

The Dalles Dam Fishway Status Report

Date: 11/10/13
 Inspection Period: 11/3-9/2013

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
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Fishways are inspected twice daily. Additional daily monitoring done via automation system in fisheries office.

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 20	Temperature: F
			Comments	Secchi: in ' 5.0
NORTH FISHWAY				
Exit differential	0	≤ 0.5'	Cleaned north forebay staff gauge 10/31.	
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 8.7	
Entrance weir N2		Closed	Bulkhead installed.	
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.	
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'	Picketed leads raked several times per week.	
Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	depth (≥ 7')	Removed 10/21 due to low tailwater.	
East entrance differential	0	1.0' - 2.0'	Average 1.6	
Entrance weir E1	0	No criteria	Average 11.3	Manually adjusted.
Entrance weir E2	0	depth (≥ 8')	Average 11.2	
Entrance weir E3	0	depth (≥ 8')	Average 11.5	
Collection channel velocity	0	1.5 - 4 fps	Average 2.3	See Velocities tab for more complete information.
Transportation channel velocity	0	1.5 - 4 fps	Average 2.3	
North channel velocity	0	1.5 - 4 fps	Average 2.6	
South channel velocity	0	1.5 - 4 fps	Average 3.2	
West entrance differential	0	1.0' - 2.0'	Average 1.4	Daily differentials & weir depths, see AVGS tab.
Entrance weir W1	0	depth (≥ 8')	Average 8.2	Out of criteria at 7.9'.
Entrance weir W2	0	depth (≥ 8')	Average 8.2	Out of criteria at 7.9'.
Entrance weir W3	0	No criteria	Average Closed	
South entrance differential	0	1.0' - 2.0'	Average 1.1	OOC at 0.9', 0.8'; manually adjusted; Low tailwater.
Entrance weir S1	0	depth (≥ 8')	Average 8.2	
Entrance weir S2	0	depth (≥ 8')	Average 8.1	
JUVENILE PASSAGE				
Sluiceway operation	0	units 1,8,18		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.1' - 0.3'	
Spill volume	0	40%, 24hr	On seal.	
Spill Pattern	0	per FPP	On seal.	
Turbine Unit Priority	1	per FPP	11/5 - MU 16 was condensing instead of running - control room notified	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:**Birds/Sea lions:**

Bird observation data collected twice daily. Gull and cormorant numbers increasing on rocks upstream of bridge, grebes in the forebay and mergansers and cormorants in PH1. See avian zones map and distribution tabs. No sea lion sightings this week.

Operations:

North and south entrance bulkhead sill inspection via ROV Nov 12.

Calibration of entrance weirs, entrance channel/tailwater, exit staff gauges 11/1. Few out of criteria by 0.1'.

Fish Counts ended on October 31, 2013. The counts start again on April 1, 2014.

Current Outages:

Main Unit 15 out of service 9/17 to 10/31 for five year overhaul.

Station Service 01 OOS 10/15 to 11/29 for digital governor installation.

Transformer five OOS 10/21 to 10/31 for bushing replacement.

One generic MU OOS rolling daily 10/28 to 11/1 for WECC model validation testing.

MU 7 and MU8 out of service 10/30 for disconnect upgrade measurements; return to service same day.

MU 9 returned to service 10/31 from scheduled T5 transformer bushing replacement.

Maintenance:

Fishway PLC automation inaccuracy problem for east fishway entrance weir E2 corrected.

Fishway winter maintenance dewatering schedule; East fishway Dec 4 to mid Jan. North fishway Jan 15 through end of Feb.

Main jobs to be addressed; west entrance grating attachment upgrade, east exit weir upgrades, East exit water leak over electrical panel repair, west entrance wheel replacement, north ladder brush removal and fish lock back flushing operation.

The south entrance differential trend was out of criteria 0336 - 0415 hrs. 10/29.

Studies:

PIT - Temporary Thin Wall PIT tag Antenna continues to work successfully. Slight modification to north upstream antenna positioning planned.

EFL - Project resumed after Government shutdown. Plan to run 10' pipe through dam directly to AWS conduit under east fishladder.

PUD - "Freedom" turbine proposal out for review. Modification of original FERC license underway. PUD consultant meeting Nov 7 at NOAA office to review NOAA, PSMFC and COE biologist perspective on additional 800cfs fishway flow. Consensus; no obvious fish passage improvement and likely no degradation in north fish passage. There may be potential lamprey passage improvements, depending on modifications.

