

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 09 April 2020 FPOM meeting.

The meeting was held via conference call. In attendance:

Last	First	Agency	Email
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1. Final decisions or recommendations made at this meeting.

- 1.1. February and March meeting minutes were approved.
- 1.2. 20AppJ002_JDA-Index-Sampling – Approved.

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. FPOM outages schedule (NWW)
- 2.3. Composite Cooling Water Strainers lamprey Counts (NWW)
- 2.4. 2020 NWW Early Start Presentation (NWW)
- 2.5. BON stilling basin photos (NWP)
- 2.6. IHR weir photos (NWW)
- 2.7. Coordination Forms (MOC/MFR)(NWW/NWP)
- 2.8. FPP Change Forms (NWW/NWP)

3. Action Items

3.1. NWW

- 3.1.1. **[February 20] LGS special operation unit 1- ACTION:** ACTION: Lorz will write an MOC and send it to FPAC for confirmation before sending it to the Corps.

3.2. NWP

- 3.2.1. **[March 20] 20BON05 MOC BI Relocate Lamprey Refuge Boxes - ACTION:** Hausmann will add the lamprey refuge box locations to the after action of the MOC if different than the proposed. *Status: MOC has been updated and the locations are correct.*
- 3.2.2. **[March 20] BON AFF - ACTION:** Hausmann will look into a fix for fish holding in the non-sample exit pipe. *Status: Hausmann wanted clarification. He has been looking at slicker material but wasn't sure about the padding. Lorz thinks that both slick and slightly padded would be optimal. Hausmann said that they have some ideas but no samples in hand due to the COVID-19 situation. Conder and CRITFC AFF staff would like to look at the materials before installation.*

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

- 3.3.1. **[March 20] LGS fall out fence - ACTION:** Peery will find out where the location of the array was during the study. *Status: Sent to FPOM March, 25, 2020.*
- 3.3.2. **[March 20] MCN Study operations April 1-10 - ACTION:** Conder will send in his generation limit to Setter. *Status: Trevor provided up to 13,500 cfs via March 26, 2020 email. Due to low flows, this action wasn't implemented.*
- 3.3.3. **[February 20] LGS - ACTION:** Peery will look into the telemetry data for the fall out fence at the north powerhouse entrance. *Status: Peery sent out a short summary of information to the group. The early information showed that fish were falling out. The first fence installed did not work but the redesign did. The current fence is effective in reducing the numbers of fish from falling out. The concern was if the fence effects the fish coming in to the north shore entrance. There is not enough detail in the data to address that question. The fence was repaired this winter. A lot of fish use the north powerhouse entrance but less fish use the north shore entrance. Conder asked if the array for the study was at the fence or in the channel. ACTION: Peery will find out where the location of the array was during the study. The study was not designed to answer the question of the fence. Peery looked at the report which indicated that the array was downstream of the fence but he will follow up with PNNL.*

4. Updates

4.1. NWW

- 4.1.1. Upcoming maintenance/construction/research activities.
 - 4.1.1.1. LGS Unit 1 special operation – This topic came from TMT and FPAC. Running Unit 1 to the upper end of 1% helps lessen an eddy in front of the powerhouse. The suggestion is to move 5k cfs of flow from the powerhouse to the spillway by running the unit 1 at the lower end of 1%. The thought is to maximize passage over the

