

## MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 18 December 2014 FPOM meeting.

The meeting was held at the CRITFC offices, Portland OR. In attendance:

<b>Last</b>	<b>First</b>	<b>Agency</b>	<b>Email</b>
Barrows	Kyall	Pixelheavy Ind.	<a href="mailto:Kyall@pixelheavyindustries.com">Kyall@pixelheavyindustries.com</a>
Baus	Doug	NWD-RCC	<a href="mailto:Douglas.m.baus@usace.army.mil">Douglas.m.baus@usace.army.mil</a>
Bettin	Scott	BPA	<a href="mailto:swbettin@bpa.gov">swbettin@bpa.gov</a>
Conder	Trevor	NOAA	<a href="mailto:Trevor.conder@noaa.gov">Trevor.conder@noaa.gov</a>
Conger	Kurt	Wasco PUD	<a href="mailto:Kurt-conger@nwasco.com">Kurt-conger@nwasco.com</a>
Cordie	Bob	NWP-TDA	<a href="mailto:Robert.p.cordie@usace.army.mil">Robert.p.cordie@usace.army.mil</a>
Doumbia	Julie	BPA	<a href="mailto:jadoumbia@bpa.gov">jadoumbia@bpa.gov</a>
Dugger	Carl	NWW-MCN	<a href="mailto:Carl.r.dugger@usace.army.mil">Carl.r.dugger@usace.army.mil</a>
Fielding	Scott	NWW/NWP	
Fredricks	Gary	NOAA	<a href="mailto:Gary.fredricks@noaa.gov">Gary.fredricks@noaa.gov</a>
Fryer	Jeff	CRITFC	<a href="mailto:fryj@critfc.org">fryj@critfc.org</a>
Gilmore	George	Meridian Env	<a href="mailto:ggilmore@meridianenv.com">ggilmore@meridianenv.com</a>
Hausmann	Ben	NWP-BON	<a href="mailto:Ben.j.hausmann@usace.army.mil">Ben.j.hausmann@usace.army.mil</a>
Iverson	Tom	Yakama	<a href="mailto:t.k.iverson@comcast.net">t.k.iverson@comcast.net</a>
Kiefer	Russ	IDFG	<a href="mailto:Russ.kiefer@idfg.idaho.gov">Russ.kiefer@idfg.idaho.gov</a>
Lorz	Tom	CRITFC	<a href="mailto:lor@critfc.org">lor@critfc.org</a>
Mackey	Tammy	NWP	<a href="mailto:Tammy.m.mackey@usace.army.mil">Tammy.m.mackey@usace.army.mil</a>
Martinson	Rick	PSMFC	<a href="mailto:rickdm@gorge.net">rickdm@gorge.net</a>
Moody	Greg	NWWP	<a href="mailto:Gregory.P.Moody@usace.army.mil">Gregory.P.Moody@usace.army.mil</a>
Morrill	Charles	WDFW	<a href="mailto:Charles.morrill@dfw.wa">Charles.morrill@dfw.wa</a>
Petersen	Christine	BPA	<a href="mailto:chpetersen@bpa.gov">chpetersen@bpa.gov</a>
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Royer	Ida	NWP-BON	<a href="mailto:Ida.m.royer@usace.army.mil">Ida.m.royer@usace.army.mil</a>
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Shutters	Marvin	NWW	
Spillane	Kathy	NWW	
Van dyke	Erick	ODFW	
Wertheimer	Bob	NWP	<a href="mailto:Robert.h.wertheimer@usace.army.mil">Robert.h.wertheimer@usace.army.mil</a>
Wills	David	USFWS	<a href="mailto:David_Wills@fws.gov">David_Wills@fws.gov</a>
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Zorich	Nathan	NWP-FFU	<a href="mailto:Nathan.a.zorich@usace.army.mil">Nathan.a.zorich@usace.army.mil</a>

Doumbia, Iverson, Kiefer, Moody, Morrill, Royer, Scott, Sears, Spillane called in.

