



# Conference Call Minutes

## Aquatic Settlement Work Group

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**To:** Aquatic SWG Parties

**Date:** August 9, 2017

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

**Re:** Final Minutes of the July 12, 2017, Aquatic SWG Conference Call

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The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, July 12, 2017, from 10:00 to 11:30 a.m. Attendees are listed in Attachment A of these conference call minutes.

### I. Summary of Action Items

1. Douglas PUD will upload to the Passive Integrated Transponder (PIT) Tag Information System (PTAGIS) PIT tag data collected from the bird colony located on Washburn Island (Item VI-1). *(Note: Andrew Gingerich uploaded these data and provided an update to Kristi Geris on July 26, 2017, which Geris distributed to the Aquatic SWG on July 27, 2017.)*
2. Douglas PUD will provide a draft summary update on the 2016-2017 Bull Trout Passage and Take Monitoring at Wells Dam and Twisp River Weir Study to Kristi Geris for distribution to the Aquatic SWG (Item VI-4). *(Note: Andrew Gingerich provided a draft summary update to Geris on July 17, 2017, which Geris distributed to the Aquatic SWG that same day.)*
3. The Aquatic SWG will further discuss 2005-2006 Rocky Reach and Wells project spill data during the Aquatic SWG conference call on August 9, 2017 (Item VI-5).
4. Douglas PUD will provide Wells Dam turbine unit flow data and Rocky Reach Dam forebay and Wells Dam tailrace elevation data for review to Kristi Geris for distribution to the Aquatic SWG (Item VI-5).
5. Douglas PUD will try locating and distributing video of hydraulic model study results demonstrating how spill gate flow influences flow patterns in the Wells Dam tailrace, which was shared at a workshop around the time of relicensing (Item VI-5).
6. Douglas PUD will provide an update on 2016 Douglas PUD Pacific Lamprey Study data to date to Kristi Geris for distribution and discussion during the Aquatic SWG conference call on August 9, 2017 (Item VI-5). *(Note: Chas Kyger provided this update to Kristi Geris on July 26, 2017, which Geris distributed to the Aquatic SWG that same day.)*

7. Douglas PUD will discuss internally policy staff perspectives regarding potential 2017, 2018, and beyond Douglas PUD Pacific Lamprey Study designs, as discussed during the past two Aquatic SWG meetings (Item VI-5).
8. **The Aquatic SWG meeting on August 9, 2017, will be held by conference call (Item VII-1).**

## II. Summary of Decisions

1. Aquatic SWG members present approved the 2016 White Sturgeon Monitoring and Evaluation (M&E) Report ("Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016"), as revised (Item VI-2).

## III. Agreements

1. Aquatic SWG members present agreed to meet in-person at Douglas PUD Headquarters in East Wenatchee, Washington, on Tuesday, August 22, 2017, from 12:00 to 4:00 p.m. to discuss the proposed 2018 Douglas PUD Pacific Lamprey Study design matrix (Item VI-5).

## IV. Review Items

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

## V. Documents Finalized

1. The Final 2016 White Sturgeon M&E Report ("Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016"), which was approved by the Aquatic SWG on July 12, 2017, was distributed to the Aquatic SWG by Kristi Geris on July 13, 2017 (Item VI-2).

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

The revised draft June 12, 2017, meeting 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 June 12, 2017, meeting minutes, as revised.

