

The Dalles Dam Fishway Status Report

12/20/2014
 Inspection Period: 12/14/2014 to 12/20/2014

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
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Fishways are inspected once per day during the winter maintenance period.

| The Dalles Dam | Inspections Out of Criteria | Criteria Limit | Total Number of Inspections: 7 | | Temperature: 44.9 F |
|---------------------------------|--------------------------------|-------------------|--|----------|--|
| | | | Comments | | Secchi: > 5.0 feet |
| NORTH FISHWAY | | | | | |
| Exit differential | 0 | ≤ 0.5' | | | |
| Count station differential | 0 | ≤ 0.3' | | | |
| Weir crest depth | 0 | 1.0' ± 0.1' | | | |
| Entrance differential | 0 | 1.0' - 2.0' | Average | 1.4 | |
| Entrance weir N1 | 0 | depth (≥ 8') | Average | 9.2 | |
| Entrance weir N2 | 0 | Closed | | | |
| PUD Intake differential | 0 | ≤ 0.5' | | | |
| EAST FISHWAY | | | | | |
| Exit differential | NA | ≤ 0.5' | | | |
| Removable weirs 154-157 | NA | Per forebay | Auto adjusts 1' increments. | | |
| Weir 158-159 differential | NA | 1.0' ± 0.1' | | | |
| Count station differential | NA | ≤ 0.3' | | | |
| Weir crest depth | NA | 1.0' ± 0.1' | | | |
| Junction pool weir JP6 | NA | depth (≥ 7') | Average | N/A | |
| East entrance differential | NA | 1.0' - 2.0' | Average | N/A | |
| Entrance weir E1 | NA | No criteria | Average | N/A | Manually adjusted as needed. |
| Entrance weir E2 | NA | depth (≥ 8') | Average | N/A | |
| Entrance weir E3 | NA | depth (≥ 8') | Average | N/A | |
| Collection channel velocity | NA | 1.5 - 4 fps | Average | N/A | |
| Transportation channel velocity | NA | 1.5 - 4 fps | Average | N/A | Fishway velocities concluded Dec 1 and will resume Mar 1, 2015 as per Fish Passage Plan. |
| North channel velocity | NA | 1.5 - 4 fps | Average | N/A | |
| South channel velocity | NA | 1.5 - 4 fps | Average | N/A | |
| West entrance differential | NA | 1.0' - 2.0' | Average | N/A | |
| Entrance weir W1 | NA | depth (≥ 8') | Average | N/A | |
| Entrance weir W2 | NA | depth (≥ 8') | Average | N/A | |
| Entrance weir W3 | NA | No criteria | Closed | | |
| South entrance differential | NA | 1.0' - 2.0' | Average | N/A | |
| Entrance weir S1 | NA | depth (≥ 8') | Average | N/A | |
| Entrance weir S2 | NA | depth (≥ 8') | Average | N/A | |
| JUVENILE PASSAGE | | | | | |
| Sluiceway operation | 0 | 1, & 18 | December 1 - 15, sluiceways 1-2,1-3, 18-1 & 18-2 are open. | | |
| Turbine trashrack drawdown | NA | <1.5', wkly | Resume on March 1 | | |
| Spill volume | NA | 40% ±1% | Average | On seal. | |
| Spill Pattern | NA | per FPP | Spillbay | On seal. | |
| Turbine Unit Priority. | NA | per FPP | Fish passage season resumes March1 | | |
| Turbine 1% Efficiency | NA | per FPP | Fish passage season resumes March1 | | |

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map.

Operations:

Gateway drawdown completed for the season and will resume March 1, 2015.

Current Outages:

T8 (main units 15 & 16) de-rated to single unit full load ops through 2017

Fish unit 1 out of service 12/1 to 1/29/2014 for overhaul maintenance

Fish unit 2 out of service 12/1 to 1/15/2014 for annual maintenance

Maintenance:

Fish unit 1 cavitation work to begin next week.

Exit weir 158 fabrication final assembly near complete. Installation Dec 22.

Extensive weir guide damage found on west and east entrances. Repair underway. Overtime work weekend Dec 20 to maintain workload.

Three weirs removed for wheel replacement with high density plastic. Work to begin Dec 23. Will complete half of entrance weir wheels.

Four collection channel dewatering pumps require rehab. Parts on hand for completion of two. Remaining pumps to be inspected during winter outage.

Permanent east fishway exit boom delivered. Contract underway for installation before March. Further assessment for oil spill protection continues.

Long term repair plans funding dependent; Upgrade east exit weirs 154-157, stabilize north ladder rock walls, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels.

North fish ladder rock wall stabilization project awaiting initiation.

Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 wire rope replacement, HDC update fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.

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

Studies:

Investigating PIT tag 15 mile creek steelhead overshooting The Dalles Dam. Possible need for some winter sluiceway operation. Dec FPOM agenda item.

FPOM MOC form being revised with proposal and justification. To be reviewed in Jan.

Wasco PUD transformer pad work underway. Greater than 50' from fishladder. See pic.

Investigating de-icing alternatives and sensitive locations near fishways. SOP and sensitive area map in progress.