**December birthdays include: Dugger, and Baus**  
**HAPPY BIRTHDAY!**

## 1. Decisions made at this meeting.

- 1.1. November meeting minutes approved.
- 1.2. TDA north fishway rock wall repairs. Some of the basalt rock is sloughing off in areas and that creates a hazard for fish, the ladder, and for personnel in there during dewatering. A team is being assembled to look at this issue. A kick off meeting hasn't been set yet but once it does, the team progress will be reported back to FPOM. Fredricks wanted to make sure FPOM has a chance to comment on any proposed actions. This will remain on the agenda.
- 1.3. BON CI picket leads. Fredricks said there is more head loss than he would like to see. Hausmann said the back panels could be removed and stored elsewhere. FPOM felt that might be something to look into.
- 1.4. BON Weir Gate 1. Hausmann reported that the gate fell and it is believed the entrance is open. Hausmann asked when FPOM would like to have the work completed. Fredricks suggested getting the gate fixed this winter. This would require closing the ITS and shutting off a couple of south end units while PH1 is the priority powerhouse. FPOM was in general agreement with getting the work completed. Hausmann felt it would take about a day.
- 1.5. JDA STSs. Fredricks asked about the condition of the STSs. Mackey and Cordie figured they have never been rehabbed. Mackey explained that B. Klatte has been trying to get spares built and the old ones taken off-site for rehab. Cordie added that the STS crane still needs work as well. FPOM requested a more thorough discussion at the January 2015 meeting.
- 1.6. **Coordination/Notification forms (need concurrence).**
  - 1.6.1. **14BON80 MFR** November Debris Issues. Bettin asked why the operation went so long and why PH1 wasn't used more. Hausmann and Mackey said PH1 was used as much as it could be. After a certain point, it seemed pointless to install screens only to turn around and remove them the next week. Bettin noted that in the past, coordination sometimes allowed for up to two unscreened units to be operated before opening the B2CC.
  - 1.6.2. **14BON81 MFR** BI Bridge follow on. No comments.
  - 1.6.3. **14BON82** Updated T11 outages for 2016. **Approved.** Bettin noted that the outage is about a week and a half longer so it will bump up against chum flows. Spill may be required to meet chum flows.
  - 1.6.4. **14BON83** WS Fish Viewing Building Roof repair. **Approved.** FPOM recommended using a 50' hose so the contractor's pressure sprayer equipment will be outside the 50' buffer.
  - 1.6.5. **14TDA12 MFR** TDA-E mortars. No comments.
  - 1.6.6. **14DWR01** Unit 3 rehab. *Carry over to the January FPOM meeting.*

## 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. LWG Temperature work. **ACTION:** Pinney will update the MOC and re-submit to FPOM. **STATUS:** Pinney provided a 25 page document to Setter. NWW will work to pare that document down and provide it to FPOM later. The plan is to have rental pumps on-site by 1 July. Setter has been working on getting a PM assigned and getting resources assigned to the project.

- 3.1.2. [Dec 14] Fish count improvements. Bettin suggested Barrows look at the existing video to see what fish counters deal with. **ACTION:** Moody can provide video for a busy day in September.
- 3.1.3. [Dec 14] Noise and Vibration Task Group. **ACTION:** Conder and NWW will work on some updated language that leans more conservative while Fielding continues to pursue baseline data. Conder and Fielding will send their references to Mackey for her to include on the Task Group link.
- 3.2. NWP Action Items.
  - 3.2.1. [Nov 14] TDA avian hazing/performance standards. **ACTION:** NWP will draft up justification regarding whether or not TDA continues to haze avian predators as effectively as when they met the performance standards. Wertheimer and Cordie will take the lead on this action. **STATUS:** Cordie reported that it appears boat hazing was implemented in 2011. Fredricks said we need to ensure the same effectiveness as in 2011 carries forward in future years. We need to figure out a way to assess effectiveness and how to compare that to 2011. This is a problem because we are missing standards up and down the river. Fredricks believes it is important to keep the hazing effectiveness as when standards were met. Setter pointed out that the avian hazing and monitoring has been added to the FPP so FPOM can keep track of what the projects are doing. For TDA it boils down to 2011 had an increased hazing effort than now. How does that relate to effectiveness? Zorich had some ideas. Fredricks would like FFU to provide a method to gauge effectiveness and include it in the FPP. Setter said it sounds like we need a range and if our effectiveness is outside that range, we need to look at our effort. FFU and TDA will work on developing a way to measure effectiveness between years. Wills noted that 2011 had high flows so we need to think about how we tease out flows from effort. Cordie asked if we need to look at 2010 (all three species) and 2011 (steelhead and yearlings) or include 2012 (subs only) as well.
  - 3.2.2. [Oct 14] BON ITS gate installation. **ACTION:** Hausmann will 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 PH1 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. The work will take about three weeks.
  - 3.2.3. [Nov 14] JDA-S weirs. Fredricks asked Zyndol about the weirs. Zyndol said the three lower weirs are not needed. **ACTION:** This will be added to the next NWP FFDRWG agenda.
  - 3.2.4. [Dec 14] CRITFC AFF PIT tag detector. **ACTION:** Fryer will update and send his handout to Mackey.
  - 3.2.5. [Dec 14] BON Weir Gate 1. **ACTION:** Hausmann will pursue getting the work completed during the winter. He will double check on whether the ITS gates can be closed or if bulkheads need to be installed. Installation will take about week.
  - 3.2.6. [Dec 14] TDA ITS February operation. **ACTION:** Cordie will work with Faber and Rerecich to get the MOC and internal coordination started. The goal would be to get a test in 2015.
- 3.3. Completed Action Items or to be discussed later in the agenda.
  - 3.3.1. [Nov 14] BON Debris at PH2. **ACTION:** BON will, after this emergency operation concludes, draft a MFR to document this operation. **STATUS: MFR drafted.**  
*Operation concluded on 15 December.*

