

# The Dalles Dam Fishway Status Report

Date: 02/17/2014  
 Inspection Period: 02/09/2014-02/15/2014

## THE DALLES DAM



US Army Corps  
 of Engineers  
 Portland District

The Dalles Project-Fisheries  
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Fishways are inspected once daily during the winter.

The Dalles Dam	Inspections	Criteria	Total Number of Inspections:	Temperature:
	Out of Criteria	Limit	14	#DIV/0! F
			Comments	Secchi: 5.5 feet
<b>NORTH FISHWAY</b>			<b>North fishladder dewatered Feb 4 for annual maintenance</b>	
Exit differential		≤ 0.5'		
Count station differential		≤ 0.3'		
Weir crest depth		1.0' ± 0.1'		
Entrance differential		1.0' - 2.0'	Average	#DIV/0!
Entrance weir N1		depth (≥ 8')	Average	#DIV/0!
Entrance weir N2		Closed	Bulkhead installed.	
PUD Intake differential		≤ 0.5'		
<b>EAST FISHWAY</b>			<b>East Fishway dewatered for annual maintenance. Returned Feb 3.</b>	
Exit differential		≤ 0.5'		
Removable weirs 154-157	0	Per forebay		
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	1	≤ 0.3'	out at 0.8'. Automation PLC reset.	
Weir crest depth	1	1.0' ± 0.1'	out at 1.2'.	
Junction pool weir JP6	0	depth (≥ 7')		
East entrance differential	1	1.0' - 2.0'		
Entrance weir E1	none	No criteria		
Entrance weir E2	none	depth (≥ 8')		
Entrance weir E3	closed	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	1.0' - 2.0'		
Entrance weir W1	4	depth (≥ 8')		
Entrance weir W2	10	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	5	1.0' - 2.0'		
Entrance weir S1	12	depth (≥ 8')		
Entrance weir S2	14	depth (≥ 8')		
<b>JUVENILE PASSAGE</b>				
Sluiceway operation	0	units 1 & 18	End gate closed; 2 sluiceways open to forebay.	
Turbine trashrack drawdown		<1.5', wkly	Unit priority starts Mar1.	
Spill volume		40%, 24hr		
Spill Pattern		per FPP		
Turbine Unit Priority		per FPP		
Turbine 1% Efficiency		per FPP		

one fish unit operation

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

Bird observation data collected once daily. Few eagles foraging/roosting at Westtick park.  
See avian zones map and distribution details.

**Operations:**

North fishway dewatered.  
East fishway in service with 1 fish unit.  
Sluiceway closed through Feb 28.

**Current Outages:**

Transformer 8 (MU15 & MU16) de-rated to single unit full load ops.  
Fish unit F2 out Feb 11-13 and F1 out Feb 18-20 for as built documentation/future upgrade planning. One fish unit operation during these outages.  
TA out Jan13 to Feb3 '14 for Doble testing.  
Station Service 02 out Jan21 to Feb27 '14 for Digital Governor Upgrade  
Main Unit 4 out Jan21 to Feb27 '14 for overhaul.

**Maintenance:**

East fishway work completed; west diffuser grating attachment, exit weir 159 rehab, count station window brush repair, exit deck drains/leak repair, and all routine preventative maintenance on entrance weirs, exit weirs and count station equipment.  
Plans underway to build new weir to replace 158 or 159 next year pending funding, east fishway dewatering pump repairs and modify east entrance dewatering bulkheads for better fit.  
North fishway planned maintenance; vegetation removal from fishladder walls, assess fishladder rock wall integrity and preventative maintenance of count station and entrance weirs. Entrance dewatering below tailwater postponed to next winter due to pump motor problems.  
Items on list pending fish funds; Upgrade east exit weirs 154-157, stabilize north ladder rocks, remove collection channel diffusers.  
Items fish related but not fish funded; spillway evaluation to prioritize upgrades, one which is spillgate 10/11 wire rope replacement. Both on Critical Infrastructure list and Unfunded Requirement list

**Studies:**

**PIT** - North out for dewatering. East functioning. PSMFC investigating possible sluiceway antenna options. Awaiting BPA comment.  
**EFL** - Plan involves 10' dia. pipe through dam, under roadway and into AWS conduit under east fishladder. Construction start winter '15.  
Onsite management inquiring possible introduction into fishlock approach channel directly into junction pool from side.  
**PUD** - FERC license modification request submitted for additional north turbine, known as 'freedom' turbine.  
**Lamprey** - Plating mods in lower east weirs completed. No additional fishladder mods planned for this winter. Toured Bonneville lamprey structures.

