



Conference Call Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: May 9, 2019

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

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

The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, April 10, 2019, from 10:00 a.m. to 12:15 p.m. Attendees are listed in Attachment A of these conference call minutes.

I. Summary of Action Items

1. There were no action items created during today's conference call.
2. The Aquatic SWG meeting on May 8, 2019, will be held by **conference call** (Item VII-2).

II. Summary of Decisions

1. There were no decision items approved during today's conference call.

III. Agreements

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

IV. Review Items

1. The draft *2018 Aquatic Settlement Agreement Annual Report* and appended *2018 White Sturgeon Management Plan Annual Report*, *2018 Bull Trout Management Plan and Incidental Take Annual Report*, *2018 Water Quality Management Plan Annual Report* (and appended *2018 Water Temperature Annual Report*), *2018 Pacific Lamprey Management Plan Annual Report*, *2018 Aquatic Nuisance Species Management Plan Annual Report*, and *2018 Resident Fish Management Plan Annual Report* were distributed to the Aquatic SWG by Kristi Geris on March 22, 2019, and are available for a 45-day review with edits and comments due to Geris on May 7, 2019; Douglas PUD will request approval of the report during the Aquatic SWG meeting on May 8, 2019 (Item VII-1).
2. A draft Northern Pike Monitoring and Response Plan was distributed to the Aquatic SWG by Kristi Geris on March 26, 2019. Edits and comments are due to Chas Kyger on May 3, 2019;

Douglas PUD will request approval of the plan during the Aquatic SWG meeting on May 8, 2019 (Item VI-3).

3. A draft Douglas PUD 2018 Evaluations of White Sturgeon Supplementation report was distributed to the Aquatic SWG by Kristi Geris on April 16, 2019, which is available for a 45-day review with edits and comments due to Andrew Gingerich by May 31, 2019; Douglas PUD will request approval of the report during the Aquatic SWG meeting on June 12, 2019.

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 from Aquatic SWG members; however, Ferguson added a reminder about the 2018 Aquatic Settlement Agreement Annual Report review period.

The revised draft March 13, 2019 conference call minutes were reviewed. Kristi Geris said the revised minutes were first distributed on April 2, 2019, additional edits were received from the Colville Confederated Tribes (CCT) and the Yakama Nation (YN) on April 8, 2019, and the second and third revised minutes were distributed that same day. Geris said the new edits are captured in redline strikeout for quick review. The Aquatic SWG reviewed the new edits. Andrew Gingerich asked the Aquatic SWG to be mindful of the 7-day review period as stipulated in the Aquatic Settlement Agreement to best manage review and approval of the minutes. Ferguson agreed this is a good reminder. Aquatic SWG members present approved the March 13, 2019 conference call minutes, as revised. (*Note: Jason McLellan provided CCT approval of the minutes via email prior to the Aquatic SWG conference call on April 10, 2019.*)

Action items from the Aquatic SWG conference call on March 13, 2019, are as follows (note: the following italicized item numbers correspond to agenda items from the March 13, 2019 conference call):

- *Douglas PUD will update the revised draft Wells Fish Hatchery Brood Year 2019 White Sturgeon Rearing Plan to include compliance with the fish health guidance outlined in the Washington Department of Fish and Wildlife (WDFW) White Sturgeon Fish Health*

Protocol,¹ and will provide the final revised draft to Kristi Geris for distribution to the Aquatic SWG (Item VI-2).

Andrew Gingerich updated the plan as discussed and provided a final plan on March 14, 2019, which Geris distributed to the Aquatic SWG that same day.

- *Douglas PUD will update the draft 2019 Aquatic Settlement Agreement Action Plan to address comments received from the CCT and the YN, as discussed, and will provide the final revised draft to Kristi Geris for distribution to the Aquatic SWG (Item VI-3).*

Andrew Gingerich updated the plan as discussed and provided a final plan on March 14, 2019, which Geris distributed to the Aquatic SWG that same day.