- 3.3.2. [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. **STATUS: completed**

## 4. Updates

### 4.1. NWW Updates.

- 4.1.1. Upcoming maintenance/construction/research activities. Includes already coordinated MOCs.
- 4.1.2. NWW Solicitation for Biological Services contract. Going out to solicitation in January. NWW has similar issues as NWP had regarding BON separator bar monitoring. They will attempt to have a transfer of duties from USACE to the BPA contract with FPC, similar to what NWP somewhat successfully did for 2015. Depending on who has the successful bid for the contract, there could be new personnel in the facilities. NWD is working with NWW to find a workable solution. Morrill said it does appear that PSMFC will be able to bid on the contract.
- 4.1.3. MCN descaling. Setter said there was a discussion at TMT that included the SMP data, system impacts, etc. Fredricks wanted this kept in FPOM. The discussion was looking at descaling.

### 4.2. NWP Updates

- 4.2.1. Upcoming maintenance/construction/research activities. Includes already coordinated MOCs.
- 4.2.1.1. 14BON13 and 14BON59 T11 and T12 outages.
- 4.2.2. BON Unit 11 update. Hausmann reported that there has been some slippage in the Unit 11 schedule. The best guess right now is mid-March 2015. This RTS date includes the model validation testing. Fredricks calmly reminded everyone that Unit 11 is an important unit. He also noted that there are people in attendance who have never seen or heard of that unit ever running. It's been out for five years.
- 4.2.3. TDA north fishway rock wall repairs. Some of the basalt rock is sloughing off in areas and that creates a hazard for fish, the ladder, and for personnel in there during dewatering. A team is being assembled to look at this issue. A kick off meeting hasn't been set yet but once it does, the team progress will be reported back to FPOM. Fredricks wanted to make sure FPOM has a chance to comment on any proposed actions. **This will remain on the agenda.**
- 4.2.4. JDA-N AWS fish pump testing. *Intensive testing of AWS pumps by COE engineers and contractor was performed during the annual outage on 12/2- 12/6. Analysis should be available soon and we are hoping that all pumps will be fixed/available by 1 March 2015. Good news is that 5 out of 6 pumps total are available as of 12/10, but pump 3 is problematic due to its vibration issue. Again, to put things in perspective for the past, 2014 fish passage season, we had 5 pumps available except for the very end (October & November,) when we had 4 pumps available out of 6 total. JD North Adult Fishway was not even close to ever lacking AWS discharge and it met the optimal entrance differential's criteria of 1.5' '90 % of time. Furthermore, it met the minimum criteria of 1.0' 100% of time in 2014 so it is self explanatory that it was a great result from a fish passage perspective. Happy Holidays and thanks for the help! MZ.* Fredricks said all of the new pumps should be available and if they aren't, we need to get to the main cause of the problem.
- 4.2.5. BON winter maintenance work.

