

## MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 12 March 2020 FPOM meeting.

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

Last	First	Agency	Email
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On the phone: Bellerud, Conder, Cordie, Ebel, Grosvenor, Hausmann, Hockersmith, Holdren, Johnson, McLellan, Norton, Scott, Sears, Wood and Wright.

## 1. Final decisions or recommendations made at this meeting.

- 1.1. February meeting minutes were not approved. Morrill has some corrections that were sent to Kovalchuk but had not yet been incorporated into the minutes.
- 1.2. 20BON07 MOC OWS Cleaning and Valve work – FPOM concurred with this action.

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. FPAC Memo on early startup 20-21
- 2.5. LWG PIT Detectors and schematic (WDFW)
- 2.6. LWG Walleye trapping proposal (IDFG)
- 2.7. FPOM transmission outages (BPA)
- 2.8. ODFW Shad letter (NWW)
- 2.9. WDFW Shad letter (NWP)
- 2.10. Pictures of LMN expansion joints (NWW)
- 2.11. Pictures of LWG spillway PIT detection
- 2.12. Ebner's BON tailwater table (NWP)
- 2.13. Coordination Forms (MOC/MFR)(NWW/NWP)
- 2.14. FPP Change Forms (NWW/NWP)

3. **Action Items**

3.1. **NWW**

3.1.1. **[March 20] LGS fall out fence** - ACTION: Peery will find out where the location of the array was during the study.

3.1.2. **[March 20] MCN Study operations April 1-10** - ACTION: Conder will send in his generation limit to Setter.

3.1.3. **[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.*

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.

3.2.2. **[March 20] BON AFF** - ACTION: Hausmann will look into a fix for fish holding in the non-sample exit pipe.

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

3.3.1. **[February 20] FPOM outages** - Action: Hockersmith will forward pictures of the LMN bypass pipe repair to Kovalchuk. Status: Completed.

3.3.2. **[February 20] Invasive Species** - ACTION: Setter will try to identify the invasive species coordinators for the states. Status: Completed.

3.3.3. **[February 20] BON Rock Removal**- ACTION: Ebner will forward the tailwater/spill table to Kovalchuk for distribution. Status: Completed.

- 3.3.4.[February 20 BON Rock Removal - ACTION:** Kovalchuk will ask MacDonald to add high spill shaping patterns to the next FFDRWG agenda. Status: completed.
- 3.3.5.[January 20] Staff Gauges - ACTION:** Setter will follow up with Hausmann after the meeting. *Status: Setter did speak to Ken Fone and he said that he had updated one staff gauge already. IHR has additional sheet metal to make another. BON no longer has the capability to make the staff gauges until they replace the person who runs the plasma cutting machine. IHR has really limited funds and staff gauges are a low priority.*
- 3.3.6.[January 20] Invasive species - ACTION:** Setter will have the invasive species coordinator write a letter to WDFW specifying the Corps position on lethal removal from sampling facilities for shad. *Status: discussed under Invasive Species Discussion.*
- 3.3.7.[January 20] BON B-branch weirs - ACTION:** Kovalchuk will email McDonald to get B-branch weirs on the FFDRWG agenda. Status: Completed.
- 3.3.8.[January 20] Pinniped update - ACTION:** VanDyke will forward the 2019 final pinniped observation report to Kovalchuk. Status: Completed.

