

Subject: Final minutes for the 05 October 2023 FFDRWG/FPOM meeting. The meeting was held via WebEx, from 0900 until 1345.

In Attendance:

Last	First	Agency	Phone	Email
Andes	Carolina	BPA		
Ashline	Josh	BPA		jdashline@bpa.gov
Barnes	Chuck	NWW		
Baus	Doug	RCC		
Bellerud	Blane	NOAA		
Bethea	Dana	NOAA		
Bettin	Scott	BPA		
Brooks	Gabriel	NOAA		
Campbell	Noah	FPC		ncampbell@fpc.org
Carabbacan	Kenneth			
Cates	Becca	NWP		
Conder	Trevor	NOAA		trevor.conder@noaa.gov
Cooper	Erin	FPC		
Cordie	Bob	NWP-TDA		Robert.P.Cordie@usace.army.mil
Derugin	Andrew	NWP-BON		andrew.g.derugin@usace.army.mil
Ebel	Jonathan	IDFG	2088*51	jonathan.ebel@idfg.idaho.gov
Eppard	Brad	NWP-PME		
Fielding	Scott	NWP-PME		
Flemmer	Jeanette	NWP-BON		
Getz	John	NWW		
Griffith	Denise			
Grosvenor	Eric	NWP-JDA		Eric.Grosvenor@usace.army.mil
Hausmann	Ben	BPA		
Hesse	Jay	Nez Perce		jayh@nezperce.org
Holdren	Elizabeth	NWW-LWG		
Johnson	Bobby	NWW-MCN		
Jones	Adam	NWP		
Juhnke	Steven	NWW		Steven.d.juhnke@usace.army.mil
Kovalchuk	Erin	NWP		
Lampman	Ralph	YN		
Laughery	Ryan	NWW		
Lawonn	James	ODFW		matthew.j.lawonn@odfw.oregon.gov
Litzenberg	Aaron	NWP		

Lorz	Tom	CRITFC		
Lotspeich	Michael	NWP-JDA		michael.d.lotspeich@usace.army.mil
Mackey	Tammy	NWP		Tammy.m.mackey@usace.army.mil
Macdonald	Jake	NWP-PME		
Madson	Patricia	NWP-FFU		patricia.l.madson@usace.army.mil
Magel	Chris	NOAA		
McClain	Nathan	NWP		
McDowell	Michelle	USFWS		michelle_mcdowell@fws.gov
Miller	David	USACE		david.l.miller@usace.army.mil
Morrill	Charlie	WDFW	360*40	Charles.Morrill@dfw.wa.gov
Murdock	Keely			
Newberry	Duncan	NWP		
Peery	Chris	NWW		Christopher.A.Peery@usace.army.mil
Petersen	Christine	BPA		chpetersen@bpa.gov
Porter	Laurie	CRITFC		
Rapp	Shawn	EAS		srapp@easbio.com
Rerecich	Jon	NWP		
Rhynard	Chad			
Ricketts	Laura	NWP-JDA		
Roshani	Mehdi	NWP		
Schlenker	Stephen	NWP		
Van Dyke	Erick	ODFW		erick.s.vandyke@odfw.oregon.gov
Warf	Don	PSMFC		
Wertheimer	Bob	NWP-FFU		
Wilson-Fey	Max	NWP		
Wright	Lisa	NWD-RCC		Lisa.S.Wright@usace.army.mil

**FFDRWG ended at 11:18. FFDRWG notes will be sent out by Jake Macdonald.
FPOM started at 11:26**

1. Final actions or decisions.

- 1.1. FFDRWG and FPOM will not be combined again in the future. Peery thanked FFDRWG for allowing FPOM to tag on to their October meeting.
- 1.2. Approval of September FPOM meeting minutes. Morrill has one edit he will send.

2. FPOM Action Items

2.1. NWW

- 2.1.1. [Sep 23] Avian Lethal take. **ACTION:** Peery will update the lethal take spreadsheet. **STATUS:** Will be available at the November meeting. McDowell asked what will be included. Peery said just the NWW dam sites.
- 2.1.2. [Sep 23] MCN spillway crane and ERDC model. **ACTION:** Peery and Juhnke will work on a MCN spillway presentation. **STATUS:** in the works. Will be available by November FPOM.
- 2.1.3. [Sep 23] LWG tailwater monitors/LGS pool levels. Peery sent info to Conder and will share with FPOM after receiving his comments. This will be on the November FPOM agenda for further discussion. **ACTION:** Peery will send info to FPOM after receiving NOAA

comments. **STATUS:** Still some outstanding questions from NOAA. May need to average or use the median of the gauges. Hesse has concerns and would like to be included in the conversations. Peery said there are concerns regarding the impacts of changing tailwater elevations. The min. tailwater was set to help maintain fish passage criteria. Ebel asked if the data from the gauges has been collected, this is important since spill is what drives the differences in gauge readings. Conder agreed that the data could be useful if provided to everyone. He thought there were seven different elevation gauges. He would like to know where the gauges are located and where is the data stored, is it accessible. Peery agreed with sharing data and confirmed there are more gauges. The readings taken during fishway inspections are at the entrances. There are other gauges at the navlock.

