Willamette Action Team for Ecosystem Restoration (WATER)
Research, Monitoring and Evaluation (RM&E)
November 26, 2018 Meeting

http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/Willamette_Coordination/Willamette%20RME/RME.html

FINAL Facilitator's Summary

(Edits provided by NMFS)

ACTION	BY WHOM?	BY WHEN?
Schedule a workshop with the FFDRWG and the PDT regarding APH-15-05-FOS	Fenton	January, 2019
Review APH-19-XX-FOS and provide comments to Fenton	RM&E Team	11/30/18
Revise APH-19-03 and provide it to the RM&E team for further review	Diana and Rachel	December RM&E meeting
Connect with researchers regarding RM&E team revisions on APH-19-03	Rachel	ASAP
Review the Steering Team meeting summaries and provide Diana and Rachel with a recap of the Steering Teams' requests regarding APH-19-03.	DSC	11/30/18
Reply to the Corp's comments regarding JPL-19-01-LOP	Diana	ASAP
Make additional revisions to JPL-19-01-LOP and circulate it to the team for additional comments.	Rich and Fenton	Prior to December RM&E meeting
Provide comments regarding revised JPL-19-01-LOP	RM&E Team	December RM&E meeting
Incorporate team comments on JPL-19-01-LOP and request a proposal for portion of the study on evaluating spring spill	Rich and Fenton	ASAP
Begin SOR process for spill operation anticipated in JPL-19-01-LOP	Rich and Fenton	ASAP

Document Review Tracking

Document Name	Document Type	Comments Due By	Comments received / forthcoming from
Cougar RO fish injury and survival study (Sensor Fish and Balloon Tag)	Final Reports	Final provided on 11/28	
Evaluation of Foster Adult Fish Trap Performance, 2019 (APH-15-05-FOS)	Pre-Proposal	November 2	CTGR provided comments
Evaluation of Chinook Salmon Fry Survival at Lookout Point Reservoir, Oregon, 2017 (USGS)	Draft report	November 2	CTGR & NMFS provided comments
FY19 Wild Fish Surrogate Proposal	Proposal	December 10	
Fall Creek Prespawn Mortality Pilot 2017	Draft report	December 21	
Evaluate interim management strategies for adult UWR Chinook Salmon at Big Cliff/Detroit Dams (APH-19-03)	Pre-Proposal	TBD - pending more info	
Evaluation of Foster Adult Holding and Transport (APH -19-XX-FOS)	Concept Paper	TBD - pending more info	
Copepods In UWR Reservoirs (JPL-19-03-SYS)	Pre-Proposal	TBD - pending more info	CTGR provided comments
Evaluation of a spring and summer spill at LOP (JPL-19-01-LOP)	Concept Paper	TBD – pending more info	COE provided comments

Participants in the room: Leslie Bach (NPCC), Diana Dishman (NMFS), Mike Hudson (USFWS), Fenton Kahn (USACE), Christine Peterson (BPA); ***Participants on the phone***: Brad Eppard (USACE), Dave Jepsen (ODFW), Jim Meyers (NMFS), Rachel Neuenhoff (USACE), Rich Piaskowski (USACE), Lawrence Schwabe (CTGR), Ricardo Walker (USACE); ***Facilitation Team***: Emily Stranz and Nancy Pionk (DS Consulting)

Welcome, Housekeeping and Updates
Emily welcomed the group and conducted a round of introductions. The team reviewed and approved the 10/25/18 summary with team member edits. Fenton reported that he is assuming the RM&E Chair responsibilities for the Corps.

Discussion Items
The group discussed the following proposals and concept papers:

APH-15-05-FOS (*Evaluation of Foster Adult Fish Trap Performance*) - Fenton reported on the outstanding questions that need to be resolved before this study can move forward:

1) whether spill can occur at Green Peter; and,
2) what other options/ideas can be explored to address temperature issues.