## 4. Updates

### 4.1. NWW

#### 4.1.1. Upcoming maintenance/construction/research activities.

- 4.1.1.1.** FPOM outages schedule (Setter) - no substantial changes were made this month. LMN unit 2 cavitation is delayed. LGS roof repair is delayed until 2021. The original request was to have the entire powerhouse out for 5 months. BPA and the Corps are working to reduce the timeframe.
- 4.1.1.2.** Tug nova sinks in MCN pool (Setter) [Pictures] – Tug removal was not a Corps action so there wasn't any after action report to share. The tug sank under windy conditions on a Monday, February 24. A sheen was discovered about a half mile downstream of the sunk tug. Booms were put in place and the tug was removed on Thursday, February 27.
- 4.1.1.3.** LWG SW PIT Status (Hockersmith) [Pictures] – After all work was completed, the bottom center antenna started to have problems with recurring noise issues. The antenna completely died and the contractor had to go in to remove the capacitor lid. Water had leaked in which caused electrical shorts due to a water tight fitting being loose. The fitting was tightened and covered with sealant and capacitor lid reinstalled. The antenna is now working correctly. Morrill passed around pictures of the work. Peterson asked about the detection efficiency. Peery said that it has not been tested but they did detect sticks that they threw in. Hockersmith said that NOAA is planning a test with live fish this spring. Lorz requested the study design. The funding source for this study is not the Corps so the study design is not reviewed in the typical process. Several FPOM members wanted to know the release mechanism for the live fish. Bettin said that if they can find the study design, he will provide it. Peterson is meeting with that group next week. If she can't find a study design then she will ask them about release mechanisms. Hockersmith thought it might be similar to the B2CC test. Holdren agreed and said that the fish would be released right into the flow. VanDyke has concerns about the coordination even though the Corps is not paying for this test, LWG is involved with the operation.
- 4.1.1.4.** LWG PIT detection transfer (Morrill) – Upgrades are required on the equipment that the Corps is transferring to PSMFC. Morrill requested that the work be done before the transfer. Holdren said that the upgrades need to be done in the winter maintenance period. The Corps is in the process of bar coding the equipment so that it can be transferred. Morrill said that there might be problems with adult detection without the upgrades. Holdren will facilitate any software updates or anything else

than can be done while still watered up but access to the equipment boxes will have to wait until next winter.

- 4.1.1.5.** MCN study operations April -10 (Bettin, Norton, Hockersmith) – The question was if there should be a waiver of turbine criteria so that it doesn't impact the study design. Norton would like to keep the operations the same as the fall study for comparison. Norton said that how the turbines are set up now is how they will be run in the future. There is a low probability that there will be involuntary spill. The original spill plan was approved in January. Bettin said that starting April 1, the amount of capacity goes down and the chance of spill goes up when the project implements the 1% band. Bettin would like to wait until April 10. If there is involuntary spill then the study test would be affected. Lorz would like to have a successful test and is okay with Bettin's proposal for ten days only. VanDyke concurs with Lorz. Conder is okay with this action but doesn't want to go to generator limit. Lorz suggested an upper limit of 144. Conder is looking for a number that is below cavitation but has a scientific reason behind it. Screens usually go in on April 16; this year, four screens are in place due to early start up. Bellerud recommended allowing the operation in the screened units. Setter said that this action would be a modification to the existing teletype using current turbine priority and allow generation up to the limit that Conder specifies for the first ten days of April. VanDyke stressed that this operation is for the study only, not a blanket allowance of ignoring the 1% rule. The MOC will be revised. **ACTION: Conder will send in his generation limit to Setter.**
- 4.1.1.6.** MCN TSW operations (Carryover from last month – Setter) No one has researched the temperatures. Setter wants to move this to a new forum. Conder said that it should go to FFDRWG. It will be removed next month.
- 4.1.1.7.** IHR operating gate position – There is funding to replace the leaking cylinders to the head gates. The project wants to go to a new type of cylinder. To replace the current telescoping style is \$2 million more than a single stage cylinder. The project wants to do the same repair as LMN. Lorz is opposed to this change. This summer, more sub-yearling will go through the powerhouse than spill or bypass. Lorz suggested sending the topic to FFDRWG. Thompson will not comment without a written document.

