

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 13 November 2014 FPOM meeting.

The meeting was held by conference call for those who couldn't travel due to weather and in the CRITFC offices for those who were in Portland. In attendance:

Last	First	Agency	Email
Bailey	John	NWW	John.c.bailey@usace.army.mil
Baus	Doug	NWD-RCC	Douglas.m.baus@usace.army.mil
Bettin	Scott	BPA	swbettin@bpa.gov
Conder	Trevor	NOAA	Trevor.conder@noaa.gov
Cordie	Bob	NWP-TDA	Robert.p.cordie@usace.army.mil
Doumbia	Julie	BPA	jadoumbia@bpa.gov
Dugger	Carl	NWW-MCN	Carl.r.dugger@usace.army.mil
Faber	Derrek	ODFW	Derrek.m.faber@or.state.us
Fredricks	Gary	NOAA	Gary.fredricks@noaa.gov
Hausmann	Ben	NWP-BON	Ben.j.hausmann@usace.army.mil
Kiefer	Russ	IDFG	Russ.kiefer@idfg.idaho.gov
Lorz	Tom	CRITFC	lorz@critfc.org
Mackey	Tammy	NWP	Tammy.m.mackey@usace.army.mil
Moody	Greg	NWWP	Gregory.P.Moody@usace.army.mil
Morrill	Charles	WDFW	Charles.morrill@dfw.wa
Petersen	Christine	BPA	chpetersen@bpa.gov
Pinney	Chris	NWW	Chris.a.pinney@usace.army.mil
Renholds	Jon	NWW	Jon.F.Renholds@usace.army.mil
Royer	Ida	NWP-BON	Ida.m.royer@usace.army.mil
Sears	Sheri	Colville Tribes	sheri.sears@colvilletribes.org
Setter	Ann	NWW	Ann.L.Setter@usace.army.mil
Scott	Shane	PPC	shane@rainiercorp.com
Wertheimer	Bob	NWP	Robert.h.wertheimer@usace.army.mil
Williams	Jason		Jason.C.Williams@usace.army.mil
Wills	David	USFWS	David_Wills@fws.gov
Wright	Lisa	NWD-RCC	Lisa.s.wright@usace.army.mil
Zorich	Nathan	NWP-FFU	Nathan.a.zorich@usace.army.mil
Zyndol	Miro	NWP-JDA	Miroslaw.a.zyndol@usace.army.mil

Nearly everyone called in.

**November birthdays include: Mackey, Ebner, Meyer, Klatte, and Zorich
HAPPY BIRTHDAY!**

1. Decisions made at this meeting.

1.1. October meeting minutes approved.

1.2. LWG U1 repair work. Setter asked if 15 September would work. Conder said he isn't looking for a fixed date; he just doesn't want to see the work start in the middle of a temperature issue. Lorz was willing to give a hard date of 15 September. If LWG can guarantee the rental pumps will be on-site by 1 September, then 1 September will work for a

start date. If LWG cannot guarantee the pumps will be on-site, then 15 September needs to be the start date. Kiefer also supports 15 September. The rest of FPOM supported the 15 September start date, unless pumps are on-site earlier.

- 1.3. BON Unit 11 update. 31 December 2014 return to service still holds. Hausmann reported that the unit will need to be spun without screens in early December. This would be about a week before the FPP allows for units to run unscreened. Hausmann said he didn't know how long the unit would be spun. The Chief of Maintenance didn't have a solid schedule but the guess is a few hours spread out over days. **FPOM was in general agreement.**
- 1.4. BON debris issues. FPOM recommends prioritizing pulling STSs over U11, if it comes down to it over the weekend. Lorz said delaying adults now is a bigger priority than delaying the return of a unit that has been out since 2008. He also recommended opening the B2CC to help move debris away from the units and provide downstream passage for any juveniles or adults heading downstream. Unscreened units may be operated at generation limit. This will help pull debris from the fish units and move more flow away from PH1.
- 1.5. **Coordination/Notification forms (need concurrence).**
 - 1.5.1. **14 IHR10** Unit 3 Blade Welding to reduce oil discharge. **MOC will be updated. FPOM generally concurred with the MOC.**
 - 1.5.2. **14LWG20** Unit 3 NERC-WECC exciter testing. **FPOM concurred.**

