

The Dalles Dam Fishway Status Report

2/19/2017

Inspection Period: 02/12/2017 - 02/18/2017

THE DALLES DAM



US Army Corps
of Engineers
Portland District

Fishways are inspected once daily during winter

| The Dalles Dam | Inspections Out of Criteria | Criteria Limit | Total Number of Inspections: 7 | Temperature: 35.8 °F |
|---------------------------------|--------------------------------|-------------------|---|----------------------|
| | | | Comments: Snow conditions subsided | Secchi: 3.4 feet |
| NORTH FISHWAY | | | | |
| Exit differential | 0 | ≤ 0.5' | 1.3 | |
| Count station differential | 0 | ≤ 0.3' | | |
| Weir crest depth | 0 | 1.0' ± 0.1' | | |
| Entrance differential | 0 | 1.0' - 2.0' | | |
| Entrance weir N1 | 0 | depth (≥ 8') | 9.1 | |
| Entrance weir N2 | 0 | Closed | | |
| PUD Intake differential | 0 | ≤ 0.5' | | |
| EAST FISHWAY | | | | |
| Exit differential | | ≤ 0.5' | | |
| Removable weirs 154-157 | | Per forebay | | |
| Weir 158-159 differential | | 1.0' ± 0.1' | | |
| Count station differential | | ≤ 0.3' | | |
| Weir crest depth | | 1.0' ± 0.1' | | |
| Junction pool weir JP6 | | depth (≥ 7') | | |
| East entrance differential | | 1.0' - 2.0' | | |
| Entrance weir E1 | | No criteria | | |
| Entrance weir E2 | | depth (≥ 8') | | |
| Entrance weir E3 | | depth (≥ 8') | | |
| Collection channel velocity | | 1.5 - 4 fps | | |
| Transportation channel velocity | | 1.5 - 4 fps | | |
| North channel velocity | | 1.5 - 4 fps | | |
| South channel velocity | | 1.5 - 4 fps | | |
| West entrance differential | | 1.0' - 2.0' | | |
| Entrance weir W1 | | depth (≥ 8') | | |
| Entrance weir W2 | | depth (≥ 8') | | |
| Entrance weir W3 | | No criteria | | |
| South entrance differential | | 1.0' - 2.0' | | |
| Entrance weir S1 | | depth (≥ 8') | | |
| Entrance weir S2 | | depth (≥ 8') | | |
| JUVENILE PASSAGE | | | | |
| Sluiceway operation | 0 | Units 1, 18 | Reopens Mar1 for fish passage. Opened during intermittent forced spill operation. | |
| Turbine trashrack drawdown | NA | | | |
| spill | NA | | Intermittent spill for high river flows | |
| Turbine 1% Efficiency | NA | per FPP | Out of fish passage season | |
| Turbine Unit Priority | NA | per FPP | Out of fish passage season | |

***Out for winter maintenance and
AWS backup construction. Return
2/28***

Birds/Sea lions:

No sea lions observed. All bird numbers low.

Bird observation data collected once daily. Refer to Avian Zone map and bird count.

Spillway avian lines repair plan in progress. USDA work plan COE approvals completed. USDA prework site tour Mar1.

Operations:

North Fishway watered up Jan24. Additional temperature monitoring probe deployed at north entrance, data shown in temperature graph

Two additional temperature monitoring probe to be deployed at east junction pool and south entrance prior to water up

Current Outages;

T8 (MU15 & MU16) out due to transformer failure. Transformer replacement scheduled for spring 2018.

MU21 out for exciter failure, return Feb23

MU3 out for governor oil level failure, return Feb24

Awaiting tailrace crane completion to resume turbine maintenance schedule. ETR end of March.

Maintenance:

North fishway entrance diffuser grating ROV inspected 2/15. No problems found.

PUD intake trashrack and North entrance exit ROV inspected 2/15. No problems found.

Installing material to bottom of east count station crowder to keep lamprey out from entering crowder. FPOM informed.

New east exit weir electrical panel FCQ7 installation on hold awaiting funding.

East ladder dewatered Dec1 through Feb28 for AWS backup construction and ladder maintenance. North ladder in service.

Winter work in progress; East exit weirs 154 and 159 coupler/seal replacement complete, ladder expansion joint repair (50%)

N1 weir rehab and spare swap complete, W1 weir repair/wheel replace complete/install next week.

Other repair maintenance plans; 154 -157 rehab/weir wheel replace, collection channel diffusers decommission, repair failed diffusers.

Fish related /non-fish funded items; Spillway crane and spillgate 9, both awaiting funding.

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Research/Construction/Contractors:

Normandeau supervisors scheduled 2/23 to receive badges and keys to resume fish counting for fish season 2017

North fishladder rehab/rock wall stabilizing - Awaiting funding. Possible 2018/19.

East fishladder AWS emergency backup - Forebay diving saw cutting continues. Junction pool 7' pipes span complete. Excavation 7' valve room continues.

Jackhammering hole complete season 1. Excavation 10' valve room to occur in March per FPOM approval. Possible EFL outage extension FPOM approved

Railroad track removal - Underway west powerhouse tailrace deck. Work over sluiceway in March FPOM approved. Crane rail replace 2021.

Tailrace crane rehab - Work resumed. Completion Feb.

Fish unit breaker replace.- Work start fall 2017. Switch over Jan 2018.

Fish unit rehab - Weekly coordination meetings. Phase 1A report Jan 2018. Award 2020. Completion 2022. Investigating possible increase flow capacity.