- 4.2.5.1.** Fredricks would like to know if the CI picket lead mods made things worse for keeping fish out of the upper section of the ladder. He said there is more head loss than he would like to see and would like the BON Fisheries to keep an eye on it to see if there are any fish jumping or scales on the leads. If problems are seen, perhaps the area needs to be re-designed. Hausmann said the lamprey group has talked about putting a LPS into the upper section, which would allow the leads to go back to 1” spacing and raise the leads 1” from the bottom. This would increase porosity which should address the head issue. Hausmann said the back panels could be removed and stored elsewhere. **FPOM felt that might be something to look into.**
- 4.2.5.2.** Rerecich asked about the lack of functioning DSM2 orifice flushing. Hausmann said they are looking into it.
- 4.2.5.3.** Weir Gate 1. Hausmann reported that the gate fell and it is believed the entrance is open. Hausmann asked when FPOM would like to have the work completed. Fredricks suggested getting the gate fixed this winter. This would require closing the ITS and shutting off a couple of south end units while PH1 is the priority powerhouse. **FPOM was in general agreement with getting the work completed.** Hausmann felt it would take about a day.

*\*B-valves in south monolith of WA shore ladder. The new B3 valve is being reinstalled and B4 will be removed for replacement identical to B3.*

*\*Cascades Island FV5-4 refurbishment. Inspection revealed very poor condition. It will be repaired and FV5-3 will get the same treatment in 2 years.*





*\*Cascades Island diffuser maintenance (specifically 6-5 and 6-6 right now).*

*\*Cascades Island picket lead lamprey mods were completed (follow-on from last year to keep lamprey from being able to pass through them). Lamprey will be directed through UMT to WA shore ladder/AWA lamprey structure.*

*\*STS repairs are badly needed and will all be addressed.*

#### **4.2.6. TDA-E winter maintenance work.**

*\*New 158 exit weir prep near complete. Install early Jan.*

*\*Dislodged single grating panel found at south entrance. Repair Mid Jan.*

*\*Entrance weirs W2, E2 and E1 pulled for wheel replacement. Mechanics working on it. Guides were in pretty bad shape and will be replaced as time and money allow.*

*\*2 of 10 east fishway dewatering pumps to be pulled for electrical/mechanical repair.*

*\*Mechanics sealing leaking gearboxes at entrances and east exit.*

*\*Entrance weir guide condition worse than expected. Structural and engineering working on solution. Will install new steel in W2 and E2 this winter. All entrances guide repairs will be needed in future IWW periods.*

#### **4.2.7. JDA winter maintenance work.**

*\*RTS for JDA North Adult Fishways is 18 December.*

*\*Fixed/ Variable Width Entrance Weir was pulled out from its guides for an inspection. JDA Mechanical crew reattached two missing skin plates and replaced all plates' fasteners with the new/ stronger ones.*

*\*Wind damaged Exit shear/debris boom was removed from forebay for repairs.*

*\*Lower fishway diffuser gratings were ROV inspected on 4 December. All gratings were rock solid and properly attached without any deficiencies.*

*\*Counting station crowder had the floor "bristled" strips (made of metal) corroded/falling apart just after 4 seasons of operation. JDA Mechanical "improvised" a synthetic/ plastic replacement, which should last longer than the original metal.*

*\*Auto cleaning brush is being adjusted by JDA Mechanical to clean better, without leaving any algae spots on the counting window and crowder's lighting pane.*

*\*Damaged Exit staff gauge is being adjusted for proper elevation.*

*\*Exit section regulating weir's electric controls have been fixed.*

*\*SMF dewatered on 24 November: No major repairs are necessary or anticipated. A few minor maintenance activities are in-waiting to be performed in warmer weather, in February/March '15 (a couple of leaking expansion joints, painting of the D/A separator's porosity unit, screen cleaner's PMs etc.)*

*\*JDA JBS still in service. Surplus STSs are being removed on 15 December and the remaining ones (48 total) will be removed by 18 December. Annual maintenance of STSs started early, back in November due to a high number of MUs OOS, which should result in their improved condition for the 2015 fish passage season.*

Fredricks asked about the condition of the STSs. Mackey and Cordie figured they have never been rehabbed. Mackey explained that B. Klatte has been trying to get spares built and the old ones taken off-site for rehab. Cordie added that the STS crane still needs work as well. **FPOM requested a more thorough discussion at the January 2015 meeting.**

**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](http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/Research.html)

**4.3.1.** NWP FFDRWG scheduled for 5 February. FPOM would like to look at potentially having the meeting in January.

**4.3.2.** BON Fish Unit trashrake. Rerecich reported that there were contracting delays but the parts are all at BON. Hausmann confirmed that the rake is back in the hands of the Project. He anticipated the rake would be back in service by the end of winter maintenance season. Lorz asked if there would be an evaluation. Rerecich confirmed that is the plan. This will be discussed more at FFDRWG.