2. The following documents were provided or discussed. Documents may 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 Strainers Lamprey Counts.xls.*
- 2.3. *Coordination/Notification Forms (NWW/NWP)*
- 2.4. *FPP change forms. (NWW/NWP)*

3. Action Items

3.1. NWW Action Items.

- 3.1.1. LMN PLC programming. Moody said there is a person assigned to the programming. Conder said he would like regular updates in the weekly reports.
- 3.1.2. LWG and LMN Unit 1 return to Kaplan schedule.
 - 3.1.2.1. J. Williams said LWG U1 will be returned to Kaplan. It will take ten months, currently proposed for September 2015 – July 2016. Schedule may change due to bridge crane repair schedule. Conder said NOAA would like to see this work done as soon as it can be done. Williams said if there is an opportunity to begin sooner, the project will do so. Conder said he wants to make sure the scheduling takes into consideration the temperature concerns that come up in. Setter suggested Conder provide comments via email so Williams can move forward on the contracting language. **Setter asked if 15 September would work. Conder said he isn't looking for a fixed date, he just doesn't want to see the work start in the middle of a temperature issue. Lorz was willing to give a hard date of 15 September. If LWG can guarantee the rental pumps will be on-site by 1 September, then 1 September will work for a start date. If LWG cannot guarantee the pumps will be on-site, then 15 September needs to be the start date. Kiefer also supports 15 September. The rest of FPOM supported the 15 September start date, unless pumps are on-site earlier.** Morrill asked if funding was going to be an issue. Setter said the rental pumps were not in the FY15 O&M budget but a clear justification would make getting the funding easier.

3.1.2.2. As soon as the windings are available, LMN U1 will be completed January – November 2016. Work will include rewinding, returning to Kaplan and cavitation repair. U2 will have cavitation repair completed first, while waiting for U1 windings. U2 work will occur from September 2015 – January 2016. These units will not be OOS at the same time.

3.1.3. Pinney said the LWG temperature work may be delayed until the next winter work window. NWW is having difficulty coming up with a six day work window that the Region agrees to. Pinney is still moving forward with the contract so materials are available when it is time to install. He is still trying to make a three day outage in June work. Pinney said the team is looking at changing the diesel pumps to electric pumps. Kiefer commented that there are concerns about sockeye fallback and IDFG would like to see the flow in front of the ladder exit. He asked if that might be a possibility. Pinney said it may be possible to move water to the forebay. This project will be talked about at the NWW FFDRWG later this month as well. Setter said the FFDRWG stuff should stay in FFDRWG. FPOM is concerned about a finalized MOC. **ACTION: Pinney will update the MOC and re-submit to FPOM.** Pinney said there are no operational changes requested for the dives. He said that may change but for now, there should not be a need to change ops for the divers. Lorz added that a three day outage may be possible but a six day outage is a no-go for the tribes. Pinney said that may allow for some work to be completed in June.

3.2. NWP Action Items.

3.2.1. [Oct 14] TDA Avian Hazing. **ACTION:** Mackey and Cordie will collect the information for what hazing occurred in 2010 – 2012. **STATUS:** *Cordie sent the following information on 14 October:*
2010 - 8 hour shore hazing from May1-July31. Might have borrowed the boat from JDA early in the season.
2011 - 16 hour boat hazing from May1-July31.
2012 - 16 hour boat hazing from May1-July31. Extended to August7 due to bird numbers.
Present - 14 hour shore hazing from Apr16-July31
Some other info;
-Minimal boat hazing when shared with JDA. Usually only the first week or 2 when birds were higher at TDA than JDA.
-2011 high flow year credited for decreased predation and high survival
-2010 steelhead survival substantially lower than 2011
-2011 was first year with improved avian lines
-2010 FFU estimated mid 80K juv salmonids consumed
-2011 FFU estimated 16K juv salmonids consumed.