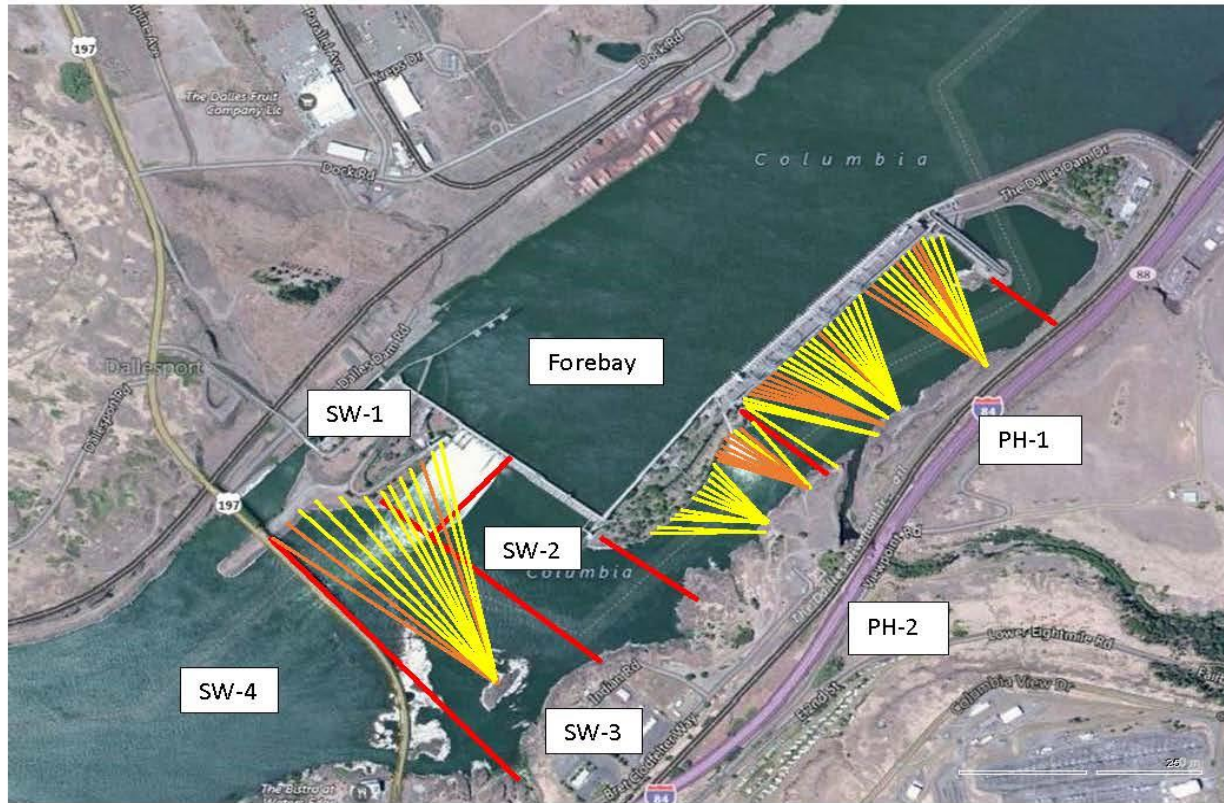
Transformer replacement - Install start May 2018. Coordinated through FPOM.

N Wasco Co PUD Memo of Agreement - Complete.

Lamprey minor mods - Tribal trap hoist improvements and rounded entrance weir caps designs underway. Fab in-house '17. Install next in water work period.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

The Dalles River/Water Temperatures

Series1

Series2

Series3

Series4

35.5

35.0



USGS:

<http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201701.lcol.html>

| | Secchi: | | Temperatures |
|------|------------|------------|--------------|
| 2/12 | 4.0 | Sun | 35.8 |
| 2/13 | 4.0 | Mon | 35.8 |
| 2/14 | 4.0 | Tue | 35.6 |
| 2/15 | 3.0 | Wed | 35.7 |
| 2/16 | 3.0 | Thurs | 35.7 |
| 2/17 | 3.0 | Fri | 35.8 |
| 2/18 | 3.0 | Sat | 36.0 |
| | 3.4 | AVG | 35.8 |

The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill

= Out of criteria

| Date: | North Ladder | | East Ladder | | | | | | East Ladder | | | East Ladder | | |
|-------|----------------|----------|---------------|----------|----------|---------------|------|--------------|----------------|----------|----------|--------------|----------|----------|
| | North Entrance | | East Entrance | | | West Entrance | | | South Entrance | | | | | |
| | Differential | N1 Depth | Differential | E1 Depth | E2 Depth | E3 Depth | JP 6 | Differential | W1 Depth | W2 Depth | W3 Depth | Differential | S1 Depth | S2 Depth |
| 2/12 | 1.3 | 9.3 | | | | | | | | | | | | |
| 2/13 | 7.2 | 9.6 | | | | | | | | | | | | |
| 2/14 | 1.3 | 9.6 | | | | | | | | | | | | |
| 2/15 | Weir Repair | | | | | | | | | | | | | |
| 2/16 | | | | | | | | | | | | | | |
| 2/17 | 1.0 | 9.6 | | | | | | | | | | | | |
| 2/18 | 1.4 | 9.6 | | | | | | | | | | | | |
| | 2.4 | 9.5 | | | | | | | | | | | | |

Weir Failure

PUD had just RTS'd

East Ladder OOS for Maintenance



North Entrance Diffuser Grating

www.videoray.com

+1 610-458-3000

VideoRay

MENU SELECT

Power

Forward

Up



AWS 7' pipes entering AWS chamber west of junction pool