- *Chas Kyger will coordinate with the Wells Dam Mechanical Foreman to obtain clarification about the numbers and locations of Pacific Lamprey rescued during past annual winter maintenance fish salvages and will report back to the Aquatic SWG (Item VI-7).*

John Ferguson recalled this action item stemmed from comments made by Wells Dam mechanical crew members during past tours at Wells Dam, indicating crew members have observed large numbers of Pacific Lamprey in the Wells Dam fishways during recent dewatering activities for annual winter maintenance. Ferguson said the Aquatic SWG expressed interest in obtaining clarification on when and where these Pacific Lamprey were observed. Kyger said he spoke with the Douglas PUD Mechanical Foreman, Steve Nieuwenhuis, and confirmed the maintenance crew has not observed Pacific Lamprey in the dewatered fishways, but where Pacific Lamprey have been observed is in the draft tube and sump areas of turbine units, and Pacific Lamprey have not been observed in these turbine unit locations in years. Kyger said the only time a fish can access the draft tube and sump area is when a turbine unit is taken offline, and recalled fish can access this area when the upstream bulkhead is installed first and fish from the tailrace can swim into the draft tube and up into the scroll case before the downstream bulkhead is installed. He said it seems the mechanical crew members were likely not clear about the location of where Pacific Lamprey were observed. He also reiterated that during each annual winter maintenance outage, Douglas PUD Natural Resources staff conduct thorough inspections of areas where Pacific Lamprey may potentially be located. Andrew Gingerich noted that Nieuwenhuis has been the Wells Dam Mechanical Foreman for decades (nearly 30 years) and is a great source of information and history. Gingerich also clarified that when Kyger said fish can only access the turbine area when the unit is offline, this does not mean anytime the turbine is not operational; rather, this means only when the entire unit is dewatered for some type of significant maintenance, which is rare.

¹ In March 2014, WDFW, in coordination with the YN and the CCT, developed a standardized White Sturgeon Fish Health Protocol (to be implemented starting with 2014 White Sturgeon broodstock and larval collections). This protocol was reviewed by the Aquatic SWG, Chelan and Grant PUDs, the Spokane Tribe of Indians, and the Columbia River Inter-Tribal Fish Commission, and is intended to be a document open for discussion and modification as new information becomes available.

Gingerich said 2 of 10 units are taken offline in the spring and 2 of 10 units are taken offline in the fall for bi-annual maintenance. He said units can also be taken offline to conduct a complete overhaul of the unit, which puts the unit out-of-service for a while. He said these are the major dewatering events where Pacific Lamprey may have historically been observed in the turbine area. Kyger said he also inquired about the number of Pacific Lamprey observed and Nieuwenhuis indicated about 10 to 20 or less, along with other species, have been observed. Kyger noted that even historically with larger numbers of Pacific Lamprey passing Wells Dam, only a small number of fish have been trapped in this area. Ferguson recalled discussing before that this area receives plenty of fresh running water while a unit is offline, and fish can either be rescued or left there to leave on their own volition once the unit is watered back up. He clarified that "trapped" does not mean "killed"; rather, fish can hold in this area. Kyger recalled the Chelan PUD White Sturgeon detected in the Wells Reservoir but not in the Wells Dam fish ladders, which proves fish can survive in this area. Ferguson asked if this information is sufficient to address this action item. Ralph Lampman asked if the draft tube, sump area, and turbine area are separate locations. Kyger said each location connects to the turbine unit, but all areas are separate from the fishways. Ferguson explained if a fish entered this area from upstream moving downstream, it would enter through the turbine intake which leads to the scroll case. He said the scroll case is curved, begins to swirl the water around, and leads to a concrete donut. He said the concrete donut supports the wicket gates which are how flow entering the turbine unit is controlled. He said flow passes from the scroll case, past the wicket gates, over the turbine blades, and out the draft tube. He said the draft tube is a 90-degree structure. He said there is a sump in the scroll case that collects flows leaking from the upstream bulkhead gates and one below the turbine in the draft tube that collects flow leaking from the downstream bulkhead gates. Gingerich projected slides of a scroll case model (Attachment B), which were distributed to the Aquatic SWG by Kristi Geris following the conference call on April 10, 2019. Gingerich said on day 1, crews set the head gate and on day 2, crews set the draft tube gate and begin draining the scroll case. He said this is a large area that is not completely sealed up, so fresh water keeps coming in. He said during bi-annual maintenance the draft tube remains watered up for safety and crews float scaffolding under the turbine blades to conduct their work on the blades. He said if someone falls down the draft tube, this is a long fall, which is the reasoning for keeping the area watered up and placing crew members on floating scaffolding to complete necessary work. He said this area might be completely emptied of water during a complete overhaul, but he is not certain. Lampman asked if fish enter this area from the upstream end. Gingerich said, theoretically, fish can access the area from either end. He said in the case of the Chelan PUD White Sturgeon, these fish accessed the area from the downstream end and up the draft tube when the unit was offline. Lampman asked if the

