

**Willamette Action Team for Ecosystem Restoration (WATER)  
Joint Steering and RM&E Teams Meeting  
August 4, 2020**

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

**FINAL Joint Steering-RM&E Team Meeting Summary**

<b>ACTION</b>	<b>WHOM?</b>	<b>BY WHEN?</b>
Incorporate comments into concept papers and send final concepts to DS Consulting.	Concept paper authors (Anne, Lawrence, Fenton, Ida, Jon and Rachel)	COB, August 21
Send concept package to Steering and RM&E Team members.	DS Consulting	August 24
Review concepts and send agency ranking to DS Consulting.	WATER members	COB, August 26
Compile WATER concept rankings into spreadsheet for Joint meeting.	DS Consulting	August 27
See action items below listed within the concept discussion.	WATER team members	Ongoing

**Participants on the phone or WebEx video (for all or part of the meeting):** Leslie Bach (NPCC), Brad Eppard (Corps), Nancy Gramlich (ODEQ), Mike Hudson (USFWS), David Jepson (ODFW), Fenton Khan (Corps), Marc Liverman (NOAA), Jim Meyers (NOAA), Anne Mullan (NOAA), Rachel Neuenhoff (Corps), Christine Peterson (BPA), Kelly Reis (ODFW), Jon Rerecich (Corps), Ida Royer (Corps), Lawrence Schwabe (CTGR), Dan Spear (BPA), David Trachtenberg (Corps).

**Facilitation Team:** Donna Silverberg and Emily Stranz, DS Consulting

**Welcome, Introductions, & Housekeeping**

Facilitator, Donna Silverberg welcomed the Steering and RM&E Teams to the meeting and conducted a round of introductions. She reviewed the agenda with the group, noting that the primary purpose of the joint meeting was to discuss and prioritize FY21 information needs for each sub-basin. To support the prioritization effort, draft concept papers and an updated RM&E Planning table were sent to the group prior to the meeting.

Due to timing constraints, the draft concept papers did not incorporate WATER member’s comments that were provided through the RM&E Team process; instead, the comments were noted in “red-line” on each concept. Moving forward, the concept authors will work to incorporate the team’s input into final concepts. The group decided to postpone ranking the concepts until regional input has been incorporated. Thus, there will be a follow-up Joint meeting on August 27<sup>th</sup>, during which the agencies will review and discuss rankings on the revised concepts.

At the August 4<sup>th</sup> meeting, the Joint Steering and RM&E team members reviewed and discussed the nine draft concepts, noting areas of concern, research needs, and where more regional conversation would be beneficial. The table below summarizes the conversation; specific comments on each concept are available via the draft concept papers sent out prior to the meeting.

North Santiam	
<p><b>WQTM-XX-21</b> Big Cliff TDG_IM#6 (Corps authored)</p>	<p>This concept is intended to monitor TDG downstream of Big Cliff Dam and identify the extent that TDG criteria is met under this operation. The Corps clarified that no new equipment is needed for this effort.</p> <p>WATER partners expressed interest in also monitoring for TDG above Minto Dam to shed light on the extent of TDG impact on fish downstream of Big Cliff. Additionally, there was a request for additional conversation around opportunities to monitor for the biological impacts of TDG on fish. It was noted that the 2020 pedigree analysis could provide information on the biological impacts; however, more conversation is needed on how to tie the biological impacts to monitoring. The group felt that it was important to ensure that there was a connection, or cross-pollination, between the study efforts. Because the Corps is already moving out to implement this concept now, any additional conversations on biological monitoring would need to be focused on implementation for Fall 2021.</p> <ul style="list-style-type: none"> <li>→ <b>ACTION</b> – Anne will provide a map showing the desired location for TDG monitoring above Minto Dam.</li> <li>→ <b>ACTION</b> – The Corps will discuss internally to see how/if they can work additional information needs into this concept in the short term.</li> <li>→ <b>ACTION</b> – The RM&amp;E and Steering Team will continue conversations on how to incorporate biological components into monitoring actions next fall.</li> </ul>
South Santiam	
<p><b>JPL-XX-21</b> Foster Dam Adult Passage Operations_TDG_IM#10 (Corps authored)</p>	<p>This concept does not require additional research or monitoring, instead it calls for development of a research summary that details the studies conducted at Foster, which informed Interim Measure #10. Fenton Khan, Corps, clarified that the Green Peter spill operation in June 2020 was a one-time test to see if the operation warmed water at the adult facility, which it did. That test was not intended to be an annual operation. The PDT is now working those findings into their design to use the fish weir and turbine operations to get the right balance for passage. This concept proposes a research summary showing the efficacy of the measure proposed.</p> <p>There was a request from the WATER partners to include temperature and timing of fish entering the ladder in the research summary. Additionally, some felt that, through the implementation of the interim measures, there is an opportunity to monitor to ensure efficacy of the operation. The question was posed: what if the results do not reflect the assumptions and previous research? Conversely, further documenting the success of the interim measure may provide information to inform decision making sooner than later. The request was not for research or monitoring, but rather the evaluation of a specific action. It was noted that, historically, the Corps has evaluated new actions. The group agreed to have additional discussion about the need to evaluate this action to ensure that it is providing the benefit intended. Brad Eppard, Corps, suggested that the RM&amp;E Team work to develop objectives for data tracking and to add that to the concept paper. Fenton noted that the effort as currently described will document the action, details of fish collection, such as fish arrival timing, collection numbers, etc.</p> <p>The Corps shared that the interim actions are planned to be implemented until 2023 or when the new BiOp is finalized.</p> <ul style="list-style-type: none"> <li>→ <b>ACTION:</b> The RM&amp;E Team will develop objectives for data tracking to add to the concept paper at their August meeting.</li> </ul>