**4.3.3.** BON FGE. More info to be available at the NWP FFDRWG.

**4.3.4.** CRITFC AFF PIT tag detector. Fryer provided a handout and talked through it. He would like to include a floating antenna if it can be made to work. **ACTION: Fryer will update his handout and provide an electronic copy to Mackey.** FPOM discussed the potential to mess up hydraulics. ODFW wasn't sure if they would be requesting access to the AFF for sampling again this year.

**4.4. RCC update.** Chum survey and trap removal in Duncan Creek will be completed on 19 December.

**Table 1. RCC flow forecast.**

Project	Previous day average (kcfs)	5 day forecast average (kcfs)	10 day forecast average (kcfs)	Projected Peak
LWG	31	45	36	
MCN	148	177	185	211 on 23 Dec
BON	164	200	207	238 on 24 Dec

**4.5. Lamprey updates.** Zorich said the best lamprey updates were provided at AFEP. The AFEP presentations will be posted to the FPOM site. **ACTION: Mackey will send an email with the link.**

**4.6. Avian.** No update at this time.

**4.7. Critical Infrastructure.** Starting in January, we will focus on one Project at a time to look at the spreadsheet and walk through the needs. LWG will be on the schedule for the 8 January FPOM meeting. Setter asked how FPOM would like to structure the discussion. Fredricks said he would like to discuss what Projects are prioritizing and provide some input. Setter said there are new asset management processes and a strong push to build smart budgets that rebuild Projects to where they need to be for maintaining facilities.

**4.8. BPA updates.** No updates at this time.

**5. BON spill gate repair pit work.** (Cutts) Due to scope changes, Matt Cutts will provide more information at the January FPOM meeting.

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

**6.1. 14BON80 MFR November Debris Issues.** Bettin asked why the operation went so long and why PH1 wasn't used more. Hausmann and Mackey said PH1 was used as much as it could be. After a certain point, it seemed pointless to install screens only to turn around and remove them the next week. Bettin noted that in the past, coordination sometimes allowed for up to two unscreened units to be operated before opening the B2CC.

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- 6.4. 14BON83** WS Fish Viewing Building Roof repair. *Approved.* FPOM recommended using a 50' hose so the contractor's pressure washing equipment will be outside the 50' buffer.
- 6.5. 14TDA12 MFR** TDA-E morts. No comments.
- 6.6. 14TDA13** TDA back up AWS survey. This MOC hasn't been sent yet but will be sent on 18 December.
- 6.7. 14DWR01** Unit 3 rehab. Moody and Spillane discussed the MOC. Moody explained that Unit 3 has not been rehabbed in a number of years. The schedule is designed to maximize the 8 month work period. Work begins on 8 September 2016 and will continue into May 2017. The goal is to have the unit back in time for summer flow augmentation. Moody explained that the eight months is an ideal schedule with just normal rehab work. If there are issues, it could be extended another 45 days, which brings the unit back just before flow augmentation begins. Some work may be completed between now and 8 September 2016. Fredricks expressed concerns about in-river TDG. He said there isn't a waiver for the state of Idaho. Bettin said this is just an FYI at this point because there are many issues and river shaping concerns to work through. Spillane said the current schedule is already compressed. Spillane noted that runner repair may occur in 2019. Morrill asked about starting in August if the chimney will provide cooler water. Spillane said the contractor will not be able to make the August date due to the lead time needed for parts. Moody would like this MOC finalized in January 2015. Baus would like to get comments from partners who request specific operations during the outage schedule. NWW is coordinating the outage with FPOM which may impact the Corps ability to implement in-season operational recommendations from the TMT. Bettin asked if any work on units 1 and 2 has been identified. Moody would like to not do any work on them. Bettin clarified that we want to make sure the other two units are available while Unit 3 is out of service. Kiefer said IDFG is supportive of the work but he would like to see impacts to summer and spring flood control and augmentation included in the MOC. There are still some issues to address in the MOC. **ACTION: NWW will work further on the MOC and bring it back to the January FPOM.**