Action items from the last Aquatic SWG meeting on June 12, 2017, are as follows (note: the following italicized item numbers correspond to agenda items from the June 12, 2017, meeting):

- *Douglas PUD will coordinate with the Colville Confederated Tribes (CCT) regarding ongoing efforts to remove Northern Pike from Lake Roosevelt and sampling methods that might support monitoring of Northern Pike range extension in the Wells reservoir, and will report those discussions back to the Aquatic SWG (Item VI-1).*  
Chas Kyger said Douglas PUD will not conduct additional Northern Pike monitoring in the Wells reservoir until spring 2018. Kyger said Douglas PUD will coordinate with Bret Nine (CCT Resident Fish Program Manager) prior to the next monitoring event. Ferguson suggested closing this action item, presuming that Douglas PUD will complete this prior to the next sampling season. Patrick Verhey asked if the CCT are planning additional removal efforts in Lake Roosevelt in 2017; and if so, he is interested in helping. Jason McLellan said yes, the CCT efforts are ongoing. McLellan said he can put Verhey in contact with Holly McLellan (CCT Fish Biologist), who is leading this effort.
- *Douglas PUD will provide a Revised 2016 White Sturgeon M&E Report ("Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016"), for approval during the Aquatic SWG conference call on July 12, 2017, to Kristi Geris for distribution to the Aquatic SWG (Item VI-2).*  
Andrew Gingerich provided the revised report to Geris following the meeting on June 12, 2017, which Geris distributed to the Aquatic SWG on June 13, 2017.
- *Douglas PUD will upload to PTAGIS PIT tag data collected from the bird colony located on Washburn Island (Item VI-2).*  
Andrew Gingerich said he discovered that this bird colony did not formerly exist in PTAGIS; however, after discussing this with PTAGIS data managers, the addition of the bird colony was reviewed and approved. Gingerich said the colony now exists in PTAGIS and those data just need uploading. This action item will be carried forward. (Note: Gingerich uploaded these data and provided an update to Kristi Geris on July 26, 2017, which Geris distributed to the Aquatic SWG on July 27, 2017.)
- *Douglas PUD will provide a revised summary report documenting Aquatic Nuisance Species Management Plan (ANSMP) Northern Pike sampling efforts conducted in the Wells reservoir in 2017, to Kristi Geris for distribution to the Aquatic SWG (Item VI-4).*  
Chas Kyger provided the revised report to Geris following the meeting on June 12, 2017, which Geris distributed to the Aquatic SWG on June 13, 2017.
- *Kristi Geris will contact Julene McGregor (Douglas PUD Information System Staff) to request visitor access to the Aquatic SWG Extranet site for Sean Goudy (Yakama Nation [YN] Pacific Lamprey Technical Support), as agreed by the Aquatic SWG, and will add Goudy to the requested Aquatic SWG email distribution lists (Item VI-6).*

Geris contacted McGregor about Extranet access and added Goudy to the email distribution lists on June 13, 2017.

## 2. White Sturgeon

### DECISION: 2016 White Sturgeon M&E Report (Andrew Gingerich):

Andrew Gingerich said the Draft 2016 White Sturgeon M&E Report ("Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016") has been available for review for several months (note: the original draft for review was distributed to the Aquatic SWG by Kristi Geris on March 1, 2017). Gingerich recalled receiving extensive edits and comments from the CCT, which were incorporated into a revised draft report. He also recalled that the CCT agreed the revisions sufficiently addressed their comments and the revised draft report was distributed to the Aquatic SWG by Geris on June 13, 2017. Gingerich said Douglas PUD decided to provide one additional month for review with all edits incorporated, and Douglas PUD is now requesting approval of the report.

Aquatic SWG members present approved the 2016 White Sturgeon M&E Report ("Evaluations of White Sturgeon Supplementation and Management in the Wells Reservoir, 2016"), as revised. The final report was distributed to the Aquatic SWG by Geris on July 13, 2017.

### White Sturgeon Larvae Collection Update (Andrew Gingerich and Jason McLellan):

Gingerich said on July 7, 2017, Douglas PUD met with Matt Howell (CCT Senior Fish Biologist) and 2,144 larval-origin fish collected from Lake Roosevelt were transferred to Wells Fish Hatchery. Gingerich said the CCT collection efforts are still ongoing. He said Douglas PUD is considering requesting an additional 500 fish in case there is poor in-hatchery survival. He recalled that the worst survival recorded to date was 20 to 30% survival from the larval stage to about 12 months (just before stocking). He said if there is a tragic year (10% survival or less), the program goal will not be met; however, Douglas PUD also does not want to bring too many fish on station resulting in surplus fish or culling.