water velocity is too fast for fish to enter the area when the turbine unit is online, so fish only enter the area when the unit is offline? Gingerich said he would not expect a fish to enter the area when the unit is online, so yes, he guessed fish likely enter the area only when the unit is offline. Ferguson clarified that the turbine unit area and the fish ladders are totally separate water passage ways. He said there is no way for Pacific Lamprey in the collection gallery to access the turbine inlet passage ways because these areas are separated by walls of concrete. He said fish can only access the scroll case from the river. Lampman asked how long it takes to complete the dewatering process. Gingerich said this takes 1 or 2 days because the bulkheads are set with cranes. He said on day 1, the first bulkhead is set and then the crew comes back and sets the draft tube bulkhead. Lampman asked if the 10 to 20 Pacific Lamprey Nieuwenhuis mentioned were observed in recent years. Kyger said Nieuwenhuis indicated it has been 10 years since Pacific Lamprey have been observed. Lampman said the mechanical crew indicated seeing Pacific Lamprey last year in fairly high numbers. Kyger said there were higher numbers passing through the fishways, but no Pacific Lamprey were observed during dewatering. Lampman said one mechanical crew member said he saw Pacific Lamprey and it seemed he was referring to within the fish ladder. Gingerich said Douglas PUD can arrange a tour of a dewatered unit sometime in December 2019 or January 2020, if Aquatic SWG members are interested. He said additionally, this would be a good opportunity to speak with Nieuwenhuis. Ferguson recommended if Aquatic SWG members have not been in a turbine scroll case to take advantage of this opportunity to better understand the scale and magnitude of the area. Patrick Verhey said he has already seen this area at Priest Rapids Dam, but if Douglas PUD arranges a tour at Wells Dam, he would be interested in attending. Verhey added that 2 years ago, the mechanic lowering and raising the basket into the collection gallery indicated he observed Pacific Lamprey in the fishway. Verhey said in retrospect, he should have brought this information to the Aquatic SWG at that time. He said in the future if this happens, he will bring this to the Aquatic SWG to discuss the details with the person as a group. He said at this time, WDFW is satisfied with the explanation Douglas PUD has provided; however, it is quizzical why a mechanical crew member would provide misleading information. Steve Lewis joined the conference call and Ferguson provided a brief recap of the discussion. Lewis asked if this is a misunderstanding of what the mechanical crew member said, or rather an exaggeration of numbers? Gingerich said he thinks there is confusion about where and how many fish were observed. He said more Pacific Lamprey have been observed through the count windows, so maybe the mechanic was referring to this? Lampman said he has not seen a turbine scroll case area and would be interested in touring one at Wells Dam. He said he does not believe many fish would access this area in only 1 to 2 days. He said the mechanical crew member he spoke with about observations of Pacific Lamprey was not talking about in the count windows. He said there may be a lack of communication

between the mechanical crew member and Nieuwenhuis, and it would be good to clarify the crew member's perspectives. Lampman said this still needs to be addressed. Ferguson asked if Nieuwenhuis spoke with his crew. Kyger said Nieuwenhuis has been asking his crew for this information for years because the Aquatic SWG has been investigating how to improve Pacific Lamprey passage at Wells Dam for years. Kyger said he and Gingerich have also spoken to several people over the years, including crew members who have been at Wells Dam for several years and have since retired. Gingerich asked if the mechanic indicated exactly where he observed Pacific Lamprey? Lampman said it sounded like in various locations throughout the fish ladder during fish salvage events. Gingerich said he and Kyger have not been able to verify this. Gingerich said the mechanical crew is aware of the Aquatic SWG's interests with Pacific Lamprey, the crew has worked with him and Kyger, and surely if the crew encountered Pacific Lamprey, he and Kyger would be notified. Gingerich also reiterated the only time the mechanical crew might observe Pacific Lamprey is during dewatering events for annual winter maintenance when he and Kyger also conduct thorough investigations for Pacific Lamprey in the fishways. Kyger said on occasion, the fishways are temporarily drawn down to clean the windows and this is completed during a time when Pacific Lamprey might be encountered in the fishways; however, this work is completed by the maintenance crew and not the mechanical crew. Lewis suggested talking to this mechanical crew member and maybe request a technical memorandum. Gingerich said Kyger spoke with Nieuwenhuis who manages the mechanical crew. Gingerich said it is not reasonable to ask a mechanic to write a technical memorandum and asking a mechanic to attend a technical meeting such as this is outside their scope of work. Gingerich said it would be more appropriate to have a conversation in an informal way such as during a tour. He said he and Kyger have a good relationship with the mechanical crew. He said it may be a person who does not see or know fish very well, might recall something that is not completely accurate. He said it is important to be technical about this, he and Kyger are trying to clarify the confusion, and they plan to continue asking questions. Lewis said in a lot of ways a mechanic's insight might be the best insight, caveating that a level of excitement might affect their recollection. He said the mechanical crew may have good information. Gingerich said he completely agrees and does not mean to downplay the value of their feedback. Jason McLellan joined the conference call and Ferguson provided a brief recap of the discussion. Lampman said his preference is to talk to this mechanic at a meeting, or at least during the next dewatering event, to have this discussion to clear up confusion. Ferguson said Douglas PUD has offered to have this conversation during the next dewatering of the fish ladder. He suggested thinking about how to structure this conversation ahead of the tour, including notifying Nieuwenhuis that the Aquatic SWG has questions for his crew members.

