

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 25 July 2018 FFDRWG meeting.

The meeting was held at the Lobby Conference Room, Block 300 in Portland, OR.

In attendance:

Last	First	Agency	Email
Askelson	Sean	NWP-EC-HD	Sean.A.Askelson@usace.army.mil
Axel	Gordon	NOAA	-
Bellerud	Blane	NOAA	Blane.Bellerud@noaa.gov
Bettin	Scott	BPA	swbettin@bpa.gov
Bissell	Brian	NWP -BON	Brian.M.Bissell@usace.army.mil
Conder	Trevor	NOAA	trevor.conder@noaa.gov
Filan	Ben	NWP-ENC-DM	Benjamin.J.Filan@usace.army.mil
Harris	Carl	NWP-ENC-DM	Carl.M.Harris@usace.army.mil
Kovalchuk	Erin	NWP	Erin.H.Kovalchuk@usace.army.mil
Lopez-Johnson	Sienna	BPA	smlopez@bpa.gov
Lorz	Tom	CRITFC	lort@critfc.org
Rerecich	Jon	NWP-PM-E	Jonathan.G.Rerecich@usace.army.mil
Roshani	Mehdi	NWP	Mehdi.Roshani@usace.army.mil
Royer	Ida	NWP-PM-E	Ida.M.Royer@usace.army.mil
Sullivan	Leah	BPA	lssullivan@bpa.gov
Thompson	Josie	NOAA	
Van Dyke	Erick	ODFW	erick.s.vandyke@state.or.us
Walker	Ricardo	NWP	Ricardo.Walker@usace.army.mil
White	Tom	NWP-ENC-DM	Thomas.J.White@usace.army.mil

On the phone: Axel, Bettin, Bissel, Lopez-Johnson, Royer, Sullivan and Van Dyke.

1. Final decisions or recommendations made at this meeting.
 - 1.1. May meeting minutes were approved.
2. Lamprey Passage Minor Fishway Modifications (Turaski/Schroeder/Walker)

Bonneville Washington Shore lamprey refuge box redistribution. –The current refuge boxes will be redistributed throughout the ladder; there will not be any new boxes. Most boxes are by the count station window and the team thought it would be better to have boxes in higher velocities in the throughout the upper portion of the exit control section. The Lamprey Task Group has already approved this design. BON project may not permit this plan for fish salvage reasons. Conder mentioned that the boxes are no longer visible and it would be hard to know if one was dislodged. The boxes will be pull tested like the ones at BI. If it comes loose then worst case it could get stuck in an orifice. Van Dyke asked why they were originally set in this fashion. It started as a pilot scale installation to verify if lamprey would use them. The initial thinking was to create somewhat of a lamprey pathway leading the lamprey orifices. Now, the team feels that the boxes should be spread out to higher velocity sites. Since they don't have much funding they can't build new boxes and the only cost will be changing the location. Conder has concern that

the higher velocity may cause an eddy on the sides of the refuge box. Van Dyke asked if an example of the high velocity will be visible from the window. The last visible box will be in a higher velocity area but not the highest velocity. Conder asked about a camera. Walker said that a full study is cost prohibitive with remaining lamprey funds. Conder said he was already nervous about the lamprey orifices and now adding the boxes is more of a concern. Lorz wants to make sure lamprey are using them. **ACTION: Walker will discuss with the Fish Field Unit (Wertheimer/Nathan) about cameras and monitoring.** If they don't redistribute the boxes, then they will remain in place. At the low velocity boxes, lamprey morts have not been seen. Walker said that the AFF lamprey trap has been a success this year.