2.1.3.1. Peery noted that data analysis isn't fitting into his schedule very well, but he is happy to share what he has. Conder asked if the data would be uploaded to the 2.0 query. Peery said that decision hasn't happened yet but it seems reasonable to make the data available to those using it for decision-making. Ebel said once the tedious task of transcribing the data to upload, how do we assess whether a violation of criteria has an impact on fish passage? There is the potential for lots of conversation and opposing opinions on some of the potential impacts. Morrill agreed that tailwater elevations may not have an impact if the gates/entrances are already on sill.

2.1.3.2. Van Dyke said this is related mostly to navigation and he isn't hearing that the Region is seeking information that helps clarify actions to address the navigation concerns. Peery said he understands the concern is about maintaining a minimum tailwater elevation for navigation. If a sensor is impacted by spill, and potentially giving an incorrect elevation, it could result in unnecessary changes to the LGS forebay to accommodate navigation. The additional concern is fishway criteria and how meeting criteria is impacted by pool elevations.

2.1.3.3. Ebel said as long as NWW trusts the navlock gauge, the data seems clear that spill impacts the tailwater gauges. The fishway criteria gauges do not show as clear a picture. Hesse agreed the navigation sill gauge has been validated. He would like more clarity on what the need is and when it will be provided.

2.2. NWP – no outstanding action items.

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

2.3.1. [Sep 23] NWP/NWW Critical Fish Passage O&M needs. Conder asked for a task group to rank items. **ACTION:** Mackey will schedule a TG meeting after the November meeting. **STATUS:** meeting will be held 30 minutes after the November FPOM meeting ends.

3. FPOM Updates

3.1. NWW Updates

3.1.1. Upcoming coordinated maintenance/construction/research activities.

3.1.1.1. 22 LWG 04 MOC T1T2 Gasket Repair. Nov 28-Jan 31. T1C first and then T1B. No changes.

3.1.1.2. 23 LGS Unit 5 Commissioning. Postponed to Fall/Winter 2023. No changes.

3.1.1.3. LGS Fishway Cooling Pump Repair/Replace. The pump in the shop has an estimated return in January. The pump at the project will be rehabbed/repared; currently working on contract solicitation with a return in the late winter. Pump three is anticipated to be on-site in July. Looking at improvements, redesigns, and improvements.

3.1.1.4. 23IHR07 MOC Unit 3 Biological Testing. 19 – 31 Oct. Delayed from late September to mid-October. The first control group had high mortality, likely due to high water temps. FPOM had concerns as to how this release could have occurred given the temps. Ebel brought up the ethical standards for handling animals, even if they are hatchery fish raised for this purpose. Van Dyke asked where the issue was

seen. Peery stressed that he is not the PM on this project and has limited information at this time.