## **4.2. NWP**

### **4.2.1. Upcoming maintenance/construction/research activities.**

- 4.2.1.1.** 20BON05 MOC BI Relocate Lamprey Refuge Boxes – The project installed six out of the original eleven boxes. They are installed in every other block in the serpentine section. If the orifice slots continue, the boxes will line up with them. Lorz asked if the new box locations are listed anywhere. **ACTION: Hausmann will add the lamprey refuge box locations to the after action of the MOC if different than the proposed.**
- 4.2.1.2.** 20BON06 MOC BI Installation of Pucks for Lamprey – The pucks are 8" wide and 1" deep. The pucks were installed in visible locations.
- 4.2.1.3.** 19BON56 MOC PH2 OWS installation – discussed under 7.6.
- 4.2.1.4.** 15TDA08 MOC Transformer Installation – There is the potential for delay in the schedule. T1 was supposed to come out on 16 March. The project has concerns about taking out a new line before another one is complete. During the T1 outage, the fish units would move to line 3 and there would be no redundancy for lines. Bettin pointed out the line has not always had redundancy. The outage would be during the summer but before the fall run. Lorz suggested the end of September. Bettin asked if this work was coordinated with work going on at BON. If the work moves then the other work may have to move. Bettin will look into moving the work. *Update immediately after*

*the meeting: the project is no longer looking to push the work out. The T1 outage will be from 3/16- 6/11.*

- 4.2.1.5. 19TDA04 MOC Crane rail Replacement – Cordie asked whether the 50’/100’ requirement is horizontal to the water line. Mackey said that the line is to the structure.
- 4.2.2. BON BI exit dredging – The dredging is scheduled for 23 March. There will be a safety boat so the sluiceway can remain open. The exit will be slightly open. This will not impact the corner collector.
- 4.2.3. BON ITS gate – The gate will be repaired next year. Funding has been identified. Conder wants to maximize the flow. Hausmann will look into reprogramming the other gates. Conder will bring this up to policy folks.
- 4.2.4. BON AFF – The braille pool supports have been repaired. Gratings haven’t been replaced but they have been ordered. The AFF is ready for use. Conder reiterated that fish hold in place in the non-sample exit pipe. He would like the neoprene lining upgraded to a slippery surface. Hausmann suggested removing the black substance. Mackey said that the rubber was added for a reason and there is major leakage in the joints without it. **ACTION: Hausmann will look into a fix for fish holding in the non-sample exit pipe.** Lorz said that he asked the CRITFC people who work there but they didn’t have anything. The gratings should be in soon.
- 4.2.5. BON spill for rock removal – The hydro-survey will be on 25 March. Bettin didn’t think that the project was going to do another spill test. Hausmann didn’t know if the gate had been fixed. If the hydro-survey shows rocks then they will need to repeat the spill. VanDyke pointed out that the spill action did not work as it should have since the gates didn’t open. Bettin said that now we are coming up to the chum minimum flows which has an impact on the spill test flows. It is possible that the action worked the first time.
- 4.2.6. TDA AWS – The project needs a plan to clean the screen for the AWS. The project feels that one more week of operation is necessary for a sense of security. The preventative maintenance on the AWS requires the project to open it every six months. The actuators have been replaced. The project will finish the alarm system. The flooding threat has decreased since the vents are now closed. *Update after the meeting: the vents have been removed and opening permanently shut.*
- 4.2.7. TDA Line 3 – The commission test was complete. A minor grounding issue was found and addressed. The fish units are now on line 3. Line 1 will go out for maintenance on March 16.
- 4.2.8. TDA turbine unit priority – Cordie asked if it makes a difference why a unit is out of priority such as forced out of service, scheduled maintenance or human error. Mackey said that they are all out of criteria and the justification should be written in the notes.
- 4.2.9. TDA trunnion pin – no update
- 4.2.10. JDA north pumps - 4 out of 6 pumps are available. Some parts have been ordered for one of the pumps. Pump #1 has a breaker issue that is being addressed. The project has no problem meeting the entrance criteria.
- 4.2.11. JDA elevator – The condition of the elevator will stand as is for the rest of the year. The elevator is working currently. The project was hoping to reprogram some fund to do additional rehab but it did not work out.
- 4.2.12. JDA SCADA – The commissioning just finished. The new SCADA is working well.
- 4.2.13. JDA Turbine Pump 3 – There was an oil leak around the sleeve of the thrust bearing. The turbine pump was out of service for about 36 hours. There was no damaged to the thrust bearing.

