fruit modifications
- Year 3 and 4—implement low hanging fruit modifications
- Year 5—study (evaluate) low hanging fruit modifications

Gingerich asked with this approach, what happens when in year 5 conversion rates and counts increase at Wells Dam? He asked what caused the increase—because run size increased, pheromones increased, or due to the modifications? He said this approach is not consistent with the adaptive management outlined in the *Pacific Lamprey Management Plan* and discussed within the Aquatic SWG (i.e., develop a hypothesis, design a study, implement a measure, test and retest and/or modify the original hypothesis as necessary and as supported from data). Lampman suggested not over-studying this because it is just wasting time. He said translocation is a short-term solution and is not full recovery. He said these low hanging fruit modifications are needed to help Pacific Lamprey pass the dams. He said ideally, fish should be migrating upstream and passing the Projects on their own volition. He said this is the end goal.

Ferguson said the SOA needs to be consistent with the *Pacific Lamprey Management Plan*. Lampman said his proposed path forward includes evaluation within 1 year of the modifications. He said further, these improvements are not novel approaches. He said these have been implemented at other Projects and proven successful. He said he does not understand why there is still discussion about evaluating them.

Gingerich said it seems implementing the low hanging fruit is now the preferred path forward. He said this means not conducting translocation, but rather to implement small modifications and test the modifications within 1 year. He said the question remains about the desire for Pacific Lamprey to approach Wells Dam and the ability to evaluate this statistically; however, Douglas PUD can discuss this path forward, as well. He added that this is not his preferred or technical recommendation, but it may be the preference of others and the Pacific Lamprey Management Plan would allow for this route.

Lampman asked what if both pheromones and in-ladder modifications are issues? Gingerich said there is an opportunity to fix both if both are found to be issues, as described in the SOA.

Ferguson said he believes the Aquatic SWG is still making good forward progress. He said the overall goal of the SOA is still intact. He said the implementation details just need clarifying for the Aquatic SWG to reach agreement.

Lampman suggested removing the trigger points from the SOA and following his suggested path forward (bulleted above). He said the improvements can be tested using PIT-tags pre- and post-modifications.

Verhey asked about Section 4.1.4 in the *Pacific Lamprey Management Plan* regarding an upstream passage literature review. Kyger said the literature review is in progress and will hopefully be ready for discussion by July 2018. Verhey said he believes the literature review may help inform this SOA. He said it is important to verify that fish are approaching and passing Wells Dam. He said to effectively evaluate in-ladder modifications a large sample size is needed to assess both pre- and post-improvement passage rates. He said Douglas PUD and the Aquatic SWG have been struggling for years with low sample sizes. He said first, fish need to be approaching and passing the dam, and then in-ladder modifications can be evaluated.

Steve Lewis said a key task of the Aquatic SWG is to reach compromise. He said he understands the need to remain consistent with the *Pacific Lamprey Management Plan*; however, if the entire SWG agrees to deviate from the plan, FERC has historically been receptive to such requests. He said this has been done in other fish forums, provided there is support and justification. Lewis said he is supportive of Lampman's proposed path forward.

Kyger said whether or not an SOA can supersede the FERC license is not a determination technical staff can make and will need to be discussed with Douglas PUD policy staff.

Verhey recalled a request to add more specificity in the SOA about what modifications will be implemented (i.e., low hanging fruit). He further suggested explaining in the Background section of the SOA why implementation of the measures under Sections 4.1.5, 4.1.6, and 4.1.7 of the *Pacific Lamprey Management Plan* are on hold until jump-off points 1 and 2 are satisfied with regard to having the ability to study the modifications within 1 year.

Gingerich said specific low hanging fruit modifications have not yet been presented to the Douglas PUD Commissioners. He added that the Aquatic SWG has not yet discussed specific details on what these "low hanging fruit" modifications entail. He said further, Douglas PUD hoped not to include the specific details in the SOA to avoid making the SOA too lengthy. Verhey suggested that identifying the lowest hanging fruit will become clearer following the literature review. Lewis said he believes the highest priorities are reducing the gaps in the collection gallery floor and further reducing access to the auxiliary water supply system. Lampman said he believes the lowest hanging fruit include the modifications he shared that Grant PUD completed and those highlighted in the PGE passage improvement studies, notably the plating along flooring edges and ramps in the fish ladder orifices. Ferguson said Douglas PUD is saying the specific details of these modifications have not yet been discussed. Lampman said in his proposed path forward, these are the discussions that will occur in years 1 and 2. He said during this time, the Aquatic SWG will need to come to consensus on what modifications are most important to implement first.

Lampman reiterated his suggestion to omit the trigger points in the SOA because they are causing uncertainty. Ferguson argued the trigger points are needed to understand when a threshold is met, that translocation is taking hold, and the Aquatic SWG can move forward into the central elements of the *Pacific Lamprey Management Plan*.

Ferguson asked if Douglas PUD might be receptive to Lampman's proposed path forward. Kyger said he can take the request back to Douglas PUD policy staff. Kyger said a key question seems to be whether there is flexibility around evaluation within 1 year of modifications.

