CENWP-OD 17 April 2017

MEMORANDUM FOR THE RECORD

Subject: DRAFT minutes for the 17 April 2017 FPOM meeting.

The meeting was held at the JFF conference room at McNary Dam in Umatilla, OR. In attendance:

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On the phone: Baus, Bumgarner, Cordie, Graham, Hausmann, Keifer, Lowry, Lundell, Scott, Sears, Wright and Vandyke.

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

1. **Decisions made at this meeting.**
   - **1.1. March meeting minutes were approved.**
   - **1.2.** FPOM suggested using the TSW during peak migration and the split leaf method during nonpeak times.
   - **1.3. MOC/MFR forms**
     - **1.3.1. 17TDA15 MOC AWS Concrete Demo – FPOM concurred with this work**
   - **1.4. FPP Change Forms**
   - **1.5. MCN Table 7 footnote – FPOM recommends removing footnote D.**
   - **1.6. MCN scroll case water temperatures - FPOM suggested using only one unit (MU1) and change to a digital thermometer. The others can be eliminated.**

2. **Action Items**
   - **2.1. NWW**
   - **2.2. NWP**.
     - **2.2.1. [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.
     - **2.2.2. [Mar 17] BON B2 Orifices** ACTION: Hausmann will check into the funding and labor code for the reprogramming. *Status: The project is waiting on money and due to the CRA this may not be until next month. This funding is to increase the number of bursts not the volume of air per burst. The amount of air was very low when Fredricks cycled the other day and some would not cycle. BON mechanics should have all the airlines functional. ACTION: Hausmann will write up what work will get done and which funding sources will be tapped in an MFR. Medina will cover the reprogramming and O&M will cover any nonfunctional equipment.*
     - **2.2.3.** [Feb 17] **Forebay Temperature Profiles** ACTION: Lundell will revise the proposal based on the discussion. *Status: FPOM had concerns about the location of the floating platforms at the last meeting. Lundell proposed that the contractor will spend one day to collect samples from each NWP dam in the forebay at four locations to figure out if there is cooler water available. Ideally this would be just past the BRZ. If cooler water is found at a location near the fish ladder then the floating platform will be placed there. At TDA and BON, there isn't much stratification but it will be double checked. JDA does stratify somewhat so there is more concern here. The plan is to check JDA at the north & south Fish ladders, in the center of the dam and upstream of the BRZ zone. Entering the BRZ will double the price. They want to do it in July. At a previous FPOM meeting, it was decided to look for an area that has cooler water in case it needs to be pumped to the fish ladder. NWW has stratified reservoirs so their plan doesn't compare exactly to NWP but might be helpful for JDA. If a permanent location is found within the BRZ, the monthly checks and calibration will cost significantly more than outside the BRZ. The locations right next to*

the dam (similar to the USGS monitoring sites) have eddy problems. These strings go to 60-80" deep and an eddy could cause consistency issues from moving around so much. The concrete could interfere with temps as well. Mackey explained that at the previous meeting, members had wanted to know if there were any deep pools to draw cool water from. FPOM agreed that looking for a deep pool is no longer the objective since it would cost too much to run a pipe from far away. The water temps lower down the water column are cooler even right next to the fish ladder exit. Checking the temperatures between the dam and middle of the forebay would be very similar until late July or August. FPOM suggested using this year figure out the locations and next year to do the temperature string monitoring. Locations accessible from the dam or the shoreline would be preferred to keep BRZ costs down. Testing locations over a week or several days versus one day would be better. There are trolley pipes used for former research work at nearly every dam that could be used for this purpose. Lundell will give an update at the next meeting.