- 3.1.1.5.23**LMN12 MFR spillgate 5 and 7 repair. Tried to use gear box from Bay 5 for Bay 8 but it needed repair. Ended up pulling Bay 7 to fix Bay 8. Need about \$12-\$15K for each gear box and 6 weeks lead time. Plan is to repair all eight gear boxes. Estimated full return is March – April. There is a chance there may still be a few bays OOS at the start of spill season. Peery showed a picture of the gears. There has been a significant amount of erosion of the gears in a 12-month period, so the gears were not passable this year. This topic generated a lot of conversation about the potential causes and effects of the wear of gears.
- 3.1.1.5.1**Ebel asked about the condition of gear boxes at the other projects. Peery said Bay 8 was checked during a PM last year. Each project likely has PMs to check the condition. Ebel asked if the Projects should check the gear boxes at their spillways now? Peery said these checks are built into the regular maintenance schedules. He also noted that there has been a continued squeeze on the maintenance periods and when that happens, something has to give. Morrill shared his realization that the Projects are not getting more staff to address aging infrastructure and keeping on top of inspections and maintenance is a significant challenge. Ebel said he understands there is a lack of resources to inspect and that is frustrating. He recognizes that it is also frustrating for the Corps. He acknowledged that this is a higher level issue.
- 3.1.2**.MCN crane status. A memo was sent on Friday. It outlines the EC restrictions on the use of the hoists for the MCN spillbays. It is similar for the cranes. All of the cranes are overloaded, some more than others. Some are overloaded over 125% of their capacity. These can only lift half gates. The other seven are restricted to critical emergency lifts twice a year. The default is using a split gate setting for spill – lifting the upper leaf of the gate and letting the water fall over the top of the lower leaf. There are fish concerns. Deflectors have been installed and the flow over the lower leaf will likely hit the deflector head on rather than flow over. There is also a concern about a backroll over the jet. NWW has been investigating options for meeting spill requirements with these restrictions. Bellerud asked if survival studies would be conducted while spilling in this configuration. He recommends a live fish study but if not, then at least a sensor fish study. NWW is looking at what is possible/fundable by next spring. Peery said the balloon tag or sensor fish study seem like the easiest to initiate. Bellerud suggested a two-phase study. 1. Sensor fish study that could be done as early as this fall. 2. Follow up with live fish in the spring.
- 3.1.2.1**.Laughrey discussed his recommendations and ideas. He showed a powerpoint presentation. There are challenges with each option and more discussion will be needed. Ebel asked about a fixed spill volume. Conder asked about a short leaf that could stack on the lower leaf to create a TSW-like configuration. Hesse asked if raising or lowering the FB changes the water trajectory. Laughery said it should influence it but he didn't have information on the significance and if it could move the jet off the deflector. Hesse asked if TSW operations would be impacted. Laughery said at this time they do not think so. Morrill asked about putting a plastic cushion on the ogee/deflector. Laughery said that was originally looked at when TSWs were created. The potential angle of impact is less than that of the TSWs so it may not be needed. Regardless of the option chosen, there are tradeoffs. None of the adjustments to spill will be quick and spill patterns may not meet FPP criteria. Peery said there isn't much that can be done to speed up the process for repair but he believes this will rise in urgency with those higher than him. So many questions and not a lot of answers at this time. More to come.

- 3.1.3.MCN ERDC Model.** Did get some funding for a scoping effort in FY24. Laughery is leading the effort for modeling and providing the results to ERDC. ERDC has two locations in mind. Lorz asked if there were other facilities that might be able to do this work. Juhnke said there were no other interested parties. Part of the issue is the space needed for a model of this size. Lorz suggested Laughery is harboring dreams of Texas by going bigger but would it be possible to look at smaller scales to increase the options for other locations. Juhnke said NWW looked at some of those aspects but funding has already been slated for ERDC and they have started the processes of placing a new model.
- 3.1.4.Fish Transport program.** Switched to smaller trucks. Continuing through 1 November. LWG last truck is 1 November. Ebel asked if there are discussions about continuing since there are single digits per day. Hesse said the fall migration is highly dynamic and a bit of rainfall will result in increased fish movement.

3.2.NWP Updates

- 3.2.1.Upcoming coordinated maintenance/construction/research activities.**
- 3.2.1.1.19BON001 MOC Navigation Lock 1 Bridge Replacement.** No FPP conflict. Work may not begin for many years.
 - 3.2.1.2.23BON002 ITS end gate replacement.** Installation is still expected for October. On track. Bulkhead placement has been started. The end date is installed and the limits are being set. Commissioning may occur next week or the following week.
 - 3.2.1.3.23BON003 T11 outage.** Still on track. Completed. RTS on 21 Sept.
 - 3.2.1.4.23BON092 MOC Lamprey work at B-Branch.**
 - 3.2.1.5.BON FGE – U12** expected RTS by 9 November.
 - 3.2.1.6.BON PH2 Tailrace crane replacement.** Work will occur during winter 25/26.
 - 3.2.1.7.19TDA04 MOC – East side powerhouse crane rails.** No new update. Looking at resuming work this winter.
 - 3.2.1.8.18JDA02 MOC Trash rack replacement.** Next update – fall 2023. PDT met with DCB. Looking at replacement rather than rehab. Seeking internal alignment. No new updates expected for awhile.
 - 3.2.1.9.20JDA04 MOC STS crane replacement.** In the fabrication portion of the contract. Construction will start next June, commissioning to occur at the end of summer 2024. No new updates.
 - 3.2.1.10.22JDA20 MFR JDA-S Temps.** Incorporating 2023 data into the memo.
 - 3.2.1.11.23JDA03-05 JDA -S fish turbine pumps 1 and 2** operating at reduced output 55 rpms, 3 OOS for gearbox repair. No change to the operation. Pump 3 gear box repair ran into challenges. The shaft fused but JDA had a spare so the contractor will repair once shipped to them later this month.
- 3.2.2.JDA north pump #4.** Budget request has been submitted. No funding received yet. Looking at submitting an FY26 budget package.