Fredricks said he would like to see the same level of hazing as we had in 2011. He felt this may need more discussion later. He said in order for NOAA to buy off on the 2011 performance standards results are valid and indicative of what is to be expected in the future, and then NOAA needs to see a commitment to the similar level/effectiveness of avian hazing. Lorz noted that the spillway gate operation is different now than it was in 2011. CRITFC would like to agree with the Action Agencies that TDA has successfully met the performance standards but they need to see the spillway returned to the similar condition as it was in 2011. Cordie said he will confirm which gates were available in 2011. The next steps would be figuring out a way to evaluate the effectiveness of the avian hazing. Fredricks said he didn't want a long-term study but maybe a short-term look at effectiveness would be

appropriate. He noted that the easiest way to address the issue is to have 16 hour boat hazing. He recognized that this option is likely cost-prohibitive. Zorich and Fredricks discussed the previous monitoring and what the results appeared to show. Wertheimer recommended ending the conversation as far as FPOM goes. This may need to be broken out into a smaller task group.

- 3.2.2. [Nov 14] TDA avian hazing/performance standards. **ACTION:** NWP will draft up justification regarding whether or not TDA has met the performance standards. Wertheimer and Cordie will take the lead on this action.
 - 3.2.3. [Oct 14] BON ITS gate installation. The repairs are expected to be completed in November. The Project needs about three weeks to install. Proposed dates are 10 - 27 November. **FPOM concurred.** **ACTION:** This will be included in an MOC to fully document the action. **STATUS:** Hausmann reported that this work will not be completed in November. The gate was not ready and with the BI bridge overlay, moving the gate is much more difficult. From a safety standpoint, the ITS cannot easily and quickly be closed without the gate. From a fisheries standpoint, having the ITS open isn't a problem, however, if debris becomes an issue, not having the gate to help float large logs can make removal more problematic. Fredricks suggested next winter or choosing the lowest passage time. Hausmann talked about performing the work during spill season, when PHI isn't going to be used. Fredricks agreed but noted that July and August are not good times of the year due to the sub-yearling migration. Fredricks suggested Hausmann write up a MOC with a proposed date during fish passage season with the back up being winter maintenance season. 11 April was a suggested in-season date with the caution that if PHI has to run more than one unit, the work needs to be delayed until winter. Wills did not agree with the one unit operation due to the April release at Spring Creek. Hausmann noted that at this time, there have been no issues with the ITS being open.
 - 3.2.4. [Oct 14] 15BON002 – Turbine Start-up Operation. Fredricks said this should be included in the Load Shaping Guidelines. **ACTION:** Royer will find out more about the speed no load operation and if the Load Shaping Guidelines cover the 60 minutes. **STATUS:** Fredricks would like to see language minimizing speed no load. Hausmann noted that the language in question is the verbiage in the body of the text allowing 30 minutes to bring a unit back.
 - 3.2.5. [Oct 14] TDA split flows. (Cordie) Team members include: Bettin, Cordie, Fredricks, Klatte, Lorz, Mackey, Rerecich, Stansell, Wills. Conference call on 3 September. **ACTION:** Need to schedule a meeting to discuss results and plan forward. **STATUS:** The team will meet after the December meeting.
 - 3.2.6. [Nov 14] BON Debris at PH2. **ACTION:** BON will, after this emergency operation concludes, draft a MFR to document this operation.
 - 3.2.7. [Nov 14] CRITFC AFF PIT tag detector. Lorz said Fryer's understanding was that after a hydraulic review of the proposed area, everything should be ok. Fredricks said his concern that the upstream antennae stuck too far into the channel. Fryer will report out at the December meeting. **ACTION:** Lorz will remind Fryer to review the November FPOM notes regarding FPOM concerns
- 3.3. Completed Action Items or to be discussed later in the agenda.
- 3.3.1. [Oct 14] MCN transition screen cleaner. **ACTION:** Dugger will provide more information (background, issues, proposed path forward) at the November FPOM meeting. **STATUS:** Discussed later in the agenda.
 - 3.3.2. [Oct 14] FGE testing. FFDRWG meeting to be scheduled in late October to discuss the EDR supplement. Rerecich said there is no room available at NWP on 21

October. **ACTION:** Rerecich will send a doodle poll with a new date or he will find a room at another agency. **STATUS:** *NWP FFDRWG occurred on 27 October.*

- 3.3.3. [Oct 14] Fish counts. Clipped v unclipped. **ACTION:** FFU will write up the issue for the Regional reps to review, it will include 2013 if problems were found in those counts as well. They will also add a note to the fish count web page. **STATUS:** *Discussed later in the agenda.*

4. Updates

4.1. NWW Updates.

- 4.1.1. Upcoming maintenance/construction/research activities. Includes already coordinated MOCs.

