

**Willamette Action Team for Ecosystem Restoration (WATER)  
Research, Monitoring and Evaluation (RM&E)**

July 25, 2019

[http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/Willamette\\_Coordination/Willamette%20RME/RME.html](http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/Willamette_Coordination/Willamette%20RME/RME.html)

**FINAL Facilitator's Summary  
[Edits provided by: Corps]**

<b>ACTION</b>	<b>BY WHOM?</b>	<b>BY WHEN?</b>
Review 5/23/19 and 6/27/19 summaries and provide edits to Nancy.	RM&E Team	8/1/19
Send written comments on individual concepts (with tracked changes) to the concept authors (Fenton or Anne) and DS Consulting.	RM&E Team	COB 7/30/19
Send out concepts (with tracked changes) and the FY20 Study Planning Tables, as part of the August 6 Joint RM&E/Steering Team meeting materials.	Emily	7/31/19
Prepare Steering Team members for prioritization/ranking of concepts.	RM&E Team	8/6/19
Send out the presentation on the 2020 Status Review Update/Life Cycling Modeling with draft meeting summary.	Nancy	7/31/19
Coordinate with other WATER teams to schedule 2020 Status Review Update/Life Cycling Modeling presentations.	Fenton	As needed
Coordinate with Dave Jepsen regarding any revisions/comments to FMWQ-18-04-SYS concept.	Anne	ASAP

**Participants in the Room:** Morgan Bond (NMFS), Fenton Kahn (Corps), Jeff Jorgensen (NMFS), Anne Mullan (NMFS), Jim Myers (NMFS), Rachel Neuenhoff (Corps), Christine Peterson (BPA); **Participants on the Phone:** Kelly Reis (ODFW), Ida Royer (Corps), Lawrence Schwabe (CTGR);

**Facilitation Team:** Emily Stranz and Nancy Pionk, (DS Consulting).

**Welcome and Housekeeping**

Emily welcomed the group and conducted a round of introductions. The team deferred approving the 5/23/19 and 6/27/19 RM&E Team meeting summaries to allow additional time for review.

→ **Action:** Team members will review the summaries and send and suggested edits or comments to Nancy by August 1. If no additional edits are received, the summaries will be considered approved.

**Team Updates**

- **Middle Fork Workshop:** Rachel reported that contracting is underway and once processed, the Corps will be able to proceed with coordinating the workshop. She asked the RM&E Team members respond to the doodle poll that was sent out (the poll is attempting to identify specific weeks through September that the workshop might be scheduled). The goal is to hold the workshop before the Managers Forum which is currently scheduled for October 18, 2019.
- **Report Back From July Steering Team Meeting Regarding Potential FY19 Studies:** Emily updated the group on the Steering Team's discussion regarding potential FY19 studies. The Steering Team decided that JPL-19-02-LOP (*Evaluation of delaying refill and spring surface spill operation at Lookout Point Dam for improving juvenile spring Chinook salmon dam passage*) was a priority for funding over the other potential studies identified by the RM&E Team, and asked the Corps to look into options for funding it. Subsequently, Andy Traylor (Corps) reported that the Corps is pursuing resources to complete

an in-house assessment (i.e. compile existing data or complete additional ResSim modeling to consider feasibility). The Corps is also preparing a response to the Special Operations Request that was drafted by NMFS for a spill operation at Lookout Point.

- **Other Study Updates:**

**JPL-18-03-HHB:** *High Head Bypass Fish Passage Investigations* - Fenton reported that this study is moving forward this fall; the final proposal and updated concept paper have been provided to the RM&E Team (the Corps is not seeking any additional comments on these documents). Fenton noted that NMFS had asked to conduct the study at a pipe bypass constructed to NMFS Criteria; this objective was added to the concept paper as a third objective; however, it was not included in the proposal for the fall study as it is not something that can be done this year.

**FMWQ 18-02 SYS FMWQ 18-02** *Determination of habitat use patterns for rearing and emigrating juvenile spring Chinook salmon and winter steelhead below Willamette Project dams* (additional juvenile sampling) - This study is currently in the contracting process.

Ida is also working on getting the contract awarded for the Foster outplanting study. The Corps is also continuing to conduct ongoing flow studies.

### **FY20 Concept Paper Review**

The group reviewed the concept papers listed below (provided by the Corps) and identified red flags, suggestions and questions.