#### 4.3. Research/FFDRWG updates.

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

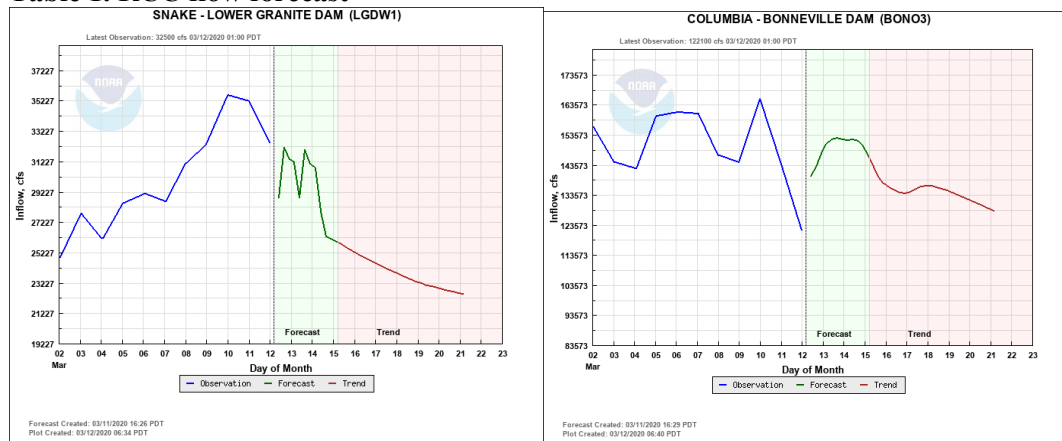
**4.3.1.NWP FFDRWG** – Next meeting is April 2. Ebner is looking into ways to prevent rocks from entering the BON spillway.

**4.3.2.NWW FFDRWG** – no update

**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	32	25	23	23 (3/21) / 32 (3/12)
MCN	119	122	116	116 (3/21) / 140 (3/13)
BON	126	135	128	128 (3/21) / 152 (3/13)

**Table 1. RCC flow forecast**



**4.5. BPA update [Handout]** – The only concern was the TDA line 3 which is now working.

**4.6. Fish Count Program update (Peery, Wertheimer)** – Fish counts should start 01 April. There is concern on project access in light of the Corona virus. The backup plan is to record video and count remotely. If this would occur, then the counts would be delayed not real time. Bettin said that the only place that a delay is the least desirable is LGS due to the spill trigger in the first few weeks of April. Peery said that there is PIT information as a backup. The quality control plan update is a contract modification which could take a month or so. The existing quality control plan is in place.

**4.7. Pinniped update**

**4.7.1.BON** – There are very few sea lions presently in the tailrace. FFU will present on 20 April to the Power Planning Council and a task group meeting on 20 May. Wertheimer reported that 12 ST have been documented crossing the separator bars. The B2CC had been open on Wednesday morning for passing debris but it most likely flushed steelhead down.

**4.7.2.Willamette Falls** – VanDyke did not have an update on numbers. The States are still working on the SSL trap. Wertheimer asked for breakdown of California and Steller sea lion numbers for the next meeting. Baus asked if there is take number. Wertheimer said the California sea lion number was ~92 and he didn't think that they would take that many.

**4.8. Lamprey update** – The LPS are set to open on 01 April. Hausmann said that the flume and tank are ready for the CI trap but the electrical work has not been finished. Lorz said that the reduced flows at night change form is being withdrawn but wants to make sure that the action will still happen this year. The change form is withdrawn because TDA still has to fully automate the system and Conder has concerns about the system returning to FPP criteria. Cordie said that

system will not be automated this year but he is training the control room operators to adjust the weirs. Cordie asked if the task group will request the north ladder flow reduced as well. The PUD would be able to accommodate the request. Lorz will follow up with the task group. CRITFC will resubmit the change form after all the automation has been completed and Conder's concerns are addressed.

#### **4.9. Avian updates**

**4.9.1.NWW** – The contract for hazing is in place. The MCN laser hasn't been set up yet but will be before the birds show up.