- 7. Wasco PUD TDA-N attraction flow study. (Handout available on the website)** Gilmore (Meridian Environmental) and Conger (N. Wasco PUD) provided a handout. The document is available on the website. The study needs to be done as part of the FERC license amendment. They are seeking FPOM approval for the study plan.
- 7.1.** Gilmore explained that the N. Wasco plan would double attraction flow at TDA-N. If the plan is approved and implemented, N. Wasco PUD would take over the TDA-N maintenance issues. They would be committed to working with FPOM for approval for actions or modifications to the area.
- 7.2.** A new juvenile sampling facility would be built. Martinson said the current system is vulnerable to the forebay elevation and the collection tank isn't designed to handle the design criteria flow. Bettin asked if N. Wasco PUD would rebuild the juvenile sampling facility even if the new turbine is not built. Conger said they are committed to improving fisheries, but need to get value in return for project investments. Bettin said it impacts river operations if the forebay elevation needs to be maintained to accommodate juvenile sampling.
- 7.3.** Gilmore stressed that the utility would take over the cost of maintenance at TDA-N AWS. Cordie said TDA would appreciate any help with O&M funding because budgets are decreasing but needs are increasing.
- 7.4.** Gilmore talked about spill and attraction flow and fish passage at TDA-N. N. Wasco needs to conduct the attraction flow study at TDA-N as part of their FERC re-licensing and amendment approval process. Gilmore talked about the on/off design of the study. Fredricks



clarified that FPOM isn't the study review group; that should happen at SRWG. Setter asked how the extra 800 cfs would be delivered to the ladder. The plunge pool would be used to increase the existing flow to 1600 cfs. TDA-N weir gate 1 bulkhead would be replaced with an adjustable weir for the test period. Cordie said the existing weir and equipment is in disrepair so the weir would need to be adjusted manually. Moody asked how it would be determined that the increased flow works. Gilmore said the fish counts would be compared between on and off. Fredricks gave some history on the rock wall and the rock bolts and shot-crete used to stabilize the channel. He expressed concerns about using the channel and potentially having it fall apart. He suggested there needs to be an evaluation of the channel to make sure it is able to withstand the flows. Cordie said TDA was planning on having a geo tech engineer evaluate the channel but it sounded like N. Wasco PUD was planning on doing the same thing so TDA put their evaluation on hold. *In response to Fredrick's request for confirmation of this statement Cordie provided the following comment on 15 January- I personally trust PUD doing the geotech evaluation. However if others feel COE geotech needs to be involved, we can do that. We didn't want to duplicate efforts and unnecessarily spend more fish budget. Fish budget is already in red for this FY due to the winter maintenance workload.* Conger confirmed the PUD geo tech will be on-site in February, during the winter outage, and conduct a thorough evaluation of the channel.

7.5. Wertheimer brought up the potential for upgrades to TDA-N fish count station. Morrill asked if project operations would be considered in the evaluations.. Gilmore said the comparison would be just on/off. van Dyke noted that randomized blocks would be best. Gilmore brought up the spill test and suggested that might complicate the PUD test. Conder asked about the screening. Conger explained how the current system works and noted that during the study, half of the water would be screened and half would be unscreened. Martinson said the trashrack bars are 7/8" so adults won't be an issue. Fredricks said Martinson would be able to provide more details about impacts to juveniles. He would like to see some discussion about the impacts.

7.6. Rerecich asked how soon the plan could get to SRWG. Conger and Gilmore would like to send it to SRWG as soon as FPOM concurs with them moving forward. Bettin asked when PUD would like to move forward with the test. Conger said 2015. Bettin brought up some roadblocks that are more policy in nature than FPOM.

7.7. Cordie asked who is on the hook for channel repairs if damages occur during the study. This would still need to be worked out. Rerecich and Fredricks discussed the timing for SRWG. They both agreed sooner is better.

