

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 04 December 2018 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	Jeffrey.M.Ament@usace.army.mil
Budai	Chris	NWP	Christine.M.Budai@usace.army.mil
Dishman	Diana	NOAA	Diana.Dishman@noaa.gov
Eppard	Brad	NWP-PM-E	Mathew.B.Eppard@usace.army.mil
Fielding	Scott	NWP	Scott.D.Fielding@usace.army.mil
Fortuny	Kristy	NWP	Kristina.R.Fortuny@usace.army.mil
Griffith	David	NWP	David.W.Griffith@usace.army.mil
Hudson	Mike	USFWS	michael_hudson@fws.gov
Jundt	Melissa	NMFS	melissa.jundt@noaa.gov
Khan	Fenton	NWP-PM-E	Fenton.o.khan@usace.army.mil
Kirkendall	Keith	NOAA	Keith.Kirkendall@noaa.gov
Kovalchuk	Erin	NWP-ODT-F	Erin.H.Kovalchuk@usace.army.mil
Mullan	Anne	NMFS	Anne.Mullan@noaa.gov
Murauskas	Josh	Four Peaks Consulting	jmurauskas@fourpeaksenv.com
Reis	Kelly	ODFW	Kelly.E.Reis@state.or.us
Rerecich	Jon	NWP-PM-E	Jonathon.G.Rerecich@usace.army.mil
Richards	Natalie	NWP	Natalie.A.Richards@usace.army.mil
Schlenker	Steve	NWP	Stephen.J.Schlenker@usace.army.mil
Schwabe	Lawrence	Grand Ronde Tribe	Lawrence.Schwabe@grandronde.org
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Walker	Ricardo	NWP-PM-E	Ricardo.Walker@usace.army.mil
Weiland	Mark	Four Peaks Consulting	mweiland@fourpeaksenv.com
Ziller	Jeff	ODFW	Jeffrey.S.Ziller@state.or.us

On the phone: Hudson, Murauskas, Reis, Schwabe, Tarbox, Weiland and Ziller.

Meeting Purpose:

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

Need presentation added to the website.

1. Final decisions or recommendations made at this meeting.
 - 1.1. NMFS requested additional time to review last month's minutes. Comments on November's meeting minutes are due on Monday, December 10, 2018.

1.2. Comments on the Cougar DDR need to be in by 07 December 2018.

1.3. Supporting documents for this meeting can be found at:

http://pweb.crohms.org/tmt/documents/FPOM/2010/Willamette_Coordination/Willamette%20FPT/2018_December/.

2. Schedule of reviews

Document	Review Dates
Cougar DDR	Comment period closed on 07 Dec
Cougar Draft EA	Comment period closed on 06 Dec
High Head By-pass Report 60%	Delayed – new date January
Detroit revised SWS 60% DDR	First week of January
Detroit SWS DDR90%	March
Detroit FSS DDR 90%	Sending out this week
Detroit FSS DDR 95% new tower location	March/April
Detroit EIS	February/March

3. Updates on active design/construction projects

3.1. Fall Creek AFF – The contractor is addressing several repairs on the adult ladder. To fix the dewatering issue, the request for proposal has been finalized and the contractor has to submit a cost estimate. The pipe lining is being worked as well.

3.2. Foster DSP and AFF ladder

3.2.1. Foster Weir- The PDT is looking at modifications to the weir to address the injuries seen during the RME testing. The team is working on CFD modeling to inform the flows at the weir and will update this group on progress in January/February.

3.2.2. AFF ladder – The RME testing has been completed and ladder temperature has been identified as the problem. The PDT has to recruit new members to the team and will start in January. The team will start with a brainstorming session. There will be no more RME studies until the alternatives have been decided. If there is a gap in data then a study could be proposed. Reis asked how agencies can contribute to the brainstorming and Khan said that the PDT will present at a future WFFDWG meeting. Dishman suggested working with the Detroit PDT for temperature modifications. Fortuny pointed out that Schlenker is on both teams.

3.3. Cougar DSP – The review period ended on 03 December but NMFS requested additional time. Budai said it is imperative to stay on schedule due to the different reviews going on at once and the team will be starting Plans and Specs this month. The naval architect contract was awarded last week. This contractor is a different architect and marine designer than from the DDR phase. The physical model is behind schedule. Testing may occur in January and site visits will be scheduled (dates TBD). The goal of the physical model is to verify the internal hydraulics of the FSS and the entrance configuration. Reis

said that she had 10 December on her calendar for the DDR review deadline, which was the error date sent out in the first email with the DDR. Fielding pointed out that another letter was sent out with the correct date (03 Nov) and stressed that the comments should be in as soon as possible. USFWS and ODFW will be sending in comments. Grande Ronde (Tribe) will not be drafting comments due to time constraints.