**4.9.2.NWP** – The estuary bird work has started. East Sand Island has the one acre colony space intact. FFU has mobilized to Rice Island to set up dissuasion. Wertheimer said that the dissuasion was very effective last year. Lorz asked if the dredge materials affect their ability to dissuade birds. FFU worked with the dredge operators to place the materials in good locations.

**5. Invasive species discussion (Setter)** – Setter worked with the invasive species coordinator to get letters out to WDFW and ODFW. Morrill will have internal dialogue and then bring the issue to FPAC. ODFW will follow the same path as WDFW.

#### **5.1. Lake Roosevelt mgmt update – northern pike suppression and monitoring program**

**(Colville tribe) [Presentation]** Colville uses a variety of tools to capture the northern pike.

There are no ESA listed fish in Lake Roosevelt so they don't have many restrictions. They offer a reward of \$10 per northern pike head. The reward program started in 2017. They have given out about \$20K to fisherman. WDFW and Colville coordinates the invasive mussel and the northern pike monitoring. The spring drawdown of the lake creates flats that strand northern pike, yellow perch and carp. McLellan is keeping track of the drawdown data to maximize northern pike stranding. Bettin said that you don't want to draw down too quickly causing the banks slough off. Lorz said that the CRSO is looking at draft rates currently that could negatively impact this operation. VanDyke asked if they always pick up the fish after the drawn down. McLellan said that they can't monitor all the flats so they chose one area to keep consistent data on. Birds tend to take all the fish if they don't grab them first. There are about 25 native species in Lake Roosevelt. Wertheimer asked if there is an abundance estimate for northern pike. McLellan said that in order to do a population estimate, it requires mark/recapture. At this point, they have prioritized lethal take than releasing a fish for a study. They are looking at other markers like changes in the number of net captures.

**6. IDFG Walleye trapping at LWG proposal (Ebel)** – Walleye captures at the LWG trap have been increasing. IDFG has concerns about walleye moving up the lower Snake. IDFG is proposing to lethally take 100% of the capture walleye to look at otoliths, age, stomach contents and other characteristics. Setter said that IDFG needs to follow the standard research guidelines for access to LWG. The trap was paid for by BPA and run by NOAA. IDFG has staff on site and this study is just additional procedures for that staff. Setter said that an updated letter with the new study design and expected procedures needs to be sent in for review. Next year, the letter can have both of the purposes in the same access request letter. Thompson wants confirmation that this operation would not interfere with any ESA listed species. Ebel said that the catch rates would remain the same and the walleye would be worked up after all other fish have been handled. Ebel has been in contact with the NOAA trap operator. Lorz suggested increasing the sample size to include JDA and TDA. Morrill is continuing internal discussions on the fate of the by-catch from the dam angling program. WDFW and ODFW have no objections to the study. IDFG has not requested the scientific permit yet from WDFW but will soon.

**7. Coordination/Notification forms (need concurrence/discussion)**

- 7.1. **FPAC Memo** – Setter disseminated the memo internally to the NWW projects. She received a couple comments asking why there is a plan to do the early start up again when the results from the first test are not in. The memo was meant to serve as a recommendation and communication for later but FPAC will review the data as it comes in and possibly revise the recommendation. Mackey said that JDA will start up early as they had previously.
- 7.2. **20 LGS 02 MFR Steelhead Mortality**
- 7.3. **20 IHR 02 MFR Delay in Returning North Fish Ladder to Service**
- 7.4. **20 MCN 01 MFR Fish loss in Oregon ladder**
- 7.5. **20TDA02 MOC FUB ground troubleshoot** – The project has a minor grounding issue. Discussed under 4.2.7.
- 7.6. **20BON07 MOC OWS Cleaning and Valve Work**– The work will be next week for 5 days in shifts. The core drilling will be at night on the 18<sup>th</sup> & 19<sup>th</sup>. Lorz and Conder stressed that this type of work needs to happen in the in- water work period. FPOM concurred.

8. **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/>

8.1. **Pending Change Forms:** NONE

8.2. **New Change Forms:**

8.2.1. 20BON003\_Reduced-nighttime-flow

8.2.2. 20TDA009\_Reduced-nighttime-flow – pending automation

9. **Task Group Updates.**