

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 22 May 2018 FFDRWG meeting.

The meeting was held at the Mt. St. Helen room, NOAA offices in Portland, OR. In attendance:

Last	First	Agency	Email
Axel	Gordon	NOAA	
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Eppard	Brad	NWP-PME	Mathew.B.Eppard@usace.army.mil
Fielding	Scott	NWP-PME	Scott.D.Fielding@usace.army.mil
Halvorson	Leif	NWP-BON	Leif.J.Halvorson@usace.army.mil
Kovalchuk	Erin	NWP	Erin.H.Kovalchuk@usace.army.mil
Lopez-Johnson	Sienna	BPA	
Lorz	Tom	CRITFC	lort@critfc.org
Morrill	Charlie	WDFW	Charles.Morrill@dfw.wa.gov
Peterson	Christine	BPA	chpetersen@bpa.gov
Rerecich	Jon	NWP-PME	Jonathan.G.Rerecich@usace.army.mil
Royer	Ida	NWP-PME	Ida.M.Royer@usace.army.mil
Studebaker	Cindy	NWP-PME	Cynthia.A.Studebaker@usace.army.mil
Swank	David	USFWS	David_Swank@fws.gov
Van Dyke	Erick	ODFW	erick.s.vandyke@state.or.us
Walker	Ricardo	NWP-PME	Ricardo.Walker@usace.army.mil

On the phone: Axel, Bettin, Lopez-Johnson, Rerecich and Swank.

All supporting documents can be found at:

<http://pweb.crohms.org/tmt/documents/FPOM/2010/FFDRWG/FFDRWG.html>

1. Final actions or recommendations from the 22 May 2018 meeting.
 - 1.1. March meeting minutes were approved.
 - 1.2. The next meeting will be held 25 July 2018 at 1300. The location has not been determined yet.
2. 29 March 2018 NWP FFDRWG Meeting Action Items (Studebaker)

Action ID	Date Requested	Description	Champion	Status
1	29-Mar-18	Set-up a stakeholder Site Visit: TDA East Fish Ladder / Adult LR Trap – TDA completed ; LR	R. Walker	Completed

		trap – The timing of the delivery of the trap did not allow for a site visit. There are pictures of the installation. Mods can be made this winter, if needed. Conder noticed the use of hex bolts instead of rounded bolts. The trap has been successful at trapping lamprey and U of I has been collecting for their study.		
2	29-Mar-18	Develop BO LR Wetted Wall - Ops Plan w/ LR Workgroup- The main concern about the wetted wall is the splashing into the fish ladder. There are also problems with the screens plugging up. The plan is to run at lower flow so there is no splashing. If no lamprey use this structure with the low flow then the team will consider running at full flow during the night only. No changes to the pipes or pumps will be made this year.	R. Walker	Completed
3	29-Mar-18	Investigate BO LR Wetted Wall - Pump Alternative – The size of the pipe has more of an impact to the flow than the pumps. The pipe size and orientation will be looked at for next year.	R. Walker	Completed
4	29-Mar-18	Check-into BO LR Wetted Wall - CRITFC field crew availability – Not moving forward with this right now.	R. Walker	Completed
5	29-Mar-18	Send JDA Turbine - 60% Report – Rerecich will send out the report concurrent with the ATR on 15 June. Due to its size, the report will be posted on the website as well.	J Rerecich	Pending
6	29-Mar-18	Send JDA ERDC Model Trip – Agenda Completed.	S. Fielding	Completed
7	29-Mar-18	Coordinate JDA ERDC Model Trip - Invite TDY – Last week, there was a conference call to review the ERDC trip results. Fielding is waiting on Morrill's trip report. The overall impression was that at spill over 50%, the egress falls apart. The TSW jet at low flow and high spill went north. The old spill patterns were still adequate. The 40% spill egress looked better than at higher percentage.	S. Fielding	Completed
8	29-Mar-18	Coordinate JDA Avian Lines - Phase 2 O&M Plan / R&Rs	J. MacDonald	Pending

9	29-Mar-18	Send Dalles Rehab Report – The report was sent 15 May; comments due on 15 June. The construction schedule is the biggest concern. Lorz wanted to know if the back-up AWS will be tested to integrate with one fish unit operation. After the AWS commissioning has been completed then the integration test will occur.	J Rerecich	Completed
10	29-Mar-18	Check status and send BO Major Rehab Report	J Rerecich	Pending
11	29-Mar-18	Send BO PIT Concept: Ice and Trash Sluiceways As-built Report – Royer sent as built drawings to Axel. He said that the drawings are from 1977; these need to be updated and accurate. This project is still being worked on internally as a charter. The funding for pre-work in FY18 is not set and may be too late to do a MIPR. Axel is working with West Corps on a barge concept to be used below the outfall pipe. The strong flow makes it challenging to keep an antenna in that location. The plan started as a vertical pier with a downstream mount concept but then changed to a barge. Eppard recommended getting the paperwork in place and a set plan so when funding becomes available in the next FY, they can start immediately. Axel and Brooks are drafting the proposal currently and will work with PIT TAGIS. West Corp Experimental are building some prototypes and should be able to provide cost information next week. Axel will proceed with coordinating with PSMFC even though the funding hasn't dropped. The proposal is expected to be submitted in Mid-June.	B. Eppard	Completed
12	29-Mar-18	Continue BO PIT Concept: Present Findings from Spring 2018	Axel and Brooks	Pending