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

2.3.1.[Mar 17] Temporary LMN and LGS PIT Detectors ACTION: Morrill will find out if detections at one project are more important than the other and what timeframe is most significant. *See 3.1.2 Temporary LMN and LGS PIT Detectors.*

2.3.2. [Feb 17] MCN FOG maintenance ACTION: Johnson will write an MOC to coordinate swapping the FOGs in March. Status: The swapping of the FOGs will not occur in March but the new date is still unknown. Six have been repaired and six more to do. *See 4.5 17MCN05 FOGs 2017.*

2.3.3.[Jan 17] BON Staff Gauges Action: Hausmann works with Kovalchuk about price, design and coordinate a dive crew to clean in the winter to standardize staff gauges. *Status: Hausmann sent photos and PR details to Peery. The cost is per pound of metal not by number of staff gauges. Peery needs dimensions. Hausmann will forward all details to Kovalchuk and Peery.*

3. Updates

3.1. NWW

3.1.1. Upcoming maintenance/construction/research activities.

3.1.1.1. FPOM outages schedule – Setter noted two changes: LWG MU1 will return to service in July and LMN MU1 will not return until Sept /Oct. LMN Unit 5 has jumped in priority over Unit 1 and will RTS in July. DWK MU3 is still scheduled for a mid-July return. LMN found a way to fix the oil spill at MU4 without taking it out of service. LWG MU2 came back to service on 13 April. Unit 2 is the fixed blade and it was set at the upper range of 1% like MU1. MU1 will return in July. NWW will draft an FPP change form/MOC for unit priority changes now that MU2 is back in service. An SOP for return to service for main units has not yet been formalized.

3.1.2. Temporary LMN and LGS PIT Detectors – The issue is whether or not to remove the picked leads in count stations that have the temporary PIT detectors after the count period is over. NWW wants to pull leads which NMFS supports and change forms have already been submitted. Funneling fish into the count slot creates delay but the amount of delay is hard to prove/quantify. The PIT detectors were intended to be temporary and NMFS doesn't want to change operations of the project for the antennas. NMFS has brought up these concerns since the start of the project. The tradeoff is the data of the detections vs. the delay of fish. Bumgarner said he didn't realize that the arrays were temporary. The arrays have given data on steelhead movement between the dams. The data has been very useful and it would be great if they could continue to take passage data but as an agency, delay issues are very important. Morrill talked to Wharf about moving the detectors to a new permanent location and it is estimated to cost about $250K for both ladders. This year's run is forecasted at 35% so every decision this year is very significant. Morrill mentioned that Wharf will write

up a memo about what it takes to add an array to the serpentine weir section. Even if a decision is made this year, LMN hasn't budgeted for this and it would take several years to get funding. Bumgarner will look at the data and filter the results on which detections are not detected elsewhere. The data will be brought to the next FPOM.

3.1.3. MCN Table 7 footnote (Johnson) – The footnote (D) to Table in the FPP came from a change form from Moody but FPOM members are not sure why it is in there. It says to close the TSW when the project is spilling over 260Kcfs. The project does not want to be turning the TSWs off and on. The preference of the project to leave the TSW open for this year and further discussion will take place when the modeling for gas cap is underway. Setter will discuss this further with RCC. The recommendation from FPOM is to remove Footnote D. After the meeting, the group watched the tailrace as the project went from TSW closed to open. FPOM concurred with Corps that TSW's should stay open, Corps will extend spill pattern to allow for the continued operation-FPP change form to May mtg

3.1.4.

3.1.5. Updates to MCN lighting for troubleshooting debris clogs (Johnson) – [power point] Flood lights were added to see the pipe better. This was a preventative measure from an MFR (16MCN06) fish mortality.

3.1.6. Use of the ventilator for Unit rehab at IHR (Peery) – The project needed to add a ventilator system for unit rehabs. It is on a trailer outside the powerhouse and it will be there for several years doing several units over the years. The issue is that it is really loud but not louder than the AWS pumps. Any work that is not routine and within 50' of the fishway needs an MOC. Peery can check on how loud/vibration with accelerometer and write an MOC. NOAA said that vibration is more of a concern than decibel level. The ventilator can't be moved because there are concrete trucks further down. FPOM's main concern is the coordination hiccup.

3.1.7. MCN water cannon pump & intake (Johnson) – The new pumps are on project; the new intake will be ready in ~2 weeks. These new parts should improve the water cannon and hold the project over until a total new system is built.

3.1.8. MCN need to use split leaf gate to spill debris (Johnson) – There was a large debris mat in front of the dam. The wind finally pushed it out to the TSW. The project still doesn't have a good process for getting rid of debris. On the WA SH, the Nav Lock can be used to flush. On spill way, the project has used the split leaf as a tool to remove debris until the TSWs were installed. FPOM suggested using the TSW during peak migration and the split leaf method during nonpeak times. MCN project will develop language for FPP change form on when the project can use the split leaf method without coordination.