4.1.1.1. NWW Winter Maintenance schedule.

4.1.1.2. 14MCN27 JBS to bypass due to cold weather. Fredricks said he views this bypass as temporary and would like to return to the primary bypass if the weather warms. Dugger pointed out that the FPP states that if the JBS goes out in November, due to weather, then it could remain OOS until normal winter maintenance season begins. Dugger and Fredricks further discussed the intent of the language in the FPP and the MOC.

4.1.1.3. 14LWG19

4.1.1.4. 14LWG21 JBS to bypass due to cold weather. U6 screens up on 12 November. U4 and U3 screens up on 13 November. U2 screens up on 14 November.

4.2. NWP Updates

- 4.2.1. Upcoming maintenance/construction/research activities. Includes already coordinated MOCs.

4.2.1.1. NWP winter maintenance schedules.

4.2.1.2. 14BON08 BI Bridge overlay. Began night work on 3 November.

4.2.1.3. 14BON13 and revised 14BON59 T11 and T12 outages.

4.2.1.4. 14BON21 FV3-7 inspection in November.

- 4.2.2. BON Unit 11 update. 31 December 2014 return to service still holds. Voith is currently working 24/6. Hausmann reported that the unit will need to be spun without screens in early December. This would be about a week before the FPP allows for units to run unscreened. Hausmann said he didn't know how long the unit would be spun. The Chief of Maintenance didn't have a solid schedule but the guess is a few hours spread out over days. **FPOM was in general agreement.**

- 4.2.3. BON debris issues. Everything looked fine on 11 November. Hausmann explained that debris showed up on 12 November. Fish units have 15' drawdowns, VBSs were clogged enough that units were at reduced load. Cleaning gets about six hours of normal operation before debris clogs racks and screens again. BON raked fish units and is currently pulling STSs from U18. Tomorrow will be tougher since U11 Kaplan pipes are supposed to be installed by the crew that would normally pull screens. Fredricks said the concerns are that BI is closed, WS entrances are out of criteria, and we have high numbers of coho still passing. In addition, PH1 is running pretty hard due to the reduced operation of PH2 units. Top that off with sea lions in the tailrace preying on delayed salmonids. Fredricks acknowledged that BON is doing everything they can but it is a bad situation for migrating salmonids. Fredricks suggested the debris should take priority over U11. Hausmann said that might be a contentious discussion for some. Hausmann said unscreened units will not be operated until the B2CC opens. He said running U18 at the upper end should help pull debris away from the fish units. **FPOM recommends prioritizing pulling STSs over U11, if it comes down to it over the weekend. Lorz said delaying**

adults now is a bigger priority than delaying the return of a unit that has been out since 2008. He also recommended opening the B2CC to help move debris away from the units and provide downstream passage for any juveniles or adults heading downstream. Unscreened units may be operated at generation limit. This will help pull debris from the fish units and move more flow away from PHI. ACTION: BON will, after this emergency operation concludes, draft a MFR to document this operation.