2. Well Fish Hatchery White Sturgeon Rearing Update (Andrew Gingerich):

Andrew Gingerich said there are currently 99 fish on station at Wells Fish Hatchery. He said there have been no losses for the last several months. He reviewed numbers, as follows:

Number of Fish	Mean Fish Mass (grams)
54 (large fish)	302.0
36 (medium fish)	216.0
9 (small fish)	69.0

Gingerich said the large fish are doing quite well and water temperature and feeding rations have been adjusted over the last 30 days to slow down their growth rate. He said these fish are on ambient well water and are on a feeding rate of 1.5% body weight per day. He said he is optimistic the medium fish will meet the size target of 200 grams per fish by June 1, 2019. He said sizes for the medium fish range from 160 to 250 grams, and there are still 1.5 months left to grow. He said of the 9 small fish, 7 will likely survive. He recalled each year there are a few slow growers. He said 2 fish just will not convert. He said the small fish have been on a feeding rate of 4% body weight per day for the last several months. He said the size distribution around the mean for the small fish is very wide, and it will be difficult to grow all of these fish to 200 grams in 1.5 months.

Gingerich said tagging will occur in May 2019, and stocking will occur on June 1, 2019. Patrick Verhey asked if a fish health investigation will occur prior to stocking? Gingerich said one investigation was already conducted per the WDFW White Sturgeon Fish Health Protocol, which occurred soon after the fish arrived to Wells Fish Hatchery. He said during the tagging event, at least 30 days prior to stocking, fin clips will also be collected per the fish health protocol. He said these samples are sent to the Washington Animal Disease Diagnostic Laboratory and Douglas PUD Fish Health Specialist, Betsy Bamberger, will collect the samples. Gingerich said samples will be analyzed for White Sturgeon Iridovirus.

Gingerich noted that there is a call with WDFW and other agencies this Friday, April 12, 2019, at 10:00 a.m. to discuss potentially updating the fish health protocol.

3. Northern Pike Monitoring and Response Plan (Chas Kyger):

Chas Kyger said a draft Northern Pike Monitoring and Response Plan was distributed to the Aquatic SWG by Kristi Geris on March 26, 2019. John Ferguson asked if Douglas PUD plans to request approval of the plan during the Aquatic SWG meeting on May 8, 2019. Kyger said yes, but there is no Federal Energy Regulatory Commission (FERC) deadline driving approval of the document; rather, Douglas PUD wants to have an approved plan in place to be

prepared in case Northern Pike become an issue in the Wells Project. Ferguson suggested a comment deadline of Friday, May 3, 2019, ahead of requesting approval on May 8, 2019.

Kyger said the plan leaves a lot open for the Aquatic SWG to decide on how to approach issues as they arise. He said the plan is a general framework for possible approaches and monitoring activities. He said there are a lot of uncertainties. Andrew Gingerich noted that some suppression and monitoring measures have not yet been tested for Northern Pike. He said additionally, among the suppression efforts currently underway, he is unsure how many of these have a nexus with Endangered Species Act (ESA)-listed fish, and Douglas PUD needs to plan around this risk. He said there is open-ended language in the plan to discuss potential risks to ESA-listed fish with Steve Lewis and the U.S. Fish and Wildlife Service (USFWS) and the Aquatic SWG regarding what makes sense to try and manage here.

Kyger said Douglas PUD is continuing environmental DNA (eDNA) monitoring in 2019. He said the first sample for this season was collected in March 2019. He said Douglas PUD also received results from sampling conducted in 2018, which was delayed due to the government shutdown. He said all results came back negative for Northern Pike, and for Zebra and Quagga Mussels. He said for now, eDNA sampling is the primary monitoring approach for detecting Northern Pike, and Zebra and Quagga Mussels, as outlined in the plan.