1. **JPL-11-05-FOS** - *Evaluation of Foster Dam Juvenile Passage:* Fenton noted that this study is on hold until the design improvements to the weir are constructed, which is expected to be completed by June 2020. The post-construction evaluation would take place immediately after construction is completed. Anne indicated that NMFS supports this study and suggested that the Corps consider a PIT-tag detector in the future.
2. **JPL 20-01-LOP** - *Spatiotemporal sources of mortality in juvenile reservoir-reared UWR spring Chinook salmon: implications for successful downstream passage at Willamette Valley Projects with an emphasis on Look-out Point:* Fenton noted that this is a follow-on (year 3) to the two years of the fry survival study by USGS. Rachel noted this could either be a desk-top modeling exercise or additional field work; the Corps wants to review the data collected to date before reaching out to the researchers to see if more data is needed.
3. **JPL 20-01-SYS** - *Spatiotemporal index of infection severity of a copepod, *Salmincola californiensis* that parasitizes juvenile spring Chinook salmon in the Willamette River Basin:* Rachel noted that this study is similar to an FY19 concept previously reviewed by the RM&E team and this concept is being re-submitted for FY20.

Regarding to the FY19 concept: Rachel reported that a permit is in place and the Corps is waiting for contracting to be completed. Once the contract is received, the researchers only have half a year to conduct the sampling. [Note: after the RM&E meeting, Rachel reported that due to delays in contracting, it was decided that this study would gain greater value in waiting to conduct the study in FY20 in order to accommodate a full field season.]

4. **JPL 19-03-SYS** - *Spatiotemporal distribution of a copepod, *Salmincola californiensis* that parasitizes juvenile spring Chinook salmon in the Willamette River Basin: implications for fish collection facilities:* The Corps noted that this is follow-on work for FY19 Concept JPL 19-03 SYS and will keep the same study code. The Corps noted that it will be helpful to have 2 seasons of sampling to capture interannual variability.

The team discussed the following concept papers listed below (provided by NMFS). These concepts were previously reviewed by the RM&E Team at the 6/27/19 RM&E Team meeting.

5. **JPL -19-01-LOP** - *Evaluation of a spring and summer spill operation at Lookout Point Dam for improving juvenile spring Chinook Salmon dam passage.*
6. **JPL-19-02-LOP** - *Evaluation of delaying refill and spring surface spill operation at Lookout Point Dam for improving juvenile spring Chinook Salmon dam passage.*  
Fenton noted that JPL -19-01-LOP and JPL-19-02-LOP are related to the update provided above regarding potential FY19 studies. The Corps is currently vetting the operations internally for feasibility (including the SOR submitted by NMFS, ODFW and USFWS). From Corps' perspective, the timing is not ripe for field studies. Fenton noted that the operation is dependent on conditions in-season and may not be possible in 2020 and would need to be coordinated with BPA. Anne noted that NMFS strongly supports these concepts. The team agreed that the studies should still be prioritized in the FY20 prioritization/ranking at the Joint RM&E/Steering Team meeting.
7. **APH-17-02-GRP** - *Evaluate reintroduction and productivity of UWR Chinook salmon above Green Peter Dam.* Anne noted that this study would evaluate the action of putting Chinook salmon above Green Peter Dam. In June, NMFS sent an official letter to the Corps that indicated NMFS' final determination that it is necessary for the Corps to outplant adult hatchery Chinook salmon above Green Peter for fish passage research as described in the 2008 NMFS Biological Opinion. The Corps is preparing a response to the letter.
8. **FMWQ-18-04-SYS** - *Assess Effects of Total Dissolved Gas Exposure on UWR Chinook Salmon and Steelhead Below Big Cliff Dam.* Anne noted that NMFS prepared this concept; however it is based on a concept put forward by ODFW in FY19. She explained that ODFW is proposing a change in how fish are handled fish at Minto. This study would help inform future management decisions and help the team better understand the effects of TDG on fish and alternatives to releasing fish during periods of high TDG.  
  