Fenton noted that there is a question concerning whether spill could actually occur at Green Peter. Spill has not occurred for decades at Green Peter and the Corps will need to determine whether it could safely spill and the potential impacts of any spill (i.e erosion, condition of spill gates, etc.). Additionally, a preview of the USGS modeling (not yet finalized) indicates that the three-day on/off block study treatment would not make much difference in temperature, while a 10-day on/off block treatment looked more effective. Timing, however, is a concern: the modeling preview does not show the temperatures warming up sufficiently enough until mid-August and fish start congregating in early May. Spill could also affect hatchery intake downstream. Ida is checking with Brett to find out the temperature threshold for the hatchery.

Ida is also consulting with the Project Delivery Team ("PDT") regarding the feasibility and effectiveness of pumping water into the ladder. One concern is that pumping water into the ladder will potentially affect the hydraulics in the ladder and this would add another variable to consider, in addition to temperature, when assessing passage conditions. As all indications point to temperature as the issue, the PDT is looking at ways to warm up/add water to the head box. It was suggested that a heating element might be added to the head box. It was also suggested that the PDT follow-up on ideas that were generated as part of the Detroit NEPA process relating to modifying intakes to dam outlets for temperature control.

Fenton proposed that this study is tabled for now to allow time for the modeling to be completed and for the PDT to explore options for warming water or other ways to approach the issue if spill from Green Peter is not available. Once the USGS modeling is complete, the Corps will hold a workshop with the Fish Facility Design Review Work Group ("WFFDWG") to review the modeling and the PDT's ideas. If the PDT determines that more data is needed, they will inform the RM&E team and the team can move forward with a study. The earliest date that a study could take place is May. A decision would need to be made no later than the January, 2019 RM&E team meeting to allow enough time to order tags.

→ **Action:** Fenton will schedule a workshop with the FFDRWG and the PDT for early January. If the PDT determines that additional data is needed, Fenton will revise the concept paper and the RM&E team will consider it at the January 2019 RM&E team meeting.

APH-19-XX-FOS *(Evaluation of Foster Adult Holding and Transport)* - Fenton reported that Ida checked with the Hatchery Management Team (HMT) and also talked to others (Brett/Tammy Mackey) regarding whether additional data was needed. The concept objectives have been revised to first allow for a review and synthesis of

all data compiled thus far, to see if more data is needed. The Corps has not decided whether they have resources to do this synthesis in-house or if they will contract the work.

NMFS did not see a need for additional data and questioned whether the study would provide information that would lead to change in current management practice. ODFW also did not see a need for additional data. FWS questioned the need for Objective 2 (assess the risks and benefits for Chinook salmon spawning success among trap and transport options) of the study and instead, suggested that the study might be done in a phased approach, with Objective 1 (the review and synthesis of available information) being done first to determine if there is a need to do Objective 2. Fenton asked the team members provide comments regarding whether the concept is supported/not supported by email. It was noted that if the Corps decides it would like to move forward with the study, it would need to go to the Steering Team to be prioritized.

→ **Action:** Team members will review the concept and provide comments to Fenton by 11/30/18

APH-19-03 (*Evaluate interim management strategies for adult UWR Chinook Salmon at Big Cliff and Detroit dams*) - This proposal was presented at the October RM&E meeting and the team identified a need to clarify the study's scope. Diana noted that some of the data sought is redundant as it is going to be collected as part of the new HGMP BiOp. She also raised concerns about the uncertainty regarding the input parameters of the model. From NMFS' perspective, there is a concern that the input parameters of the model will not provide information with sufficient certainty upon which interim outplanting decisions can be made. She noted that genetic pedigree or actual survival data would be preferable. Jim also noted that the survival of adults moving above dam is related to water flow/spill in the next year, which the study does not address. It was suggested that the concept be revised to explicitly call out how to modify conditions where outplanting currently occurs and how to address TDG conditions. Additionally, it was noted that this tool could be more relevant when there are reintroduced natural-origin fish upstream of the dam and downstream passage.

→ **Action:** Diana and Rachel will revise the concept and provide it to the RM&E team for further review at the December RM&E Team meeting. Rachel will inform the researchers that the RM&E team is revising the concept and ask them to stand by until the RM&E team reviews the revised concept.
→ **Action:** DSC will review the Steering Team meeting summaries and provide Diana and Rachel with a recap of the Steering Teams' requests regarding this concept.

