CENWP-PM-E 30 April 2019

MEMORANDUM FOR THE RECORD

Subject: Draft minutes for the 30 April 2019 FFDRWG meeting.

The meeting was held at the Lobby Conference Room, Block 300 in Portland, OR.

In attendance:

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| --- | --- | --- | --- |
| **Last** | **First** | **Agency** | **Email** |
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| Bettin | Scott | BPA | [swbettin@bpa.gov](mailto:swbettin@bpa.gov) |
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| Conder | Trevor | NOAA | [trevor.conder@noaa.gov](mailto:trevor.conder@noaa.gov) |
| Cooper | Erin | FPC |  |
| Cordie | Bob | NWP-TDA | Robert.P.Cordie@usace.army.mil |
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| Warf | Don | PSMFC | dwarf@psmfc.org |

On the phone: Axel, Conder, Cooper, Cordie, Kiefer, Morrill, Van Dyke and Warf.

1. Final decisions or recommendations made at this meeting.
   1. December meeting minutes are still pending.
2. Outstanding action items – Rerecich sent out a Memo from hydraulic design TDA fish unit testing in the meeting invitation and it is posted on the website.
3. Update on Bonneville and The Dalles spillway erosion and rocks (Ebner) – [Handout ROV Inspection Reports on the website]
   1. Bonneville – BON has already hit the spill threshold (150kcfs) for rock movement. Rocks were removed last year. The ROV survey showed more exposed rebar in bay 13 upstream of the baffle blocks. Ebner said the rebar is not a problem at the moment but it will need to be watched for undercutting and then the rebar would have to be removed. The repairs are holding up well. The District is seeking funds to stop the rock roadway by putting in speed bumps. Bettin asked about making all of the baffles a solid wall. Ebner said no that wouldn’t help. After the repairs in 1954, they put in a solid wall instead of baffle blocks. The stilling basin floor is a foot higher on the south side. Lorz asked if there are any concerns about the bays at BON that are leaking and can’t be surveyed. Ebner didn’t think so. Conder asked why the baffle blocks have large holes and if this could contribute to the lower survival through the spillway. Ebner said the damage happened prior to 1954. Ebner explain that the flow per bay gets deflected off the deflector and goes horizontal. The flow interacting with the baffle blocks is coming from downstream to keep the spillway jet supported. If the fish are interacting with those flows then the fish are being moved back upstream. The spill pattern is very critical to keep the fish moving downstream. Ebner said there is not a strong shear zone because the return jet starts far down the river. Conder asked what is significant about BON compared to the other projects that would help explain the poorer survival. BON has a raised stilling basin compared to the drop at the end sill of TDA and JDA. The stilling basin doesn’t provide a definite pool and the design was eliminated after it was used here. There are also vertical spill gates versus tainter gates and two deflectors at work as well.
   2. The Dalles –The ROV inspection showed two surprises. Two erosion holes are forming in the ogee of bay 1. The holes are 9’ and 20’ long, 1-4 feet wide and 6” deep and have developed since the 6/7 wall was constructed. During the construction of the 6/7 wall, bay 1 was completed dewatered. Bay 1 is confined by the walls on either side and the energy is more than the bay can handle. A potential recommendation in the future is to hold the gate at a 10’ maximum to stop more damage. At this point, Ebner only recommends monitoring the situation. The second issue at TDA is rocks were found in bay10 between the baffle blocks and the end sill. Ebner doesn’t think they need to be removed and they can’t be blown out. Ebner strongly recommends not to operate 10 or 11 until 9 is running. Moving the rocks closer to the wall would be a disaster. Bay 9 already has some erosion on the wall. A reasonable explanation for the rocks being in the spillway is that an eddy could have moved the rocks during the high flows in from the outside and dropped off at 10 since 11, 10 and 9 are off losing energy. The crane has to be fixed before the trunion pin can be fixed at bay 9. There is no funding to fix this. The equipment used to get the rocks out at BON is not the same as TDA because of the depth. The rocks aren’t as big as at BON. Conder asked if spilling out of 9-11 would have good egress conditions. Ebner said that flow out of bay 9 follows the wall and it is important to run 9 in order to push the flow from 10 and 11 straight. Bellerud asked about the hole being scoured out on Bay 9. Ebner said it would be monitored. In order to have reasonable egress conditions outside of the wall, bay 9 needs to be open. ACTION: Macdonald will send pictures of the stilling basin out to the group and post on the website.
4. Update on efforts to relocate PIT tag room at Bonneville Cascades Island (Allen Brower, PSMFC) Brower gave a similar presentation to the one he gave at FPOM on the proposed plan for new antennas and building to replace the existing PIT detection on Cascade Island. It is more cost effective to have a new system rather than move the building and run the conduit away from the subsidence. The new system will cover the entire passage in the ladder rather than just orifice passage. The antenna will be the thin bodied antenna used at TDA with lamprey ramps. Conder asked if the antennas are being operated in dual mode for the half and full duplexes and the answer is yes. PSMFC would put the antenna inside the UMT if there is an interference issue with the two antennas. They would test the distance before installation. The metal picket leads would not interfere due to the shield inside the antenna. The current system is working and will be used until it fails. This topic will continue to be coordinated at FPOM.