**7.8. Most of FPOM, except for BPA, was agreeable with the PUD moving forward with sending the study to SRWG.**

8. **TDA-N fish count improvements. (powerpoint available on the website)** Barrows gave a presentation about what he can do with time-compression video of fish counts at TDA-N. FPOM discussed the crowder color. Barrows suggested white would be the best option. He explained that the camera can be set to pick up fish as well or better than a human. Turbidity in the Snake River was discussed in detail. Bettin suggested Barrows look at the existing video to see what fish counters deal with. **ACTION: Moody can provide video for a busy day in September.** Barrows talked about the potential future: how a software algorithm could determine species. Lamprey and shad are easy to identify, the salmonids are a bit more difficult. Barrows showed video and discussed automated metric collection. He proposed the possibility of using video for smolt monitoring, avian paintballing, and kelt identification. Barrows said the goal is to keep the eight cameras inside the count window. Lorz asked about the down-facing camera and how critical it is. Barrows said it isn't too critical but if you have it, your accuracy increases. Zorich suggested that you wouldn't be able to see much with that downward camera due to water clarity.

**8.1.** Cordie said the plan is to have this system ready for testing in March and October at TDA-N. Fredricks wants to look at the set-up once TDA has it ready. He is concerned about making the count station too bright. Cordie suggested Fredricks check out the area before the changes are made so he has a good comparison. **FPOM was suitably intrigued by the video.**

## 9. MCN debris.

**9.1. Screen cleaner.** Dugger said he would bring plans to FPOM for input. Dugger said they are looking at lights as well. MCN is looking at LWG and the earlier MCN studies. Setter said the current light fixtures are out-dated and parts are hard to come by. FPOM discussed the merits of lights and how they could be controlled to attract fish. Setter said MCN is looking at going back to a single point light rather than a light ring, which will be consistent with approach at the Snake R facilities and lower cost.

**9.2. Debris Management.** Fredricks had recently driven up the Columbia. He noted he saw a lot of tumbleweeds in the Wanapum pool. The expectation is that once the water rises those tumble weeds will arrive at MCN. Dugger said there is a plan for dealing with the debris and will assemble a draft for further review. MCN plans to start cleaning trashracks early and often. NWW is working on getting a boat for MCN, but the arrival date isn't yet known. FPOM discussed if it would be possible for those upriver projects to not send them downstream. Fredricks asked that the project develop a debris management plan for 2015.

## 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.** 15 December – Regional change forms were due.

**10.2.** By no later than 31 December – all 2015 draft sections and change forms will be posted on the website for review at January FPP meeting.

**10.3.** 15 January 2015 - Appendix A sections are due. 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.** 22 January 2015 – proposed date for FPOM meeting to finalize FPP change forms.

**10.5.** Change forms - 2015 (new or pending further review):

**10.5.1. 15BON002** – Turbine Start-up Operation. *Pending.* 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.

**10.5.2. 15BON003** – DSM Orifice Control Table BON-7. *Pending.* Fredricks said the orifice openings are directly tied to the forebay.

**10.5.3. 15BON005** – B-Branch Entrance Gates. *Pending further review.* Not approved until FPOM reviews Schlenker's email with justification.

**10.5.4. 15BON006** – PH2 Mid-Range Operation Dates

**10.5.5. 15TDA001** – Table TDA-4 Unit Priority

**10.5.6. 15TDA002** – Removable Weirs #154-157

**10.5.7. 15TDA003** – Fish Lock

**10.5.8. 15MCN002** – Work Near Fishway. *Pending Task Group discussion.*

**10.5.9. 15MCN003** – Spill Patterns at Higher Flows

**10.5.10. 15MCN004** – Warm Water Ops Temperature Review

**10.5.11. 15IHR001** – Work Near Fishway. *Pending Task Group discussion.*

**10.5.12. 15IHR003** – Turbine Unit Operation

**10.5.13. 15IHR004** – STS Operation

**10.5.14. 15IHR005** – Backflush Orifices

**10.5.15. 15LMN001** – Work Near Fishway. *Pending Task Group discussion.*

- 10.5.16. 15LMN003 – STS Operation
- 10.5.17. 15LGS003 – Work Near Fishway. *Pending Task Group discussion.*
- 10.5.18. 15LWG001 – Work Near Fishway. *Pending Task Group discussion.*
- 10.5.19. 15AppB001 – Truck Transport Minimum #s
- 10.5.20. 15AppG001 – BON AFF picket leads
- 10.5.21. 15AppL001 – Avian Monitoring & Deterrence Plans. *Pending review. Updated and available on the FPP website.*

10.6. Potential FPP change forms.

- 10.6.1. BON split flows. Additional trigger to operate more units at PH1.
- 10.6.2. NWW transport projects. 2013 operation for columnaris needs to be included in FPP.
- 10.6.3. Overview. Getting MFRs covered in the FPP.
- 10.6.4. Appendix C Load Shaping Guidelines. Needs to be updated.