→ **Action:** Anne will coordinate with Dave Jepsen regarding any revisions/comments to this concept.
9. **FMWQ-18-02-SYS** - *Determination of habitat use patterns for rearing and emigrating juvenile spring Chinook salmon and winter steelhead below Willamette Project dams.* This is placeholder for an ongoing study from 2018 that is part of the USGS SWIFT modeling. The study is in line for additional funding depending on review of this year's results. Anne noted that NMFS supports the structured decision making process.
10. **JPL 18-02-SYS** - *Willamette Project Dam Passage Delayed Mortality:* Fenton noted that he and Rich are in separate discussions with Melissa Jundt and Keith Kirkendall (NMFS) regarding performance criteria for downstream passage at Cougar after the FSS/Trap and Haul construction is complete. He proposed that this concept be placed on hold until the work regarding metrics is completed. It was agreed that the concept would be included in the FY20 prioritization/ranking and the Corps can bring the recommendation to put the concept on hold to the Steering Team. Christine noted that the Science Center recently came out with a paper concerning carryover effect that might inform this concept.
11. **JPL-15-02-SYS** - *Evaluate the feasibility of in-stream and head-of-reservoir juvenile fish trap and haul above Willamette Project (WP) Dam:* Although there was a feasibility study done in the past that indicated that the protocol for HOR was not feasible, Anne noted that HOR is still in the Middle Fork plan and a solution has not yet been determined for LOP. She suggested that the concept could provide other information about HOR as a possible passage option that will help the agencies prepare for the 2020-21 decision point.

RM&E Team members were asked to send “tracked changes” comments on individual concepts directly to the concept authors (Fenton or Anne) and DS Consulting by COB 7/30/19. Tracked changes/comment bubbles will be left in the documents so that both RM&E and Steering Team members will be able to see the comments. Emily will send out all the concepts as part of the August 6 Joint RM&E/Steering Team meeting materials on 7/31/19. The concept papers will be finalized after the August 6 Joint meeting. Fenton noted that the Corps may bring forward another round of concept papers in late summer/early fall, depending on results from on-going studies (such as SWIFT) that could indicate whether additional data is needed.

- **Actions:** RM&E Team members will send written comments on individual concepts (using tracked changes) directly to the concept authors and DS Consulting by COB 7/30. Emily will send out all the concepts and the FY20 Study Planning Tables, as part of the August 6 Joint RM&E/Steering Team meeting materials.

### **Preparation for 8/6 Prioritization Meeting**

The team discussed how best to prepare Steering Team members for the conversation. In response to a question from Anne about how the Corps prioritizes studies for funding, Fenton noted that the Corps gives substantial consideration to regional partners’ input and ranking, when making decisions regarding which studies are funded. However, he noted that there may be times that the Corps will fund a study, even though it is ranked low by some partners, in order to meet legal obligations or design engineering needs.

- **Actions:** RM&E Team members will prepare their Steering Team members for the prioritization/ranking at the August 6, 2019 Joint RM&E/Steering Team.

### **Presentation Regarding the 5-Year Status Review and Updates to the NMFS Life-Cycle Modeling Approach**

Morgan Bond, Jeff Jorgensen, and Jim Myers, of NOAA’s NW Fisheries Science Center, gave a presentation on NOAA’s 5-Year Status Review and Updates to the NMFS Life-Cycle Modeling Approach (a separate PowerPoint document). Jim provided a review of the information being collected and encouraged RM&E Team members to provide relevant data for the 5-year status review. The goal is to have as accurate an estimate as possible of species status. The Status Review update will include ESU/DPS boundary changes and ESU/DPS viability status. NOAA is collecting updated data in all areas (abundance, genetics, life history, traits, hatchery influence, habitat), as well as information on ongoing and completed recovery actions. Based on this information, they will determine the what the extinction risk is for individual populations.

Jim noted that a notice regarding the Status Review Update will be published in the Federal Register shortly. The Science Center will put a report at the conclusion of the review and a draft report will go out to co-managers first. It was suggested that a follow-up presentation be scheduled once the draft report comes out.

Morgan and Jeff reviewed the updates to NMFS Life-Cycle Modeling approach and the systematic efforts to study fish at the Wenatchee River Basin. They also reviewed Willamette life-cycle model refinements. They noted that the program to tag out-migrating juveniles from Willamette Falls could be resumed (a new detector/platform has been designed) and that it would be beneficial to have a centralized system for tagging.

RM&E Team members appreciated the presentation and saw opportunities for additional presentations or a workshop with the Willamette Fish Passage Operations and Maintenance Team (WFPOM), the Habitat Technical Team (HTT), and the Flow Management Team.

- **Actions:** DS Consulting will send out the PowerPoint presentation and link to the Federal Register Notice.

### **O&M Funding Prioritization**

Fenton noted that O&M staff would like the RM&E Team to prioritize studies for O&M funding. As the studies are not available yet, this topic was deferred to the August 22 meeting.

**Next Steps and Closing**

The group discussed agenda items for the August 22 meeting, which include: follow-up from Joint RM&E/Steering Team Meeting, O&M prioritization, finalization of FY20 concepts, and review of any new concept papers.

