

**USACE Portland District (NWP) FFDRWG Update Form
5 February 2015**

PROJECT INFORMATION

Project Title	Lamprey Passage Structure (LPS) Development and Improvements
SCT Reference Number	
Project Manager (PM)	Gail Saldana (NWP, 503-808-4781)
Technical Lead (TL)	Seth Stevens (NWP, 503-808-4849)
Biologist/Coordination	Sean Tackley (NWP, 503-808-4751)

PROJECT DESCRIPTION

This project consists of the design and construction of several new LPSs at BON and JDA and miscellaneous improvements to existing LPSs systems.

Specific tasks (pending funding availability and prioritization) include the following:

1. Design and build LPSs that address known problem areas and extend existing LPS to forebay where appropriate:
 - a. BON Bradford Island Fish Ladder – B-Branch Transition Pool to existing LPS (forebay). Include ramp near A-Branch/B-Branch junction pool to collect A-Branch lamprey.
 - b. BON Cascades Island Fish Ladder – Auxiliary Water Supply Channel
 - c. BON Cascades Island Fish Ladder – New ramp to existing LPS, to be located along south wall of the fishway entrance area.
 - d. BON Washington Shore Fish Ladder – Channel between UMT junction and count station, as a means of reducing the use of the serpentine weir section.
 - e. BON Washington Shore Fish Ladder – Extend new lamprey flume system LPS to forebay; including new ramp(s) in transition pool of ladder.
 - f. BON Washington Sore Fish Ladder – Fix the air entrainment issue at the existing LFS.
 - g. JDA North Fish Ladder – Extend entrance LPS to forebay.
2. Complete minor modifications to existing LPSs to improve O&M functionality:
 - a. Inspect structures and modify as necessary to minimize risk of structural failures.
 - b. Modify or replace pumps and pump intakes, as necessary, to meet juvenile salmon fry criteria, accommodate maintenance needs, and provide sufficient water supply for systems.

- c. Improve counting systems for existing LPSs.
- d. Improve electrical and plumbing systems (as needed) for existing LPSs.

The current strategy for accomplishing these tasks is to develop a single DDR for all new LPSs, and to develop separate Plans & Specs packages that correlate with construction seasons. It is anticipated that all of the design will be performed by USACE staff, with support from NOAA Fisheries (Mary Moser/Kinsey Frick) and the University of Idaho (Chris Caudill/Ralph Budwig) regarding design criteria.

CURRENT SCHEDULE

- Meeting to prioritize which LPS projects to proceed with due to limited funding available: MAR or APR 2015
- Resume DDR for prioritized LPS projects, schedule for design and construction will be developed once scope has been determined.
- Plans & Specs for LFS air entrainment fix: FEB 2015 – DEC 2015
- Construction of LFS air entrainment fix: OCT 2016

PROGRESS AND KEY ISSUES (List)

1. 30% DDR for all new LPSs and modifications to existing LPSs issued for agency review in January 2015 (comments due 23 FEB).
2. Limited funding availability has halted DDR effort.
3. LFS Improvements: design has continued on the LFS air entrainment issue (high priority), and we also believe there may be certain tailwater conditions that cause the velocity in a portion of the flume to be very high, so we are considering options for improving that as well . Concepts are still being identified to balance hydraulic, mechanical, and biological needs and include:

Air Entrainment Fix

- Orifice plate cartridge insert for water supply pipe
- Manifold on top of water supply boxes for venting air
- Cut holes in water supply box partitions for venting air

Flume Velocity Fix

- Modify flume to have divider that separates the fish flow from the attraction flow in upper (sloped) flume section

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

- Feedback on 30% DDR
- Potential dates for special FFDRWG in March or April