Verhey said the *Pacific Lamprey Management Plan* discusses evaluation in a couple of locations, notably in Section 4.1.5:

"If additional passage improvement measures are deemed necessary by the Aquatic SWG, based upon the results of studies conducted at Wells Dam, then within one year or as soon as practicable following consultation with the

Aquatic SWG, Douglas [PUD] shall identify, design and implement any reasonable upstream passage modifications (structural and/or operational)"

Verhey said it seems the phrase "as soon as practicable" leaves a little room for interpretation. He suggested Douglas PUD review Sections 4.1.5 through 4.1.7 of the *Pacific Lamprey Management Plan* and determine if this language might allow the Aquatic SWG to adaptively manage implementation of the actions. He said, for example, perhaps high passage numbers can trigger a study.

Aquatic SWG members will discuss within their respective agencies what to include in the draft Douglas PUD Pacific Lamprey Translocation SOA and their position on the SOA regarding evaluations and implementation of in-ladder modifications at Wells Dam to be discussed during the Aquatic SWG meeting on May 9, 2018.

4. Document Review Reminder (John Ferguson):

Draft 2017 Aquatic Settlement Agreement Annual Report and Management Plan Annual Reports

John Ferguson said the draft *2017 Aquatic Settlement Agreement Annual Report*, including the draft *2017 Aquatic Nuisance Species Management Plan Annual Report*, *2017 Bull Trout Management Plan Annual Report*, *2017 Pacific Lamprey Management Plan Annual Report*, *2017 Resident Fish Management Plan Annual Report*, *2017 Water Quality Management Plan Annual Report*, *2017 Water Temperature Annual Report* (appended to *2017 Water Quality Management Plan Annual Report*), and *2017 White Sturgeon Management Plan Annual Report*, were distributed to the Aquatic SWG by Kristi Geris on March 20, 2018. These documents are available for a 45-day review with edits and comments due to Andrew Gingerich and Geris by May 4, 2018.

Draft Three-Year White Sturgeon M&E Report

Ferguson said the draft report, *Evaluations of White Sturgeon Supplementation and Management Plan Implementation in the Wells Reservoir, 2014-2017*, was distributed to the Aquatic SWG by Geris on March 20, 2018. This document is available for a 42-day review with edits and comments due to Gingerich by May 1, 2018.

Final Wells Dam Approach Report

Ferguson said the draft report, *Adult Lamprey Approach and Passage Study, Wells Dam, 2016-17*, was distributed to the Aquatic SWG by Geris on April 9, 2018. This document is available for a 30-day review with edits and comments due to Chas Kyger by May 9, 2018.

5. Wells Hatchery Brood Year 2017 White Sturgeon Rearing and Surplus Update (Andrew Gingerich):

Andrew Gingerich said there are 340 fish on-station at Wells Fish Hatchery for a 325-fish program. He said on average, fish are 150 grams a piece. He said approximately 800 fish were surplus to the CCT Fish and Wildlife Trout Hatchery. He said on average, surplus fish were 135 grams a piece. He said fish health is good (note: a fish health memorandum was distributed to the Aquatic SWG by Kristi Geris on April 3, 2018). Gingerich said that overall, fish condition is great and mortalities are essentially zero.

6. Water Quality and River Forecast Update (Andrew Gingerich):

Andrew Gingerich said the latest water runoff forecast for Grand Coulee Dam is 120% of normal. He said Grand Coulee Dam is drafting 3/4-foot per day, and Wells Dam is receiving about 100,000 cubic feet per second (100 kcfs) on average. He said incoming TDG is about 102 to 103% and TDG in the Wells Dam tailrace is about 109% on average. He said Wells Dam Bypass operations commenced on April 9, 2018. He said since that time, Wells Dam has been releasing water with about 104% TDG associated with the 10 kcfs spill during bypass operations. He said bypass operations will continue until August 19, 2018, unless there is a modification by the Wells Habitat Conservation Plan Coordinating Committee. Gingerich said flow coming into the Wells reservoir from tributaries is expected to increase. He said the Methow and Okanogan river basins are wet with snow pack, and the 120-day forecast is for runoff to be 135% and 150% of normal from these basins, respectively, into August 2018.

VII. Administration

1. Yakama Nation Aquatic SWG Representation Designation Update (John Ferguson):

John Ferguson recalled that a YN Aquatic SWG Representation Designation memorandum, which designates Ralph Lampman as the YN Technical Representative and Bob Rose as the YN Alternate was distributed to the Aquatic SWG by Kristi Geris on March 22, 2018.

2. Upcoming meetings (John Ferguson):

The Aquatic SWG meeting on May 9, 2018, will be held by conference call.

Other upcoming meetings include: June 13, 2018 (TBD) and July 11, 2018 (TBD).

List of Attachments

Attachment A List of Attendees

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
Chas Kyger	Technical Support	Douglas PUD
Breean Zimmerman	Aquatic SWG Technical Representative	Washington State Department of Ecology
Steve Lewis	Aquatic SWG Technical Representative	U.S. Fish and Wildlife Service
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Chad Jackson	Technical Support	Washington Department of Fish and Wildlife
Ralph Lampman	Aquatic SWG Technical Representative	Yakama Nation
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederate Tribes