

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 14 November 2019 FPOM meeting.

The meeting was held in the Columbia Conference Room of the CRITFC Office in Portland, OR. In attendance:

Last	First	Agency	Email
Baus	Doug	NWD-RCC	Douglas.m.Baus@usace.army.mil
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Thompson	Josie	NOAA	Josie.Thompson@noaa.gov
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VanDyke	Erick	ODFW	erick.s.vandyke@state.or.us
Wright	Lisa	NWD-RCC	Lisa.S.Wright@usace.army.mil

On the phone: Brower, Fielding, Johnson, Laughery, Lundell, Martinson, Morrill, Peery and Swank.

1. Final decisions or recommendations made at this meeting.

1.1. October meeting minutes were approved.

1.2. BON will start orifice flow for the Bradford Island fish ladder on 30 November.

2. The following documents are provided or discussed at this meeting. All documents can be found at: <http://pweb.crohms.org/tmt/documents/FPOM/2010/>.

2.1. Agenda, Fish Passage O&M coordination team

2.2. Outage Schedule (NWW)

2.3. BPA Transmission outages (BPA)

- 2.4. LCOR Temperature Profile Strings Final Report for 2019 (NWP)
- 2.5. 2019 Draft Dam Angling Harvest Graphs (WDFW)
- 2.6. Coordination Forms (MOC/MFR)(NWW/NWP)
- 2.7. FPP Change Forms (NWW/NWP)

3. Action Items

3.1. NWW

- 3.1.1. **[November 19] Shad discussion** - ACTION: Setter will send out an AMRIP brief of the proposed shad removal/restriction methods to FPOM.
- 3.1.2. **[November 19] 19IHR18 MFR South fish ladder picketed lead debris problem** - ACTION: Peery will follow up with Fone on any actions for next year to reduce the chance of a reoccurrence of this debris problem.
- 3.1.3. **[November 19] Fish Count Program** - ACTION: Peery will send an outline of the QA/QC program to Lorz to share with FPAC.
- 3.1.4. **[October 19] Fish Count Program** – ACTION: Peery/Kovalchuk will send out the QAQC plan to the group. Per our Contracting Division, the QC Plan is considered proprietary information of the Contractor and cannot be released. *Status: Peery checked with contracting and it is proprietary information. Each counter is checked once a month for an hour via video. The supervisor reviews the video and the counter has to be within 95%. Two counters have been let go because they were not able to meet these standards. The CORs then review some of the reviewed video as QA on the QC program. Morrill asked if the hour depends on the fish abundance but no, it is a random system. Lorz feels that some level of selection would help ensure that no species are missed. The structure of the QC plan needs to be tweaked and there is a meeting next month to look at this. Lorz asked for an outline of the work plan for FPAC. ACTION: Peery will send an outline to Lorz.* Thompson asked if there is a training and testing before the season. Peery said that there is a training before the season but he would like to see a mid-season training to help with jack Chinook and sockeye differentiation. Bellerud asked about the longevity of the counters. Peery said that newer people tend to either leave in a couple of weeks or stay for many years. Peery is keeping track on the mean number of experience of the counters. Setter brought up river conditions and quality of the video for the QC/QA. The video review is new this year. If the video is clear then it is fine but if the video is cloudy or not set correctly then the video is worthless.

3.2. NWP

- 3.2.1. **[November 19] Lamprey Update** - ACTION: Lorz will ask the lamprey task force about the entrance flow plan for next year.
- 3.2.2. **[October 19] BON LFS** - ACTION: Hausmann will follow up with Schlenker on the hydrologic conditions of welding the hatch. *Status: The project looked at the flume with the ROV. The latching mechanism is still there but the hinge is gone. They need to figure out who will pay for repairing the hatch. Schlenker is fine with closing the hatch but would prefer for the hatch to be bolted on not welded because it is painted steel. The point of the hatch was to access the flume but it has not been useful since it is underwater. Bettin suggested welding the bolt so it won't come off. Hausmann said the question is whether or not to spend money on something that doesn't function well. The cost is \$15K to fix it. Conder feels that with the amount of money spent on the flume, \$15k is worth fixing and seeing if it can work. Hausmann said that they were leaning that way because it would cost \$1.5 million to remove it. VanDyke suggested bolting the other hatches as well. Repairing the flume will require shutting down the fish units and all of PH2. Mackey suggested submitting a UFR to pay for it.*

3.2.3.[October 19] TDA Spillway MRER - ACTION: Rerecich will follow up with Trachtenbarg about the status of the MRER and the cost benefit ratio. *Status: There is no funding for this FY to finish the report but it is close to completion. The PDT has not generated the cost benefit ratio yet.*

