

**USACE Portland District (NWP) FFDRWG Update Form  
30 April, 2019**

**PROJECT INFORMATION**

Project Title	Bonneville Second Powerhouse Fish Guidance Efficiency
SCT Reference Number	
Project Manager (PM)	George Medina (NWP, 503-808-4753)
Technical Lead (TL)	Mehdi Roshani (NWP, 503-808-4988)
Biologist/Coordination	Jon Rerecich (NWP, 503-808-4779)

**PROJECT DESCRIPTION**

This project consists of improving juvenile salmon survival in the gatewells at the Bonneville Dam second powerhouse. Biological testing in 2008, 2009 and 2013 showed elevated mortality for juvenile salmon in the gatewells when the units are operating at the upper end of the peak efficiency range (>15 kcfs). Evidence suggests that undesirable flow conditions develop within the gatewells at the high unit flows causing the increase in mortality.

The chosen alternative for improving mortality rates of fish passing through the gatewells was a VBS porosity modification and installation of stainless steel plates behind the VBS on the el. +31 beam to improve flow conditions in the gatewells. Steel plates were installed in all A and B gatewells of each PH2 unit. Flow modification in the gatewells, as a concept for reducing fish mortality, has been demonstrated through post construction bio testing. Since full PH implementation, data from the BON JMF has indicated acceptable mortality similar to the mid and low end 1% peak efficiency range, when operating turbines in the full 1% range.

During routine inspections, it became apparent that the anchoring system for the steel plates was inadequate. In effect, the nuts and anchoring bolts holding down the plates have come loose, posing risk that the plates could potentially take out a unit. All the plates are scheduled to be removed by mid Sept. 2018. The PDT's task is to provide P&S for a concrete design option that meets the goals and objective.

**CURRENT SCHEDULE**

TBD in FY19

**PROGRESS AND KEY ISSUES (List)**

Funding has been reallocated to other CRFM high priority projects. The construction of the concrete prototype and hydraulic testing is on hold until FY19.

**FFDRWG REVIEW NEEDED AT MEETING? (If YES, list discussion topics below)**

No