CENWP-OD 06 October 2020

MEMORANDUM FOR THE RECORD

Subject: Draft minutes for the 06 October 2020 Willamette Fish Facility Design Work Group meeting.

The meeting was held via conference call. In attendance:

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| **Last name** | **First Name** | **Agency**  | **Email** |
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**Meeting Purpose:**

Finalize previous meeting notes. Provide an update on status of active design projects.

1. Final decisions and recommendations made at this meeting.
	1. September minutes were approved.
	2. Mullan requested the full name of the FLAC model acronym.
	3. Due to the lack of funding for many projects in FY21 and therefore, a lack of updates on the projects, WFFDWG agreed that a monthly meeting may not be necessary. All meeting appointments will stay on the calendar. If there are not enough project updates that warrant a meeting, Khan will send out a cancellation notice a week or two before the meeting with a brief written update.
2. Updates on active design/construction projects.
	1. Fall Creek AFF – Hicks said that they are getting ready for the third year of pipe lining. Mobilization will start in the next two weeks. Last year, the pipe spools on the fish horns were a pinch point that prevented the contractor from doing the pipe lining work. This year, the spools will be removed first by a mechanical sub-contractor. An ROV will then be able to go into the pipe. The work window is October to the end of January. Hicks anticipates this being the last year of the pipe lining contract. The lining goes from the intakes to the fish horns.
	2. Cougar DSP 2.0 – Hicks has been working with Tetra tech to bring three alternatives forward to the 90% report. The contract modification was successful and Tetra tech will be providing the report to the Corps by the end of October. The report will then be reviewed by BPA followed by WFFDWG. The contract with Tetra Tech goes through February. The FLAC model efforts are also progressing. The safety folks require modeling to see how the dam functions under the operational changes. The model makes a 3-D mesh of the dam and is run against the different reservoir levels to see if there are any potential dam safety issues like sediment build up, cracking or other issues. The results will be incorporated into the 100% not the 90% EDR as an appendix. The next report review will be late November/early December. Spear asked for a review of the timelines. The Tetra Tech contracts ends in February and should have the EDR report completed by 23 February. The FLAC model will finish in February /March. The FLAC model results will not be in the 90% EDR review. Mullan asked for the **FLAC acronym** stands for. Mullan also asked which three alternatives are moving forward and if there was any past data on drawdowns being used from the construction of the temperature control tower. The three alternatives are the diversion tunnel at 1290 with the existing RO, the modified penstock in the diversion tunnel as a secondary outlet using reservoir elevation of 1420 and the diversion tunnel at 1340 with the RO as a secondary outlet. Each of these are much lower than the existing operation elevations which is why there is a dam safety concern. There are two different diversion tunnel elevation alternatives. Mullan asked if during the construction and repairs of the temperature control tower, were there opportunities for collecting data for the modeling. Hicks said that the cyclic loading (wetting/drying) effects over many years is unknown and why they need the FLAC model. Mullan said it seems like the capacity of the diversion tunnel and penstock that is most important. Hicks is working through those details with Tetra Tech.
	3. Detroit Temp Control and DSP – The big effort in FY20 was working with ERDC to do a physical model of the stilling basin including the penstock. ERDC implemented a new policy requiring all drawings to be completed before the work could start. Once all the drawings had been approved, ERDC came back with a new scope of work that had a cost estimate $500K higher than expected. The PDT doesn’t have sufficient funding for the physical model. They will continue to request the money but have put a hold on the ERDC model. The PDT is wrapping up the NEPA comments and then it will be put on the shelf. Kelley asked how the project will move forward without the physical model. Hicks said that they need to validate the critical design and hydraulic assumptions before the design for TCT can be complete. In the budget process, they can list their capabilities, but they need more appropriations from Congress or OMB. Kelley asked for confirmation that the project isn’t necessarily mothballed but it is stalled until funding comes through and Hicks agreed with the description. Khan said that Detroit is one of the projects that cannot have future design work until funding comes through. All design work has stopped. The PDT will wrap up the EIS. Mullan asked if there are any design questions holding up the EIS work that won’t be answered and if the EIS work is funded. Khan said that funding is at steering team not the technical meeting. Hicks said he doesn’t see any issues with wrapping up the EIS. He doesn’t anticipate any questions that would stop it. Khan agreed that the physical model was to validate assumptions and should not hold up the EIS.