3.3. Completed Action Items or to be discussed later in the agenda

3.3.1.[September 19] TDA AWS - ACTION: Cordie will find out about the details associated with the follow-on contract commissioning testing. *Status: Commissioning testing will be in the last two weeks of January and require only one day. Cordie will confirm one day or 24 hrs. Lorz asked about running the AWS for additional time beyond the one day test. The PDT is getting together to discuss this issue this month. The AWS is currently out of service.*

3.3.2.[September 19]COE Temperature Profile Strings - ACTION: Kovalchuk will find out when the report is expected. *Status: The report is scheduled to be out in December.*

3.3.3. [August 19] Shad dissuasion - ACTION: BPA will look into the shad research supported by BPA. *Status: See 4.0.*

3.3.4.[August 19] Shad dissuasion - ACTION: The States will discuss removing juvenile shad at the JBS facilities internally. *Status: See 4.0.*

4. Updates

4.1. NWW

4.1.1. Upcoming maintenance/construction/research activities.

4.1.1.1. FPOM outages schedule (Setter) – [handout] The schedule is posted to the website and no major changes since last month. Setter talked with LGS about the reliability concerns that were brought up in FPOM. They are still are struggling to get the back-up pump back. The contractor manufactures the pumps overseas and then does the maintenance stateside. The Chief of Maintenance feels that the pump they have will be operable. The project is requesting assistance from office of counsel to help get the other pump back from the contractor. The installation of permanent power this winter will help. Bettin asked if it requires unit outages. Bettin said that there is a unit 1-4 outage this month and maybe the work could be piggy backed. This work is tied to the roof repair which has been delayed by a couple of years. The outage is rushed to take advantage of the low flows.

4.1.1.2. LWG Spillway PIT Construction Schedule update – [handout] Hockersmith is scheduling a site visit for people after AFEP on 05 December. The flow deflectors, antennas set in place and upper and lower concrete pours will be ready to view. Conder wants to see the smoothness of the concrete pour over the antennas which won't be ready. Hockersmith said that Conder can come back for that. They will need a spill test for a couple of hours in January to make sure the capacitor cap stays in place and that the concrete handles the forces of the spill. The construction is on schedule. There is still no money for testing the antennas after they have been installed.

4.1.1.3. 2019 Barge and Raceway TDG during spring spill –Previously, Hockersmith shared a suggestion of modifying the water supply pipe similar to LMN with an orifice plate to alleviate the high TDG is the LGS raceways. The water supply pipe at LGS is only a 24" line compared to the 36" at other dam's raceways which have the modifications. The difference is a specific design to LGS. The reduced size means that LGS needs all the flow when the raceways are at capacity. VanDyke asked why the pipes are different sizes. Setter said that LMN was designed by Seattle and not by Walla Walla. The hope had been to modify the pipe like the other locations but that is not an option now. The short term solution is to direct load as long as they can and if they have a debris problem, they will switch to raceways but incrementally direct load

throughout the day as staffing allows to prevent fish from being in the raceways too long. For a long term solution, re-plumb the supply pipe, add a degassing system or fix the debris issues to allow direct loading all the time. Setter suggested coming up with cost estimates for each option. Lorz recommended looking at the head box fix. Conder asked if the fish were GBT tested and they are not. The concern will be when the tailrace is at 125%. Conder asked about the debris removal. Setter said that the main proposal is to redo the plumbing so that the debris is not as big of an issue but that it is expensive. Raking debris has not been effective and maintenance doesn't like to pull crews off useful projects for something that doesn't work. One of the proposals was to have a more effective trash rake. Flow patterns and topography contributes to the debris problem at the powerhouse. Conder suggested looking into a cheaper solution such as BioBalls, orifice plate, or something that disturbs the flow enough to release dissolved gas..

- 4.1.1.4. Winter dewatering schedules – The dewatering schedules have been posted to the website. LWG will have the fish ladder down for 2 months due to all the upcoming work.

