**USACE Portland District (NWP) FFDRWG Update Form**
**13 August 2014**

**PROJECT INFORMATION**

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| Project Title | John Day North Fish Ladder Entrance Improvements |
| SCT Reference Number |  |
| Project Manager (PM) | Natalie Richards (503-808-4755) |
| Technical Lead (TL) | James Boag - Pumps (503-808-4927);Brent Welton - Other (503-808-4873) |
| Biologist/Coordination | Sean Tackley (503-808-4751) |

**PROJECT DESCRIPTION**

The purpose of this project is to improve entrance and lower ladder passage conditions for adult salmonids and Pacific lamprey at the John Day North Fish Ladder. Modifications include a new variable-width entrance weir (VWW), bollard field, new ¾-inch diffuser grating, lamprey diffuser plating, installation of an experimental Lamprey Passage Structure (LPS) inside the entrance, removal of obsolete overflow weirs in the lower ladder, structural changes to the AWS to improve performance, and installation of 6 new AWS pumps.

**CURRENT SCHEDULE**

* AWS pump failure analysis completion: SEP 2014.
* AWS pump re-design, testing, and construction completion, assumed necessary for all lower bearings to maintain pump reliability: DEC 2014– MAR 2016 (TBD).
* Design solution for VWW panel anchoring: AUG 2014 – NOV 2014.
* Repairs to VWW: DEC 2014 – FEB 2015 (TBD).
* Installation of new AWS trash rack and AWS trash rack and bulkhead lifting beam: TBD.

**PROGRESS AND KEY ISSUES (List)**

1. Ladder is operational. Most construction was successfully completed during the IWW periods of 2011-2012 and 2012-2013. The North Fish Ladder is currently operational and fish counts and radio-telemetry results suggest likely improvements to passage conditions for salmonids and lamprey.

2. **AWS pump failures update.** Pump 4 is not in working condition (July 2013 lower bearing failure). All other (5) pumps are in working order. Analysis continues regarding lower bearing failures on various pumps, but suggests possible (third party) design flaw. NWP is working with the contractor and an independent party on failure analysis and solutions. In the event of pump failure, another pump will automatically take over (if available) and FPP criteria will be maintained (3 pumps automatically run at higher RPM; 4 pumps meet ladder criteria 95-99% of time; 5 pumps are used only for tailrace elevations above 170 ft). Each pump can discharge between 315- 430 cfs, depending on tailrace elevation.

3. **Variable width weir (VWW) panel damage.** HDPE panels on the downstream face of the VWW have torn loose several times, despite efforts to reinforce anchors. One panel is currently missing (Panel 2 – second panel down on north side of weir) and needs to be replaced during the 2014-2015 IWW period. This most recent failure may be due to the incorrect hardware being used to secure the panel. This will be addressed when the panel is replaced. Responsibility for these repairs is currently under internal discussion.

4. **Other Work in progress.**

1. New trash racks had coating deficiencies and minor fit issues (rub blocks) and were not installed. Coating repairs are to be completed by contractor soon (schedule TBD). Other modifications will be made after coating repairs completed. Installation schedule has not been discussed.
2. Lifting beam for the AWS trash rack and bulkhead has not been built or installed. Contractor is proposing schedule extension. FFDRWG will be updated when this is resolved.

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

No review is required at this time. FFDRWG and/or FPOM will be updated on status of pump status, VWW repairs, and other work as appropriate.