

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 08 June 2017 FPOM meeting.

The meeting was held in the Columbia conference room at the CRITFC Offices, Portland, OR. In attendance:

Last	First	Agency	Email
Baus	Doug	NWD-RCC	Douglas.m.Baus@usace.army.mil
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Zyndol	Miro	NWP	Miro.A.Zyndol@usace.army.mil

On the phone: Hesse, Johnson, Kiefer, Lundell, Meyer, Morrill, Swank, VanDyke, and Wright

Documents may be found at: <http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/>

1. Decisions made at this meeting.
 - 1.1. May minutes were approved.
 - 1.2. Forebay Temp Profiles - FPOM recommends August & September for the first year and July & August for the second year.
 - 1.3. Next 5-year adult fish counting contract – FPOM recommends automating the counts. All comments on the contract are due before the July FPOM meeting.
 - 1.4. FPOM Charter review – All comments are due by the July meeting.

- 1.5.** 17BON11 MOC T11 Outage for B2 Roof Repair - FPOM would prefer the timeframe to be post spill in September (first choice) or July 31-August 14 (second choice).
 - 1.6.** 17TDA17 MOC Rail removal west PH – FPOM concurred with this action.
 - 1.7.** MCN - FPOM suggests leaving the TSW in until 26 June for this year only to aid in passing debris.
 - 1.8.** 17MCN008 – Table MCN-10 Spill Patterns during TSW Removal at Higher Spill – Approved.
 - 1.9.** BON minimum spill to maintain good B2CC egress – In conjunction with the preplanned ERDC trips this July, Ebner and Fredricks have arranged to review this topic.
 - 2.** The following documents are provided or discussed at this meeting. All documents can be found at: <http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/>
 - 2.1.** Agenda, Fish Passage O&M coordination team
 - 2.2.** Cooling water strainer lamprey counts, NWW
 - 2.3.** FPOM Outage Schedule (NWW)
 - 2.4.** May-July 2017 Transmission Outages (BPA)
 - 2.5.** FPOM Charter (NWW/NWP)
 - 2.6.** SOW_Lower Columbia River Forebay Templines Study June 2017 (NWP Water Quality)
 - 2.7.** LMN forebay boat barrier pictures (NWW)
 - 2.8.** Coordination Forms (MOC/MFR)(NWW/NWP)
 - 2.9.** FPP Change Forms (NWW/NWP)
 - 3.** Action Items
 - 3.1.** NWW
 - 3.1.1.** [Jun 17] Court ordered early start-up of by-pass facilities - ACTION: Next month Setter will update on NWW's ability to perform this request for 2018.
 - 3.1.2.** [Jun 17] Court ordered early start-up of by-pass facilities - ACTION: Lorz will take the issue to FPAC and do a small write-up that will then be shared to the FPOM group.
 - 3.1.3.** [May 17] 17IHR02 Powerhouse flooding at high tailwater - ACTION: Peery will talk to Ken Fone to see if some of the AWS pumps can be turned off instead of all of them.
Status: pending to July meeting.
 - 3.1.4.** [May 17] 17LWG008 - U1, U2 Priority - ACTION: Setter will follow up on the status of unit 2 returning to Kaplan for the next FPOM. *Status: It is estimated to take 2 years to return to Kaplan. The unit is currently operating in the fixed blade position. It would take a week or two to change the angle of the blade.*
 - 3.2.** NWP
 - 3.2.1.** [Jun 17] BON Debris loading on the fish units - ACTION: Hausmann will write an MOC. FPOM recommends raising all gates to 8' rather than shut an entrance to maintain criteria and doing the work in the afternoon.
 - 3.2.2.** [Jun 17] BON adults fish in tail log slots- ACTION: Hausmann will coordinate with BPA and the operators so that if a unit will be turned off then they can choose one that has fish in it.
 - 3.2.3.** [Jun 17] 17BON11 MOC T11 Outage for B2 Roof Repair - ACTION: Hausmann will ask about shifting the outage until September and provide an MOC.
 - 3.2.4.** [Jun 17] B2FGE - ACTION: Rerecich will follow up to see if the B2CC outage could overlap with the complete PH2 outage.
 - 3.2.5.** [Jun17] Court ordered early start-up of by-pass facilities - ACTION: JDA will provide cost estimates and any issues that may affect their ability to get screens in by March 1 for the next FPOM.
 - 3.2.6.** [May 17] Avian Update – BON - ACTION: Hausmann will talk to USDA about hazing protocols. *Status: Hausmann discussed this issue with the USDA supervisor. Their policy*

is haze either species. The particular employee may be new and not trained in all aspects of the job.