4.2. NWP

4.2.1. Upcoming maintenance/construction/research activities.

- 4.2.1.1. 19BON18 MOC CI Subsidence Project – The bridge installation is the week of December 10th.
 - 4.2.1.2. 19BON56 MOC PH2 OWS installation – Ongoing per the coordination.
 - 4.2.1.3. 19BON62 MOC CI ladder dewatering for PIT work – This work is the same week as the bridge installation. The top of the ladder will be dried up but the lower section will be at orifice flow. No fish salvage will occur.
 - 4.2.1.4. 15TDA08 MOC Transformer Installation – The schedule has changed since the original coordination. 2/24-5/3 are the new dates for the T1 line outage. MU1 and 2 will be out and the fish units will be moved to T3. The fish units will not have a backup line during this outage. VanDyke asked when the original dates were. The outage was originally scheduled during the winter.
 - 4.2.1.5. 19TDA04 MOC Crane rail Replacement – no changes.
 - 4.2.1.6. 19TDA17 MOC Fish Unit outage for FUB – The outage was on 30 October for 1 hour but ended up doing 2 hours. The operators returned the fish units to service but only one actual came back. The operators caught the mistake about 4 am. Checking the differentials will now be part of the SOP in returning the fish units back to service.
 - 4.2.1.7. 19TDA18 MOC Fish Unit exciter work FUB – no changes.
 - 4.2.1.8. 18JDA08 MOC Line 1 outage – Bushing replacement – The bushing was not replaced during the three week outage. It will need to be replaced next year. The bushing was more difficult to remove than expected. An MOC will be coming for next year's outage.
- 4.2.2. Temperature Profile Strings Report – [Report] The 2018 study was repeated in 2019 and similar results were found at all the sites. The JDA-S had some stratification; TDA and BON had only a very slight stratification. 2018 and 2019 were somewhat different water years but the results were the same. Tailwater temperatures from MCN were available to compare to JDA. Lundell felt that at JDA-S, cooler water could be pumped to alleviate the temperature differentials from the forebay to the ladder. Conder summarized that there is a temperature differential at JDA-S and there is cooler water to access that could eliminate the differential. The warmer water started in mid-July and lasted through mid-September. The team did not find much differentials or locations of cooler water that would add much benefit at TDA or BON. The highest temperature at all three projects was ~73°F, with the exception of ~78°F near the surface at JDA in early August.

- 4.2.3. BON dewatering – BON will take out BI down to orifice flow on 30 Nov. FPOM concurred.
- 4.2.4. BON spillway rock removal – This project has been canceled. The project will come up with a spill flushing strategy since the rocks are on the apron and not in the stilling basin. Conder asked if there is evidence that below 150kcfs brings in the rocks. Bettin said no because they went over the 150kcfs limit and couldn't test the hypothesis.
- 4.2.5. BON BI exit dredging – The dredge estimate is much higher than expected. A UFR has been requested. The contract is not combined with the rock removal which is why it is more than in the past. Hausmann said the project has a crane removing the milfoil in the forebay. The milfoil has built up on the trash rack. If the exit isn't dredged than it will be in two years. The project is trying to come up with the money. Lorz asked about the fish unit dredging. Hausmann said the dredging was pretty thorough last year.
- 4.2.6. BON Ice and Trash Sluiceway broken gates – The estimated cost to replace the gates is \$750K and is a UFR. Conder asked if there is a high probability of operating the same way as last year. Hausmann said that most likely the gates will not be fixed and they will be operated the same way as last year. Conder doesn't think it is as effective at passing fish. Bettin said that the effectiveness is unknown. Conder asked why the gates aren't lowered. The gates need to be able to close in an emergency and the project can't intentionally create a hazard. Bettin asked if PIT project could help; BPA had suggested changing the fixed gates to auto. Conder said changing the gates to auto would be outside the scope of the PIT project. BON project uses the fixed gates to pass debris so they will have to be fixed at some point. Original only the first three gates were used for fish passage but the project found that using the two other gates helped with the flow. One of the fixed gates is at 68' and the other is at 70'. Conder said that both fixed gates are at 70' in the FPP and the PIT project report. Hausmann suggested lowering the upstream gates but Conder has concerns about the back flow at 10. Conder asked if they can find a cheap boat guard. Mackey asked about the cable going across the forebay but it is not a safety cable.
- 4.2.7. TDA Ice and Trash Sluiceway – This project is not funded. BON had sent the dimensions of the plates from the FGE study but they were way too short and extremely heavy.
- 4.2.8. TDA AWS – The project can't get parts until the second week of February, installation will occur the next week followed by the one day testing. The AWS should be back in service by the end of February. The FUB contract will be finishing ~ 03 February with a week or two of commissioning. This delay forces a dual outage of the east and north ladder. The AWS will not be run as previously asked for by FPOM because the test would be during the passage season. Lorz and Conder suggested running the AWS in March during the day. Bettin doesn't want the AWS run 24hrs straight and would prefer an off/on strategy. Rerecich said the PDT engineers need to discuss running the AWS for an extended time and turning it off and on frequently. Bellerud asked what the backup plan is if the AWS and FUB don't work out. The plan would be the north ladder additional spill.
- 4.2.9. TDA PUD sampling facility – The construction has been delayed by one year. Bettin asked if they will be requesting a forebay restriction. Martinson did not think so since they didn't need one this year. The delay is from the COE real estate office, NOAA concerns about criteria compliance and engineers responding to the concerns. Paul Schmidt gave a verbal okay but Wasco County PUD has nothing in writing yet.
- 4.2.10. JDA south turbine pump #3 – The project has received the bearing and will install this winter.
- 4.2.11. JDA north pumps – Maintenance thinks both 3 and 4 will be in service by next year.