- 4.2.4. USFWS fish health report. The report is available on the website.
- 4.2.5. WFL gate operation. Royer reported that the gates have been modified to avoid stranding fish.
- 4.2.6. JDA-N AWS fish pump testing. Zyndol explained that the pumps are very complex and will be tested during winter maintenance season.
- 4.2.7. JDA-S weirs. Fredricks asked Zyndol about the weirs. Zyndol said the three lower weirs are not needed. This will be added to the next NWP FFDRWG agenda.
- 4.3. Research/FFDRWG updates. Approval letters, permits, etc located at www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/Research.html
 - 4.3.1. NWP FFDRWG. Fredricks gave a recap of the recent BON FGE FFDRWG. There is a new study proposal looking at Spring Creek NFH fish only. Wills said the hatchery will work out the fish issues.
 - 4.3.2. B2CC. Mackey reported that the B2CC will move from CRFM funding to O&M funding. Fredricks asked if it would be possible for Region to get in and look at the channel.
 - 4.3.3. BON Fish Unit trashrake. Lorz asked about the new rake. Hausmann reported that the rake hasn't been completed and installed yet.
 - 4.3.4. CRITFC AFF PIT tag detector. Lorz said Fryer's understanding was that after a hydraulic review of the proposed area, everything should be ok. Fredricks said his concern that the upstream antennae stuck too far into the channel. Fryer will report out at the December meeting. ACTION: Lorz will remind Fryer to review the November FPOM notes regarding FPOM concerns.

4.4. RCC update.

Table 1. RCC flow forecast.

Project	Previous day average (kcfs)	5 day forecast average (kcfs)	10 day forecast average (kcfs)
LWG	25.5	20.6	20.2
MCN	125.5	120	113
BON	147	129	123

- 4.5. Lamprey updates. No updates.
- 4.6. Avian. Hausmann reported the B2CC avian lines are re-installed. BON, rather than USDA, installed the lines.
- 4.7. Critical Infrastructure. Information was put out on FPOM website. Fredricks would like to go Project by Project to look at the needs and walk through the spreadsheet.
- 4.8. BPA updates. No updates.

5. Coordination/Notification forms (need concurrence).

5.1. 14 IHR10 Unit 3 Blade Welding to reduce oil discharge. Conder expressed some concern about the angle of the blade. He said if U1 is operating then there shouldn't be an issue. He would like to see the MOC discuss the probability of operating unit 2 or 3 and what the impacts might be. Setter said the MOC will be updated. Lorz asked if the 23 degree angle is within the 1% range. Setter believes it is. She added that HDC will be on-site to assist the Project when welding the angles. Unit 2 was welded at 22 degrees. Renholds joined after the discussion. He wasn't able to answer the question about U1 outages over the next few years.

5.2.14LWG20 Unit 3 NERC-WECC exciter testing. Bailey explained the MOC. **FPOM concurred.**

6. **Wasco PUD TDA-N attraction flow study.** (Gilmore and Conger) Moved to December.
7. **15 Mile Creek data.** Faber talked to the handout (posted to the website). He said 15 Mile Creek has 95-100% detection rate with the PIT tag arrays installed. No detection at Mill Creek yet, but smolts are interrogated at the dam. Both Mill Creek and 15 Mile Creek meet the Columbia below TDA. The results are adults that were tagged as smolts in Mill Creek or 15 Mile Creek. Wertheimer asked if there is a population size estimate. Fredricks asked about the BON survival. Faber said the population is around 2000 fish per group. Faber will present this, along with additional tributaries, in NWW next week. FPOM said they will take the time to consider the data prior to that more formal presentation. Conder asked about summer/winter distinction. Wertheimer asked to clarify the TDA ITS operation. The ITS is closed from 15 Dec – 1 March.
8. **Fish counts.**
 - 8.1. **Clipped v unclipped discrepancies.** This is more an FYI, no decision needed. Wertheimer pointed out the discrepancies found. Moody added that the QA/QC will stress the importance of getting the splits accurately counted or accurate report when splits could not be completed.
 - 8.2. **Fish counting after October.** Fredricks said this came about because of a discussion he had in NWW regarding an outage in November. There was no passage information for November so Trumbo said he would use October. That didn't set well with Fredricks. After looking further, Fredricks found there was information available for November and it is a matter of making people aware of those counts. Moody said he talked to Trumbo and found out he had used DART, which doesn't have that information. Moody recommended people use the NWP Fish Count website (link may be found on the FPOM website). Fredricks asked if there might be a way to note when fish counts were completed outside the normal count window. Mackey reported that visual counts will continue at BON through November in 2015 and possibly beyond.
 - 8.3. **TDA-N fish count improvements.** Cordie and Dalen reported that the mods are still moving forward. One change might be just deploying the camera just during the off season so there would be limited disturbance to the fish counters during the season. Color – Cordie and Dalen will start with a neutral color and if it works, PowerBait green will not be needed.
9. **MCN screen cleaning.** Dugger provided drawings. Dugger was asked to provide pictures for FPOM. They were not posted to the web before the FPOM meeting so this will be carried over to December. The Regional input will be requested at that time.
10. **Fish Passage Plan:** The 2015 FPP draft sections and change forms are online at: <http://www.nwd-wc.usace.army.mil/tmt/documents/fpp/2015/index.html>.
 - 10.1. 1 November – NWP and NWW change forms are due.
 - 10.2. 15 December – Regional change forms are due.
 - 10.3. Appendix A – include when/where each item had been coordinated. NWP has used Appendix A for research and construction. NWW uses Appendix A for maintenance. Appendix A utility was discussed. NWW will review their use of Appendix A.
 - 10.4. Change forms - 2015:
 - 10.4.1. **15BON002** – Turbine Start-up Operation. Fredricks said this should be included in the Load Shaping Guidelines. **ACTION: Royer will find out more about the speed no load operation and if the Load Shaping Guidelines cover the 60 minutes.**
 - 10.4.2. **15BON003** – DSM Orifice Control Table BON-7. Fredricks said the orifice openings are directly tied to the forebay.

