

## MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 01 October 2019 Willamette Fish Facility Design Work Group meeting.

The meeting was held in the Fireside Conference Room, USACE Block 300, Portland, OR. In attendance:

Last name	First Name	Agency	Email
Ament	Jeff	NWP-PM-F	<a href="mailto:Jeffrey.M.Ament@usace.army.mil">Jeffrey.M.Ament@usace.army.mil</a>
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Ziller	Jeff	ODFW	<a href="mailto:Jeffrey.S.Ziller@state.or.us">Jeffrey.S.Ziller@state.or.us</a>

On the phone: Boyd, Janes, Kelley, Loffink, Mullan, Reis, Schwabe, Scott, Skiles, Taylor and Ziller.

**Meeting Purpose:**

Finalize previous meeting notes. Provide an update on status of active design projects and discuss the Detroit SWS 30% P&S and High Head Bypass Cougar Alternatives.

1. Final decisions or recommendations made at this meeting.
  - 1.1. September meeting minutes were approved.

2. All supporting documents for this meeting can be found at:  
[http://pweb.crohms.org/tmt/documents/FPOM/2010/Willamette\\_Coordination/Willamette%20FPT/](http://pweb.crohms.org/tmt/documents/FPOM/2010/Willamette_Coordination/Willamette%20FPT/).

3. Upcoming Review Dates

<b>Document</b>	<b>Review Dates</b>
Foster Ladder Draft Assessment Report	October/November
Foster DSP 60% Plans and Specs	October/November
Cougar physical model construction	February
Cougar DSP 90%	November
Detroit SWS 30% Plans and Specs	Closes 15 October
High Head Bypass 30% report	October/November

4. Updates on active design/construction projects

- 4.1. Fall Creek AFF – The PDT is still addressing the follow up contract. Jeff Hicks is the new PM and he is planning on coming to the next WFFDWG meeting.
- 4.2. Cougar DSP – The team is working on the design and making updates on the DDR. The next report is the 90% slated for November but it might be delayed.
- 4.3. Cougar DSP 2.0 (new PDT) – The contract was awarded on 27 September to Tetra Tech. The contractor is available 22 or 23 October for the workshop. Khan will set up another Doodle Poll for this all day workshop. NMFS is available on the 23<sup>rd</sup> but not the 22<sup>nd</sup>. Low will ask the contractor for additional dates. The report schedule is 50% in January and 90% in April. Jeff Hicks will be the PM as well.
- 4.4. Detroit Temp Control and DSP – SWS 30% P& S was sent out and the review comment period is open for another two weeks. Bell gave an overview of the project, highlighting the changes. The generator is on the top deck currently but it may be moved below later on. The 30% P& S structural drawings show the wrong penstock bifurcation but it is correct in the mechanical design drawings. Kelley asked what the reservoir will be drawn down to make the access road. Ament said they are not going below the minimum pool but it is a good question for the review comments. An IEPR is going on right now and it will take a couple of months. Loffink asked under what conditions the Cumley Creek crossing would be present and for how long? Would the crossing be backwatered by the reservoir? The use of half pipe culverts on a low water crossing or vented ford will not meet fish passage criteria when the crossing is not fully backwatered by the reservoir. This crossing will need to be designed to meet ODFW fish passage criteria if the crossing is to be in place when Cumley Creek is flowing through the crossing. The civil engineer was not present to answer. Ament suggests sending the written comment into the review and add what ODFW usually does in this scenario.
- 4.5. High Head Bypass – Woolbright reminded everyone of the six alternatives that were developed at the workshop. These alternatives were then evaluated by the contractor with COE in a matrix. The ODFW 7<sup>th</sup> alternative fell outside of the conditions the contractor was hired to consider and evaluate, so it is being worked internally and was not evaluated by the contractor. The matrix criteria is weighted by comparing each of the factors against each other. The engineers and biologists came up with the ranking numbers internally and with the contractor. The criteria judgment is by feel of how difficult a project is or comparing to like Green Peter which has a