4.3. Research/FFDRWG updates.

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

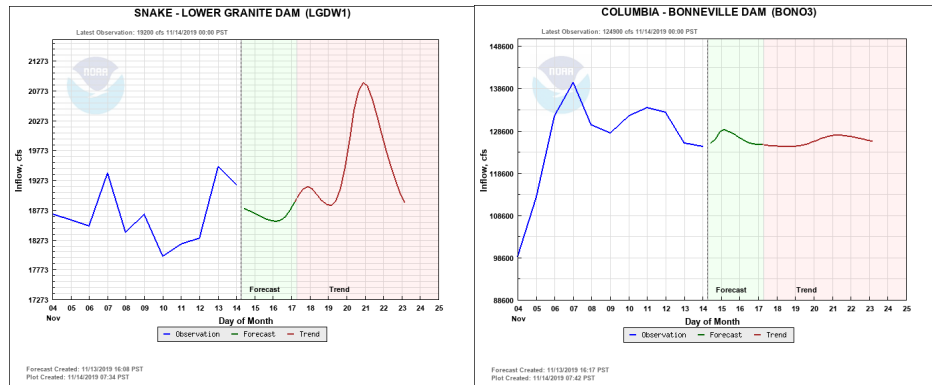
4.3.1.NWP FFDRWG – The next meeting is 02 December. B2 FGE will be discussed. The PDT will have an MOC on the construction and testing for the next FPOM. FPOM has concerns about operating in the midrange for next year. Conder is still willing to go above mid-range if there are not a lot of juveniles present. Last year, during the high flows the spring creek hatchery released a slew of fish. Bettin would like to be above the mid-range and go back down when the releases pass. Lorz asked if the flows are not available in May for the testing is there flexibility during the contract to test later. Rerecich said that the PDT has been discussing this issue. Conder asked about holding off on the release during the high flow. Rerecich pointed out that the porosity screens on the VBS have been modified so there is some biological benefit but it is unknown how much. JDA turbine rehab will be getting funding next week for phase 1.

4.3.2.NWW FFDRWG – The next meeting will be in January. The LWG spillway PIT antenna site visit will be in the main interest.

4.4. RCC update

Project	Previous day average (kcfs)	5 day forecast average (kcfs)	10 day forecast average (kcfs)	Projected Low/Peak (kcfs) and date.
LWG	20	19	19	19 (11/16) / 21 (11/20)
MCN	115	117	118	117 (11/18) / 123 (11/14)
BON	129	125	126	125 (11/18) / 129 (11/15)

Table 1. RCC flow forecast



4.5. BPA update – The only new item is the LGS outage that was discussed under 4.1.1.1.

4.6. Fish Count Program – Fish counts ended at the end of October for all locations except BON and LMN and LWG have video counts. FPC has had technical difficulties on their website. Bettin asked if the high chum count is accurate. Bjorn said there is other anecdotal evidence that the chum run is high this year like pictures from chum in the ladder and fisherman catching chum.

4.6.1.Lamprey Counts – this item will be removed next month

4.7. Pinniped update

4.7.1.BON – The average morning point counts are 47 SSL per day but during the day, the foraging numbers near the dam are much less. This high morning count followed by lower foraging count trend is typical for November. Rerecich asked about monitoring by Ives Island. WDFW said that they do not have the funding for pinniped monitoring but they note when they see pinnipeds during the chum surveys. Spring season for sea lion monitoring runs from Jan 02 – May 31. No new reports of sea lions above BON.