Lewis asked if Douglas PUD is looking for specific recommendations on the framework of the plan to provide more direction versus waiting until a specific action is needed? Kyger said the goal is to have a portfolio of methods ready now in a format that can be discussed quickly and have options available should Northern Pike be encountered. He said Douglas PUD wants to have these discussions now and avoid needing labored debates while Northern Pike get established in the Wells Reservoir. Gingerich agreed and said once the plan is reviewed and approved, this will provide Douglas PUD the opportunity to respond quickly. He said Douglas PUD also plans to include the methods in this plan in Douglas PUD's 2019 WDFW Scientific Collection Permit so any collection methods will already have been permitted.

Lewis asked when the next eDNA monitoring event will occur. Kyger said each year, the first event occurs in March and then sampling continues monthly through September. He said this year, Douglas PUD made arrangements with the laboratory to receive results quicker. He said Douglas PUD's preference is to receive results within a few weeks so these results can be shared with the Aquatic SWG each month. He said eDNA monitoring is the primary early detection method and the plan also includes more direct monitoring measures, such as electrofishing or fyke netting, where there will be minimal bycatch or risk of mortalities. He said when Aquatic SWG members review this plan, they should think about what risks the proposed monitoring methods pose to native and ESA-listed fish and whether these risks are acceptable.

Ferguson asked, recognizing this is a living document, will there be an annual review of this document in the fall after data collection is complete? Kyger said he plans to incorporate this document and the associated data into the annual Aquatic Nuisance Species Management Plan annual report. He said final results should be available by November or December and there can be a discussion at that time. He said this approach prevents adding another document to review, and it does not preclude adapting the plan as more data become available.

Patrick Verhey said considering different removal methodologies seems to be an exercise of balancing risk to ESA-listed fish and allowing Northern Pike to survive. He said this comes down to ESA take numbers and he is not sure the Aquatic SWG can adjust take for ESA-listed fish. Kyger said correct, Douglas PUD does not have take associated with the *Aquatic Nuisance Species Management Plan*. He added that Douglas PUD does not want to push up to the take limit unless the Aquatic SWG thinks this is absolutely necessary.

Lewis asked if Douglas PUD is open to some level of monitoring funding for Northern Pike removal upstream of the Wells Project to prevent individuals from coming downstream into the project. Kyger said this has been discussed at the policy level and it was decided to first address the Wells Project. After that if Douglas PUD has the resources available, helping efforts upstream may be an option. Lewis said he does not agree with this approach. He said if Douglas PUD does not want to push up to the allowable take, it seems that it would be more efficient to address this issue outside the project. Kyger said he understands what Lewis is saying; however, this is a policy decision and scope-creep discussion. He asked, where would efforts end—Washington, Idaho? Gingerich said at the time of relicensing, Douglas PUD also discussed off-Project actions with FERC who indicated the protection, mitigation, and enhancement measures under the *Aquatic Settlement Agreement* are focused on and within the Wells Project. He said he also agrees with Kyger about where to stop. Gingerich said there are several complicating factors, including states that have tributaries that flow into Lake Roosevelt who are refusing any management of Northern Pike because they want to maintain their fishery for this species. He said despite the energetic removal efforts in Lake Roosevelt, there is a continued risk that Northern Pike will continue entering the Wells Project from upstream.

Lewis asked what level of participation is Douglas PUD planning for the spring event in Lake Roosevelt? Kyger said Douglas PUD hopes to supply boats and gear; however, he is unsure about funding actions. He said this support would be part of a regional coordination effort for Northern Pike removal.

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

Andrew Gingerich said a Wells Dam River Forecast Update (Attachment C) was distributed to the Aquatic SWG by Kristi Geris on April 9, 2019. Gingerich recalled distributing a similar update before the last Aquatic SWG conference call. He said the slides in Attachment C came from the Northwest River Forecast Center of the National Oceanic and Atmospheric Administration (NWRFC/NOAA). He said last month's slides were by Ryan Lucas (NWRFC/NOAA) and this month's slides are by Geoff Walters (NWRFC/NOAA).

Slide 1 of Attachment C

Gingerich said the web links on this slide are good resources for water forecast and runoff updates applicable to the Wells Project.

Slide 2 of Attachment C

Gingerich said this slide shows temperature anomalies deviating from the average from November 2018 to March 2019. He said the first part of the winter season was warmer than usual and February 2019 was very cold with a series of storms. He said March 2019 was also colder than average.