Investigating north fish count station mods for visibility improvement and use of video to reduce fish counting cost.

EFL Backup; Plans/Specs 60% review underway. Includes 10' pipe from forebay to AWS. A 1400cfs flow test planned in Feb. Product Development

PUD 'freedom' second turbine proposal underway. Field test proposal for summer 2015 being reviewed and presented at Dec FPOM.

Spill test for more fish passage to north fishladder completed. Results showed benefit. FPOM discussion continues for when to implement.

District working on justification for spillgate 9 repair.

Research/Contractors:

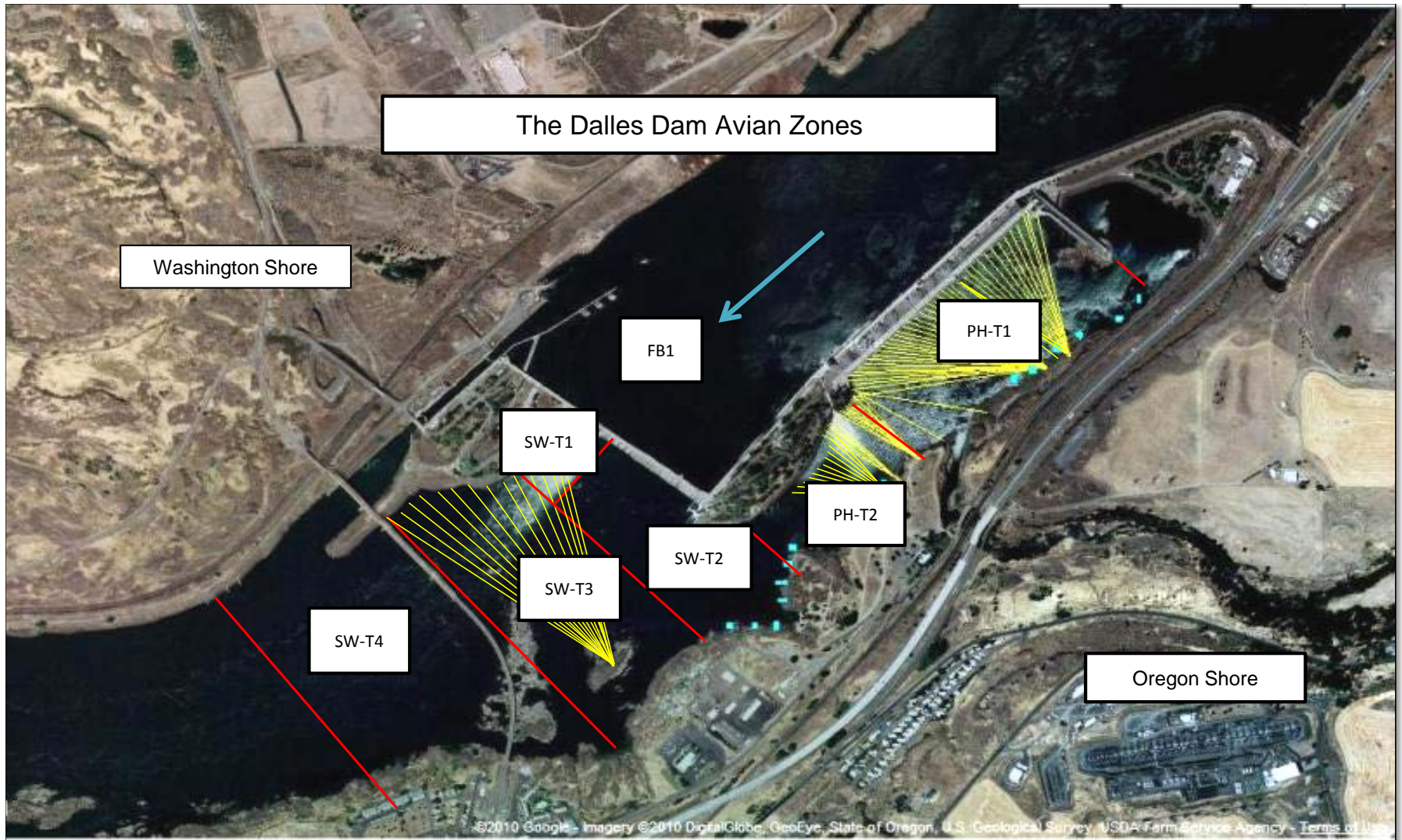
PSMFC PIT tag monitoring continues at north count station. Outage maintenance as needed for east count station antenna.

Normandeau fish counters to resume Apr1. East bathroom upgrades planned.

University of Idaho maintaining antennas and continuing downloads for winter steelhead.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Avian lines in yellow, zones in red.