3.2.7. [May 17] 17BON10 MFR MU3 Juvenile salmonid morts - ACTION: Hausmann will add the preventative measure to the unit dewatering plans. *Status: Completed but need to send to Kovalchuk.*

3.2.8. [May 17] TDA picketed leads - ACTION: Cordie will review the language in the FPP and decide if a change form is needed. *Status: Completed, no change form is required.*

3.2.9. [May 17] 17JDA06 MOC JDA-Spill bay 20_Restriction - ACTION: Cordie will check on the pendants used at TDA to see if they could be used at JDA. *Status: Cordie found the pendants and sent the information to JDA but it is unclear if they would work. ACTION: Cordie and Zyndol will follow up on if they are in useable condition and if they could even be used in the spill gate slots.*

3.2.10. [May 17] 17JDA07 MFR MU12 Juvenile salmonid morts - ACTION: Zyndol will update the MFR with more details and timeline. *Status: Completed.*

3.2.11. [May 17] 17JDA07 MFR MU12 Juvenile salmonid morts - ACTION: Zyndol will make changes to the dewatering procedure based on the discussion. *Status: Completed. Zyndol will send to Kovalchuk for posting and dissemination to the group.*

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

3.3.1. [May 17] MCN TSW removal - ACTION: RCC will send a revised teletype. *Status: Completed.*

3.3.2. [Apr 17] TDA BRZ - ACTION: TDA will send out a Memo for the Public and post a copy of the map at the boat ramp. *Status: The change to the BRZ has not occurred so no memo was sent. The project tried to install a buoy but it floated away. They will pursue help from the Coast Guard. Cordie will send a copy of the memo to Lorz when it is actually completed.*

3.3.3. [Mar 17] BON B2 Orifices ACTION: Hausmann will write up what work will get done and which funding sources will be tapped in an MFR. *Status: Discussed under 5.13.*

4. Updates

4.1. NWW

4.1.1. Upcoming maintenance/construction/research activities.

4.1.1.1. FPOM outages schedule –

4.1.1.1.1. DWR unit 3 has been delayed to May 2018.

4.1.1.1.2. LWG primary by-pass is starting early and has been updated on the schedule.

4.1.1.1.3. IHR research trolley pipes – Coordination is no longer required because the work will be done during the In-Water Work period.

4.1.1.1.4. LMN forebay boat barrier [Pictures] Boat barriers were put in place to prevent boats from going towards the RSWs but now they are catching too much debris. The project is trying to remove debris from there.

4.1.2. Court ordered early start-up of by-pass facilities [Van Dyke, Hesse, Lorz]:

4.1.2.1. Deployment timing of ESBS at MCN – The ESBS screens are usually installed about two weeks after the by-pass facility is watered up to prevent juvenile lamprey impingement on the screens. Hesse said that he recommends retaining the current timing of screen installation but starting the by-pass a month early. ODFW agreed.

4.1.2.2. Primary bypass fundamentals – Setter said that all facilities except Lower Granite could potentially be watered up early for PIT detection but they would not be staffed for sampling. Hesse said that the request is just for PIT TAG detections so no Smolt Monitoring would be required but that facility monitoring would. Staff would need to look for debris and equipment issues. Bio-sampling would be beneficial but not essential. Setter is still trying to figure out the feasibility on this request for this year.

It has not been budgeted for and the appropriate staffing/maintenance needs are not yet known. **ACTION: Next month Setter will update on NWW's ability to perform this request for 2018.** The idea behind this request to see if run time has changed and therefore spill timing might need to be changed.

4.1.2.3. Revolving maintenance schedule over the years to allow relief from lost maintenance period by potentially rotating one project a year out of early startup providing a broader maintenance interval - Each dam might not be able to accomplish the early maintenance schedule every year. **ACTION: JDA will provide cost estimates and any issues that may affect their ability to get screens in by March 1 for the next FPOM.** ODFW and Nez Perce would like all projects but are understand that maintenance issues may prevent some from participating. Hesse stressed that LWG is of high importance this year. NWW is hoping that LWG will be available. The construction work is expected to be finished by the end of January and then the work is turned over for commissioning in February. At MCN, the project is retro fitting screen cleaners and working on several other maintenance issues. This work needs to be done before the facility is watered up even if the screens are not in. Keifer suggested operating one project in the upper Snake and one in the lower Snake. One of the upper and lower JBS facilities operating early each year would show if fish are moving early plus it would allow projects to plan their maintenance. BPA and Conder supported IDFW's suggestion and added that it should be every other project for a better picture. Twice a week sampling is also recommended since there are high debris flows that time of year. Fredricks said if the screens aren't deployed than less debris would enter the system and less monitoring could be acceptable. Nez Perce and ODFW agreed to continue the discussion in the FPOM meeting platform and a sub group will be created when necessary. **ACTION: Lorz will take the issue to FPAC and do a small write-up that will then be shared to the FPOM group.**