Slide 3 of Attachment C

Gingerich said this slide shows seasonal precipitation from October 2018 to February 2019 and from October 2018 to March 2019. He noted in the October 2018 to March 2019 figure that seasonal precipitation in the northern section of the Columbia River Basin was below average.

Slide 4 of Attachment C

Gingerich said this slide shows snowpack. He said the colored values are snowpack readings in percent of normal. He said green and blue values are good stories and yellow, orange, and red values are bad stories. He noted that the Snake River Basin is at or above normal, and the upper Columbia River Basin (which affects the Wells Project) is well below normal.

Slide 5 of Attachment C

Gingerich said this slide shows how much runoff occurred through this past winter. He noted at Grand Coulee Dam from October 1, 2018 to April 3, 2019, the percent river flow was 79% of normal, which is relatively dry in terms of average. He said this will likely continue.

Slide 6 of Attachment C

Gingerich said this slide shows the major river basins that impact the Wells Project. He said in each case, snowpack is 78% to 87% of normal.

Slide 7 of Attachment C

Gingerich said this slide shows the upper river basins of the Snake River, which does not affect the Wells Project, but he wanted to note these areas are 112% to 125% of normal.

Slide 8 of Attachment C

Gingerich said this slide shows the water supply forecast about 30 days ago for the entire basin. He said Grand Coulee Dam was 87% of normal. He also noted that although the Snake River is a better picture, the combined expected runoff from the Snake River and runoff from the upper Columbia River and Canada still has The Dalles Dam only at 87% of normal.

Slide 9 of Attachment C

Gingerich said this slide shows an updated water supply forecast. He noted The Dalles Dam forecast has no change, the Columbia River forecast has declined, and the Snake River forecast has improved compared to a month ago.

Slide 10 of Attachment C

Gingerich said these areas do not affect Wells Dam, but he thought the data were interesting. He noted the drier conditions in the northern Cascades but wetter conditions in the section reaching down through Oregon. He also noted the big increase in the Willamette River over the last 30 days.

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

Gingerich said on this website, selecting the snowpack values shows real-time data. He noted that the basins affecting the Wells Project are low.

https://www.nwrfc.noaa.gov/water_supply/ws_ranking.cgi?id=GCDW1

Gingerich said this website ranks the water supply at Grand Coulee Dam for the last 59 years. He noted that 2015 was a really low water year, with a ranking of 56, which equates to 77% of average. He said currently, 2019 ranks at 48, which is 87% of average. He said the Wells Project is expected to be below average this year.

https://www.cpc.ncep.noaa.gov/products/predictions/90day/lead01/off01_temp.gif

Gingerich said this is a 90-day climatology outlook issued by NOAA. He said this shows continuing warmer or above average temperatures.

Discussion

Gingerich said he will continue keeping the Aquatic SWG updated on the water forecast for the Wells Project. He said the data to date and forecasts suggest a lower runoff year and quite a bit lower for the Wells Project.

Brean Zimmerman thanked Gingerich for this information. Zimmerman also noted she received an email yesterday, indicating that the snowpack is substantially lower this year, especially in the upper regions, and Governor Jay Inslee just issued a drought emergency for the Okanogan, Methow, and upper Yakima river basins. Gingerich said the NOAA 120-day forecast indicates the Methow River near Pateros is at 65% of average, the Columbia River at Chief Joseph Dam is at 73% of average, and the Columbia River at Wells Dam is at 72% of average.

John Ferguson asked what the runoff looks like at Wells Dam right now. Gingerich said below average and added that there is not a lot of water this time of year. He said last he heard, Grand Coulee Dam is not conducting drum gate maintenance so there will be less of a draft. He said normally, Grand Coulee Dam drafts Lake Roosevelt hard this time of year to get ready to capture Canadian mountain snowmelt.

Jason McLellan said Grand Coulee Dam and Lake Roosevelt have operational bounds where the reservoir can only be drawn down so far in the summer and it needs to be refilled by a certain date. He said the timing of these operations are currently being re-evaluated, per a request from the Bonneville Power Administration and other regional managers. He said currently, the elevation of Lake Roosevelt is 1,256 feet above mean sea level (MSL), which is well below the 1,275 MSL flood control target. He said the reasoning for the deeper drawdown is due to power demand and flow maintenance for Chum Salmon below Bonneville Dam. Gingerich asked if McLellan is saying that the water level in Lake Roosevelt is below normal for this time of year? McLellan clarified the reservoir is not below normal; rather, it is below the flood control target, which is one of many operational controls. He said during the summer, Lake Roosevelt cannot be drawn down below 1,278 MSL, except in a drought year when it can be drawn down to 1,277 MSL. He said the reservoir must be refilled to 1,283 MSL by September 30. He said these are the operations currently being renegotiated.