## 11. Task Group Updates.

- 11.1. Pinniped Task Group. (van der Leeuw). Wertheimer said FFU would like to provide an update on FY14 Pinniped monitoring to the FPOM at the 8 January meeting, as there was no AFEP presentation on Pinniped monitoring for FY14. Wertheimer requested that the Pinniped Task Group meet after FPOM and get feedback from the Region on future sampling design in light of potential O&M budget shortfalls. Conder said the permitting is the major NOAA fence. **Meeting scheduled for after the January 8 FPOM.**
- 11.2. TDA split flows. (Cordie) Team members include: Bettin, Cordie, Fredricks, Klatte, Lorz, Mackey, Rerecich, Stansell, Wills. Need to meet to discuss proposed change form 15BON006. **Meeting postponed.**
- 11.3. BON Ops. (Lorz) Team members include: Benner, Bettin, Fredricks, Hausmann, Lut, Mackey, Meyer, Rerecich, Wertheimer, Wills. **Meeting scheduled for after the Pinniped Task Group meeting on January 8, 2015.**
- 11.4. 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.
- 11.5. Noise impacts task group. (Setter and Conder). Team members include: Conder, Cordie, Fredricks, Hevlin, Lorz, Mackey, Setter, and others as needed. **Meeting occurred on December 18 FPOM (no audio due to a dead battery).**  
 Conder gave some background on how the Task Group formed. Setter provided a map of IHR with the 50' buffer indicated. Setter said NWW would like to know how the 50' and 100' buffers are defined and what the scientific basis is for them. NWW has edits on the FPP change forms. Fielding said the plan would be to gather baseline information. Once that has been collected, other operations can be compared to the baseline. Dugger said a drawing for MCN would be much more extensive because of all of the entrances. He said the buffer would include the powerhouse. He said it is more important to look at where sound starts to impact fish. Shuttars said he is interested in this so that all of us may be educated. Conder said he did some research and while noise does seem to reflect off the water but vibration next to a fishway will transfer through. Fredricks explained that the language is in the FPP to spark a conversation so people can discuss the issues. He said it is rare that work is ever stopped. Setter said NWW is agreeable to developing language the projects can live with while baseline data gets collected over the next couple of years. The Task Group agreed that was a reasonable approach to start with. Fredricks and Lorz said the work isn't going to be stopped, maintenance still needs to happen but this would give FPOM a chance to provide input. The Task Group felt much of the early determination should be on the shoulders of the Project bios before bringing any issue to FPOM. **ACTION: Conder and NWW will work on some updated language that leans more conservative while Fielding continues to pursue baseline data. Conder and Fielding will send their references to Mackey for her to include on**

the Task Group link. Fredricks noted the areas that are most concerning due to fish response to the entrances, exits, junction pools, fish count windows. Fielding expected to collect data at LWG for 2015. Fredricks asked if one dam a year is acceptable for NWW. It is expected conservative measures will be implemented until the baseline data can be collected. Fredricks expressed some concern about fine tuning too much. Setter asked if LWG could serve as the surrogate for all of the Snake River. Wills added that the Navy has done a lot of noise/vibration studies. While those studies are not readily available to the public, Wills suggested NWW might be able to gain access to them. Wills also brought up there was a proposal years ago to help dampen vibration at hatcheries because hatchery fish were going deaf. At that note, the task group ended.

- 12. 15-mile Creek and TDA ITS operation.** Cordie brought up the idea of opening the ITS during February. He suggested one gate. Fredricks said we need engineering to look at the proposal to see if single gate flow is safe for fish passage. Cordie said if we opened the ITS for a couple of weeks in February Faber can determine if it was successful for moving fish or not. Cordie will write up the MOC. Wertheimer suggested that RT fish will be in the river and we could use those in addition to the PIT tagged fish. Cordie said Faber thought he could get a detector in the ITS but PITAGIS didn't think it would be feasible from a cost perspective. Options include costly mods. **ACTION: Cordie will work with Faber and Rerecich to get the MOC and internal coordination started. The goal would be to get a test in 2015.**