Jason McLellan said the CCT are still collecting fish for the Sherman Creek program, which has a goal of releasing 5,000 fish. McLellan said there may be fish from this program to help back-fill the Douglas PUD program, if needed. He said the CCT collection efforts this year have caught 27,000 fish.

John Ferguson said he does not believe coordination is needed with the Aquatic SWG if Douglas PUD decides to request an additional 500 fish. Gingerich agreed, and added however, that Douglas PUD will keep the Aquatic SWG updated as decisions are made.

**3. 2017 Water Quality, Spill, and Total Dissolved Gas Update (Andrew Gingerich):**

Andrew Gingerich said a Wells Dam total dissolved gas (TDG) and water quality update (Attachment B) was distributed to the Aquatic SWG by Kristi Geris on July 10, 2017.

Gingerich reviewed Figure 1 in Attachment B. He noted that peak river flow typically occurs at Wells Dam around June and July (solid red line); however, in 2017, the highest river flow occurred earlier in May (solid blue line). He said this was due to the increasing snow pack in the Cascade Mountains and dam operators aggressively drafting Lake Roosevelt to create space in the reservoir for flood storage. He said river flow at Wells Dam then quickly decreased, and noted that refilling the reservoir took place, which is typically completed in time for the July 4th holiday. He said he understands that beginning this week, Grand Coulee reservoir will reach full capacity and dam operators will start passing inflows into Rufus Woods Lake behind Chief Joseph Dam. Gingerich said river flow at Wells Dam will also likely increase; however, flows will be closer to average for this time of year.

Gingerich then reviewed Figure 2 in Attachment B. He noted that TDG at Wells Dam (solid green line) is tracking closely to river flow (solid red line). He said the TDG sensor installed in the Wells Dam tailrace has been unable to transmit data in real-time for the past couple of weeks, due to what Douglas PUD suspects was lightning striking the river nearby and damaging the cables and/or hardware. He said the sensor is still logging data; however, those data must be manually downloaded while the real-time feature is unavailable. He noted that since the real-time feature has been inoperative in the tailrace sensor, spill volumes have been small and limited to approximately 10,000 cubic feet per second (10 kcfs) in bypass flow to facilitate juvenile salmon passage at Wells Dam.

**4. 2016-2017 Bull Trout Passage and Take Monitoring at Wells Dam and Twisp River Weir Study Update (Andrew Gingerich):**

Andrew Gingerich said this is the time of year when the upstream migration of Bull Trout is observed, associated with spawning migration. He said Douglas PUD is continuing to collect data per the 2016-2017 Bull Trout Passage and Take Monitoring at Wells Dam and Twisp River Weir Study Plan. He said data collection will continue through the end of August 2017 and in September 2017, Douglas PUD will begin drafting the report. He said in terms of downstream passage at the Twisp Weir, there have been no changes since the last update. He recalled that 34 fish have interacted with the weir, including four tags which have been recovered in an off-channel associated with an irrigation diversion upstream of the Twisp Weir. He said in terms of downstream passage at Wells Dam, there have been 11 fish detected downstream of the dam, with quite a bit of movement from at least nine of those fish. He said a couple more fish have been detected; however, those detections are still being

evaluated as to their validity. He said upstream passage at Wells Dam is typically observed from May through July. He said ten fish have interacted with the dam and eight fish have been detected in the Methow River. He added that the upstream receivers were last downloaded 2 weeks ago, and more fish may have been detected by them since that time. He said upstream passage at the Twisp Weir is just getting started and he expects more detections at the weir over the next month and into early August 2017.