3.3.NWS updates. No NWS attendees.

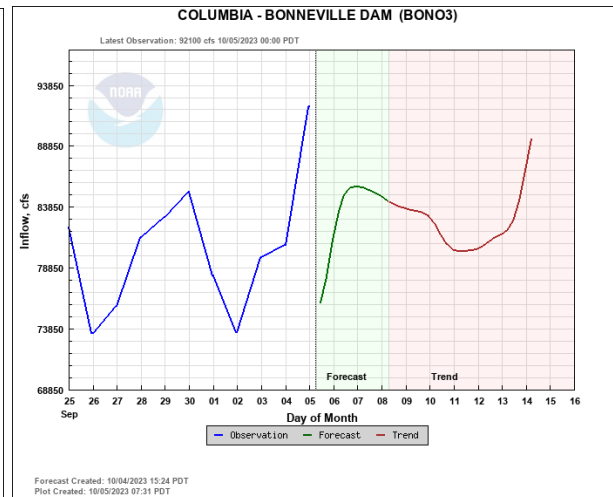
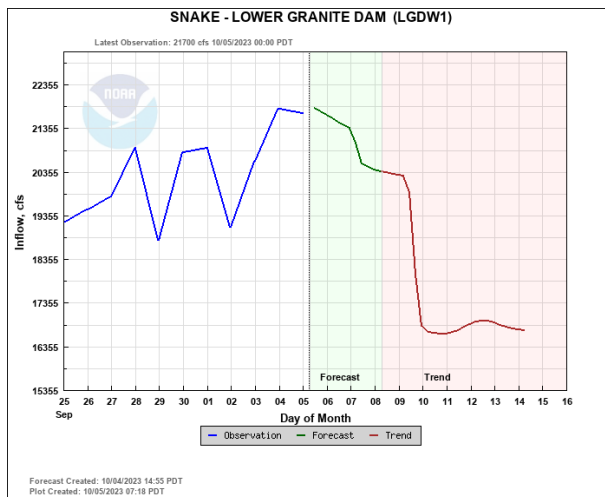
3.4.Research/FFDRWG

- 3.4.1.SRWG.** Macdonald reported that the preliminary proposal review occurred in late September. Two proposals – seasonal affects of transport and juvenile lamprey RME – are being worked. Other proposals that were chosen for funding are in process. Ebel asked if anyone has reached out to NOAA regarding their long-term study. Barnes said he has been in contact with them and should see a proposal soon.

3.5.RCC update.

Table 1. Previous Day Average Outflow and NWRFC Inflow Forecast.

Project	Previous Day (10/4) Avg. Outflow (kcfs)	5 Day (10/9) Forecasted Inflow (kcfs)	10 Day (10/14) Forecasted Inflow (kcfs)	Forecasted Inflow Low/High (kcfs)
LWG	23	20	17	17 (10/10) / 22 (10/05)
MCN	79	77	84	72 (10/05) / 84 (10/14)
BON	90	84	89	76 (10/05) / 89 (10/14)



Project Data: <https://pweb.crohms.org/report/projdata.htm> NWRFC Inflow Forecasts: <https://www.nwrfc.noaa.gov/rfc/>

3.6. Fish Count Program (Peery, Wertheimer).

3.6.1. Morrill asked if walleye are counted during condition monitoring. Peery said they are noting walleye. Morrill would like walleye over the separator to be counted and condition metrics collected. Peery said this is an issue for the juvenile contracts and he will pass along the information. Morrill said anecdotal info indicates there are larger walleye passing over the separator bars. Ebel said IDFG staff are seeing more walleye at the LWG fishway trap this year.

3.6.2. Close to getting the solicitation on the street. There will be a 30 day window for vendors to submit their proposals.

3.7. BPA Update. Schedule available on the FPOM website. LMN has a total powerhouse outage to allow for T2 connection. BON has switched to PH1 priority for work. Full powerhouse outage for LGS scheduled.

3.8. Pinniped update.

3.8.1. BON. 2 Stellers seen. Morrill reported that WDFW is done with trapping.

3.8.2. Willamette Falls. van Dyke said surveys are conducted around Willamette Falls this time of year. Trapping may start soon. He will follow up after receiving any additional information.

3.9. Lamprey update

3.9.1. BON. Low numbers, everything is running smoothly. Madson sent a count estimate for LPS passage ~ 166,547 uncorrected. LPSs typically shut down by November.