spillway. Lorz suggested this operation during the gas cap spill but not during the 30% spill. Setter said that the project has noted that eddy does appear worse during the gas cap spill at the powerhouse especially at the south entrance. Milligan, who has worked on the ERDC model, doesn't think that the eddy is solely an adult passage problem and can negatively affect juvenile passage too. The eddy can pull smolts from the exit plume and entrain them. Any fish caught in the eddy would not only have delayed passage but would also be exposed to the high TDG at the base of the spillway. Milligan thinks it is better to minimize the strength and size of the eddy. Running unit 1 at the high end of 1% helps abate the strength of the eddy. Conder agrees that juveniles can be entrained in the eddy but it is a tradeoff of going through the spillway or the powerhouse. He thinks it is better to go through the spillway than have the best egress conditions. At the lower end of the flow band, the 5Kcfs would have a higher effect on the eddy but as flow increases, the effect is minimized. Milligan suggested that Ops weigh in on the process of getting around the restriction. It might be difficult to switch back and forth several times a day. Bettin doesn't know if it is hard for an operator but suggests doing this operation at night when there are more juveniles and less adults. VanDyke thinks this is complicating the flex spill agreement and believes this needs to be clearly coordinated. The more complicated it is than less likely it will happen. The staff at all projects is minimized during the pandemic. At LGS, for every major change, the project requires a teletype. Meeting the existing requirements is already difficult. Lorz suggested implementing the trigger now with the standard 8 hours of flex spill at the same time every day with the upper end of 1% to simplify the situation. Milligan understands that the upper end of MU1 will not stop the eddy but it will weaken it. The benefit of moving the 5Kcfs to the spill compared to reducing the eddy is unknown. Setter asked about thresholds of flow bands that might start or stop this action. Morrill commented that the basis for decision is based on visual observations and doesn't think the additional flow through powerhouse would add any measurable benefit. Washington would not support using the flow to the upper end of MU1 and would prefer to spill the water. Wright said that this operation would occur during the 16hrs gas cap spill not during the 30% flex spill. During the gas cap spill, the situation is minimum generation and then spill the rest. The 30% spill is 30% of the flow. VanDyke said that this operation could be used if the 30% spill was low enough and we are currently in a very low flow situation. Wright said that during spill 30% they would not be at min gen and spill the rest; they would continue to spill 30% with contingencies in place for low flow. Wright wanted to clarify that the discussion of this operation should be focused on the gas cap spill. Last year at 120% TDG spill when there wasn't enough flow in the river, MU1 was still at the upper end of 1% and spill the rest. VanDyke thinks that the spill agreement should be maximizing spill. Swank agreed that it is a trade off with unknown benefits on either side. He liked Bettin's suggestion of doing the operation at night but understands Setter's point that this might be too much for the current staff level. He is still undecided. Bettin is against doing the operation because he needs a written document to understand the exact operation. Conder said that if it does occur then he has concerns with the priority of going 1 to 6 and he would want 1 to 2 during this operation. He thinks that 1-2 would help reduce the eddy. Milligan agrees that a north or south priority helps reduce the eddy rather than split the priority. In the FPP, the priority is 1, 2, 3, 4, 5 and 6. Wright corrected that for the spring spill it is 1 then 6 but 6 is out of service. Conder said that if a change form is written then it needs to include a change in priority.

ACTION: Lorz will write an MOC and send it to FPAC before sending it to the Corps. Setter will find out if this operation would cause additional stress for the operators under the current conditions. Lorz wants the MOC fast tracked because if

they wait the two week comment period then the situation would have passed. A special FPOM call will be scheduled for early next week.

- 4.1.1.2. FPOM outages schedule (Setter) – The work on the XJ-8 breaker is almost complete which will provide a permanent power supply for the cooling pumps at LGS. The remaining work was planned for next week but it requires a line outage. With unit 6 OOS, they cannot do the work but are still planning to do it before the pump is needed. Once it is completed, the XJ-8 breaker will provide hard wired power so the pump will not be affected by a Doble testing outage. The backup pump is back on site and they tested to make sure it works.
- 4.1.1.3. LWG SW PIT Status (Hockersmith) – The system is working well. There is a query on the DART website that will show the detections through the spillway and the bypass. http://www.cbr.washington.edu/dart/query/pit_lwg. The spillway is detecting a lot more fish than the bypass. Lorz asked how the detection efficiency is being calculated. Hockersmith is comparing the upper array with the middle and bottom array. Morrill pointed out that the middle array has a unique split antenna that is working well. Warf said that the system is working well beyond their expectations. Peterson asked about additional testing with live fish. Warf thinks that the testing will still occur. Setter said that the earliest access would be in May but it depends when the states lift their shelter in place restrictions.
- 4.1.1.4. LWG and MCN early start update (Hockersmith) – [Presentation] Hockersmith presented the smolt and lamprey passage numbers from the early start up. He also discussed the fall backs and the PIT detections.
- 4.1.1.5. IHR weirs – Pictures of the repaired weirs are on the website. The weirs were repaired.