- 10.4.3. 15BON005 – B-Branch Entrance Gates.
- 10.4.4. 15BON006 – PH2 Mid-Range Operation Dates
- 10.4.5. 15TDA001 – Table TDA-4 Unit Priority
- 10.4.6. 15TDA002 – Removable Weirs #154-157
- 10.4.7. 15TDA003 – Fish Lock
- 10.4.8. 15MCN002 – Work Near Fishway.
- 10.4.9. 15MCN003 – Spill Patterns at Higher Flows
- 10.4.10. 15IHR001 – Work Near Fishway.
- 10.4.11. 15IHR003 – Turbine Unit Operation
- 10.4.12. 15IHR004 – STS Operation
- 10.4.13. 15IHR005 – Backflush Orifices
- 10.4.14. 15LMN001 – Work Near Fishway.
- 10.4.15. 15LMN003 – STS Operation
- 10.4.16. 15LGS003 – Work Near Fishway.
- 10.4.17. 15LWG001 – Work Near Fishway.
- 10.4.18. 15AppG001 – BON AFF picket leads
- 10.4.19. 15AppL001 – Avian Monitoring & Deterrence Plans *Updated and available on the FPP website.*

10.5. Potential FPP change forms.

- 10.5.1. BON split flows. Additional trigger to operate more units at PH1.
- 10.5.2. NWW transport projects. 2013 operation for columnaris needs to be included in FPP.
- 10.5.3. Overview. Getting MFRs covered in the FPP.
- 10.5.4. Appendix C Load Shaping Guidelines. Needs to be updated.
- 10.5.5. NWW truck transport.

11. Task Group Updates.

- 11.1. Noise impacts task group. (Setter and Conder). Team members include: Conder, Cordie, Fredricks, Hevlin, Lorz, Mackey, Setter, and others as needed. **Meeting scheduled for after the December 18 FPOM.**
- 11.2. Pinniped Task Group. (van der Leeuw). Memo was sent to FPOM regarding the pinniped monitoring and hazing activities.
- 11.3. TDA split flows. (Cordie) Team members include: Bettin, Cordie, Fredricks, Klatter, Lorz, Mackey, Rerecich, Stansell, Wills. Conference call on 3 September. Need to meet to discuss results and plan forward. **Meeting scheduled for after the December 18 FPOM.**
- 11.4. BON Ops. (Lorz) Team members include: Benner, Bettin, Fredricks, Hausmann, Lut, Mackey, Meyer, Rerecich, Stansell, Wills. **Met on 25 June.**
- 11.5. AFF mods (Rerecich). Team members include: Benner, Fredricks, Lorz, Mackey, Meyer, Rerecich, Royer, Stephenson, and Whiteaker. Appendix G will be modified to reflect the recommended raking level and the recommended water elevation.

12. Other/December agenda items.

- 12.1. MCN descaling.