system already. The vertical pipe inside the old tower and the telescoping pipe will not be moving forward based on the matrix. The matrix will be sent with the 30% review. Ament suggests playing with the matrix to see if any adjustments need to be made. **ACTION: Kovalchuk will send the August HHB presentation to Mullan.** Woolbright asked if one of the six alternatives works with the full range of forebay levels and passes fish, what value does reviewing the ODFW alternative have. Ziller explained that the 7<sup>th</sup> choice was a middle ground for the alternatives where the water would be kept at a set level to reduce mechanical difficulties and handling of the fish. The ODFW alternative is truly volitional. Eliminating the variable head does make it easier to design but the helical pipe would work over all the forebay levels. Loffink said that the ODFW alternative also could reduce issues associated with reservoir delay. Ziller thinks it would also improve the hydrograph downstream plus have added flood capacity at the dam. Ament asked if there are any concerns with dropping the two alternatives. NMFS was fine with dropping the two choices; ODFW was disappointed because the telescoping pipe had potential. The telescoping pipe would be very difficult to engineer and since it is under water most of the year, OM would be a huge cost. Grande Ronde did not have any issue with dropping the two choices.

- 4.6. Foster AFF ladder Improvements – [Handout - Spreadsheet] Brett Boyd, ODFW facility manager, tried some Operational changes to improve ladder conditions. At the end of August, only 177 Chinook (70 females) had returned but they needed 300. Fish were holding in the last ladder step and seemed to be struggling against the flow. Boyd adjusted the flow by 50% and fish started coming into the presort pool. Boyd had lowered the main gate for the ladder and diverted warmer water from the upper penstock to mix the water. On 01 September, the spill operation started. Once the spill operation started, there was a 4° temperature increase and immediately fish were coming in. Fish were trying to get into the old entrance near where the juveniles are located and they had to fabricate a weir to trap on the hatchery side. The side entrance had to be open as well and then they added AWS pumps to recirculate the water. After the operational changes and the spill, the collection had another 750 adults and 460 were during the first week. The old ladder was in operation from 9/1-9/16. After the fish were no longer holding in the TR, then they put the hatchery side back to normal configuration. Boyd had wanted a contractor to pump water to the presort pool but it didn't work out so they tried these operational changes as a last ditch effort. Prior to the spill, fish were holding right on the edge of the ladder flow right in the shade of the powerhouse. This was the first year since 2013 that the fish weir was not operated passing warm surface water during the summer. Taylor went over a handout of rough return data. The data shows the majority of fish returning in July which is late. In 2015, the return timing was more of a typical year for the system although different for Foster. Taylor believes that temperature is driving the returns. Not having the fish weir spill warm water highlighted how big the problems is. The temperature is only a couple degrees different between the two conditions (no spill/spill) and the fish react dramatically. The old weir was 200cfs and the new weir is 450-500cfs. Boyd suggests putting an emphasis on matching the ladder temperature to the river not just warming the river and Khan agreed. Boyd thinks the reduce ladder flow really helped and having the smell from the juveniles in the AWS water is critical. Royer said that the PDT has added the juveniles scent to their list. Budai said that the PDT is looking at a new small pond for juveniles with plumbing to the presort pool. The fish weir is not going to be fixed by next year. Khan wants everyone to think about next year adult returns and

what to do without the surface flow. Boyd asked about a temperature criteria but Taylor said it is a flow requirement through the project not a temperature requirement. Buccola added that there is an Oregon State standard that the water should not exceed 17.8°C from RM 0 to 25 in the South Santiam during summer (ODEQ standard).

- 4.7. Foster DSP - Fish Weir Design Improvements – The PDT is working on 60% design but the modeling is held up while getting the license for a 3D model. By the November meeting, the team should have some results. EDR report comments were received. The 60% Plans and Specs report should be out in the next couple of weeks. Since the weir can't be used, the spring spill operation will continue for this fall. BPA concurred with the night spill. The operation will run October 15 - December 15 to match the peak out migration of chinook.

## 5. Next Steps

- 5.1. Next WFFDWG meeting currently scheduled for November 5
- 5.2. Upcoming reviews - Detroit 30% Plans and Specs is out currently and three reports for Foster and HHB are coming up this fall.