<p><b>JPL-XX-21</b> Foster Dam Juvenile Passage Spill Ops_IM#9 (Corps authored)</p>	<p>This concept does not require additional research or monitoring, instead it calls for development of a research summary that details the studies conducted at Foster to inform Interim Measure #9.</p> <p>WATER partners requested more conversation at the RM&amp;E Team regarding information needs, how to evaluate the operation, metrics, and objectives. The Corps was open to this conversation.</p> <p>Ian noted that the BiOp calls for improvement of the weir, which the Corps has found to be more complicated than originally expected. At this point, the PDT is working on a fix, but funding was not planned for FY21 and will likely be delayed until 2023. This interim operation is expected to be implemented until that point. WATER partners felt that, given the unknown timeline of the weir improvement, evaluation of the interim operation is beneficial, specifically to see if the operation results in consistently high survival and to verify the diurnal behavior over a range of reservoir and flow conditions.</p>
<p><b>APH-21-01</b> Rapid Genetic Sorting (Corps authored)</p>	<p>This concept is intended to investigate what science/technology exists to quickly sort fish in large numbers and the efficacy of using it as a tool to manage upstream passage above Foster and Green Peter Dams.</p> <p>It was suggested that this concept incorporate a review of potential technology available to help quicken turnaround time for results. As well as adding other dams to the concept, for example the Middle Fork and Detroit.</p>
<p><b>McKenzie</b></p>	
<p><b>JPL-XX-21</b> Detroit Dam juvenile passage (IM#5) (Corps authored)</p>	<p>This concept is to develop information for optimizing operational downstream passage alternatives at Detroit Dam and reducing TDG levels downstream of Big Cliff dam. It is intended to inform downstream fish passage strategies to improve survival of juvenile Chinook and steelhead produced above DET reservoir.</p> <p>There was interest in working to incorporate marked surrogates into this effort to help inform passage route and survival. Screw trap data will inform passage timing, but not route. It was generally agreed that passage survival will be important for future decision making and NOAA noted that they will need to release marked fish to calibrate above and below dam survival.</p> <p>Brad said the Corps is working hard to get the screwtraps in place this year, however, they will not be able to get fish tagged and released for passage evaluation. He noted that the Corps can commit to considering that for next year. Fenton noted there is data on Detroit passage and survival under a different spill operations that may provide some insights. He also clarified that planning would need to start soon if there is to be a surrogate study, as those fish will need to be raised and tagged.</p> <p>The group discussed what the operation will look like and the effect of fish going through the powerhouse intake during “station service” operations. The group discussed the various forms of turbine operation:</p> <ol style="list-style-type: none"> <li>1. Speed No Load - Turbines are spinning and operating at normal speed, but not generating power for the grid. This function does not pass as much water because it is not working as much. Fish can pass through the turbines during speed no load.</li> </ol>

