



Conference Call Minutes

Aquatic Settlement Work Group

To: Aquatic SWG Parties

Date: December 13, 2017

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

Re: Final Minutes of the November 8, 2017 Aquatic SWG Conference Call

The Aquatic Settlement Work Group (SWG) met by conference call on Wednesday, November 8, 2017, from 10:00 to 11:45 a.m. Attendees are listed in Attachment A of these conference call minutes.

I. Pacific Lamprey Subgroups of the Fish Forums – Questions for the Aquatic SWG (Andrew Gingerich and Chas Kyger):

John Ferguson recalled that the Priest Rapids Fish Forum (PRFF), RRFF, and Aquatic SWG held a Pacific Lamprey Subgroup workshop on October 4, 2017. Ferguson said the subgroup asked Tracy Hillman to deliver a list of questions to the Aquatic SWG, which Sarah Montgomery emailed to the Aquatic SWG on October 11, 2017.

Steve Lewis said it seemed these questions were based on concerns expressed by Chelan PUD that Douglas PUD is not closely examining Pacific Lamprey passage issues in the Wells Dam tailrace and through Wells Dam and the Wells reservoir.

Patrick Verhey said he attempted to explain past Douglas PUD Pacific Lamprey studies to the best of his knowledge; however, it would have benefited to have a Douglas PUD representative participate in the workshop.

Andrew Gingerich apologized that no Douglas PUD representatives were available to attend the workshop. He said the questions received from the subgroup are questions Douglas PUD has already discussed within the Aquatic SWG and with stakeholders. These questions and Douglas PUD's responses were discussed, as follows:

Question #1: Is there any evidence that adult Sturgeon are in the fishways and tailrace of Wells Dam during the time adult Pacific Lamprey are migrating through the project area? Gingerich said, as the regional fish forums all know, Chelan PUD's White Sturgeon monitoring and evaluation (M&E) data clearly demonstrate that White Sturgeon are oftentimes present in the Wells Dam tailrace. He said there are hot spots within the Rocky Reach Reservoir and the Wells Dam tailrace is one of them.

Gingerich said additionally, Douglas PUD recently reviewed Chelan PUD acoustic telemetry data and Douglas PUD 2016 Pacific Lamprey acoustic data, which showed that White Sturgeon can enter the collection gallery at Wells Dam. He said, for example, an acoustically tagged adult White Sturgeon and an acoustically tagged subadult were detected in the collection gallery at a time that coincided with the tail end of the Sockeye Salmon run (July), as well as during a time of peak Pacific Lamprey interaction at Wells Dam. He said the degree of overlap of Pacific Lamprey and White Sturgeon in the Wells Dam tailrace is unknown; however, data show White Sturgeon can enter the collection gallery, and quite a few White Sturgeon are present in the tailrace during the Pacific Lamprey migration at Wells Dam. He said he is not trying to characterize this as the reason why Pacific Lamprey are not entering the tailrace at Wells Dam; however, this could be a contributing factor (and more importantly, attempts to answer the original question posed by Hillman).

Verhey commented this is interesting to that hear White Sturgeon are actually entering the collection gallery at Wells Dam. Gingerich said more than two fish, but two fish in particular, spent a lot of time in the collection gallery in 2016. He recalled, there are acoustic receivers inside of the collection gallery, so those detections were compared to those outside the collection gallery to determine the prolonged times spent inside and not outside of the gallery.

Verhey said there are also significant data which show White Sturgeon in the vicinity of the adult fish ladder trap at Priest Rapids Dam, and reduced Pacific Lamprey passage numbers at the left-bank fishway. He asked what might be attracting White Sturgeon into the fishways? Gingerich said this is a difficult question to answer; although, foraging may be a possibility.

Ferguson said he understands at Bonneville Dam, White Sturgeon move into the lower fish ladder weirs fairly readily. He said at this location, this may be to avoid predation by pinnipeds, or it could be to forage.

Gingerich recalled Chelan PUD White Sturgeon M&E data indicating that 116 tags remained active in August/September 2016, and 34% (or 39 tags) were detected in the Gateway-to-Wells area (i.e., the Wells Dam tailrace) for an average of 24 days (a range of 1 to 60 days). He said again, these data show that the Wells Dam tailrace is a hotspot for White Sturgeon in the Rocky Reach reservoir. He said, however, the degree of importance with regard to Pacific Lamprey approach to Wells Dam is unknown.

Question #2: Is there a summary of results of tailrace and fishway passage efficiencies and entrance efficiencies for adult Pacific Lamprey at Wells Dam? If so, would the Aquatic SWG please share those with the Subgroups?

Chas Kyger said the most recent Douglas PUD study evaluating passage and entrance efficiencies at Wells Dam was conducted in 2013, and those results have been made available¹. Kyger recalled, the Douglas PUD 2013 Pacific Lamprey Study was when modified head differentials were implemented at Wells Dam, and entrance efficiency ranged from 51% under the high treatment (1.5-foot) to 67% under the moderate treatment (1.0-foot). He said study fish also appeared to have a preference to pass Wells Dam via the east fish ladder (left bank). He said these are the most recent data; and he added, to evaluate entrance efficiency using acoustic telemetry would be difficult, due to the sample size being too small to measure anything with significance.

Gingerich said an overview of the results of this study are reported in Table 9 of the Douglas PUD 2013 Pacific Lamprey Study (copied below for reference).

Table 9. Entrance and Passage Efficiencies by fishway and head differential treatment. Also shown are the numbers of Pacific Lamprey which approached, entered, and passed each fishway, by treatment.