JPL-19-01-LOP (*Evaluation of a spring and summer spill operation at Lookout Point Dam for improving juvenile spring Chinook Salmon dam passage*) - Diana previously revised this concept to add objectives discussed regarding habitat below Dexter and the team has provided her comments regarding these revisions. Fenton asked Norm Buccola to look at potential temperature impacts of the spill test and will share Norm's observations with the team after he receives them.

Several questions were raised regarding this concept including
1) what size fish should be the focus of the study,
2) how can indirect mortality (that is not a direct impact of passing the project) be studied; and,
3) whether the purpose of the study was to inform an interim operation, a long-term operation, or both?

With regard to the question of what size fish should be the focus of the study, the Corps proposed that the study focus on smaller size fish. The Corps did not see a need for a second year of study regarding larger-size fish, noting that the 2018 block treatment study, involuntary spill operations, and data from other dams support the conclusion that if spill occurs, large fish will pass. Downstream survival information for larger fish will also be available. Team members supported focusing the study on smaller fish. They noted, however, that it is challenging to study little fish because they are not at a taggable size and the team would need to look to the researchers on how best to do this.

The group also discussed how to study mortality that is a delayed or indirect impact of passing the project. NMFS indicated an interest in understanding latent mortality for large and small fish, as different sized fish may be impacted differently. The Corps noted that a J-Sat study would provide information about downstream survival but not true latent mortality. Dave suggested that, rather than using a SARs river-to-ocean-return, the group could consider what the rate of survival is from a certain Point A to a certain Point B (for example, Point B could be the confluence of the mainstem and the Middle Fork). Brad suggested that the group may want to look at "indirect mortality associated with passage," similar to how the Columbia River measures SARs. NMFS indicated that the term "indirect mortality" was acceptable; its' interest is to study mortality that is related to passage but is not an immediate direct impact of passage.

ODFW also was interested in understanding how smaller fish that have passed survive in the reach below Dexter. Diana suggested that the suitability of habitat/reach could be broken down into a separate study. Rachel noted that USGS is currently doing a broad habitat study that might inform the concept. Rich noted that the OSU/SWIFT approach does directly relate to habitat conditions and survival and will factor in survival of juveniles.

The group also discussed whether the purpose of the study was to inform an interim operation, a long-term operation or both. NMFS sees the study as being informative for how passage could be improved in the interim as well as the long-term. Diana noted that a long-term solution could be operational or a combination of operational/structural and NMFS' preference is to consider both. Rich agreed that the study could support an interim solution; however, from the Corps' perspective, it was unclear how the study would inform a long-term operation and be tied to a structural solution. He indicated that the level of study for a long-term solution is more rigorous and more clarity is needed regarding what questions the managers want answered, what an operational passage solution would look like, passage criteria, and how success would be measured. Mike noted similar information was previously collected for smolts prior to establishing passage criteria and that information on fry will help inform the ultimate decision. Lawrence noted that the testing related to smaller fish will help to determine the passage criteria.

→ **Action:** The group agreed on the following next steps for the concept:
1. Diana will reply to the Corp's comments on the revised concept paper.
2. Rich and Fenton will further revise the concept paper and articulate the assumptions regarding the criteria for the study and circulate it to the team for additional comments. Team members will email their comments to the entire team.
3. The Corps will incorporate comments and request a proposal for portion of the study evaluating spring spill.
4. The Corps will begin the SOR process regarding the basic spill operation described in the concept.

APH-19-02-FC (*Fall Creek adult trap post-construction evaluation)* - Fenton reported that Ricardo solicited a proposal from Oregon State University for this study and is waiting on an implementation plan. Fenton will send out the proposal and plan when it is received.

Closing and Next Meeting Date
The December RM&E Team will be rescheduled for the week of December 17 via a Doodle poll from DSC. Emily thanked the group for their effort and the meeting was adjourned.

This summary is provided by DS Consulting. Suggested edits are welcome and can be provided to Nancy Pionk (nancy@dsconsult.co).