John Ferguson asked if the data to date can inform anything about downstream passage survival at Wells Dam. Gingerich said downstream survival with specific emphasis on route specificity is not an objective of this study; however, Douglas PUD has evaluated downstream survival in the past and it was good regardless of routes (turbine or spillway). He said one interesting observation from this study is that 2 of 11 fish which migrated downstream of Wells Dam in 2016, occurred in March and April, whereas most fish move downstream in the fall. He said there is no spill during the fall period, yet survival is high, even though the fish likely migrated via the turbine route. He said this is good news in terms of turbine survival. He added that downstream passage survival can also be parsed out by reviewing detection histories in the fall along with project operations to determine when spill was operating versus not.

Steve Lewis asked if Douglas PUD plans to distribute an update in writing. Gingerich said a draft report containing specific data is about two months away; however, if the U.S. Fish and Wildlife Service (USFWS) would like a high-level summary, Douglas PUD can accommodate this. Lewis said he would like a summary because USFWS is working with Chelan PUD on their Rocky Reach study, and this information could be helpful. Douglas PUD will provide a draft summary update on the 2016-2017 Bull Trout Passage and Take Monitoring at Wells Dam and Twisp River Weir Study to Kristi Geris for distribution to the Aquatic SWG. *(Note: Gingerich provided a draft summary update to Geris on July 17, 2017, which Geris distributed to the Aquatic SWG that same day.)*

Gingerich noted that a couple study fish must have migrated downstream past Rocky Reach and Rock Island dams, since they have been detected at PIT arrays in adult fishways at these Projects in 2017, and were also known to be above Wells Dam in 2016. He said this is pretty remarkable, and fairly encouraging that fish are repeat spawning and making successful downstream passage attempts at more than one Project. Lewis said this also adds to the good turbine survival case.

##### **5. Pacific Lamprey (All):**

John Ferguson said during the last Aquatic SWG meeting on June 12, 2017, he summarized the previous six months of discussions, including the three areas of focus (or bins):

1) passage at Wells Dam within the fishways; 2) within the Rocky Reach and Wells reservoirs; and 3) translocation. He said the Aquatic SWG then discussed paths forward for 2018 and beyond, starting with Steve Lewis asking about 2005-2006 Rocky Reach and Wells projects spill operations to determine if there were operational changes. Ferguson said Bob Rose also proposed a study design consisting of four release locations (R1 and R2 in the Wells Dam tailrace, R3 in the Wells Dam fishways, and R4 in the Wells reservoir). Ferguson said Ralph Lampman (YN) suggested adequate data already exist to initiate Rose's proposed study and Lampman also advocated to release fish in the Wells reservoir, at the very least. Ferguson said Kirk Truscott (CCT) believes there are multiple bottlenecks to address and Patrick Verhey agreed there is a need to conduct multiple studies. Ferguson said these discussions were left with Douglas PUD to further discuss with policy staff, including review of Rose's proposed study design matrix. Ferguson said the Aquatic SWG also discussed potential studies to conduct in 2017. He said Lampman proposed conducting the R4 release and Truscott suggested conducting the R3 and R4 releases; however, Douglas PUD reiterated the approach issue and how to interpret the data. Ferguson said these discussions were also left with Douglas PUD to further discuss with policy staff. He said Douglas PUD will now provide updates on these topics.

Andrew Gingerich said Ferguson provided a good summary of discussions and added that Chas Kyger and Dave Robichaud (LGL Limited) will also provide an update on the 2016 Douglas PUD Pacific Lamprey Study data to date.

#### 2005-2006 Rocky Reach and Wells Projects Spill Operations Data and Pacific Lamprey Passage Data

Gingerich recalled his task to review spill volumes from 2005 to 2006 to determine if there were any major changes in spill protocols during this time. He said he sent this request to the Wells Dam project operations department and based on this information an analysis relating spill data to Pacific Lamprey passage (Attachment C) was distributed to the Aquatic SWG by Kristi Geris on July 7, 2017.