4.2. NWP

4.2.1. Upcoming maintenance/construction/research activities.

- 4.2.1.1. 20BON07 MOC OWS cleaning and valve work – The work was completed and as coordinated. The new OWS is working and still finishing up some work that doesn't need to be coordinated.
 - 4.2.1.2. 20BON09 MOC Spillway Hydro Survey – The survey was completed after the spill test. Ebner was satisfied enough with the results for spill to resume to normal operation. One spill gate did not work automatically but is not considered a problem for operating the gate.
 - 4.2.1.3. 20BON10 MOC BI Exit Dredging – The dredge was accomplished and a post dredge survey.
 - 4.2.1.4. 20BON11 MOC F1 Outage – This outage went smoothly. For F2, both hydraulic pipes were replaced; for F1, only one pipe was replaced. The PMs have been updated due to the condition of the pipe.
 - 4.2.1.5. 15TDA08 MOC Transformer Installation – The contract is on hold due to COVID-19 restrictions. The project had wanted to swap line 1 and line 7 but Cordie isn't sure if it will still happen.
 - 4.2.1.6. 19TDA04 MOC Crane Rail Replacement – ongoing. The PDT is working on the design and the contract.
- 4.2.2. BON ITS gate – no update
- 4.2.3. BON AFF – The structural concerns have been addressed but still waiting on the grating. Based on fish numbers, sampling hasn't started. They have been in contact with the CRITFC AFF staff.
- 4.2.4. TDA AWS – The vents that flooded the 7' valve room have been removed and capped. Remote control is not available to operate the AWS. Bettin asked if the operators can leave the CR in the current restrictions. Cordie said yes and operators are on site. Lorz asked about adequate run time. Cordie said that it does need to be resolved. Rerecich said that

debris is a concern and it will be discussed through FPOM. TDA had to float the debris off after only a couple of days of use and it was not a high debris load.

4.2.5. TDA Line 3 – The grounding issue was not resolved. However they determined that it is not between the new switchgear and the fish units. They will continue to troubleshoot when available. Correct that they can run on both Line 1 and 3.

4.2.6. Line 1 and 3 are both available. The question now is finding out when line 1 will go out of service. The line 1 outage will likely be in June or July.

4.2.7. TDA trunnion pin – no update

4.2.8. TDA fry passage PUD sampling – The PUD sampling starts the first week of April. The sample always has a lot of fry in the first couple of weeks. Cordie asked if managers consider these fry to be rearing and not trying to pass or should they have a better passage route. Cordie is assuming these are from main stem spawning. Spill opens 10 April. The primary passage is through the PUD by-pass, JDA north ladder or intermittent nav lock operation. Martinson said that the mortality is most likely from the sampling tank and thinks that fish are able to pass through the facility just fine. In an effort to reduce mortality, Martinson lowered his discharge which did improve the mortality rate. Bellerud asked how much further he could cut back the discharge. The discharge is at 0.1' and Martinson has never tried 0.5' increments. Bellerud suggested every other week sampling. Morrill asked if there is a big need for sampling if the tank is killing fry. Martinson and Bellerud agreed that sampling could start once spill starts. The new facility will still have to be tested and hopefully improves the tank situation. Cordie's concern is that there may be a better passage route. The sluiceway is too far away and the only option is spill. Bellerud asked Martinson to write a memo detailing the problem and suggestion to wait until spill starts to sample, assuming the new facility is not available yet. Cordie said that if the fish are rearing then they do not need a better passage route but if they are migrating then might. Morrill and VanDyke said that fish move around a lot and don't start actively start to migrate until they reach a certain size. Fry tend to meander before migrating. Bellerud thinks the best path forward is not sampling before spill starts.

4.2.9. JDA north pumps – Pump 4 is still OOS and RTS is pushed out due to staff limitations but enough pumps available to meet criteria.

4.2.10. JDA SCADA – The commissioning was completed in the middle of March with Portland engineers. Finishing some of the local connections will be a slow process due to staff restrictions.

4.2.11. JDA Turbine Pump 3 – The project is running only two pumps out of three available pumps.

4.2.12. COVID-19 restrictions

JDA – On-site staff has been minimized to the extent possible. Access is on a case by case basis. SMP is still doing condition sampling, not index sampling.

BON – The project now requires masks if the 6' distance cannot be maintained. The masks are cloth not the N95 masks. There are only about 20 people on project. If there is an incident with a contamination in the fish count room then they would switch to video during the cleaning/sanitizing. The project is trying to arrange a contract to get the right clean up people onto the project quickly. Wertheimer suggested that they discuss offline due to budgetary conflicts.

TDA – The project is down to minimum staff. Fish counters and hazers are on site. The project is trying to keep it as business as usual as much as possible.