3.9.2. TDA. Anticipate LPS installation this winter and some other minor mods.

- 3.9.3.JDA. Wrapped up JDA-N LPS. Working on JDA-S weir caps.
 - 3.9.3.1.JDA-N elevator. Working on the motor rewind. Should be back by the start of lamprey season.
- 3.9.4.NWW. Juveniles are hard to find to tag for the study.
- 3.9.5.LAWG: Next quarterly meeting will be Nov. 16-17.

3.10. Avian updates (11:26 – 11:36).

- 3.10.1.NWW. Few birds at most projects. Those that are there are associated with juvenile shad numbers. LMN has five wires down. USDA will replace this IWW.
- 3.10.2.NWP Avian EA/NEPA (Environmental Branch). No update for October. Will have a better update for November.
- 3.10.3.JDA. 20/125 lines down. Meeting with USDA to address the powerhouse lines (16 of the 20 that are down). Expect to have them in place by next spill season. McDowell asked if all of the lines will be replaced by the start of next season. Grosvenor said that is the plan. JDA is attempting to include line replacement in the USDA Economy Act Order. If that doesn't work, there is a contract ready to go, though it will be more expensive. Macdonald asked if that would reduce the hazing funds. Grosvenor said no.
 - 3.10.3.1.~200 gulls on wing walls and navlock. 20 DCCOs on rocks below spillway. 15 AWP on the islands. All numbers are within normal.
 - 3.10.3.2. Will scan Preacher's Island this month. Any tags will be uploaded to PITAGIS.
- 3.10.4.TDA. 50 DCCO. Tory lines are still installed and working, for the most part. One avian line down at the spillway. Will not be replaced until next winter.
 - 3.10.4.1. Miller Rocks. No update.
- 3.10.5.BON. Normal bird numbers. Most are gulls at the JMF outfall and PH2 tailrace.
- 3.10.6. Estuary. Reports are available at [Documents / FPOM Avian Hazing Task Group \(crohms.org\)](#)
 - 3.10.6.1. ESI. PIT recovery occurring. Lawonn asked if the tags will be analyzed. Wertheimer said that is beyond FFU. FFU will upload the tags but others will need to analyze. Macdonald noted that SRWG needs to discuss and figure out a path forward. Lawonn said even with the decreasing numbers on ESI, it may still have the highest predation.
 - 3.10.6.2. Rice Island. Season has concluded.
 - 3.10.6.3. Miller Sands. Season has concluded.
 - 3.10.6.4. Pillar Islands. Season has concluded.
 - 3.10.6.5. Astoria Megler Bridge. RTR will collect PIT tags from the bridge.

4. FPOM Coordination/Notification forms (need concurrence/discussion)

- 4.1. NWW
 - 4.1.1. 23LMN11 MFR Spillgate 8 RSW Repair.
 - 4.1.2. 23LMN12 MFR Spillgate 5 and 7 Repairs.
 - 4.1.3. 23LMN13 MFR Overshoot spill makeup.
 - 4.1.4. 23LGS12 MOC Unit 1 Brush Rigging Cleaning.
- 4.2. NWP
 - 4.2.1. 23BON095 MFR AFF Valve 15 salmonid mort.

5. Fish Passage Plan

- 5.1. The Final 2023 FPP went into effect on March 1 and is posted at: pweb.crohms.org/tmt/documents/fpp/2023/
- 5.2. Change Forms: no new or pending change forms.
- 5.3. Invasive species removal language. No change form yet, but it will include the removal of invasive species during dewatering activities.

6. FPOM Task Group Updates.

6.1. Schedule falconry discussion (Peery/Morrill). This group will look at what was learned through the use of falconry this year and last year and how it might be beneficial to MCN in 2024.

Meeting will be scheduled after TDA provides an update on their falconry results. **Task Group will meet prior to 5 October.**

6.1.1. A subgroup of Cordie, Day, Johnson, Morrill, and Peery met.

6.1.2. Still interested in testing at MCN. Are there funds outside O&M to test or evaluate the efficacy at MCN. There wasn't enough of a positive result from TDA that would allow a switch from hazing to falconry. FPOM sees this as a tool in the toolbox, not a silver bullet. Cordie noted there is a significant challenge of getting the falcons close enough to have an impact, more so at MCN than at TDA but even TDA has this challenge. Cordie noted he has some lessons learned in contract writing that he is happy to share with MCN. To get into the budget, NWW is looking at FY25, but will try to get something in FY24.

6.2. MCN TSW operation in the summer (Peery). Look at biological and model data to determine an appropriate operation of the TSWs in the summer. Waiting on data before scheduling a meeting. Still pending.

6.3. Budget and Infrastructure Updates. Task Group will meet 30 minutes after the end of the November FPOM.