5. Yakama Nation 2018 Translocation Release Results (Ralph Lampman):

Ralph Lampman said an Overview of Adult Pacific Lamprey Translocation Passive Integrate Transponder (PIT)-Tag Results (Attachment D) was distributed to the Aquatic SWG by Lampman prior to the Aquatic SWG conference call on April 10, 2018. Lampman said he provided this presentation last week to the Rocky Reach and Priest Rapids fish forums. He said the presentation includes results from 2017-2018 PIT-tag monitoring in the Methow, Wenatchee, and upper Columbia river basins, which will also be summarized in a report that he will be finalizing by the end of this week.

Lampman reviewed results from the Methow River Subbasin, as follows:

Slide 19 of Attachment D

Lampman said 285 adults were released in the Methow Subbasin in the summer/fall 2017 period and some were also released in the spring 2018. He said 95 adults were also released in the Columbia River below the confluence with the Methow River. He said of the total 380 fish, 158 fish (or 42%) were detected at least once and 28 fish (or 7.5%) had multiple detections.

Slide 20 of Attachment D

Lampman said the green locations are the fall releases and the yellow are the spring releases. He said the two spring releases were to locations in the mid- and upper Methow subbasins, while the fall releases included those sites as well as sites farther downstream. He said these fish were broodstock 2017 and 2018, which means these fish have already migrated to the ocean, returned to freshwater in summer 2017, and the majority have finished spawning by summer 2018.

Slide 21 of Attachment D

Lampman pointed out a few releases in the lower Methow River and in the Columbia River below the confluence.

Slide 22 of Attachment D

Lampman said these releases are just below the confluence of the Twisp River and include spring and fall releases. He said the slide shows river kilometer and the number released. He said the blue dots are PIT-tag array locations.

Slide 23 of Attachment D

Lampman said this slide shows the fall and spring releases in the upper Methow River, just below the confluence of the Chewuch River, and in the Chewuch River just above and below the PIT-tag array.

Slide 24 of Attachment D

Lampman said this slide shows an overview of discharge levels. He said the summer/fall releases were during low flow conditions, and the spring release was conducted just as river flow was increasing and Pacific Lamprey started migrating. He said the last detection was in late-July 2018.

Slide 25 of Attachment D

Lampman said this slide shows the overall detection for the Methow Subbasin releases. He said 4 fish were detected moving downstream out of the Methow Subbasin. He said a total of 158 fish (or 42.1%) were detected.

John Ferguson asked if 42.1% is a good value? Lampman said this is similar to what was detected in 2017. He said total detections have not changed year-to-year, which is similar in the Wenatchee Subbasin. He said detection efficiency is not 100% at a lot of these arrays, and there are likely a fair number of fish passing and not getting detected, and also some holding between the arrays.

Slide 26 of Attachment D

Lampman said this slide shows the release sites, numbers released, and detection sites for the Methow Subbasin releases. He noted that most fish were detected initially moving upstream except the Chewuch River 1.8 Fall releases. He also noted only 27% of the Methow 83.8 Spring releases (just below the Chewuch River confluence) were detected initially moving upstream.

Slide 27 of Attachment D

Lampman said he converted the table on slide 26 to a figure on slide 27. He said the white circles represent where fish were released. He noted that the detection of fish in the Methow Subbasin from the mainstem Columbia River release group was 70% of the detections observed from the Lower Methow River release group, suggesting that roughly 70% of the Pacific Lamprey from the mainstem Columbia River may be entering the Methow River. He noted the Methow 66.5 Fall bar and said the red diagonal hatch marks represent the upper Methow River. He said this is the only release where fish were detected moving upstream to the upper Methow River. He noted that the Methow 83.2 Fall and Chewuch 1.1 Fall look almost identical (i.e., the distribution, or movement, of fish below the confluence and directly in the Chewuch River are the same), suggesting that many Pacific Lamprey in the upper Methow Subbasin appear to be entering the Chewuch River. He also noted that the Methow 83.8 Spring releases had a lot of downstream detections.

Andrew Gingerich noted that because detection efficiency in the Chewuch River is unknown, the "undetected" are at the same location as the "detects." Lampman said he estimated detection efficiency for the releases, including about 80% detection at LMR (Lower Methow array) during fall, about 44% during spring, and 57% detection on average. He said these are the best estimates based on the available data. He said there were no detections from the Chewuch 1.8 Fall release; however, it is possible fish moved upstream but were not detected.