Gingerich said Attachment C shows average spill volumes per gate, by date and time, for months when Pacific Lamprey typically pass Wells Dam. He said based on a quick qualitative scan of the data, there does not seem to be a significant change in spill volumes per gate or in overall spill in 2006 compared to 2005 during the period of the year when Pacific Lamprey are expected to interact with Wells Dam. He said spill operations were terminated in August of both years, including bypass spill. He said as discussed before, based on these historical data, Pacific Lamprey counts at Wells Dam peak in late-August and early September, when there is very little to no spill occurring at the dam. He added, when spill was operating during

the early portion of the Pacific Lamprey run, there was no great difference in spill volume per gate or the overall spill pattern.

Ferguson asked what the median passage date is for Pacific Lamprey at Wells Dam. Gingerich referred to the email containing Attachment C (Attachment D), which also included Figures 2.4-1 and 2.4-2. Gingerich said both figures show about September 10 as the median passage date, excluding 2003 data which contained several counts in October and November.

Ferguson asked if this analysis adequately addresses Lewis' questions. Lewis asked if these data suggest adjusting spill to improve Pacific Lamprey passage at Wells Dam. Gingerich said these data all look very similar and do not seem robust enough to build a convincing case to focus on the 2005 spill pattern versus 2006. He said he is not suggesting project operations should no longer be considered; however, he believes this action item has been addressed. He also encouraged the Aquatic SWG to further review the data and contact him with questions.

Rose said based on these data, it seems that in August there is minimal spill and under any of these spill conditions there seems to be very little disruption to the nature of the river. Gingerich agreed and suggested referring to Figure 1 in Attachment B under the water quality agenda item. He said this figure provides information on the amount of river flow that passed Wells Dam in August, where historically, river flow is moderate coming after the peak flows. He said this results in small levels of spill, approximately 1 to 2 kcfs per bay, combined with fish bypass flow to encourage fish migrating downstream to not pass via the turbine route. He said in terms of river flow during peak Pacific Lamprey counts at Wells Dam, most flow is exclusively via the turbines, with not much occurring as spill. Rose asked if there may be any significance to changing which turbines run. Gingerich said this is a good question that Douglas PUD has not yet evaluated.

Ferguson suggested that the Aquatic SWG further discuss 2005-2006 Rocky Reach and Wells project spill data during the Aquatic SWG conference call on August 9, 2017. Gingerich said Douglas PUD will also provide Wells Dam turbine unit flow data and Rocky Reach Dam forebay and Wells Dam tailrace elevation data for review to Geris for distribution to the Aquatic SWG.

Verhey recalled a video of hydraulic model study results demonstrating how spill gate flow influences flow patterns in the Wells Dam tailrace, which was shared at a workshop around the time of relicensing, and requested that Douglas PUD locate and distribute the video. Gingerich said he will look into this.

### 2016 Douglas PUD Pacific Lamprey Study Data

Kyger said Douglas PUD will provide an update on 2016 Douglas PUD Pacific Lamprey Study data to date, to Geris for distribution and discussion during the Aquatic SWG conference call on August 9, 2017. Kyger said, in summary, several study fish have been detected moving upstream this spring. He said, however, these new data do not appear to change our current understanding of how Pacific Lamprey approach Wells Dam. He said once the data are reviewed internally they will be distributed and a more detailed discussion will take place during the next Aquatic SWG meeting. *(Note: Kyger provided an update on 2016 Douglas PUD Pacific Lamprey Study data to date, to Geris on July 26, 2017, which Geris distributed to the Aquatic SWG that same day.)*

Lewis said he understood one study fish passed Wells Dam. Kyger said one fish was detected at the pool 19 array. He also noted that some untagged fish were counted at the Wells Dam count window before fish were counted at Rocky Reach Dam. He said among the fish detected migrating upstream, a few were detected in the Entiat River and at instream arrays in Entiat River tributaries. He said the update Douglas PUD plans to distribute will describe this in detail.

