

**USACE Portland District (NWP) FFDRWG Update Form**  
**June 1, 2017**

**PROJECT INFORMATION**

Project Title	The Dalles Dam Fish Unit Rehab
SCT Reference Number	
Project Manager (PM)	Eric Bluhm (NWP, 503-808-4759)
Technical Lead (TL)	James Schroeder (NWP 503-808-4930)
Biologist/Coordination	Jon Rerecich (NWP, 503-808-4779)

**PROJECT DESCRIPTION**

The East Fish Ladder at The Dalles Dam receives auxiliary fish attraction water from two Kaplan turbine-generators specifically designed for this purpose with both units required to be running to meet the flow requirements. Approximately 80% of all adult fish migrating past The Dalles use this ladder. These units were placed online in 1957 and the turbines are reaching the end of their service life with a condition assessment of the turbines being marginal.

HDC completed a reliability analysis on the fish units in 2009 with an update in 2015. HDC performed a condition assessment of the major components of the fish units which included the turbines, generators, exciters, breakers, governors, and transformers. The condition assessment of the turbines being marginal. Currently the generators are in fair condition but the entire system will be evaluated including original electrical equipment and cabling, generators, and turbines. There are currently projects underway to replace the transformers and breakers associated with the fish units.

The fish units are the primary source of attraction water for the three entrances of the Oregon shore ladder. The reliability of the fish units is important to aid in the upstream adult fish migration.

Project objective: Increase the reliability of the fish units and the overall fish unit system

Project Scope: Evaluate the existing fish unit system to ensure the reliability of the fish units. Primary focus will be on the turbines, spare equipment to reduce unit outage times, and redundancies/dependencies of subsystems.

**CURRENT SCHEDULE**

A. Phase 1A, Report Milestones

1. Evaluate Existing Conditions (10% Review) **Completed 03/30/2017**  
Describes background and purpose for this report. Includes existing condition of anticipated features of work. Talk about AWS in this phase of the report.
2. Criteria & Constraints Report (30% Review): **06/19/2017**  
At this milestone there will not be sufficient information identified to the point where any design can proceed. The deliverable will be a draft report and include, as a minimum:
  - Problem Statement
  - Criteria
  - Outline for write-up
  - Identification of known constraints and assumptions
  - List of alternatives to be considered
3. Alternative Evaluation Report (60% Review): **10/15/2017**  
At this milestone, the following will be added to the draft report:
  - Alternatives at least partially developed
  - Alternative analysis stated
  - Major cost items identified
  - Draft Appendices for coordination, calculations, preliminary as-built requirements, and reviews
  - Calculations partially completed
  - Drawings/Modeling developed Draft cost estimates to facilitate evaluation of alternatives
  - Write up

Review of this deliverable shall serve as an endorsement of the alternative evaluation using the criteria presented.
4. Draft Final Report (100% Review): **01/08/2018**  
At this milestone, the following will be added to the draft report:
  - Selection justification for final alternative (i.e. Evaluation Matrix)
  - Design/Analysis/Calculations as applicable for final alternative
  - Draft write-up of all sections included addressing the final alternative completed
  - Draft Appendices for coordination, calculations, finalized as-built requirements, and reviews
  - Modeling/Drawings technically complete
  - Cost estimate for selected alternative
  - A Value engineering (VE) Plan shall be generated after alternative evaluation. The PDT shall schedule the VE study (during Phase 1)
  - Draft Q/E PWS and IGE if applicable

5. Phase 1A Report Complete **02/14/2018**

- Final Report
- Recommended Alternative

B. Phase 1, Plans & Specifications, Phase 2, EDC, and Closeout Milestones

- |                        |          |
|------------------------|----------|
| 1. Design Complete     | JUL 2019 |
| 2. Contract Award      | JAN 2020 |
| 3. Physical Completion | APR 2022 |

**PROGRESS AND KEY ISSUES (List)**

On track for meeting 30% milestone.

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

No.