Lampman reviewed results from the upper Columbia River Subbasin, as follows:

Slide 28 of Attachment D

Lampman said on August 16, 2018, the YN coordinated with Douglas PUD and the CCT to release 314 fish in three areas, including the Similkameen River and tributaries of the

Okanogan River. He said among the releases in the upper Columbia River Subbasin, a total of 18% were detected at least once and none were detected at more than one site.

Slide 29 of Attachment D

Lampman said these release locations included in the mainstem Columbia River at the Starr Boat Launch and just below the Okanogan River confluence.

Slide 30 of Attachment D

Lampman said there was one release near Enloe Dam. He noted there are no PIT-tag arrays in this location.

Slide 31 of Attachment D

Lampman said this slide shows discharge conditions. He said the release was during fairly low flow conditions and the last detection was in mid-July 2018, similar to the Methow Subbasin releases.

Slide 32 of Attachment D

Lampman said overall detection was also similar to the Methow Subbasin releases. He said most detections were in the Methow River. He said 4 fish were detected in the Okanogan River, all of which were from the Similkameen River release. He said these fish were detected the following spring around the time when spawning would end and may have been drifting downstream post-spawn.

Slide 33 of Attachment D

Lampman noted that a lot of fish released at the Okanogan River confluence migrated to the Methow River.

Slide 34 of Attachment D

Lampman said he converted the table on slide 33 to a figure on slide 34. He said there are a lot of undetected fish, every fish from the Okanogan River confluence release migrated downstream, and the Columbia 828.0 Fall bar shows that a lot of fish ended up in the Methow River area.

Slide 35 of Attachment D

Lampman reviewed the Methow River Subbasin results highlights.

Slide 36 of Attachment D

Lampman reviewed the upper Columbia River Subbasin results highlights.

Ferguson noted how fish from the Okanogan River release ended up in the Methow River, and asked, based on these results, are the CCT considering any changes to translocation

plans for the Okanogan River? Jason McLellan said he has not yet discussed upcoming translocation plans internally with CCT staff. Lampman said he believes the plan is to continue the releases this spring 2019, including 300 adults in the Okanogan River Subbasin. He said he thinks it is too early to tell whether this will or will not work. He said initially, any releases to areas with few fish will result in a lot of fish turning around, which is what happened in the Yakima River Subbasin. He said in subsequent years, this percentage decreases. He said in the Methow River Subbasin, there are more fish moving farther upstream as years progress.

Lampman noted there is also a Wenatchee River Subbasin section in Attachment D, if Aquatic SWG members are interested in reviewing these data.

VII. Administration

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

John Ferguson reminded the Aquatic SWG that the draft *2018 Aquatic Settlement Agreement Annual Report* and appended *2018 White Sturgeon Management Plan Annual Report*, *2018 Bull Trout Management Plan and Incidental Take Annual Report*, *2018 Water Quality Management Plan Annual Report* (and appended *2018 Water Temperature Annual Report*), *2018 Pacific Lamprey Management Plan Annual Report*, *2018 Aquatic Nuisance Species Management Plan Annual Report*, and *2018 Resident Fish Management Plan Annual Report* were distributed for a 45-day review on March 22, 2019, with edits and comments due to Kristi Geris on May 7, 2019. Ferguson said the annual report and appended resource management plan annual reports will be up for approval during next month's Aquatic SWG meeting on May 8, 2019. He said the final, approved annual report is due to FERC on May 31, 2019.

2. Upcoming Meetings (John Ferguson):

The Aquatic SWG meeting on May 8, 2019, will be held by conference call.

Other upcoming meetings include June 12 and July 10, 2019 (TBD).

List of Attachments

Attachment A List of Attendees

Attachment B Scroll Case Slides

Attachment C Wells Dam River Forecast Update

Attachment D Overview of Adult Pacific Lamprey Translocation PIT-Tag Results

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
Steve Lewis	Aquatic SWG Technical Representative	U.S. Fish and Wildlife Service
Breean Zimmerman	Aquatic SWG Technical Representative	Washington Department of Ecology
Patrick Verhey	Aquatic SWG Technical Representative	Washington Department of Fish and Wildlife
Jason McLellan	Aquatic SWG Technical Representative	Colville Confederated Tribes
Ralph Lampman	Aquatic SWG Technical Representative	Yakama Nation