



# Oregon

Kate Brown, Governor

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March 30, 2018

Jon Rerecich  
Fish Passage Section  
Environmental Resources Branch  
US Army Corps of Engineers, Portland District  
333 SW First Ave.  
Portland, OR 97204



RE: ODFW review of the U. S. Army Corps of Engineers, Portland District draft "60% Design Documentation Report, Phase 1 Downstream Fish Passage – Selective Withdrawal Structure"

Dear Mr. Rerecich:

Thank-you for the opportunity to review the 60 Percent Design Documentation Report for Phase 1 Downstream Fish Passage – Selective Withdrawal Structure for Detroit Dam and Reservoir, distributed for review on February 13, 2018. ODFW has reviewed the draft report and comments are attached.

Please direct any questions or concerns regarding these comments to Kelly Reis ([kelly.e.reis@state.or.us](mailto:kelly.e.reis@state.or.us), 541-726-3515, x29) or Elise Kelley ([elise.x.kelly@state.or.us](mailto:elise.x.kelly@state.or.us), 541-757-5249).

Sincerely,

Kelly Reis  
Willamette Fish and Wildlife Policy and Program Manager

c: Rich Piaskowski, USACE  
Dan Spear, Christine Peterson, BPA  
Mike Hudson, USFWS  
Elise Kelley, Bernadette Graham Hudson, ODFW  
Leslie Bach, Karl Weist, NWPC  
Lawrence Schwabe, CTGR  
Melissa Jundt, Diana Dishman, NMFS

**ODFW Comments for 60% Design Documentation Report, Phase 1 Downstream Fish Passage – Selective Withdrawal Structure:**

**Thank you for your comments. USACE responses follow each comment.**

**General Comments**

- ODFW appreciates the incorporation of design that is able to incorporate volitional downstream fish passage.

USACE continues to determine the feasibility of incorporating piped bypass into the design. Text has been updated reflecting efforts of the High Head Bypass team investigation of piped bypass.

- Will juvenile Chinook swimming at 100' depth receive the flow signal from the SWS to enter the SWS/FSS and exit the reservoir?

Juvenile chinook swimming at 100' depth may not receive the flow signal to the FSS entrance near the surface and efforts are being made to minimize attraction to the Low Intake Gate (LIG). A discussion of this as well as behavioral and passage information at the dam has been included in section 2.1.6 to support the interconnected design strategy of the SWS, FSS, and turbines.

**Section 2 – Biological Design Considerations and Criteria** (where applicable, edits are in blue)

Page 2-2

- There is a periodicity table for winter steelhead on the N. Santiam that was incorporated into the 2018 WFOP that should be included in this section.

The periodicity table for winter steelhead from the 2018 WFOP has been added to this section.

- Natural origin Spring Chinook salmon and winter steelhead are trapped at the Minto fish facility ~~are and~~ released above the Minto barrier, ~~Some hatchery origin~~ spring Chinook are transported to designated release sites above ~~and below~~ the project dams.

Text has been updated as suggested.

Page 2-3

- Approximately ~~35~~130,000 legal+ size and 200,000 fingerling size rainbow trout ~~and numerous as well as~~ 25,000 kokanee are stocked in Detroit reservoir on an annual basis to support the reservoir sport fishery.

Text has been updated as suggested.

**Section 4 – Hydraulic Design**

Page 4-25

- In the FSS intake weirs section, second paragraph:
  - An assumption is made, based on available data, that during important fish passage periods such as the spring, the priority for FSS weir operations will be fish passage. Please keep in mind the variability of salmon and steelhead life history and that once fish passage is provided different life histories that have been repressed due to a lack of passage may become expressed and fish may pass the dam during times of the year that are not currently anticipated.

We are designing the FSS and SWS with a reasonable amount of flexibility so that operations can be adjusted to address unanticipated conditions or results. FSS post construction evaluations that include behavioral information in the forebay and at the dam as well as daily passage monitoring will be required to fully understand passage periods and life history expression. The FSS design includes provisions for daily fish sampling that will allow estimations of condition, species composition, and magnitude of the run.

## Section 5 – Water Quality

Page 5-20

- Referring to the drawdown for construction, if the following information is provided elsewhere please note where that is:
  - A drawdown will negatively impact both rainbow trout and kokanee fisheries. USACE kick-starting those programs once the reservoir begins to refill would reduce the negative economic and fisheries impacts of a drawdown.

The impacts analysis of the drawdown alternatives will be included in the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS). The draft EIS will be available for review by the fish managers and continued collaboration with ODFW will allow us to continue to develop strategies to minimize impacts to the reservoir fisheries.

- How will a fish kill in Detroit Reservoir be avoided during the drawdown?

Concerns of a fish kill associated with extremely high temperatures and extremely low dissolved oxygen have been expressed by Oregon Department of Fish and Wildlife. As seen in Figure 5-16, this operation would likely result in temperatures that could exceed the “without-dams” target by as much as 1-2 degrees C during mid-summer. The extent to which this might occur is dependent on the type of hydrologic and weather conditions in that year. Low dissolved oxygen could be a concern if large amounts of fine-grained sediment are mobilized and entrained in the lake. This could lead to a chemical oxygen demand, but would likely be short-lived and associated with storm events. Low dissolved oxygen can also be associated with algal blooms. Active management of the lake could include a further drawdown to expel surface waters prior to manifestation of a harmful algal bloom during the drawdown period. This would mitigate harmful effects of such an extreme algal bloom on resident fish in Detroit Lake and below.

## Section 9 – Environmental and Cultural Resources

Page 9-4

- Siltation downstream of the dams during drawdown and construction could have a significant negative impact on listed steelhead and Chinook. Given the scope of this project, standard BMPs may not guarantee the low level of siltation needed to avoid impacts to listed fish redds, offspring, and adults. A modelling effort should focus on eliminating turbidity and sedimentation downstream of Detroit and Big Cliff dams, and the criteria and practices arising from that effort should be adopted for the project.

Sediment transport is being modeled for each alternative as a part of the EIS analysis and will inform the prescribed Best Management Practices (BMPs) and mitigation measures.

- How will TDG impacts on native fish be avoided during a drawdown?

TDG and other water quality impacts are being assessed for each alternative as a part of the EIS analysis and will inform the prescribed BMPs and mitigation measures.

Page 9-5:

- The second paragraph under section 9.3.9 refers to the IWWP for the McKenzie River. This should be replaced with the N. Santiam IWWP.

9.3.9 has been amended to refer to the N. Santiam IWWP (June 1 - August 31).

