

**USACE Portland District (NWP) FFDRWG Update Form
20 April 2015**

PROJECT INFORMATION

Project Title	Minor Fishway Modifications to Improve Lamprey Passage
SCT Reference Number	
Project Manager (PM)	Mike Turaski (503-808-4704)
Technical Lead (TL)	Seth Stevens (503-808-4849)
Biologist/Coordination	Sean Tackley (503-808-4751)

PROJECT DESCRIPTION

The scope of this project includes relatively small-scale modifications to adult fish ladders to improve lamprey passage conditions at Bonneville, The Dalles, and John Day Dams. Examples of such modifications include floor diffuser plating, rounding corners, and modifications to entrance weir crests. This is a multi-year, phased project. Generally, the PDT will focus on modifying a single ladder per year.

CURRENT SCHEDULE

- The Dalles (TDA) East Ladder: Lower ladder diffuser plating (IWW period 2013-2014); Entrance weir improvements (2017-2018).
- TDA North Ladder: Lower ladder diffuser plating/ramping and entrance weir improvements (2017-2018).
- John Day (JDA) South Ladder: Lower ladder diffuser plating (2013-2014); Entrance weir improvements (2016-2017), rounding corners and modify wall diffuser to exclude lamprey near SE1 in lower fishway (2016-2017).
- Bonneville (BON) WA Shore Ladder: Lower ladder diffuser plating (***2016-2017**) and entrance weir improvements (2014-2015, ***2016-2017**)
- BON Bradford Island Ladder: Entrance weir improvements, and serpentine weir modifications (2015-2016)
- Other modifications, as identified and prioritized (through 2018).

*** Indicates schedule change.**

PROGRESS AND KEY ISSUES (List)

1. New project manager (Mike Turaski) and technical lead (Seth Stevens) assigned.
2. Based on reduced lamprey program funding in FY15 (and likely in FY16), the PDT is revisiting project scope, schedule, and priorities through 2018 (February-March 2015). This will be coordinated with tribal representatives and FFDRWG. Most urgent need is to identify specific actions and schedule for BON Bradford Island Ladder (2015-16 IWW period construction).
3. Focus for remainder of FY2015:
 - a. BON Washington Shore ladder: Award supply contract for fabrication of remaining diffuser plates (install in 2016-17 IWW period).
 - b. BON Bradford Island ladder entrances: Complete design of radiused entrance weir caps similar to those installed at BON Washington Shore. Fund fabrication by project staff or contractor, and award contract for installation in 2015-16 IWW period.
 - c. BON Bradford Island serpentine weirs: Determine whether to install orifices and/or refuge boxes in the serpentine weirs, perhaps at just one or two weir sections initially, along with i-beams for video evaluation. The PDT is determining the hydraulic modeling approach that will be used in the design process. The PDT currently assumes that the orifices would not include any mechanism for in-season closure.
4. Plans and specifications need to be technically complete by 15 June to allow time for contract award in FY2015.

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

1. What level of FFDRWG review will be required for BON Bradford Island entrance weir crest modifications? At WA Shore, we ensured no net affect on minimum elevation of the entrances. This will also be considered a design constraint at Bradford Island. Assuming this and assuming the design is essentially the same, what level of FFDRWG review is desired? Is 90% design review sufficient?
2. The current phase of this project involves designing features for 2015-16 IWW period construction and is focused on Bradford Island Fish Ladder, including possible modifications to the serpentine weir section of the ladder (installation of lamprey orifices and refuge boxes). FFDRWG and SRWG will be engaged as design concepts are developed and RME needs are identified. Initial feedback regarding lessons learned from NWW projects and modeling needs would be welcome.