4.3. Research/FFDRWG updates.

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

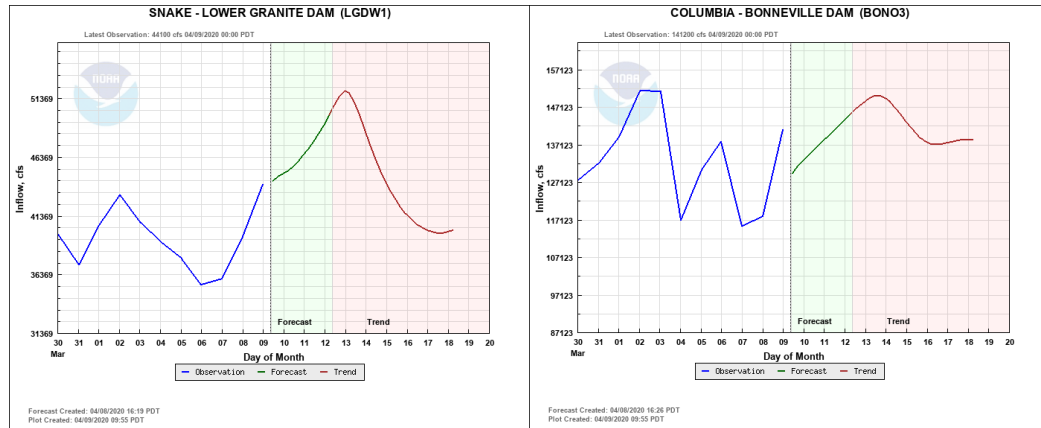
4.3.1. NWP FFDRWG – The next meeting is 02 June.

4.3.2.NWW FFDRWG – The next meeting is 23 April and will be a web meeting.

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	45	52	40	40 (4/17) / 52 (4/13)
MCN	119	132	124	118 (4/9) / 132 (4/13)
BON	126	149	138	129 (4/9) / 150 (4/13)

Table 1. RCC flow forecast



4.5. BPA update – No update this month.

4.6. Fish Count Program update (Peery, Wertheimer) – Counts started 01 April. There has been a few technical glitches but otherwise no other concerns. At LMN, there is an electrical issue affecting the modem so the data is hand entered.

4.7. Pinniped update

4.7.1.BON – The morning count was 10 SSL and 1 CSL. Active hazing is ongoing to push sea lions away from the fishway entrances.

4.7.2.Willamette Falls – no update

4.8. Lamprey update –LPS were watered up on 01 April but the traps are not running yet. FFU is working on getting counters deployed for the LPS count validation. The optic sensors are going to be a test this year but that is separate than the existing mechanical count mechanism.

4.9. Avian updates

4.9.1.NWP

4.9.1.1. JDA – very few birds

4.9.1.2. TDA – very few birds. Hazers will start on 15 April. DCC are starting to nest in the towers. The project is not using the green laser until all the safety issues can be addressed. Miller Rocks - Allen Evans provided some of the latest information but there is still no path forward.

4.9.1.3. BON - Low bird numbers but hazers have started working.

4.9.1.4. FFU – Despite the COVID-19 restrictions, staff has been able to go to ESI to prep the one acre colony and add dissuasion to the rest of the island. Staff will be going back to ESI soon for additional work. FFU has also been working Miller, Pillar and Rice Islands as well.

4.9.2.NWW – MCN – About 40 cormorants are present and are actively feeding at the outfall. Due to minimal staff, the second laser has not been installed. USDA hazing starts 19 April. Peery said that the other projects only had a few birds observations noted in the reports.

5. Invasive species discussion (Setter) – no update this month

6. Coordination/Notification forms (need concurrence/discussion)

6.1. 20BON08 MFR F2 Oil Leak and Outage

6.2. 20JDA02 MFR Daytime condition sampling

6.3. 20JDA03 MFR Spill gate 10 OOS – Fielding talked to the chief of maintenance. They don't know if the problem is electrical or mechanical. The current plan is not to use the bay because of the low flow. If the bay will be out of service for a long time than Lorz would like it dogged off between 2.5-3.5 stops. It isn't the most critical bay. Given the current forecast, Lorz is fine with leaving it closed for a few days. Dogging off is holding the gate open at a certain stop with a manual block. Lorz requested an update by Tuesday. Morrill agreed.

7. Fish Passage Plan: The final 2020 FPP went into effect March 1 and is available online at:

<http://pweb.crohms.org/tmt/documents/fpp/2020/>

7.1. Pending Change Forms:

7.2. New Change Forms:

7.2.1.20AppJ002_JDA-Index-Sampling – Approved.

8. Task Group Updates.