Lamprey - A pre-construction meeting completed for lamprey plating modifications in east ladder. Work to begin Dec 9. No project support required.

Research/Contractors:

Tribal lamprey trapping completed.

WDFW Northern Pike minnow dam Angling completed.

Plans underway for dive removal of remaining pier nose antennas this winter.

USFWS camera lamprey monitoring at both count stations completed. Equipment removal this winter.

Normandeau fish counters performing video counting through 9/30 and visual counting to 10/31.

Last set of 3 derelict Vertical Barrier Screens (VBS) from 90's research remains in MU 12 gateway slot. To be removed as time/funding allows.

University of Idaho adult RT new antennas both fish ladders completed and operating. Plans to clean up unused antennas this winter.

Approved by;
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Operation Project Manager
The Dalles Dam

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

SW-T2

SW-T4

SW-T5

Oregon Shore



Temp:		Secchi:
56.1	SUN	5.0
56.1	MON	5.0
55.2	TUES	5.0
54.8	WED	5.0
54.9	THUR	5.0
54.6	FRI	5.0
54.3	SAT	5.0
AVG:	AVG:	5.0

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

= out of criteria

North Fish Ladder			East Fish Ladder											S P I L L O N S E A L	
North Entrance		East Entrance					West Entrance				South Entrance				
Date:	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth		S2 Depth
3-Nov-13			1.5	10.0	12.5	12.5	10.3	1.5	8.5	8.5		1.3	8.0		8.0
3-Nov-13	1.5	8.6	1.6	10.1	12.4	12.4	10.2	1.5	8.3	8.3		1.2	8.2		8.2
3-Nov-13	1.5	8.5	1.5	9.0	12.4	12.4	10.2	1.5	8.4	8.4		1.3	8.1		8.2
4-Nov-13			1.5	9.0	12.5	12.6	10.3	1.5	8.5	8.5		1.3	8.2		8.2
4-Nov-13	1.4	9.0	1.6	8.1	12.7	12.7	10.6	1.6	8.2	8.2		1.2	8.2		8.2
4-Nov-13	1.5	9.0	1.6	8.0	12.1	12.6	11.7	1.7	8.9	8.9		1.4	8.1		8.1
5-Nov-13			1.7	8.0	12.5	12.5	10.5	1.5	9.0	9.1		1.3	8.2		8.1
5-Nov-13	1.3	9.3	1.9	8.6	12.4	12.6	11.1	1.6	8.8	9.0		1.4	8.0	8.0	
5-Nov-13	1.3	9.2	1.9	7.8	12.6	12.6	10.3	1.5	8.9	9.0		1.2	8.2	8.2	
6-Nov-13			1.6	6.7	12.6	12.6	9.2	1.6	8.3	8.3		1.1	8.3	8.3	
6-Nov-13	1.3	9.2	1.9	7.8	12.6	12.6	10.3	1.5	8.9	9.0		1.2	8.2	8.2	
6-Nov-13	1.3	9.1	1.6	7.5	12.6	12.6	10.0	1.6	8.4	8.4		1.2	8.2	8.3	
7-Nov-13			1.7	6.3	12.6	12.5	8.8	1.4	8.3	8.4		1.3	8.1	8.1	
7-Nov-13	1.4	8.9	1.5	7.2	12.5	12.6	9.7	1.5	8.4	8.4		1.4	8.1	8.1	
7-Nov-13	1.4	8.8	1.6	7.0	12.5	12.6	9.5	1.7	8.2	8.2		1.4	8.1	8.1	
8-Nov-13			1.3	6.9	12.6	12.6	9.4	1.7	8.2	8.3		1.4	8.0	8.0	
8-Nov-13	1.4	8.8	1.5	7.3	12.6	12.6	9.8	1.6	8.4	8.3		1.4	8.1	8.1	
8-Nov-13	1.3	8.9	1.4	6.8	12.5	12.5	9.3	1.5	8.3	8.2		1.2	8.2	8.2	
9-Nov-13			1.5	6.5	12.5	12.5	9.0	1.4	8.8	8.7		1.3	8.0	8.1	
9-Nov-13	1.3	8.7	1.5	6.4	12.4	12.4	8.9	1.4	8.8	8.9		1.3	8.1	8.0	
9-Nov-13															
AVG:	1.4	8.9	1.6	7.8	12.5	12.6	10.0	1.5	8.5	8.6	closed	1.3	8.1	8.1	

Third fish way inspection for east fish ladder, east, west, and south entrances completed via automation system in fisheries office (SCADA).