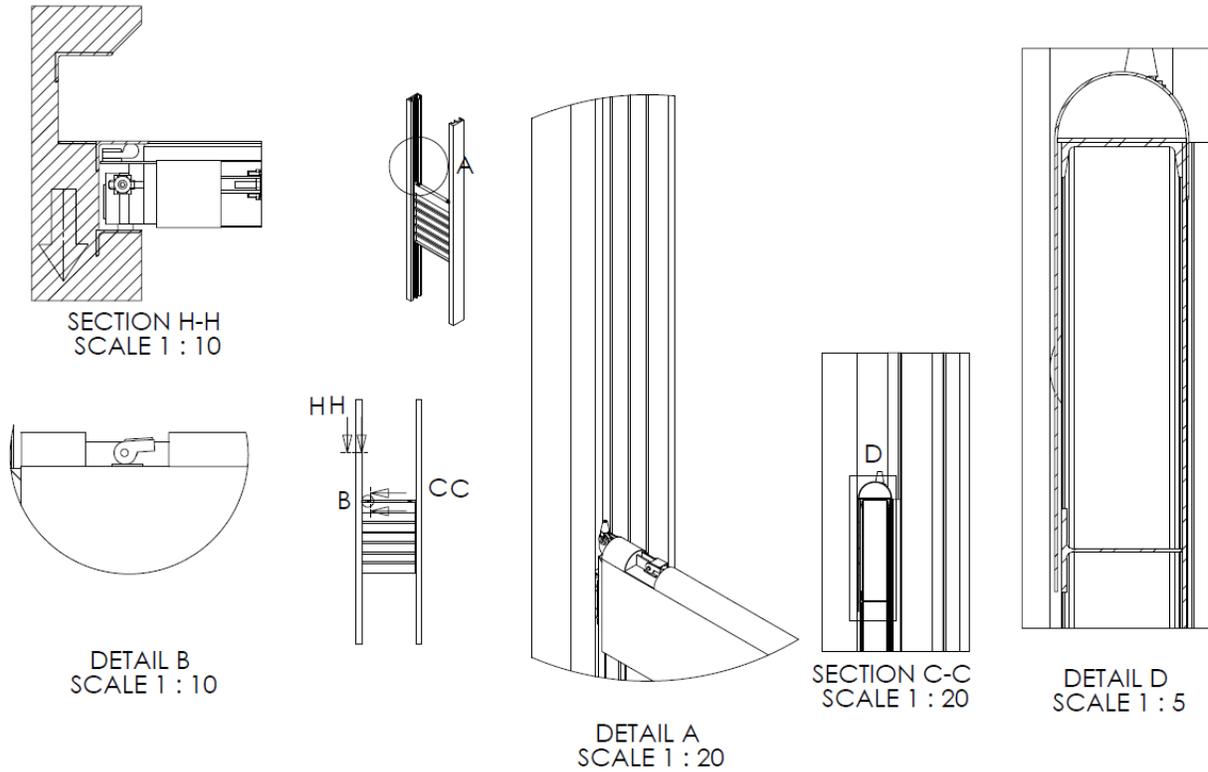


Figure 1. Design drawings for entrance weir crest modifications to improve lamprey passage. Modifications include radiused weir caps, plating on the downstream face of the weir, and plating (not shown) to provide attachment surface over a small portion of guide slot(s). This design will not affect operation of the weir and at the WA Shore Ladder, the modifications will not affect the cross-sectional area of the entrance when the weir is in its lowest position.



Figure 2. BON WA Shore Ladder entrance weir crest improvements, including photo of installed cap at one of the south entrances for reference.

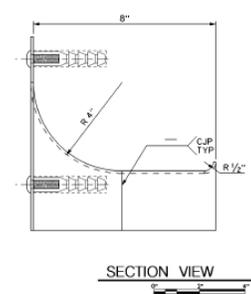
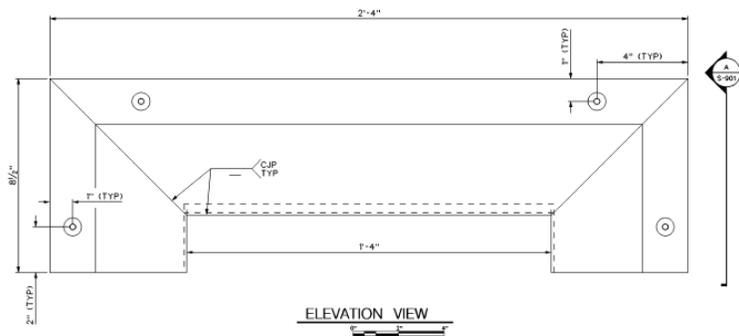
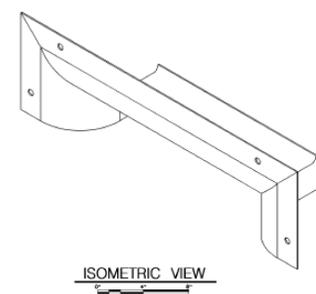
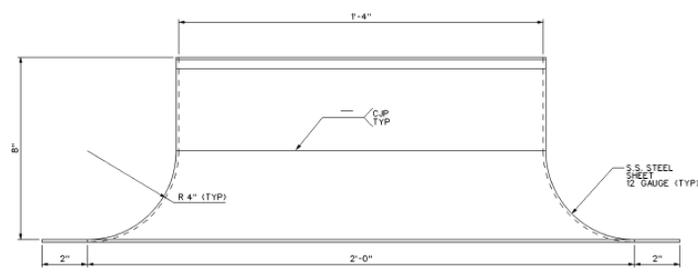
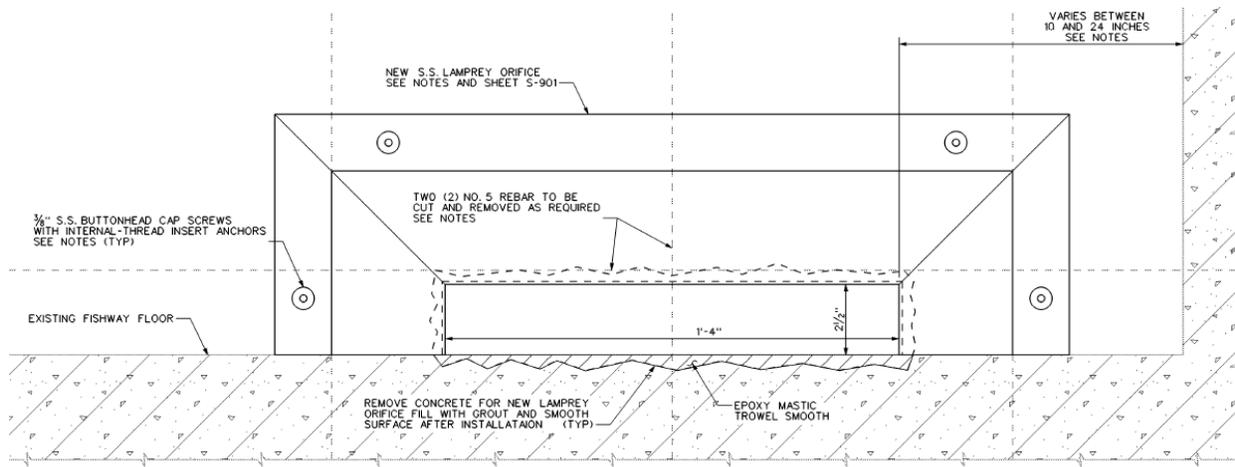


Figure 3. Example design of lamprey orifices (top) and metal orifice inserts (bottom). Orifices and inserts of this design were installed in fishways at Little Goose, Lower Granite, and McNary dams.