With that, Emily thanked the group and adjourned the meeting.

**The Joint RM&E/Steering Team Meeting is scheduled for 8/6/19.  
The next RM&E Meeting is scheduled for 8/22/19.**

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

**Attachment 1**

**Document Review Tracking** ([Click here for Master “tracking” Spreadsheet](#))

<b>Document Name</b>	<b>Document Type</b>	<b>Comments Due By</b>	<b>Comments received / forthcoming from</b>
<b>FY19 Concepts</b>			
Investigation of spring Chinook salmon fish passage alternatives for the Middle Fork (APH 19-01 MF)	<b>Status:</b> Request for proposal has been sent out.		
Evaluation of Foster Adult Fish Trap Performance, 2019 (APH-15-05-FOS)	Pre-Proposal	November 2	CTGR, ODFW and NMFS provided comments
	<b>Status:</b> On hold; PDT presented on design fixes at 3/5/19 WFFDWG meeting.		
Evaluation of Foster Adult Holding and Transport (APH -19-04-FOS)	Draft Proposal	July 2	NMFS provided comments
	<b>Status:</b> Revised Concept (synthesis approach) ranked by Steering Team on 6-4-19; Further discussion on funding anticipated at 7-2-19 Steering Team meeting. Draft Proposal sent to team members for comments.		
Evaluation of a spring and summer spill at LOP (JPL-19-01-LOP)	FY 19 Concept Paper	TBD	COE provided comments
	<b>Status:</b> RM&E and Steering Team will discuss management purpose and information needs during concept prioritization meeting.		
High Head Bypass (JPL-18-03-HHB)	Final Proposal	July 24	No additional comments being sought
	<b>Status:</b> 6/4//19: RM&E and Steering Teams supported moving forward with study. Final Proposal sent to team members.		
<b>FY20 Concept Papers</b>			
<b>Document Name</b>	<b>Document Type</b>	<b>Comments Due By</b>	<b>Comments received / forthcoming from</b>
Evaluation of Foster Dam Juvenile Passage (JPL-11-05-FOS)	FY 20 Concept Paper	7/30/19	
Willamette Project Dam Passage Delayed Mortality (JPL 18-02-SYS)	FY20 Concept Paper	7/30/19	Corps
Evaluate the feasibility of in-stream and head-of-reservoir juvenile fish trap and haul above Willamette Project (WP) Dam (JPL-15-02-SYS)	FY20 Concept Paper	7/30/19	Corps
Evaluation of a spring and summer spill operation at Lookout Point Dam for improving juvenile spring Chinook Salmon dam passage (JPL - 19-01-LOP)	FY20 Concept Paper	7/30/19	Corps
Evaluation of delaying refill and spring surface spill operation at	FY20 Concept Paper	7/30/19	Corps

Lookout Point Dam for improving juvenile spring Chinook Salmon dam passage (JPL-19-02-LOP)			
Evaluate reintroduction and productivity of UWR Chinook salmon above Green Peter Dam. (APH-17-02-GRP)	FY20 Concept Paper	7/30/19	Corps
Assess Effects of Total Dissolved Gas Exposure on UWR Chinook Salmon and Steelhead Below Big Cliff Dam. (FMWQ-18-04-SYS)	FY20 Concept Paper	7/30/19	Corps
Determination of habitat use patterns for rearing and emigrating juvenile spring Chinook salmon and winter steelhead below Willamette Project dams. (FMWQ-18-02-SYS)	FY20 Concept Paper	7/30/19	Corps
Spatiotemporal sources of mortality in juvenile reservoir-reared UWR spring Chinook salmon: implications for successful downstream passage at Willamette Valley Projects with an emphasis on Look-out Point. (JPL 20-01-LOP)	FY20 Concept Paper	7/30/19	
Spatiotemporal index of infection severity of a copepod, <i>Salmincola californiensis</i> that parasitizes juvenile spring Chinook salmon in the Willamette River Basin (JPL 20-01-SYS)	FY20 Concept Paper	7/30/19	
Spatiotemporal distribution of a copepod, <i>Salmincola californiensis</i> that parasitizes juvenile spring Chinook salmon in the Willamette River Basin: implications for fish collection facilities. (JPL 19-03-SYS)	FY20 Concept Paper	7/30/19	
<b>Draft and Final Reports</b>			
Evaluation of Chinook Salmon ( <i>Oncorhynchus tshawytscha</i> ) Fry Survival in Lookout Reservoir, Western Oregon, 2018. (USGS)	Draft Report	7/3/19	