

## MEMORANDUM FOR THE RECORD

Subject: FINAL minutes for the 14 March 2016 FFDRWG meeting

The meeting was held in CRITFC Lloyd 700 Building Portland OR. In attendance:

Last	First	Agency	Email
Absolon	Randy	NOAA	<a href="mailto:Randy.Absolon@noaa.gov">Randy.Absolon@noaa.gov</a>
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Richards	Natalie	NWP	<a href="mailto:Natalie.a.richards@usace.army.mil">Natalie.a.richards@usace.army.mil</a>
Sandford	Ben	NOAA	<a href="mailto:Ben.sandford@noaa.gov">Ben.sandford@noaa.gov</a>
Scott	Shane	Public Power Council	<a href="mailto:shane@sscottandassociates.com">shane@sscottandassociates.com</a>
van Dyke	Erick	ODFW	<a href="mailto:Erick.s.vandyke@state.or.us">Erick.s.vandyke@state.or.us</a>
Walker	Ricardo	NWP	<a href="mailto:Ricardo.walker@usace.army.mil">Ricardo.walker@usace.army.mil</a>
Warf	Don	PSMFC	<a href="mailto:Dwarf@psmfc.org">Dwarf@psmfc.org</a>

Absolon, Bettin, Brower, Chase, Livingston, Medina, Meyer, Richards, Sandford, Scott, van Dyke, and Warf called in.

<http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/FFDRWG/FFDRWG.html>

### USACE Fish Facility Design Review Work Group

#### Portland District

##### 1. Actions or decisions from this meeting.

1.1. December FFDRWG meeting minutes are approved.

##### 2. Action Items.

2.1. [March 16] TDA East Adult Fish Ladder AWS Backup System **ACTION:** Rerecich will provide a schedule update through the FFDRWG update forms. If there are significant changes they will be updated and posted to the website.

2.2. [March 16] JDA Adult Ladder weir removal **ACTION:** O&M to provide pros / cons to removing veins including hydraulic comparisons with or without weirs in place.

2.3. [March 16] FFDRWG **ACTION:** request for a trash raking effectiveness report after the 2016 season comparing pre and post modifications to determine if it is meeting expectations.

### 3. Updates

3.1. The Dalles East Adult Fish Ladder AWS Backup System. No new information. **ACTION:** Rerecich will provide a schedule update through the FFDRWG update forms. If there are significant changes they will be updated and posted to the website.

3.2. John Day North Ladder AWS pumps. Richards said new shaft and bearings ordered for pump #4 will be on site 21 March. Pump #4 will be up and running on 2 May.

3.3. Turbine Survival Program (Medina/Rerecich). Medina said trying to work up the scenario for biologic strategies to address fish friendly rehab in turbines up and down the Columbia. Looking to provide support for Foster for turbine rehab. Waiting for B2 model analysis from ERDC to look at optimum conditions for operation of B2. Fredricks said nothing to add other than it's important to close the loop and get the report out in support of the changes made. Medina asked if after installed the min gap runners in b1 was follow on biologic study done and Fredricks and Rerecich said yes but not something that provides before and after comparisons. Rerecich said bead analysis will help us understand the mechanisms for mortality but Fredericks isn't sure if the data lines up and that there will be more questions than answers and Medina agreed. Fredricks said the bead analysis assesses strike, turbulence and shear.

3.4. Bonneville Major Rehab (Cutts/Lynn/Rerecich). Rerecich said a slide show from Matt Cutts given in December 2015 should be on the FFDRWG website. Nothing significant in regard to fish passage design has occurred yet on this project. 30% report is scheduled to be available by the end of FY16 and will be sent out for comment. Fredericks would like better detail on the schedule. Rerecich commented that the big item for structural, geotechnical, and hydraulic engineering is for the spillway and what can be done to meet flow passage criteria. Need to identify maximum flood. May go with concepts that deal with a 1.0, 1.6 and 2.0 million cfs passage through the project. Spillway will be the initial discussion. Fredricks commented that it's not too early to discuss how the project will operate if spillways are out. Rerecich added the Cascade Island ladder. He stated that it has been recommended that it occurs on its own schedule due to immediate attention needed. Project has requested through a UFR that we get some district engineering resources to get some help. More information to come.