	<p>2. Station Service – Turbines operate to generate enough power for the operation of the project. Fish can pass through the turbines during station service.</p> <p>3. Offline - When the turbines are offline completely, there is no water going through the turbine, thus, fish are not able to pass.</p> <p>The group supported clarifying the operation and passage details (i.e. how much water is passing and how are the turbines being operated). NOAA noted that this is experimental and there is about 100ft to the RO so, over time, if the intention is to figure out what way the fish are coming out, there will need to be more than screwtrap data. Additionally, consider whether the elevation range is correct.</p>
<b>Middle Fork</b>	
<p><b>APH-19-02-FC</b> Fall Creek adult fish facility year-2 evaluation (Corps authored)</p>	<p>This concept is for the Fall Creek Adult Fish trap post-construction evaluation. Year 1 (originally for FY19) was delayed due to the contract not being awarded in time and is currently being funded for FY20.</p> <p>There was interest in observing pre-spawn mortality events prior to and after installation of the new trap.</p>
<p><b>JPL-20-01</b> Spatiotemporal sources of mortality in juvenile reservoir-reared Chinook salmon (Corps authored)</p>	<p>This concept was ranked in FY20; however, funds were not available in FY20; it takes existing data and parses out potential sources of reservoir mortality.</p> <p>WATER partners noted that downstream survival would be helpful information, in addition to reservoir survival. The Corps noted that the model used assumes a closed system that accounts for passage during the study period and is intended to look at reservoir survival specifically. Some felt that outmigration timing and impact on survival would be helpful information that may be available from past information sets. Rachel Neuenhoff, Corps, stated that there are several variables in the model, including operational changes between years, water year type, etc. Additionally, it was noted that it would be useful to know more about mortality sources under different operational scenarios to inform actions for safeguarding juvenile production through the reservoir to the dam.</p> <p>→ <b>ACTION:</b> Anne and Rachel will follow-up offline to discuss this concept in more detail.</p>
<b>Systemwide</b>	
<p><b>JPL-XX-SYS</b> Interim Passage and Delayed Mortality (NOAA authored)</p>	<p>This concept is intended to utilize the opportunity to gather valuable information from the interim measures while they are being implemented. The overarching objective is to provide data to inform survival rates.</p> <p>Anne Mullan, NOAA, noted that the Corps provided several comments in writing that she will work to incorporate. Brad offered that the Corps would be interested in more clarity on the study objectives and information goals and encouraged less focus on the actual methods to achieve those objectives. This prompted conversation on the benefit of PIT tags and the overall PIT infrastructure in the Willamette Basin. There was request for the WATER forum to revisit the conversation on how PIT tags are used in the basin, as a lot of information could be gleaned from PIT tagged fish, both now and into the future. It was acknowledged that this may be a bigger picture conversation. The Corps requested that the conversation continue at the Steering Team level.</p>

	<p>It was noted that this concept gets at some of the global survival issues and questions; and that an overarching monitoring system is a good investment in the long-term, as these are long-term questions and operations.</p> <p>→ <b>ACTION:</b> A conversation on PIT tag infrastructure in the Willamette Basin will be added to the September Steering Team meeting agenda.</p>
<p><b>Placeholder</b> Pedigree analysis (CTGR authored)</p>	<p>This concept is for continued pedigree work and is in line with Interim Measure #4. It is intended to provide base information to inform current and future fish operations, natural origin return numbers, and to identify factors of productivity of fish in the Minto-Big Cliff reach.</p> <p>The Corps noted that they are in the process of implementing pedigree analysis of the samples on hand from 2020 as part of the HGMP BiOp, which calls for analysis every 5 years. WATER partners were interested in collecting and analyzing pedigree data more often than every 5-years to inform fish management questions. It was suggested that natural origin returns can be moved from Detroit upriver to seed that section of river and start building a broodstock. If they are moving fish, there needs to be yearly sampling. Some partners felt that more timely information will help inform annual disposition and support management decisions. It was noted that there is still a need to prioritize TDG and flow in the Big Cliff-Minto reach, as it is an important reach for native species and there are water quality issues that need to be addressed.</p>

**Next Steps**

As noted above, the team agreed to postpone concept ranking until the concepts have incorporated input provided via written comments and today’s Joint team discussion. The concept authors will edit the concepts and send final versions to DS Consulting by COB, August 21<sup>st</sup>. DS Consulting will send the concept package to the Joint Steering and RM&E Team on August 24<sup>th</sup>, who will in turn respond with their ranking by COB, August 26<sup>th</sup>. The rankings will be compiled into the ranking spreadsheet and discussed at the August 27<sup>th</sup> follow-up meeting. (See action items noted above.)

With that, Donna thanked the Steering and RM&E Team members and the meeting was adjourned

**The next Joint Steering and RM&E Team meeting is scheduled at 9:00 on August 27<sup>th</sup>.  
The next Steering Team meeting is scheduled at 12:30 on September 1<sup>st</sup>.**

*This summary is respectfully submitted by the impartial facilitation team at DS Consulting.  
Suggested edits are welcome and can be sent to emily@dsconsult.co*