- 3.4. High Head Bypass – [Schedule Handout] Ament shared a schedule that had been internally approved. OSU is conducting a study to evaluate copepod infection protocols and will be conducting lab studies to inform potential field studies of truck and transport versus pipe bypass. Although no field test is planned at this time, there is a place holder for a potential test at Detroit to evaluate the RO (test conduit) as a passage route and possible tests at Cougar depending on the EDR findings. The HHB report has been sent to a tech writer and the WFFDWG review is delayed until January. The HHB team is working on the contract for the EDRs for Cougar and Detroit. The DDR should line up with the release of preliminary data of the copepod study. The schedule should allow enough time to add or change something to the Cougar FSS plans and specs, if needed. This schedule is the best case scenario. Jundt appreciated the Corps response to her request for a schedule and to see the time line and estimated schedule laid out. Ziller commented that the time at which the two phases come together seem too late to change from trap and haul to a bypass pipe. Ament said that there are several pieces going on at the same time. If the data shows that piped bypass is the direction they need to go, then they will. The COE has a process to follow and the team is following it. Mullan asked about the gap in the Detroit schedule. The temperature control tower will be constructed during that gap and the FSS comes after. **ACTION: Khan will share the schedule electronically.** Mullan asked if the copepod problem was worse at Cougar but Griff thought the problem is about equal. Dishman thought the mortality was higher at Cougar due to handling procedures but Griff said it is unclear if the handling is increasing mortality and the results may be due to the type of study involved. Fall Creek has varying copepod levels from year to year. There is some data gaps especially in the returning adults.
4. Detroit FSS 90% DDR presentation
 - 4.1. Detailed walk through of the 90% DDR to prepare the Group for the 90% DDR review – The 90% DDR will be sent out this week. The SWS 60% DDR will go out the first week of January.
 - 4.2. FSS layout – 90% DDR – This DDR is the original layout. There are several other changes in the FSS design that are in response to the new configuration. With the revised configuration, the team is looking at direct loading to pods. The collector will be much closer to the dam and a lifter could be used instead of an AV to decrease cycle times. The separator bars have 1cfs or less of flow. The separator bars are currently too short and will be adjusted in the 95%. PIT Tag detection and a counter will occur before the fish go to the pods. The pods are 250 galleons. Adult tanks can hold 90 fish at 60°F

water. Fortuny said the number of pods might be reduced to save space for the operator to walk around. Jundt asked if pods could be added, if needed. The pods will be shuffled in cycle and more could be added to the cycle. Fielding asked about PIT detection for adults and strongly recommended adding it. Jundt suggested adding the detection to the flume. The entrance design has a ramp that has been reduced in height behind the trash rack. The ramp slope will be extended to make it more gradual. Jundt said that fish will hang out in the stagnation spot and extending the ramp slope would help alleviate this. Jundt mentioned a perf plate that moved with the ramp used at another facility but Schlenker doesn't want to another moving part. The goal is to have 4fps at the trash rack similar to projects on the Columbia. The corner will still have a slower zone but it will be positive flow moving towards the weir. The entrance geometry is rounded. Fielding suggested that the Cougar physical model could help the Detroit team decide on their entrance geometry. The trash rack has narrower spacing in the top four feet. The size of the FSS is a major concern especially with the O&M costs. The PDT is always looking for ways to make it smaller and screen size could help. The AE will evaluate different screen velocities at the primary screens only. Preliminarily, almost every scenario is over fry criteria but the risk/reward will be evaluated. The PDT needs to figure out the details of how far out of criteria and for how long. Jundt says she need to see the tradeoffs to make recommendations. There is only water burst cleaning in both primary and secondary screens – no brushes. Jundt is wondering about the velocity profile through the screen area since this is a very aggressive approach. Schlenker said that the team has made the decision to narrow the screens which will improve the screen velocities. The team just received the report from R2 and they need to review the finding before they can go into more detail about the screens. The blasting cost needs to be look at and the dam safety concerns have to be addressed. It looks like a bigger blasting area than originally expected. The FSS will be now be 70' deep. The PDT will be busy trying to incorporate the R2 report into the 95%. The team will update at the January meeting. Dishman asked about moving the structure further south but the spillway gate is there. The fishing depth is 35'. The weir will help to regulate the temperature. A video of a fish eye view of the facility was shown. Khan will find a way to distribute but it is a large file. Ziller asked why there was no bypass pipe in the video. Ament said that this AE contract is only with trap and haul because the HHB effort is still ongoing. Fortuny said that even if the bypass pipe goes forward then a trap and haul space needs to be available in case something goes wrong. The AE contractor did not have the bypass pipe in the specs at all. Dishman suggested writing into the DDR places where space is being looked at for a future bypass pipe as was done on Cougar. Detroit doesn't need to do additional excavation like the Cougar does to add the pipe in the future. Cougar had to factor in extra excavation. A statement on the possibility of piped bypass is in the 90% executive summary but not any details. Ziller asked about how the FSS could connect to a piped bypass. Ament said they won't know until the EDR is ready. The HHB report

will be vetted through the group just like all the other EDRs. The Detroit EDR will be contracted out and the contractor will come up with alternatives. Ament will present the alternatives at a WFFDWG meeting and agencies can comment on them.

5. Next Steps

5.1. Next WFFDWG meeting. Next meeting is currently scheduled for January 1, 2019, Khan recommends moving the meeting by 1 week to Jan 8. NMFS reserved a meeting room. Steering team is on the same day. Fortuny will present information on the Detroit revised 60% SWS. If the meeting agenda is light then Khan will start the meeting later.

5.2. Upcoming reviews

HHB – 60% is delayed until Jan

Cougar due by Friday but sooner if possible

Detroit – 90% goes out this week; 95% March/April; 60% revised in January