4. **B2 FGE (Medina/Popescu/Rerecich).** Rerecich said we have a draft report from Absolon. Getting comments from an internal review. Expected to advertise in early April and award the contract in May with VBS mods beginning this summer. Outage during the flow control plate installation would occur during the T-12 outage for units 16, 17 & 18 scheduled Sept. 7 thru Nov. 23, 2016, units 11, 12, 13, & 14 targeting winter maintenance Dec. 1, 2016 thru Feb. 17, 2017 (units 13 & 14 flexibility until March 31, 2017 if needed. DDR review will be sent out. NOAA provided comments that will be incorporated. Following the bio evaluation there was concern over loss of fish in the latter half of the testing for 15a. SRWG developing a post construction study at B2. Performance testing will incorporate FGE into the equation to get route specific. Conder said report speculation of fish loss is due to gap loss. He wondered why Absolon thought gap loss was changing over time and why he thought fish were going through the gap instead of backing out. Absolon said if fish went back to forebay we would have seen more at corner collector. That helped conclude that they likely went through gap but Fredricks said they could have gone under screen also. Fredricks asked about ratio of tags detected vs not on the bird islands. Sandford said the ones not detected were a bit less than half. Conder asked if there were problems with release tubes during study. Absolon said no, they used the same hose from 2014, as 2013 and the hose from 2015 was new but there was no damage to any of them. Fish size got bigger throughout the study. Rerecich said DIDSON work in the gatewell should help us better understand gap loss. van Dyke asked if the release is done at once in the tube or in

batches. Absolon said single release at each location on the particular day is conducted. Released into hose, flushed out with water and then they move to next release location. Varied which group got released first (randomized the release groups). There were a couple times when two groups had to be combined and released into the same unit due to running out of water. Rerecich asked Absolon if he reported on B2 units operations and he said he could not remember right off hand. Rerecich thought more units were operating early on. Fredricks asked about March time extension. Rerecich said the schedule was verbally reported in FPOM, FFDRWG, and identified in the DDR that went out for FFDRWG review. A written FPOM memo will be provided.

5. **B2 Orifices (Medina/Kuhn/Rerecich).** Kuhn said we have funding to finish reports. Lorz asked if questions were discussed at FPOM about possible modifications. Rerecich said at last FFDRWG there was some talk about ideas as to where to go. Kuhn said we need a list of things we're going to try. Fredricks said we need to finish this one and at a minimum we need to make the orifices easier to inspect. Wants to see that as the end part or at least looked at. Backed away from changing orifice flows or plates due to too great of cost. Fredricks asked Kuhn if she wants him to put something together in terms of a list and Rerecich said we have Fredricks' response and comments. Rerecich said working on improving the observation capability from the tubes and reducing the heat off the lens and get them out of the water is at the crux. We have triple redundancy to flush the orifices regularly. The biggest benefit will be the ability to see the base of the jet. The project is moving to swapping out lights with LEDs; we don't know where that's at. Kuhn said schedule for timeline should be clearer by next meeting. Fredricks stressed not letting this die.
6. **John Day Avian Lines (Medina) – New item.** Medina said funding exists this FY for project staff to fix lines this year. Lorz asked what the long term plans are due to the likelihood of the lines continuing to fail. Medina said maintenance manuals will be put together to be able to maintain lines properly. Fredricks said they've heard about manuals a few times but work still doesn't get accomplished correctly. Medina said he knows it hasn't gotten completed but he's on it. Lorz asked if there would be a plan to comment and Medina said yes. Timeline for scoping and incorporating comments (laying out path forward to reinstall the lines safely) done by latter part of June. Meyer asked what the group will be getting and Medina responded with a document that will discuss the lines and materials and then the manual will still get completed. Medina wants to present plan to FPOM in June instead of just FFDRWG.
7. **John Day Adult Ladder weir removal (Grosvenor).** At FPOM Grosvenor (not at this FFDRWG) asked about removing lower ladder (south ladder last 3 weirs) weirs. Already done on north ladder. Rerecich hasn't reviewed Uof I report. Fredricks said the submerged weirs are causing fish to delay and some turn around in the area. He said Uof I thinks they are an impediment and recommended removing them where we could. Meyer asked if the north ladder was evaluated and Fredricks said yes the mods were evaluated but he wasn't certain of the differences. Meyer asked why do it...risk vs reward. It may reduce operational flexibility with lower tailwater. Lorz and Fredricks said the delay wasn't that great and that leaving them doesn't seem like an issue. Meyer reminded that the south weirs are pre-cast and could be easy to put back in place if needed. Fredricks commented on the veins in the collection channel that move and pinch in. The other part of the plan was to remove them also. Lorz asked for the data that provides justification for removing the weirs. Fredricks asked if there could be lamprey benefit. Lorz said it's possible that it could provide sturgeon refuge and that he needs to talk to the lamprey task group to see if it's on their radar. Rerecich said Grosvenor said that the veins have not been used since construction. Fredricks confirmed. Meyer asked how the project O&M comes up with money for this and not for other things. At FPOM it was said that they would fund to remove the veins. A report needs to document pros and cons. Fredricks said it needs to be known the likelihood of the weirs and veins being needed and what would occur to cause that need.