5. Quick updates:
   1. John Day Turbine Rehab (Medina/Lipski/Rerecich) – [Handout] The PDT is working on the draft final report and the FFDRWG review will be in June. The plan is to replace 14 of the 16 turbines but trying to keep the language flexible in the contract incase all units need to be changed. Lorz asked about modifying the draft tube and Rerecich said all options are on the table. Bettin asked if the remaining two units would have a pin issue and Rerecich the remaining two units would be Kaplan. The mix of how many fixed and Kaplan units is not known. The plan is to replace 1 or 2 units a year. There are no plans for the skeleton bays.
   2. The Dalles Fish Unit Turbine Rehab Phase 1A (Bluhm/Schroeder/Rerecich) – [Handout] The report will be sent out in May and comments are due by 15 June. The PDT recommended two Kaplan units but due to construction duration, they are reconsidering. The AWS plus one unit was tested in November. The one fish unit was run at typical flow and with the AWS, the total came to ~3900-4000cfs. No observable issues were seen during the test. There were inconsistencies between the SCADA computer and the actual readings. The east was in criteria, the west was in criteria but the south was slightly out of criteria. After factoring in the AWS flow that could be used during construction, the PDT changed the preferred alternative to the second option for a cost savings of $3.6 million. Bettin asked about how the $5.5 million dollars in lost revenue (by running the AWS) was factored into the equation. Bettin would like the contract sped up to avoid these lost generation costs. Rerecich said he will bring this up to the PDT. Bellerud doesn’t want to use the system unless it is an emergency instead of as a supplemental supply. The fixed turbine would have about the same range as the current turbines. There was an alternative to upgrade one turbine to run the whole ladder but it would not be possible to have the ladder in complete criteria. Lorz has concerns about using the AWS for two years. The PDT will discuss the long term reliability on the AWS. After the AWS is fixed, Lorz would like to see the AWS run for a month for another test. Bettin wants to know how much run time is needed to conclude that it is acceptable. Schlenker said he has inspected the penstock of the AWS twice and it looks good. The flooding was due to a poor choice of valves.
   3. The Dalles East Fish Ladder AWS Backup (Wright/Rerecich) – [Handout] The AWS is operational as of March. The follow-on contract will include items like electronics, ease of use modifications and safety issues for personnel and should be completed by the end of the year. Rerecich doesn’t think there are any funding issues even though it is CRFM funded. The system can be run in manual but it takes about 3 hours to employ.
   4. B2 FGE (Medina/Roshani/Rerecich) – The funding has been cut for this project and reallocated to higher priorities. The PDT has stopped all work and will restart next FY. Conder thought the modification to MU15 would still move forward including the hydraulic evaluation. NOAA, BPA and CRITFC expressed concern over not moving forward on the evaluation. The topic needs to go back to SCT.
   5. Bonneville PIT Feasibility - (Ament/Bannister/Royer) – There is a team to look at the feasibility of adding PIT detection at BON. Jeff Hicks is the lead. The scope is looking at all of the downstream passage routes on BON. The outfall has been removed as a potential location due to the flows and logistical concerns. The floating barge downstream of the outfall project that was previously presented at FFDWRG is moving forward with BPA. The contract is in place. The barge will be placed near Ives Island on the WA shore line in the next month. There is a sea lion deterrence fence on the barge. VanDyke would like all locations on the table for the COE study and Royer confirmed that all sites on the project are but BPA is looking at the downstream sites. There are two separate efforts going on: the COE is looking on BON project and BPA is looking at downstream. Axel said they are concentrating on the debris shedding function. Morrill will speak directly with Gordy about the work.
   6. Lamprey Minor Fishway Modifications (Turaski/Knowles/Walker) – JDA LPS pumps failure. The new pumps were secured with PVC but due to higher than expected velocities, the pumps broke free. The old pumps were reinstalled. The well that the pumps were in was thought to be plugged but it was not.
   7. Lamprey Passage Structures (Bluhm/Schroeder/Walker) – No update.
6. Interim BiOp terms & conditions and conservation measures (Conder/Bellerud) – The 2019 Bi OP was signed in late March. It is a no jeopardy opinion and is a two year interim Bi Op. The flex spill operations were included. The next Bi Op will have different recommendations. Conder would like everyone to think about improving survival in the spillway at BON and the MCN overshoot research. Lorz asked about how delayed mortality was looked at. Conder said that the Bi Op looked at delayed mortality in terms of a sensitivity analysis and that the next Bi Op will continue to address that issue. Lorz thinks that the methodology was not complex enough and it is not route specific. Conder suggests using the cooperating agency route to express concerns.

**Next NWP FFDRWG Meeting:** 6 June 2019, from 09:30-12:00