2014 Piscivorous Bird Counts

F=foraging, NF=non-foraging

| Date | Observer | Time (24 hr) | Zone | Gull | | Cormorant | | Caspian tern | | Other | | Total birds in zone | Notes |
|-------|----------|--------------|------|------|----|-----------|----|--------------|----|-------|----|---------------------|--|
| | | | | F | NF | F | NF | F | NF | F | NF | | |
| 12/14 | PSK | 15:03 | FB | 0 | 0 | 0 | 3 | | | 0 | 54 | 57 | 50 grebe, 3 COME, 1 BAEA COME GBHE 2 COME, 1 GBHE |
| | | 13:54 | PH1 | 0 | 0 | 0 | 66 | | | 0 | 20 | 86 | |
| | | 14:10 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 15:18 | SW1 | 0 | 89 | 0 | 0 | | | 0 | 2 | 91 | |
| | | 14:16 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 3 | 3 | |
| | | 15:26 | SW3 | 0 | 37 | 0 | 28 | | | 0 | 0 | 65 | |
| 12/15 | JWR | 9:52 | FB | 0 | 2 | 4 | 0 | | | 0 | 39 | 45 | 38 GREBE, 1 BAEA COME 4 GBHE, 1 BAEA |
| | | 8:58 | PH1 | 5 | 0 | 1 | 38 | | | 0 | 14 | 58 | |
| | | 9:06 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 5 | 5 | |
| | | 9:40 | SW1 | 0 | 8 | 0 | 0 | | | 0 | 0 | 8 | |
| | | 9:09 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 9:35 | SW3 | 0 | 17 | 0 | 66 | | | 0 | 0 | 83 | |
| 12/16 | PSK | 9:37 | SW4 | 0 | 7 | 0 | 2 | | | 0 | 0 | 9 | 46 GREBE 1 GBHE, 7 COME 2 GBHE 2 GBHE |
| | | 15:00 | FB | 0 | 0 | 0 | 5 | | | 0 | 46 | 51 | |
| | | 14:29 | PH1 | 0 | 0 | 0 | 61 | | | 0 | 8 | 69 | |
| | | 14:37 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 2 | 2 | |
| | | 15:02 | SW1 | 0 | 84 | 0 | 0 | | | 0 | 2 | 86 | |
| | | 14:42 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| 12/17 | JWR | 15:05 | SW3 | 0 | 22 | 0 | 8 | | | 0 | 0 | 30 | 36 GREBE, 1 BAEA COME GBHE GBHE |
| | | 15:11 | SW4 | 0 | 47 | 0 | 1 | | | 0 | 0 | 48 | |
| | | 10:53 | FB | 0 | 1 | 7 | 0 | | | 0 | 37 | 45 | |
| | | 9:48 | PH1 | 1 | 0 | 1 | 24 | | | 0 | 8 | 34 | |
| | | 9:57 | PH2 | 1 | 0 | 0 | 0 | | | 0 | 2 | 3 | |
| | | 10:33 | SW1 | 0 | 6 | 0 | 0 | | | 0 | 1 | 7 | |
| 12/18 | PSK | 10:19 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | GREBE COME 5 GBHE, 2 BAEA GBHE |
| | | 10:25 | SW3 | 0 | 0 | 0 | 67 | | | 0 | 0 | 67 | |
| | | 10:28 | SW4 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 14:57 | FB | 0 | 0 | 2 | 19 | | | 0 | 47 | 68 | |
| | | 14:29 | PH1 | 0 | 0 | 0 | 31 | | | 0 | 15 | 46 | |
| | | 14:36 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 7 | 7 | |
| 12/19 | JWR | 15:07 | SW1 | 0 | 90 | 0 | 0 | | | 0 | 0 | 90 | BAEA forage, grebe NF COME 4 BAEA, 3 GBHE |
| | | 14:41 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 1 | 1 | |
| | | 15:13 | SW3 | 0 | 22 | 0 | 47 | | | 0 | 0 | 69 | |
| | | 15:20 | SW4 | 0 | 28 | 0 | 0 | | | 0 | 0 | 28 | |
| | | 8:50 | FB | 0 | 0 | 3 | 35 | | | 1 | 39 | 78 | |
| | | 9:38 | PH1 | 0 | 0 | 2 | 22 | | | 0 | 6 | 30 | |
| 12/20 | EHK | 9:45 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 7 | 7 | 2 BAEA 17 mergansers 8 BAEA & 5 GBH 1 BAEA |
| | | 8:41 | SW1 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 9:50 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 9:02 | SW3 | 0 | 0 | 0 | 67 | | | 0 | 0 | 67 | |
| | | 9:06 | SW4 | 0 | 19 | 0 | 5 | | | 0 | 0 | 24 | |
| | | 12:35 | FB | 0 | 0 | 0 | 11 | | | 0 | 2 | 13 | |
| 12/20 | EHK | 13:15 | PH1 | 0 | 0 | 0 | 17 | | | 0 | 17 | 34 | 1 BAEA |
| | | 13:01 | PH2 | 0 | 0 | 0 | 0 | | | 0 | 13 | 13 | |
| | | 12:38 | SW1 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | |
| | | 13:40 | SW2 | 0 | 0 | 0 | 0 | | | 0 | 1 | 1 | |
| | | 12:39 | SW3 | 0 | 27 | 0 | 53 | | | 0 | 0 | 80 | |
| 12:40 | SW4 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |

The Dalles Dam River-Water Temperatures