	4. High Head Bypass (HHB) – The funding for the PDT ran out in September. The final DDR document was sent out to the group for their own files. The PDT is considered inactive until funding comes through and there is no FY21 funds budgeted. The Corps will continue with the RME study on copepods. Field work starts next week. Khan will give updates of the studies at RME.
	5. Foster DSP - Fish Weir Design Improvements – This project is also inactive due to a lack of funding in FY20 and there is no funding for FY21. The final DDR was sent out to the group last week with the CFD modeling results. An interim spill plan in lieu of the fish weir is in place for the spring and fall months. The interim spill will continue for the next couple of years.
	6. Cougar DSP FSS – FY21 funding is available to complete the 90% Plans and Specs package. All comments will be addressed, and the team is revising the DDR Plans and Specs package accordingly. Budai said that there is funding for a theory of operation plan which makes sure the project is a feasible concept. The funding doesn’t cover any design work including of the two new items – the RO by-pass gate and the blow out panel for the power rejection issues. The issues are documented in the DDR as issues that need to be addressed. Mullan asked if the High Head Bypass outcome will change the design of the FSS. Budai said that the FSS design does include space for pipes for the HHB but at this time HHB isn’t continuing. Mullan has concerns about doing a theory of operation when the results of the HHB project could completely change the operation. Budai said that the theory of operation of the FSS is make sure that it functions as it should. Mullan asked if the theory of operation would be redone if HHB is used in the future. Budai said that the FSS is still important to collect the fish even if the HHB is used instead of trap and haul for transport. The connections are at the back of the FSS. If HHB is used, then there would be changes to the FSS and there would be a new theory of operation of that section. Khan agreed with Budai that it is not a waste of time because the team still needs the FSS to collect the fish. Budai clarified that using the HHB would not just be connecting pipes at the back end of the FSS but would also require some modifications. The PDT will be creating a document that states what is left to be done on the project for when it is fully funded.
	7. Foster AFF Ladder Improvements
		1. Discussion on the juvenile fish screen – Comments were received on the 60% DDR report. The team is addressing the comments now. There is an issue with the juvenile fish screen that the team was discussing with NOAA and wanted to bring the whole WFFDWG team up to speed on. The PDT is working towards the 90% DDR with an internal review starting in late November. When the 60% DDR was presented, the team knew that there were some big construction and maintenance challenges with the design of the juvenile fish screen. It was projecting 50’ off the dam. As the team focused on the screen, they wondered if the NMFS by-pass criteria applied to the screen in a reservoir. The team reached out to Jundt on how to apply the NMFS criteria. Jundt told them that in this case where the idea is not to move fish into a by-pass but exclude fish from a pipe then the angle flow criteria and the sweeping flow criteria would not need to apply. However, in this situation, they would need to keep their approach velocities much lower than active screen velocity criteria. Based on that discussion, the team is looking at changing the alignment of their screen parallel to the dam. The structure can then swing in closer to the dam. They need to verify the structural analysis to make sure it is feasible. The approach velocity target is 0.25ft/sec. The second issue that the team was focusing on was debris. Pushing the debris into the spill way side of the screen would not be effective if the spill gate wasn’t open. Based on those two things, the team is looking at a screen that is parallel to the dam face at a small angle using a vertically operated brush to lift the debris the road deck level. The debris could then be manually removed. Dunlop asked for feedback on this path. Jundt tracked down a second example of a vertical screen application and will send it over. Dunlop was very appreciative of the help from Jundt. This new information will be in the 90% report. The target for the report WFFDWG review is January 2021. Late November is the internal Corps review. Dunlop asked that anyone with helpful advice to reach out to her. Watts said that he supports the direction that the Corps is going as long as they are addressing the debris issues.
	8. Discussion on the frequency of our regularly scheduled meetings – Since four design teams are going inactive for the foreseeable future, Khan is proposing to have fewer meetings. Khan recommends leaving the calendar invitation in place and he will send out cancellations if the meeting is not needed. A brief written update would be sent out in place of the meeting. The Cougar 2.0 team will do a presentation for their upcoming review in December and the Foster Fish ladder team will do a presentation in January so those meeting are necessary. Khan is not expecting anything new for November and would like to cancel it. NMFS – Mullan agrees with the proposal for now but will reconsider if the projects get funding. Jundt deferred to Mullan. ODFW – Reis agrees with the approach. BPA – Spear concurs. Grande Ronde - Schwabe concurs. If a meeting is cancelled, Khan will send out a cancellation a week or two before the meeting along with a brief update.
3. Next Steps
	1. Next WFFDWG meeting currently scheduled for November 3.