- 4.7.2. Willamette Falls** – ODFW has sent staff to spot check and no SSL or CSL have been observed. One anecdotal report of a sea lion but none during the spot checks. Conder asked how many CSL were removed. VanDyke will follow up but it was over 30. ODFW will trap and haul small SSL this year and continue CSL lethal take. Lorz asked if the SSL will be marked. VanDyke doesn't know.
- 4.8. Lamprey update** – The LPS were taken OOS on 31 October. The final numbers will be sent out in January. Cordie asked about the lamprey entrance flow plan for next year. **ACTION: Lorz will ask the lamprey task force about the entrance flow plan for next year.** Conder asked about the wetted wall operations for next year. Frick will report at AFEP.
- 4.9. Avian Update**
- 4.9.1. BON** – Many gulls feeding on shad.
- 4.9.2. TDA** – Lots of fall birds; TDA is using the laser. The laser is effective under low light conditions and when the birds are roosting.
- 4.9.3. JDA** – Lots of gulls; no missing lines on the grid.
- 4.9.4. MCN** – No change; lots of gulls and cormorants. MCN is using the laser but it is not effective on the outfall.
- 4.9.5. FFU** – Draft reports have been completed and will be circulated this month. The PIT tags from ESI were recovered and have been sent to Four Peaks for analysis.
- 5. Shad discussion (Setter)** – Thompson sent an email to Setter saying that NOAA feels that the responsibility of by-catch fish in the sampling facilities falls to the states. NOAA was okay with removing shad but didn't think it would solve anything. WDFW wrote into their scientific permit a few years ago that all sampling had to lethally remove Siberian Prawns. Setter thinks they should do the same effort for shad. Morrill is checking with WDFW internally to see what their position is. Setter talked to Holdren about a draft design for the diversion gate of the adult trap and the project is pursuing a non-routine funding. NOAA wants to review the design. Conder asked about other methods for removing/restricting shad. Setter would like to do some efforts for the IHR fish counts but they do not have money for monitoring. Without monitoring, it would not be possible to judge if the efforts were worthwhile. Morrill asked Setter to provide some written ideas on how they plan to remove/restrict shad for his internal WDFW conversations. LWG has more staff than IHR and could possibly provide some monitoring. **ACTION: Setter will send out an AMRIP brief of the proposed shad removal/restriction methods to FPOM.**
- 6. WDFW draft catch numbers from Dam Angling** – Winther/Morrill sent a table with harvest numbers. Lorz said that he feels that FPOM is at a standstill since some members think predators should not be thrown back into the river and some think they should. Morrill said that the WDFW commission is looking at the questions of by-catch removal in the dam angling program but he has not received any answer. Cordie had by-catch numbers from the dam angling efforts. More pikeminnow were caught at TDA than JDA last year. At JDA, 1 out of 4 fish caught in the dam angling program was a bass or walleye; the catch rate for by-catch was much lower at TDA. The pikeminnow were above 230cm (predator size). The harvest report from WDFW will be posted to the website.
- 7. Coordination/Notification forms (need concurrence/discussion)**
- 7.1. 19LGS14 MOC Nav Lock Leak Repairs** – No additional comments.
- 7.2. 19LMN11 MFR Temporary Change to Primary Bypass**
- 7.3. 19IHR18 MFR South fish ladder picketed lead debris problem** – Thompson asked if this is a common place. Setter said that it is common at MCN but not at IHR. Peery said that this MFR was an extreme case but IHR does have to keep their eye on the situation. Setter suggested an FPP change form on the maintenance that goes on for the picketed lead milfoil issue. **ACTION:**

Peery will follow up with Fone on any actions for next year to reduce the chance of a reoccurrence of this debris problem.

- 7.4. 19JDA17 MFR Gatewell 15A STS failure
- 7.5. 19JDA18 MFR Jack Chinook mort NFL
- 7.6. 19BON63 MFR PH2 LFS ROV inspection

8. **Fish Passage Plan:** The final 2019 FPP is available online at:

<http://pweb.crohms.org/tmt/documents/fpp/2019/> All 2019 FPP change forms and draft chapters/appendices are posted at: <http://pweb.crohms.org/tmt/documents/fpp/2019/changes/>

8.1. Pending Change Forms: None

8.2. New Change Forms: None. Lorz suggested barge loading for LGS operations this year.

8.3. Draft 2020 FPP Production Schedule:

8.3.1. Friday, 12/20/19: due date for FPP Change Forms and Appendix A submissions.

8.3.2. Friday, 12/27/19: all change forms and draft chapters/appendices will be posted online to allow at least 4 weeks for review;

8.3.3. Thursday, 1/23/20: annual FPOM meeting to finalize FPP change forms.

8.3.4. Friday, 2/14/20: drop dead due date for approved change forms and Appendix A submissions in order to be included in the print copy;

8.3.5. Sunday, 3/1/20: start date of 2020 FPP. Print copies will be shipped to Corps project and district staff by this date;

8.3.6. Thursday, 3/12/20: print copies for FPOM reps distributed at the meeting (unless otherwise arranged).

9. **Task Group Updates.**