4.2. NWP

4.2.1. Upcoming maintenance/construction/research activities.

- 4.2.1.1.** BON Avian line installation (17BON06) – The old lines have been removed. Spillway and B2CC lines are planned for September; PH1 & PH2 lines could go up in August depending on the flows.
- 4.2.1.2.** BON subsidence interim repairs (17BON09) – The work is scheduled for the last two weeks in Feb and the first two weeks in March.
- 4.2.1.3.** BON orifice rehab (17BON12) – The project is still waiting for money due to the Continuing Resolution. Medina is supporting the additional funds in the new cost estimate.
- 4.2.1.4.** BON B-branch survey – This will take place right after spill and will be coordinated.
- 4.2.1.5.** BON adults fish in tail log slots – There are adult fish trapped in the tail log slots of several units. The project can't get them out but they could swim out. Last year, the project had the same problem in a unit that was not running. The project changed protocol to have discharge going into an operating unit to prevent attraction flow to avoid this but it didn't work. If the unit was shut off, it would help the fish escape. **ACTION: Hausmann will coordinate with BPA and the operators so that if a unit will be turned off then they can choose one that has fish in it.**
- 4.2.1.6.** BON Debris loading on the fish units - The project has been floating the debris two times a day. BON would like to pull the trash racks and manually clean them because debris is crammed in small spaces. It takes an entire day to manually clean. During manual cleaning, one fish unit is turned off at a time. The ladder can keep minimal criteria with one fish unit. FPOM suggests doing it before shad season. The north upstream entrance could be closed to help criteria. There is a procedure laid out

in the FPP for loss of a fish unit but it is very involved for a short term occurrence. Lorz asked if the four plates could be completed over two days from noon to 5.

ACTION: Hausmann will write an MOC. FPOM recommends raising all gates to 8' rather than shut an entrance to maintain criteria and doing the work in the afternoon.

4.2.1.7. TDA Rail Removal (17TDA17) – The forebay deck is almost finished. The asphalt section on the tail race is next. Unit 22 was not cut but due to the proximity to the east ladder; it will be done in the next IWW.

4.2.2. Forebay Temp profiles (Lundell) – [Handout Phase 1 SOW] Lundell reviewed the feedback she received: stay outside of 100' of the fish ladder exit, stay clear of fish migration path at the exit and the trolley lines were not necessarily good places because of water exchange issues. The project is planned for late July or August but if there are still high flows and lower temps, it may be postponed until next year. Once the Hobos are in place it won't cost any more so the monitoring can last for four weeks. There will be one trolley pipe and three floating platforms for monitoring sites. **FPOM recommends August & September for the first year and July & August for the second year.** The equipment isn't available in July this year but starting this year will mean the team will at least have a run through of installation and procedures. There will be 6 sensors on each the strings with depths from 1' to 60'. The data will be manually downloaded. It will not be posted to the FPC website because it is a study. Lundell will write a report on the results.

4.2.3. Project temp – TDA and JDA have their hobos in the appropriate locations. BON doesn't have a way of installing the equipment in the new locations without dewatering but they are sending the data they have.

4.2.4. JDA trash rack crane – The crane returned to service on 1 June. The first problem was with the motor but then the clutch had problems. It has been fixed now. The new crane is slated for FY19.

4.3. Research/FFDRWG updates. www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/Research.html

4.3.1. NWP FFDRWG – B2FGE is currently collecting data. Unit outages have been requested for removing equipment. MU15 will be OOS from 24-27 July to remove the equipment on the trash rack and complete the plate inspection. MU18 on 31 July; MU17 on 1 August; MU16 on 2 August. MU11-14 will overlap with the outage scheduled for the roof repair. For the barge, the B2CC will need to be closed for half a day on August 7th. There will be a complete PH2 outage during the roof repair. **ACTION: Rerecich will follow up to see if the B2CC outage could overlap with the complete PH2 outage.**

4.3.2. NWW FFDRWG – Next meeting is 25 August. Setter reported two bids for a temporary cooling system at LGS have not worked out. The permanent cooling system is on track and has been awarded. With DWK MU3 out of service, Conder asked if a waiver was applied for providing 10K of augmenting flow. The waiver request has to be applied for by Wednesday, June 14 and then it would be in place by the beginning of July. The Snake River still has a lot of water and debris coming down.