Based on current information FFDRWG is ok with not removing the weirs. Rerecich said we'll take the discussion back to the project. Needs some engineering support from hydraulics. **ACTION:** Zyndol to provide pros / cons to removing weirs. **ACTION:** Discuss hydraulic comparisons with or without weirs in place including the likelihood of occurrence when we would need lower ladder weirs.

8. **John Day North Ladder PIT detection (Kuhn/Walker).** Walker said we're moving forward. Site visit provided good ideas that the Pacific States folks incorporated those suggestions into the design. Part of it was moving from two weir walls below counting station down to one. Fredricks said conduit and everything has been looked at and looks good. The schedule looks to install in the next in-water work period. Walker said when new design documents come in they will be sent out for review. Lorz recommended looking at Granite's system that was just installed for reference. Meyer commented that Granite just capped the weir and didn't remove it fully. Kuhn asked about flexibility or movement. Brower said weir walls can move a bit forward and back and side to side so it was suggested to have an 1/8th "play" and that a spacer had to be put in. Walker said we are still trying to figure out where to put the equipment building. Conder asked if a hydraulics study was done. Walker said no. Lorz said they are removing the weir so there won't be a hydraulic change.
9. **Lamprey Minor Fishway Modifications (Turaski/Knowles/Tackley).** Walker said the Lamprey Minor Fishway and the Lamprey Passage Structure (LPS) combined into one package. The BCOES went out this week. Gaskets for rest boxes were a concern. Going with a food grade neoprene. Fredricks said we should be good to move forward. He asked about the adhesive and verifying that it is ok in regard to cure time. Conder said why water the first year when it conflicts with cure time. He asked about cleaning protocol for oils and residuals and Walker said that is all being incorporated into the plan. Walker had asked the question about not using an adhesive and the concern was that the gasket could work its way out and cause a pinch point. Fredricks mentioned the importance of just making sure the adhesive dries and actually adheres. Walker said only other change was to the exit on LPS went from trapezoid to a square
10. **Lamprey Passage Structure (LPS) Development and Improvements (Turaski/Schroeder/Tackley).** Incorporated into #9
11. **Other: BON trash raking system (not an agenda item).** Lorz asked about BON trash rake system. Wants to know about the floating trash and does the project meet its objectives and if not why. It doesn't seem like it did. Rerecich said that the rake functions better with mods but raking 24 /7 isn't possible. Debris will start to accumulate at a high rate and the structural design won't be able to hold debris at certain heavy loads as identified in the DDR. Fredricks wants to see a study about the amount of time the trash racks floated vs. raking before the modifications were done vs. after installing the rake. Has there been a decline in debris. Rerecich said something automated would be ideal but evaluation criteria showed that it wasn't realistic. Fredricks said there seems to be a failure to meet the expectations of the plan and that perhaps there is another way and to simplify the operation. Rerecich said biological consequences of floating vary over the year and we need to ultimately know the O&M constraints. He commented that he has been pushing to keep this discussion in FPOM. The question is what can be done to use the trash rake system more and reduce float time. Conder suggested doing the analysis that Fredricks suggested regarding before vs. after mods. **ACTION:** request for a trash raking effectiveness report after the 2016 season comparing pre and post modifications to determine if it is meeting expectations..

**Next NWP FFDRWG Meeting: 7 April 2016 (conflicts with Lower Granite site visit)**

**Action:** Change meeting due to Lower Granite site visit conflict Maybe April 11th