

## MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 02 April 2019 Willamette Fish Facility Design Work Group meeting.

The meeting was held in the Lobby Conference Room at Block 300 Building in Portland, OR (NWP). 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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| Janes      | Kelly      | NWP-PM-E          | <a href="mailto:Kelly.A.Janes@usace.army.mil">Kelly.A.Janes@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: Hudson, Kelley, Reis, Royer, Schwabe, Scott and Ziller.

### Meeting Purpose:

Finalize previous meeting notes. Provide an update on status of active design projects, a presentation and discussion of the Detroit SWS 90% DDR, and an update of the Detroit EIS.

1. Final decisions or recommendations made at this meeting.
  - 1.1. The March meeting minutes were approved.
  - 1.2. The regional site visit to the Cougar physical model is 01 May 2019.

### 2. Upcoming Reviews

| Document                       | Review Dates |
|--------------------------------|--------------|
| Cougar DSP 30% Plans and Specs | April        |
| Cougar DSP 60% Plans and Specs | August       |

|   |                 |
|---|-----------------|
| Cougar physical model site visit          | 1-May           |
| Detroit SWS DDR90%                        | April           |
| Detroit FSS DDR 95% new tower location    | May             |
| Detroit EIS                               | Closes 30-April |
| Foster Ladder Draft Assessment Report     | end of June     |
| Foster Ladder DSP supplemental EDR Report | April           |

### 3. Detroit SWS 90% DDR presentation

The SWS will be built before the FSS. Fortuny highlighted the trash racks that will cover the high intake and low intake weirs. The 90% DDR should be out next week for review. The 95% FSS will be out in May. The upstream mooring structures have been removed but there are still moorings at the back. Mullan asked for the drawings to be labeled in the next DDR; Fortuny said that they will be. The COE received comments on the SWS 60% DDR and Buccola's presentation is an attempt to address the temperature comments and changes made. Buccola modeled the temperatures at the high intake weir with different flows. The team is trying to weigh the options of using the water to help attract adults by putting 50% of the total flow through the FSS in Sept- Dec. The 50% fall scenario is 50% of the overall flow not 50% of the target flow. This operation would increase temperatures. A new graph was added to show how often the water temperatures could stay on target using the SWS compared to the existing system. Mullan asked about modeling more of the normal years and appreciated the new graphs to help answer some of her questions. Dishman said it was hard to understand when the criteria was violated in the report and felt that this new graph was helpful showing the target range. Ziller asked if the Detroit gates could operate under the full range. Ament said yes, the FSS will collect fish all year round. Buccola used the extremes of hot/dry and wet/cold as the range and could use 2016 as a more normal year but then there is a question of what normal is now is. Dishman would like to know how often the scenario is likely to be closer the hot/dry or cold/wet. The new estimated emergence timing graph was simplified to show the difference between the existing scenarios and with the new structures. The graph is hypothetical based on temperatures not on actual fish that were caught emerging data. Mullan asked if the operations of the SWS would increase the number of later spawners or the early spawners since the graph indicates the most change to the outliers. The PDT is unsure exactly how it would change. Dishman said that this relates to pre-spawn mortality with the accumulation of thermal stress. There are some RME researchers that have data on this topic like Jim Peterson or U of I. The PDT recognizes that these operations are a balancing act of juvenile collection and adult impact. A new subsection is acclimation analysis looking at the temperature difference between the FSS (where fish would be collected) and Minto (where fish would be released). Fish may need to be temperature acclimated since the difference was up to 8°. Temperature blending possibly as low as .5C every fifteen minutes is being looked at and this will affect the design of the structure. Fielding said there are acclimation ponds at Swift but not sure if they are used. Kelley wants the team to keep in mind the stress of going through the FSS, adjusting temperatures and then trucking the fish. Dishman suggested looking at diel patterns of moving fish. Pendleton Round Butte went to night time operations to help stress. The temperatures in the graph are daily averages. The volitional passage method would have no way of acclimating the temperature; a truck could slowly change the temperature. Ziller said that bringing fish from warm water to cold water is not as critical and thinks that there is data out there on this topic. Baker might have some acclimation ponds but the temperature is not adjusted. Ziller asked if November and

December was modeled. It was but it wasn't shown because the model is stable at that point and doesn't have the temperature difference like July – October. Ament said that the operation has some tradeoffs for adults and juveniles. Penstock Bifurcation is a backup system to collect surface water if the FSS is down for maintenance or an emergency. Schlenker is still working on design for the interior structures.