3. Bonneville B2 FGE (Medina/Roshani/Rerecich) - All plates will be removed by 15 September. When the plates are removed, the criteria returns to the mid-range criteria. This criteria was in the change form for unit 15 only and a teletype was issued to cover all the units. **ACTION: Rerecich will send out the teletype with the updated MOC.** The MOC has the range constraint from April 1 – July 31. The concrete alternative was considered when developing the plan for the permanent fix but at the time, the metal plate was the preferred alternative. The PDT is trying to achieve the same hydraulic conditions in the A and B slots as the metal plates. The concrete is going to be thicker than the metal plate so the team has to do some modeling to achieve the same conditions. The team is expecting to have the same flow into the gatewell so that the conditions for fish should be the same. If anything, they will engineer on the side of less flow into the gatewell. Bettin asked if they could add a 1" polymer that could be removed if they needed to. Askelson said they could but anything in the gatewell could go into the unit so they would rather have concrete that they can grind down, if needed. Unit 15 will be hydraulically tested again as a final check before full powerhouse implementation. After all units have been outfitted, they will continue with year two of post construction FGE testing. Conder would like to see a study where fish are inserted into the gatewell to test conditions. But Askelson feels that they can achieve similar conditions to the metal plates. The velocity at the porosity panel will not be tested because the conditions shouldn't change. The team will look at shaping the concrete for efficiency and no sharp edges. The top of the concrete plate will be six inches higher in elevation than the metal plate but with enough distance downstream of the VBS porosity for the flow to diffuse. The hot spots on the VBS have been fixed. During testing, the VBS will not be checked. Lorz suggested testing the porosity panel and Conder agreed with him. Askelson will look into it but wasn't planning on it. The rebar will be imbedded in the concrete. **ACTION: Kovalchuk will add this diagram to the website.** The expected timeframe is: working on the Plans and Specs now- end of August, contracting out in Feb 2019, and flow testing in April 2019. The estimated cost is \$2.8 million. Lorz suggested breaking up the work over a couple of years. Project maintenance is available to support this action in March so the testing can start in April. The construction schedule will be limited by whether or not the gate can be removed. If the gate can be removed then it will go much faster but the project can only store one at a time. Units 11 and 18 will be done in the IWW. Unit 15 will be out of service for maintenance and the work can done then. The 90% review will be out 29 August.
4. Quick updates (<5 min each):
 - 4.1. John Day Turbine Rehab (Medina/Lipski/Rerecich) – The PDT just finished a 60% review of the phase 1A report and they have ATR comments to address as well. The report will go out for agency review in Mid-October/November. The current unit 1

100MW operation restriction will be reviewed due to Unit 1 being a candidate for a fixed blade unit and the fixed blade operation range may not align with the current unit 1 operation target. This review will play into the decision for a fixed blade or a Kaplan. Either one will be a fish friendly unit. PDT is conducting review of the turbine uprate study. Final by end of August.

- 4.2. The Dalles Backup AWS (Wright/Rerecich) – The night of 06 August, there will be additional testing to trouble shoot the valve issue. It is expected to last one night only. Once more data is acquired, the USACE and contractor will be able to resolve issues and decide on the next path.
- 4.3. The Dalles Fish Unit Turbine Rehab (Bluhm/Schroeder/Rerecich) – The PDT did not receive any comments from the FFDRWG review but they did receive some questions on using the AWS in conjunction with one fish unit following the 90% ATR review. They are working toward the final report scheduled out by 15 August 2018. The recommended alternative is replace with Kaplan runners which will add 20% more flow for both units combined. The next alternative is a propeller unit. They need to work on a construction sequence that would least impact the fish. The AWS was not designed for use with a fish unit. The unit rehab could take 9-12 months. Seiching is a major concern of running the AWS with a fish unit together. One fish unit can barely make criteria.
- 4.4. BON orifice – Rerecich was supposed to send out a report to FFDRWG but the report was not finished. The LED lights have been replaced. There was one idea was to add an airburst at the end of the cycle or change the frequency and duration. Rerecich said that cost estimates were increasing and there was not enough funding at the time for this program. **ACTION: Rerecich will get the B2 Orifice Final EDR posted to the FFDRWG website.**
- 4.5. Avian wires – **ACTION: McDonald will follow up with Medina on the status of the manual for the wires.**
- 4.6. BON Spillway stilling basin hydrosurvey – Lorz wants the survey results shared. **ACTION: Rerecich will follow up with Operations.**
- 4.7. PIT detections in BON tailrace – Axel is waiting on the final numbers of fish detected on the prototype barge. Axel sent Eppard and Royer the prototype design and cost estimates. Extending a cable from Robin’s Island to the outfall pipe would curb the tail water fluctuation and anchoring problems but may not be feasible. Axel thought placing the detector downstream where there is less turbulence is a better solution. Lorz suggested downstream of the JBS outfall to use the detector as a comparison. With the high flows this year, the conditions were very challenging conditions. The barge has good fencing that kept the sea lions off. The prototype had only top 6’ fins but the new model will have 20’ fins. Preliminary results are less than 1,000 hits with a good species composition mix. Fish were not avoiding the fins. They mostly detected juveniles and still have many orphans because the tag files weren’t uploaded yet. This prototype has potential to work in front of a surface weir or even The Dalles forebay. The major concern is anchoring. The new design will have blades that comes up when debris hits it and moves itself back down. This design can be a cost effective solution for many situations.