Robichaud agreed with what Kyger said about the new data, adding that some study fish which were last detected at downstream arrays have now been detected at upstream arrays; however, he does not believe the new data suggest any significant changes to previous conclusions. He said data were just received from Blue Leaf Environmental, Inc., on July 11, 2017, so an extensive review of the data has not yet been conducted.

### 2017, 2018, and Beyond Douglas PUD Pacific Lamprey Studies

Gingerich said Douglas PUD has not yet had the opportunity to further discuss potential 2017, 2018, and beyond Douglas PUD Pacific Lamprey studies. Gingerich said Douglas PUD is still interested in working on evaluating and developing a study plan that might reveal more valuable results, but is still trying to figure out how to effectively accomplish this (i.e., implement a Dual-Frequency Identification Sonar study, adjusting the head differential, or other approaches). He said like the Aquatic SWG, Douglas PUD is frustrated with the minimal, if not no-significant, results obtained from studies conducted to date. He suggested continuing discussions about potential study designs and what outcomes might result. He asked, for example, if Douglas PUD conducts a paired release study, what are the outcomes and what do they mean in terms of management decisions?

Kyger said discussions from the Aquatic SWG meeting on June 12, 2017, still need to be reviewed with policy staff. Kyger said it has been difficult to coordinate schedules due to field work and vacations. He said Douglas PUD will discuss internally policy staff perspectives

regarding potential Pacific Lamprey Study designs for 2017, 2018, and beyond, as discussed during the past two Aquatic SWG meetings (i.e., June 12 and July 12, 2017, meetings).

Ferguson said it seems Pacific Lamprey discussions are now on hold until Douglas PUD can discuss next steps with policy staff. He also suggested that Douglas PUD review the proposed 2018 Douglas PUD Pacific Lamprey Study design matrix and hash out different scenarios. Gingerich said he views populating the matrix as more of a collaborative exercise with the entire Aquatic SWG. Ferguson suggested convening the Aquatic SWG in-person to review and populate the matrix, separate from the regular monthly meetings. Aquatic SWG members present agreed to meet in-person at Douglas PUD Headquarters in East Wenatchee, Washington, on Tuesday, August 22, 2017, from 12:00 to 4:00 p.m. to discuss the proposed 2018 Douglas PUD Pacific Lamprey Study design matrix.

Lewis asked if Douglas PUD policy staff have provided any feedback at all yet. Gingerich said no more than what has already been expressed and shared with the Aquatic SWG. He recalled that policy staff support the Aquatic Settlement Agreement Pacific Lamprey Management Plan and want to move forward based on those guidelines. He said now he and Kyger need to update policy staff on recent discussions in order to move forward.

## **VII. Next Meetings**

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

The Aquatic SWG meeting on August 9, 2017, will be held by conference call.

The Aquatic SWG will meet in-person at Douglas PUD Headquarters in East Wenatchee, Washington, on Tuesday, August 22, 2017, from 12:00 to 4:00 p.m. to discuss the proposed 2018 Douglas PUD Pacific Lamprey Study design matrix.

Other upcoming meetings are as follows: September 13, 2017 (TBD); October 11, 2017 (TBD); and November 8, 2017 (TBD).

## **List of Attachments**

Attachment A List of Attendees

Attachment B Wells Dam TDG and Water Quality Update

Attachment C Analysis Relating Spill Data to Pacific Lamprey Passage

Attachment D Spill Data Pacific Lamprey Analysis Email

**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
Dave Robichaud	Observer	LGL Limited
Steve Lewis	Aquatic SWG Technical Representative	U.S. Fish and Wildlife Service
Breean Zimmerman	Aquatic SWG Technical Representative	Washington State Department of Ecology
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederated Tribes
Bob Rose	Aquatic SWG Technical Representative	Yakama Nation
Ralph Lampman	Technical Support	Yakama Nation