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	154	162	127	Peak 6/10 174
MCN	421	440	400	Peak 6/14 464
BON	436	458	418	Peak 6/14 480

Table 1. RCC flow forecast

4.5. BPA update – There will be a trip check at DWR that will be fifteen minutes or less and adjoining roof repair that Bettin is trying to coordinate. All other outages should have no impact to fish.

4.6. Fish Count Program – The counts for LGS are requested for early Monday morning. Staffing is the issue on the weekends because the folder has to be copied over manually before the FPC website can automatically pull it. The posting occurs at 8:45. If the counts remain high, then the TMT meeting will be canceled by 9:30 am.

4.7. Next 5-year adult fish counting contract – FPOM recommends automating the counts. The COE would like the contract to include all software and hardware but it may require a second contract. Fredricks brought up timing and video monitoring. The COE is challenged to get all the work done but is willing to try to get more data by extending the counts via video monitoring but not all winter. FPOM feedback is necessary on if there is a better way to do the rotations, i.e. are some sites more important than others or where there is not many years of November counts. Contracting is very slow. Peery needs comments back as soon as possible to include them in the next contract. **Comments are due before the next FPOM meeting and they will be discussed at FPOM.** FFU would still do quality control on the data.

4.8. Pinniped update – The final bi-weekly report went out 8 June. In the tailrace, all but one California sea lion has left and one in the forebay. This year, there were more Stellar SL than California SL; as many as 80 Stellar SL were observed in a single day last week. Twenty four California SLs were removed. FFU is monitoring abundance as they can. Fredricks said that there is no monitoring data for late summer and would like data with counts and behaviors even predation rates if possible.

4.9. Lamprey update – The lamprey run is late but has started. All BON LPS systems are operating. The pump for the WA SH flume structure burnt out and the project is waiting on parts to fix this but it should be any day. The refuge boxes are being used. The two new entrance ramps have been used by ~300 PL but the old system is still passing more fish. The monitoring is of the orifice cuts not the refuge boxes and Zorich noted the high turbidity causing visibility issues.

4.10. Avian update

4.10.1. BON (Hausmann) – No update.

4.10.2. TDA (Cordie) – Gull numbers have dropped off. The birds have moved from the islands to the south end of the spill way.

4.10.3. JDA (Zyndol) – Low gull numbers have been reported. A few more lines have broken but most of the grid is still in place. The PDT is working on the new installation.

4.10.4. MCN – There are many pelicans at the mouth of the Umatilla and have been observed eating juveniles and Jacks. MCN hasn't seen the high numbers of pelicans at the outfall this year. High flows may be pushing the pelicans out to the Umatilla. Gull numbers are low and Caspian Terns are picking up.