3.1.9. MCN scroll case water temperatures (Griffith, Carter) – Currently the project reads temperatures for each unit at the scroll case in the 3rd floor gallery. These are not accurate, some are broken and others are too high to read. FPOM suggested using only one unit (MU1) and change to a digital thermometer. The others can be eliminated.

3.1.10. MFR for LGS – The project will be writing an MFR about a fish kill at LGS but wanted to inform the region about the situation. (17LGS05)

3.1.11. LMN barge –A dive inspection earlier this week showed that the mooring bits are in poor condition and it is a safety concern. Funds have been identified already. As long as the temporary mooring bits are installed on time then it will not affect transport. However, the project may need a back-up plan in case it doesn't happen. An MOC on the back-up plan will be sent out, if needed. The flow will most likely need to be lower to get this work done. The region can expect to know more by next week.

3.2. NWP

3.2.1. Upcoming maintenance/construction/research activities.

3.2.1.1. BON FGE Mods. - Completed

3.2.1.2. BON B-branch erosion repair final survey results - Completed

3.2.1.3. TDA AWS Construction (16TDA10) – Dive work finished on 31 March. The contractor asked for an extension on diving too but the project rejected the idea. The steel frame that was coordinated ended up being delayed to next year. The work on the valve room and back fill of the parking lot has been completed. However the contractor poured concrete walls to high right next to the junction pool and the rebar is not high enough. For the MOC, FPOM concurred.

3.2.1.4. JDA Trash rack crane – The crane failed on 27 March. The contract to fix the motor was approved and the motor shipped off for repairs. The projects expects the motor back at the end of next week and back in service by the following week (week of 24 April). MU8 is OOS and two units have been de-rated due to the high gate well draw downs. Zyndol asked about increasing the allowable differential before derating a unit but FPOM said no.

3.2.2.JDA-N SKF alarms on pumps – The problem has been fixed and this can now be removed.

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

3.3.1.NWP FFDRWG - None

3.3.2.NWW FFDRWG – Next meeting is 25 May.

3.4. RCC update

Project	Previous day average (kcfs)	5 day forecast average (kcfs)	10 day forecast average (kcfs)	Projected Low/Peak (kcfs) and date.
LWG	136	133	158	Peak 4/14 = 162 Low 4/17 = 131
MCN	377.5	390	376	Peak 4/15 = 431 Low 4/18 = 382
BON	386.8	420	412	Peak 4/15 = 466 Low 4/18 = 407

Table 1. RCC flow forecast

3.5. BPA update – Bettin had just received the update and did not see any that had impacts to fish operations. He will forward it for posting.

3.6. Fish Count Program – FFU has been entering the faxed count sheets by hand in order to upload counts to FPC. If there are any special requests or meetings coming up that require data then let FFU know ahead of time in order to staff appropriately. Fredricks wants to talk about posting to DART as well. CAC cards will be issued next week and then the counts will be digital. FPOM requested that BON be done first.

3.6.1.MCN Water Clarity – Due to the turbidity of the water, the fish counters are having difficulty identifying clipped vs unclipped. The crowder can't be moved forward and the counters are doing the best they can.

3.7. Pinniped update – Along with the delayed fish run, the pinniped numbers are just starting to increase. The bi-weekly report will start on Monday. The CRITFC hazers had a boat incident while transiting & conducting the Phoca Rock point count and a crew member died. The group is currently conducting a risk assessment. This type of boat hazing is very dangerous. Ongoing hazing from the dam by APHIS will continue 7/days a week.

3.8. Lamprey update – The LPSs are operational. Wertheimer will send the sampling schedule for posting to the website. There is no plan to use the AFF lamprey trap and the new trap is being developed.

3.9. TDA BRZ Plan (Cordie) – Over the years, TDA has been struggling to keep fisherman away from the east ladder exit. The project has decided to change the BRZ boundary line which will

keep any boaters further back. The first try to install the buoy did not work but it will be attempted again. ACTION: TDA will send out a Memo for the Public and post a copy of the map at the boat ramp.