**Research/Contractors:**

USFWS lamprey camera equipment removed from both count stations by project fisheries staff.  
University of Idaho installed maintaining antennas.  
Dive removal of remaining pier nose USGS antennas leftover from mid 1990s to occur Feb19-21 (Feb25-26 backup). JSAT pipes removal next year.  
Change of plan for USGS peirnose plates; to be removed with next year JSAT pipe removal contract.  
Removal last set of 3 derelict Vertical Barrier Screens (VBS) from MU 12 gatewell slot scheduled week of Aug11. Pending CRFM funding.  
Approval letters forwarded for; ODFW forebay pikeminnow survey, PSMFC fish sampling at PUD, Univ Idaho adult radiotelemetry.

Approved by;  
Ron D. Twiner  
Operation Project Manager  
The Dalles Dam

# The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

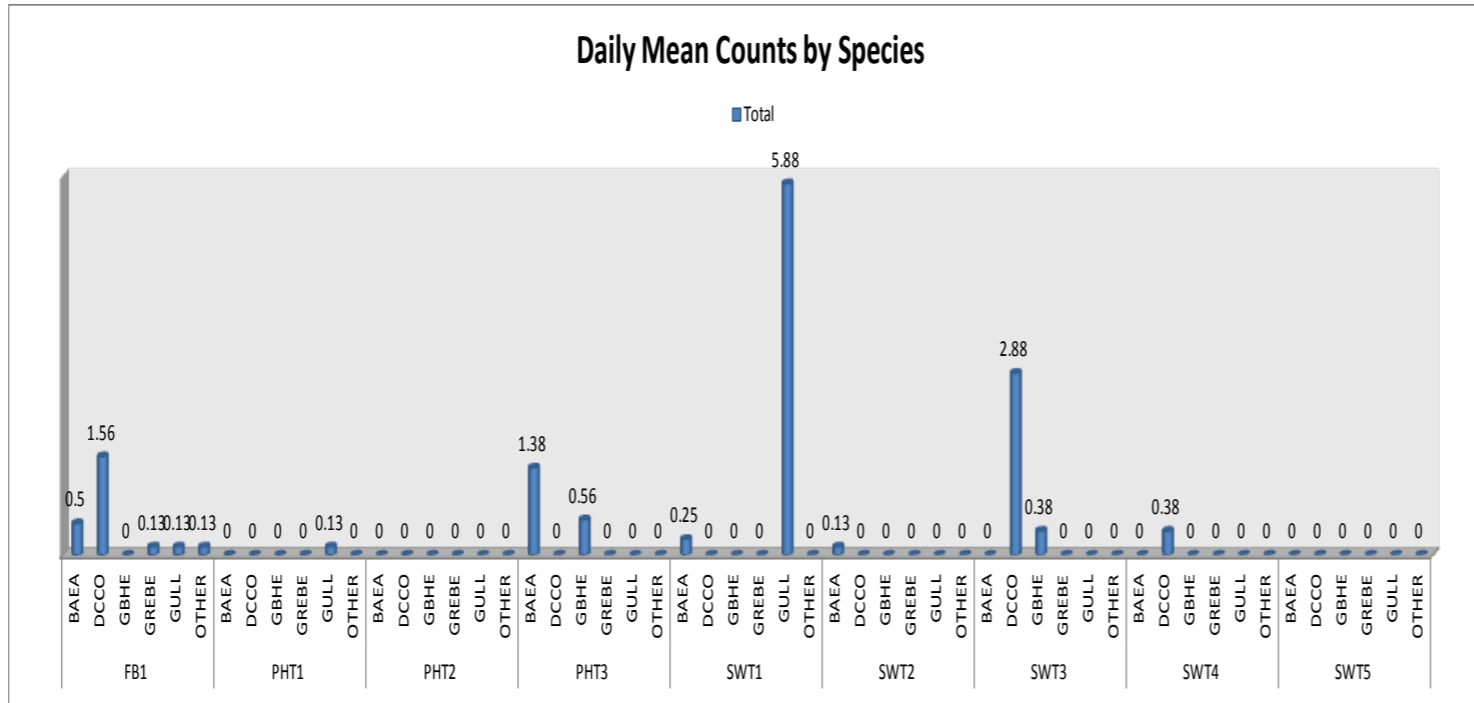
SW-T2

SW-T4

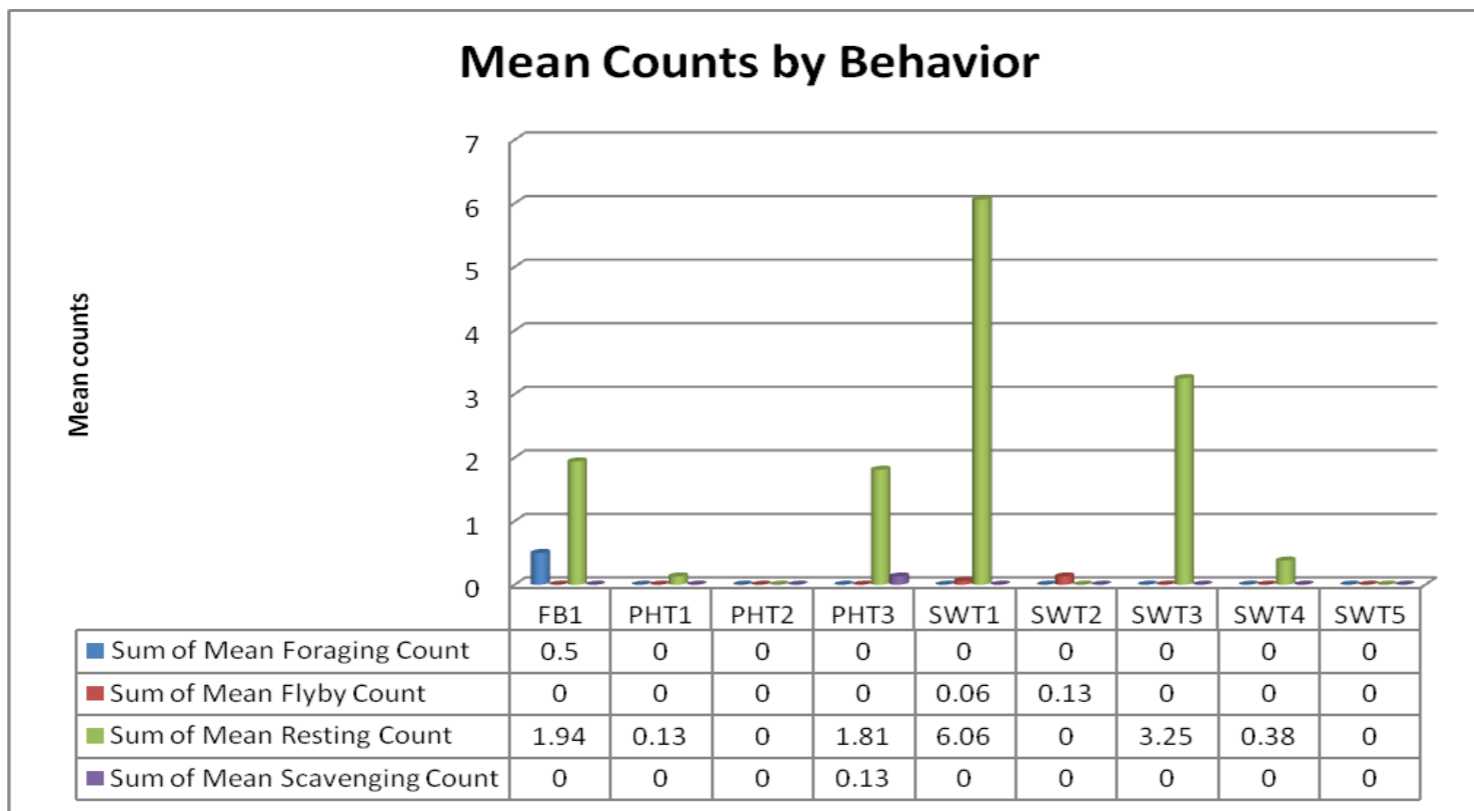
SW-T5

Oregon Shore





BAEA - Bald Eagle; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species)