5. **FPOM Charter Review** – The Charter document needs to be reviewed for next month. **Comments are due by the next meeting.**
6. **Coordination/Notification forms (need concurrence/discussion)**
 - 6.1. **17LWG06 MFR Emergency Debris Spill**
 - 6.2. **17LWG07 MFR RSW Emergency Temporary Closure for Derelict Dock Removal**
 - 6.3. **17LWG08 MFR Emergency Spill and Orifice plugging**
 - 6.4. **16LWG010 MOC JBS Upgrade Schedule Update – Outfall Installation Schedule –**
Comments have been received already and the project starts in August.
 - 6.5. **17LGS09 MFR Primary Bypass**
 - 6.6. **17LMN05 MFR Separator Exit Debris Blockage** – More debris has been coming down and the boat barrier is being monitored. A design change is not currently scheduled. A new design is a FFDRWG issue and will be followed up at SCT. Some projects are looking into funneling debris away from the powerhouse.
 - 6.7. **17IHR06 MFR for an emergency debris spill** – Another emergency debris spill occurred on 7 June. An MFR will be sent out.
 - 6.8. **17MCN 07 MFR emergency debris spill** – Debris has been building up on spillway right now. After a clogging on trash rack in 2011, the project now pushes debris down rather than removing the trash rack for cleaning.
 - 6.9. **17MCN06 MOC Fish Pump #2 Testing** – The fish pump was spinning this morning. The testing is on hold. The oil leak was actually a water leak. This fish pump has parts scavenged from the other fish pumps. The testing schedule is constantly changing. The project will update FPOM next week. Fredricks wants the MFR/MOC in Word format using Track changes to see easily see the changes made. The PDF will indicate the final version.
 - 6.10. **17JDA08 MFR juvenile and adult chinook mortalities spillbay 20** – JDA implemented the three stop limit on spill bay 20. The project plans to install a net to keep fish out as an additional measure. Fredricks suggests a change in the spill pattern but it is not clear if the three stop limit is the best solution. Other stops should be tested as well. Zyndol will submit a proposal about the net. The ERDC model is not available until January. A change in spill pattern may require relocation of the TDG gauge.
 - 6.11. **17TDA17 MOC Rail removal west PH – FPOM concurred with this action.**
 - 6.12. **17BON11 MOC T11 Outage for B2 Roof Repair** – Originally the project had planned for two one week outages with a month cure time in the middle but now they have switched materials and need the two weeks together. The coordinated dates have changed to 6 -19 August.
ACTION: Hausmann will ask about shifting the outage until September. The issue that Fredricks is most concerned about is the analysis not recognizing the risks of fall back. When fish are moved to BI from WA SH, fall back increases. **FPOM would prefer the timeframe to be post spill in September (first choice) or July 31-August 14 (second choice).** Hausmann will provide an updated MOC.
 - 6.13. **17BON12 MFR B2 Orifices (renamed from DSM rehab)** – The project is waiting on money.
 - 6.14. **17BON13 MFR Gill Net at PH1** – Lorz requested that in the future the project save the net for tribal law enforcement.
 - 6.15. **17BON14 MFR Lamprey Mort CI LPS** – Swank made a comment about the high mortality in an LPS with the least amount of passage. Zorich said it hard to compare sites. This LPS is the largest passage structure and so fish are in this system longer than others.
 - 6.16. **17BON15 MFR AFF PL mort**
 - 6.17. **17DWR03 MFR** – After the model validation testing, monitoring occurred without any instances. The efficiency testing is occurring this week and next. The results will be forthcoming. NWW is still looking for comments and is incorporating the monitoring results into these MFRs. See FPP change form 17DWR001 for additional information.

7. **Fish Passage Plan:** The Current 2017 FPP and Change Forms are online at <http://www.nwd-wc.usace.army.mil/tmt/documents/fpp/2017/>.

6.1 Pending FPP Change Forms.

7.1.1.17JDA005 - Turbine Dewatering Gatewell Dipping. Revised 5/18 per FPOM feedback.
7.1.2.17LWG008 – U1, U2 Priority. Revised 5/18 per FPOM feedback. Will be discussed at July FPOM after U2 index testing is completed.

7.2. New FPP Change Forms

7.2.1.17OVE003 – FPOM Coordination. (Mackey)

7.2.2.17MCN008 – Table MCN-10 Spill Patterns during TSW Removal at Higher Spill. (Setter)

– Approved. The TSW is removed after the yearlings pass due to lower survival and efficiency for sub yearlings. The TSW also passes a lot of debris. Kiefer suggested using a flow and temperature threshold instead of a date. **FPOM suggests leaving the TSW in until 26 June for this year only to aid in passing debris.** The TSW removal process takes three days, assuming no wind. Setter will try to coordinate this action and let everyone know if it can't be done.

7.2.3.17DWR001 – New Project Section. (Setter) – The idea behind this change form is provide dates of when fish are present and when fish aren't present in order for maintenance to plan work. The dates are in the draft form. General run timing should be included too. Conder would like to talk with IDFG and Nez Perce before sending in comments. The language in the form should read that risk is extremely minimal not no risk. Setter clarified that if the project is using the air depress system then there will not be any coordination but any “speed no load” situation will always be coordinated. Maintenance verified that using the air depression system didn't cause any harm to the units. A biologist is required to monitor the tailrace while using the air depression system and to spot check to make sure there aren't fish present.

8. **Task Group Updates.**

8.1. BON minimum spill to maintain good B2CC egress. (Fredricks and Lorz). Team: Bettin, Ebner, Hausmann, Kovalchuk, Rerecich, Wright. - Fredricks arranged with Ebner to look at the BON model in July at the ERDC trip.

Next meeting will be 13 July 2017 at Bonneville Dam.