3.10. Avian update

3.10.1. TDA (Cordie) – Due to high water, the project can't install lines until after the season is over. Hazers have permission to access the island to haze more effectively but the footing is difficult and it may not work out.

3.10.2. JDA (Zyndol) – The contractor installed more lines than expected. The lines that didn't go up will roll into the contract for next year.

3.10.3. BON (Hausmann) –The lines were not installed due to high water. Potentially lines could be installed in June and July.

3.10.4. MCN

3.8.3.1. Pelican Hazing – WDFW has asked for pelican data on the presence and feeding behavior. Due to the discussion last month about contract scope and any changes, USDA APHIS came to this meeting to address any questions. Peery sent weekly presence data. WDFW has a specific concern about hazing of breeding birds because there is a colony just upstream and it is the only breeding colony in WA. The bird counts went back 12 years. Peery provided the pelican presence data but a caveat is that the outfall changed location. There is no specific data on behavior and there is a possibility of putting out a camera to record behavior. Pelicans have been documented eating fish. The conflict between protecting federal listed salmon while hazing birds even though the pelicans are state listed is the main issue. The protocol is to target gulls even if other birds are around. There are two issues for WDFW: potential impact on foraging for juveniles back at the nesting site and proving that pelicans are not being affected despite gull hazing. Linnell pointed out that hazing has been on going with the same level of action for many years but the pelican numbers have increased. USDA has the challenge of harassing gulls near pelicans without affecting them. USDA has an obligation to protect salmon and looks for guidance from FPOM. At JDA, pelican behavior has changed by coming earlier. USDA's focus is on artificially easy feeding locations. WDFW still needs more data but is okay with indirect hazing. A separate discussion will be had on direct hazing. Peery will continue to work with WDFW on this issue. Pelicans in the adult fish ladder need to be documented.

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

4.1. 17LWG02 MFR LWG Ladder Outage

4.2. 17LGS03 Spill bay 5 RTS delayed

4.3. 17LGS04 MFR Adult Steelhead Mortality

4.4. 17LMN02 MFR Sturgeon Intake

4.5. 17IHR02 MFR South Shore AWS pumps turned off due to high tailwater

4.6. 17MCN05 FOGs 2017 – The update MOC was posted to the website.

4.7. 17JDA03 MFR Two Juvenile Morts STS

4.8. 17JDA04 MFR Steelhead mortality spill bay 20 – The spill volume has caused major flow through spill bay 20. There is a deflector installed in that bay and the spill pattern may have to be revisited**.** As flow drops down, bay 20 will be less as well. Bay 5 is out of service. A phone call discussion may be necessary.

4.9. 17TDA09 MOC AWS Steel Frame

4.10. 17TDA10 MOC Valve Room Demo

4.11. 17TDA11 MFR AWS Parking Lot Backfill

4.12. 17TDA12 MOC Fish Unit Breaker Outage

4.13. 17TDA13 MFR Avian Line Installation

4.14. 17TDA14 MFR Modification of the Spill Table

4.15. 17TDA15 MOC AWS Concrete Demo – FPOM concurred with this work

4.16. 17BON05 MOC B2CC Closure – The project was not able to get into the corner collector to fix it. The crevice is about an inch. The tailwater still has to drop 6 or 7' for the project to get in there. If a tag drops into that gap then the B2CC PIT detector will have to be taken out which would be very expensive. Morrill suggested delaying the test fish release to make sure the wound is fully healed and less likely to drop a tag.

4.17. 17BON06 MFR Avian Line install

4.18. 17BON07 MFR PH2 FU1 forced OOS

4.19. 17BON08 MFR Modification of the Spill Table

4.20. 17BON09 MFR CI Subsidence Interim Repairs

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

6.1 Pending FPP Change Forms.

5.1.1.17LWG007 – Count Station Pickets

5.1.2.17LGS006 – Count Station Pickets

5.1.3.17LMN006 – Count Station Pickets

5.1.4.17IHR006 – Count Station Pickets

5.1.5.17MCN006 – Count Station Pickets

5.2. New FPP Change Forms

6. Task Group Updates.

6.1. BON minimum spill to maintain good B2CC egress. (Fredricks and Lorz). Team: Bettin, Ebner, Hausmann, Mackey, Rerecich, Wright. Date for test selected?