4. Detroit EIS – Janes sent out an AMERDEC link of the word document of the EIS and the appendices in pdf. The review is open through 30 April. Comments in the fish section has some data gaps that she needs help with. The analysis is light on chub and other benthic critters and Janes is waiting on specific comments from ODFW. There is no schedule cushion and Janes stressed the comments are due on time. The public comment period will start on 24 May for 60 days during which time three public meetings will be scheduled. Janes explained what to expect in the document. Dishman asked about if the turbidity has been modeled; it has not. The dam can catch the bigger debris but this is the fine sediment that doesn't fall out. Contaminants isn't an issue here. In a deep drawdown, the sediment would go out in one slug but the lower slow drawdown would have continuous turbidity issues. Janes explained the graph showing the variable drawdown in alternative 4. The 1300 is lowest the operators would allow but the Bi Op flows limited them to 1450. Kelley said that steelhead are spawning during the May-June timeframe when the dam is at minimum flows while refilling dependent on weather and questioned whether or not the downstream redds would be uncovered. Janes said that it is noted in the document that redds could be uncovered. Mullan suggested looking at the ramping rate during this period. Flood control would be monitored. If there is a hot dry year, the 1450 might be difficult to reach. Janes pointed out that the EIS tries to capture the worst scenarios not the most common ones. **The COE proposed action is alternative #5 - build in the wet.** The Oregon State Park and Recreation Maintenance area was chosen as the assembly location. The south shore road will need to be rebuilt. The COE will be building a boat ramp for construction and for FSS personnel that will not be open to the public. The dam road will be closed. The total economic impact to the area is the driving force behind choosing alternative 5. The major economic impacts are different than the Marion County estimate because they included hydropower and fish concerns that the COE does not. The agriculture impacts are due to the stored water rights and losing the irrigation water. The major fish and wildlife impacts for alternative 5 are from the underwater blasting. Mullan is aware of some mussel studies funded by the Willamette Riverkeepers that she can ask for some additional data. The report does not have an estimated value because contractors would bid up to the estimate.
5. Updates on active design/construction projects
  - 5.1. Fall Creek AFF – The adult ladder has several more items to finish in the October timeframe. The pipe lining is also on hold until the fall.
  - 5.2. Foster DSP and AFF ladder –
    - 5.2.1. DSP – PDT has decided on the alternative that creates a plunge pool with the Obermeyer weirs that the team had presented last month. The team is doing hydraulic modeling and brainstorming guides for the sides of the flow. The supplemental EDR will be ready for review in April with an update at the May meeting.
    - 5.2.2. AFF ladder – Budai said that the team is starting to model to establish target temperatures using 55° in May and 60° in June. They are evaluating using spill at Green Peter and holding the reservoir down to meet the targets. The team wants feedback on whether the temperatures should change to 50° in May and 55° in June. When the adult ladder was

redesigned, the intakes for the water supply were deep supplying colder water. One benefit of the colder water is disease control for the holding ponds. The same water feeds the ladder and the holding ponds, so if the supply water is warmer, it would be warmer for the holding ponds as well. Kelley asked how much warmer. Budai said the water will be at the target temperatures of May and June ~55-60°. Kelley thought it would be okay but she will double check with her colleagues. Kelley said she thought the adult Chinook will need 55° to start moving. Dishman asked if the ponds could have a different source of water by using diffusers or other methods. Budai said that they were not aware of this issue at the last presentation and it would be very complicated to have two different temperatures. Dishman would like the flexibility for two different temperatures. Diseases start to increase at 60°. Budai suggests emailing Khan with guidance on temperatures. Budai requested that Brett Boyd call in next time to help answer any questions. Kelley said that she could request his presence with advanced noticed.

### 5.3. Cougar DSP

5.3.1. Update on the fish transport methods – The team was planning on using an amphibious vehicle but due to concerns of maintenance and road upkeep, they have decided on a custom design lander. They will still need to widen the road and can still use the slips. The design will be customized to minimize sloshing around. The decision was made after the 30% package went out so the AV is still in the report.

5.3.2. Update on the 30% Plans and Specs to prepare the Group for the 30% P&S review – The report is so big that it was divided into six volumes. Tarbox suggested focusing on volume 5. Tarbox asked if anyone was interested in the Geo tech baseline report but Fortuny did not recommend sending it out. The 30% Plans and Specs will be similar to the 90% DDR. Tarbox asked if anyone was interested in the Specs and Mullan said that Jundt would be. The 60% PS report will be out for review mid to late August. The 30% will be out in mid-April with a 30 day review which will overlap with the EIS. The 30% is drawings and specs with no report.

5.3.3. Potential dates for the WFFDWG to visit Cougar physical model – The site visit is scheduled for 01 May. Fielding will get an agenda. Alaska airlines has a flight that goes to Everett.

5.4. High Head Bypass – Comments were received on the design parameters report. The team is still working on getting a contract for the two EDRs. The brainstorm meeting can't be scheduled until the contract is in place.

## 6. Next Steps

6.1. Next WFFDWG meeting currently scheduled for May 7 at ODFW Office in Salem. Foster fish weir presentation.

6.2. Upcoming reviews