3. Review Bonneville Dam, Washington Shore LPS (Walker) – This project is part of the Minor Mods at the WA SH serpentine section. FFU conducted a study to review salmon interactions at the orifices and lamprey use. There were three lamprey orifices at weirs 1, 3 and 5. The results showed that 94% of the salmonid interactions occurred at weir 1, 4% at weir 3 and 2% at weir 5. Lamprey had more downstream passage at weir 1 than at any other weir. Weir 1 has the lowest velocity and as you move up through the ladder, the velocity increases. Walker proposed filling in weir 1 and cutting new orifices at 7, 9, 11, 13, 15 and 17. There will be no additional monitoring, no closure devices and they will remove the monitoring rails on the lower weirs. The team had

concerns of creating a jet down the line of orifices but the hydraulic engineers concluded that cross velocities should break up an orifice jet with no accumulating momentum. In 2008, a physical model looked at the orifices at the exit section of JDA and found that moving the orifices away from the wall prevented the accumulating momentum of the water jet. Conder expressed concern that only the lower three weirs were tested which have a lower velocity but the proposed weirs are moving up to higher velocity. The final weir is approaching 6 fps and he would like to know if this high velocity will still help lamprey and will it affect salmonids. Conder would prefer to evaluate the final weir looking at the same metrics as the lower weirs. Walker noted that access to the final weir will be a problem and cost prohibitive to build an access point. Lorz suggested installing the cameras when the ladder is out of service and remove the following year but the camera lens need to be cleaned frequently. The budget for this project is dwindling and adding additional work may cause the project to stop. Walker will look into the cost for a cat walk for researchers. Conder said that if each orifice was used less and less as the velocity increased and there is no monitoring then how will you know if this is a benefit to lamprey. Walker said that the orifices provide another route for lamprey which is a benefit. Walker asked if the lack of monitoring was a deal breaker for NOAA. Conder said yes because the conditions are not the same. Gallion measured the velocities at Weir 5 as 3.6fps and the theoretical computation of velocities at Weir 17 is 6.2fps. Lorz noted that the theoretical velocity is higher than actual. ACTION: Walker, Conder and Lorz will conduct a site visit on Thursday before FPOM. Walker needs to know if this project will move forward so that funding can be put in place this year. The site is not accessible to use a velocity meter. ACTION: Walker will have the hydraulics computed for a typical forebay not the max forebay. Conder suggested an enclosed perforated box connecting the orifices to prevent salmonid interactions but cleaning the box would be difficult. VanDyke asked about a wetted wall or LPS instead but this area is not a dead end for lamprey.

4. Review John Day (JDA) and Dalles (TDA) Lamprey Passage Structure (LPS) and Minor Mods
 - 4.1. JDA LPS upgrades (pumped water supply) –They are moving forward with the pump water supply and are in the BCOES review phase.
 - 4.2. TDA east fish ladder adult lamprey trapping – The team is still developing the concept with pulleys and counter weights. All the equipment will be behind the picketed leads and above the water line.
 - 4.3. Plunge box – Zorich recorded a video of the plunge box overnight and reported that no fish sat more than 5 minutes in the box before leaving. The AFF trap is collecting fish and the LFS has passed more fish this year than all of last year.
5. Back-brief John Day ERDC Model Trip (Askelson / Fielding) – Discussed under Action Item #7.
6. Update Bonneville B2 FGE (Medina/Rerecich) – An email was sent out on the modified operation of unit 15. The anchors for the plates were coming out of the concrete and had to be removed. The rest of the units will need to be inspected as well. The PNNL study is on hold until the problem can be addressed. In order to find a permanent fix, the area behind the VBS will be outfitted with accelerometers and pressure systems. Start-up, operating in lower, mid and upper end of 1%, shut down and load rejection scenarios will be looked at. The best unit to test would be 11 since it went through annual rehab recently. Rerecich is discussing with PNNL to see if they would be able to get equipment for a study in late June. An MOC will be written within the next several weeks if this plan can be accomplished. The whole operation would take a couple of weeks. Rerecich will ask if they can leave the equipment in place longer. June would be better than July due to the risk of running into the generator limit and not being able to run at the upper end of 1%. Unit 12 comes out later and could possibly swap the outages of 11 and 12. The

project is putting together a draft schedule of inspecting the plates through the end of August and will look into combining with the T11 and T12 outages. Plates are in A and B but not in C slots.

7. Update The Dalles AWS (Wright/Rerecich) – The full flow portion of the system was commissioned on 26 April but the 7' valve would not open all the way. The actuators tripped due to the torque limit. The motors might be undersized. The rest of the commissioning was stopped. Until the repair is identified, commissioning cannot be scheduled. Rerecich suggested to the team to wait until August before commissioning.
8. Update PIT Development Concepts (Brooks / Axel) – Discussed under Action Item #11. Axel has drawing of the JBS Outfall but it doesn't have all the information. They also need the updated Ice and Trash Sluice gates drawings. The current barge is in a less than ideal spot (across the river from Jones Beach in the lower Columbia River) but has been deployed for a month and getting 20 detections per day. Maintenance has been minimal. A GPS for flow was added to help predict the anchor system requirements in higher flow. No crew is required to operate. The barge will be taken out in about ten days and some release/efficiency testing has been conducted. The fins are 6' deep but they would like to use 20' fins in the future for increased detections. The barge is 30' long with 6 fin antennas. After the work here is finished, the barge could be deployed somewhere else. Conder suggested the MCN tailrace for TSW detections. Debris is a major concern for the antennas. Conder suggested putting the antennas parallel to the flow but behind a pier to avoid debris.
9. Additional Discussion (Studebaker) – No additional topics.
- 10.** The next NWP FFDRWG is scheduled for July 25 at 13:00.