Head Diff. Treatment	Fishway	Approached	Entered	Passed	Entrance Efficiency	Passage Efficiency
Moderate	West	6	2	0	33%	0%
Moderate	East	6	6	0	100%	0%
Moderate	Both	12	8	0	67%	0%
High	West	23	10	2	43%	20%
High	East	12	8	1	67%	13%
High	Both	35	18	3	51%	17%
Both	West	29	12	2	41%	17%
Both	East	18	14	1	78%	7%
Both	Both	47	26	3	55%	12%

Gingerich caveated that this study was conducted prior to understanding there is attrition through the Rocky Reach reservoir. Kyger also added that these study fish were all translocated and radio-tagged. He said this study design was not ideal for measuring the run at large, but this is what was implemented that year.

¹ "Adult Lamprey Passage and Enumeration Study, Wells Dam, 2013: The Effects of Head Differential on Entrance Efficiency, and of Picketed Leads on Count Window Enumeration Efficiency" (Robichaud and Kyger 2014; also referred to as the Douglas PUD 2013 Pacific Lamprey Study), distributed to the Aquatic SWG by Kristi Geris on July 7, 2014.

Question #3: Are there velocity profiles for various flow conditions at the entrances of the fishways at Wells Dam? If so, would the Aquatic SWG share those with the Subgroups?

Gingerich said the entrances of the fishways at Wells Dam are operated under a normal head differential of 1.5 feet. He said Douglas PUD has not performed any modeling to evaluate velocity profiles at the fishway entrances. He said the entrance is perched above the river floor, and has a very large opening. He said the velocity profile is going to be fast, but not uniform throughout. He said the slower profiles will be along the walls, and he noted that the design is intended for salmonids. He said Douglas PUD has data for flow volume through the 73 weirs throughout the fish ladder, which range from 48 to 73 cubic feet per second. He said Douglas PUD can provide these data if this is helpful.

Question #4: Why is the Aquatic SWG not comfortable using adult Pacific Lamprey trapped downstream (e.g., at Priest Rapids Dam) for conducting passage efficiency studies?

Kyger said in the past, when Douglas PUD used study fish obtained from lower in the Columbia River, most fish did not interact with Wells Dam. He said this led Douglas PUD to believe that perhaps it would be better to use study fish which are actively migrating or wanting to approach Wells Dam, which is why subsequent study fish were obtained closer to Wells Dam thinking these fish were in a more upstream-migrating phase. Gingerich said ideally, study fish would be obtained from the Wells Dam fishway because these fish have displayed an intent to pass the dam. He said farther downstream, less is known about the disposition of the fish to want to migrate farther upstream. He also reiterated the most recent data using fish released in the Rocky Reach Dam forebay (Douglas PUD 2016 Pacific Lamprey Study), which showed attrition through the Rocky Reach reservoir suggesting that fish may not want to interact with Wells Dam. Ferguson asked about the origin of the study fish from the Douglas PUD 2013 Pacific Lamprey Study. Kyger said most of those fish were obtained from John Day Dam, and Gingerich added that those fish were held at a holding facility in Prosser, Washington, before arriving to Wells Dam, so the full history of those fish was unknown.

Discussion

Ferguson said it seems this Pacific Lamprey Subgroup is requesting that the Aquatic SWG: 1) consider the questions posed by the subgroup; and 2) provide responses to these questions. Ferguson suggested either writing a brief summary of answers to these questions, sharing the finalized minutes of this Aquatic SWG meeting, or cutting and pasting this discussion into a separate document.

Gingerich suggested simply sharing the finalized meeting minutes, noting that aside from the technical representatives from Chelan PUD and Grant PUD, and Hillman, this Pacific Lamprey Subgroup is participating here in this Aquatic SWG meeting. Gingerich said the Aquatic SWG can review and edit the draft minutes, as needed, and the final minutes can be provided to Hillman for distribution to the Pacific Lamprey Subgroup.

Verhey agreed with Gingerich, and added that one theme expressed during the subgroup workshop was, Chelan and Grant PUDs think stakeholders are putting more pressure on them with regard to Pacific Lamprey, and they wondered why stakeholders are not putting more pressure on Douglas PUD. Verhey said he disagreed with this sentiment, and explained the background of the anticipated Aquatic SWG SOA for translocating Pacific Lamprey (i.e., the Aquatic SWG expressed interest in conducting both translocation and in-ladder studies, simultaneously; however, Douglas PUD did not feel it was appropriate to do both, so the Aquatic SWG agreed to focus on the pheromone issue first).

Gingerich said Douglas PUD has had these same discussions, offline, with Chelan and Grant PUD representatives, where they expressed a similar theme. Gingerich said he wonders if these questions are really rhetorical or are they really questions? He added that Douglas PUD understands the background and tone Verhey and Lewis described.

Verhey said the stakeholders just hope to keep communication lines open. He said he does not view this as pitting one PUD against the other. He said everyone just wants to do the best thing for Pacific Lamprey. Bob Rose agreed with Verhey.

Aquatic SWG members present agreed to provide responses to the questions received from the Pacific Lamprey Subgroup on October 11, 2017, in the form of formalized responses within the Aquatic SWG-approved November 8, 2017 meeting minutes, which will be provided to Hillman for distribution to the subgroup.

NOTE:

Verhey added that Mike Clement (Grant PUD) is working on a budget for 2018, and is gauging regional interest for adult Pacific Lamprey study fish being collected at Priest Rapids Dam. Verhey suggested Douglas PUD contact Grant PUD if there is interest in obtaining study fish from this source.