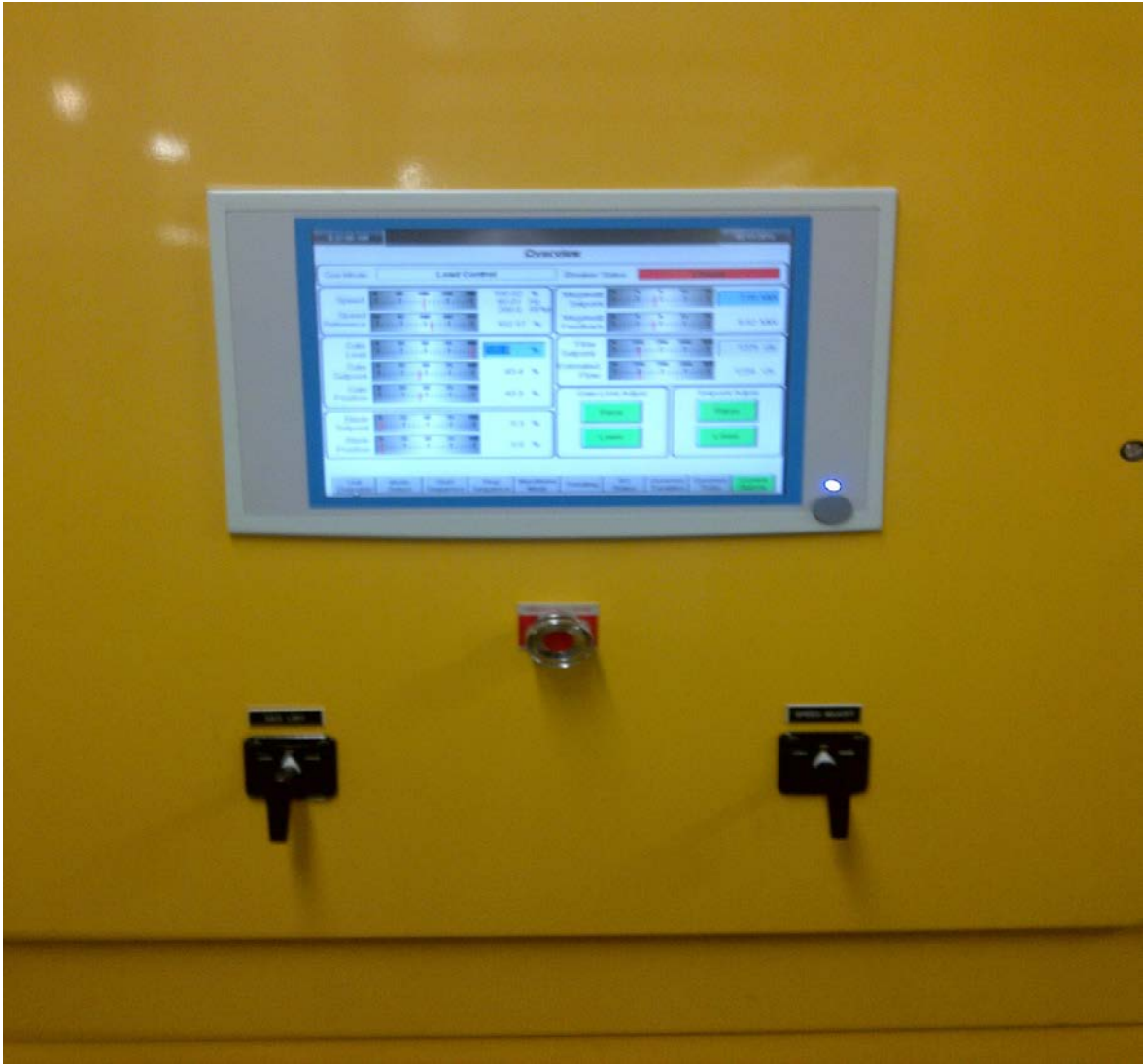


<b>Temp:</b>		SUN	5.5
		MON	5.5
		TUES	5.5
		WED	5.5
		THUR	5.5
		FRI	5.5
		SAT	5.5
<b>AVG:</b>	#DIV/0!	<b>AVG:</b>	5.5

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
9-Feb-14			1.2		8.3	8.5	8.0	1.3	8.2	0.0		0.8	7.1	0.0
			1.2		8.3	8.3	8.4	1.5	8.0	0.0		1.0	7.1	0.0
10-Feb-14			1.1		8.3	8.3	9.0	1.5	8.1	0.1		0.9	7.6	0.0
			1.2		8.2	8.2	8.9	1.5	8.0	0.0		1.2	5.9	0.0
11-Feb-14			1.7		8.2	8.2	8.4	1.5	8.3	2.7		1.3	6.0	0.0
			0.0		8.2	5.9	8.5	0.4	8.3	0.1		0.4	5.4	0.0
12-Feb-14			1.2		8.4	8.3	8.6	1.1	8.4	4.0		1.2	5.5	0.0
			1.2		8.4	8.3	7.7	1.0	8.3	3.9		1.1	5.4	0.0
13-Feb-14			1.3		8.4	8.6	7.9	1.3	8.5	0.0		1.1	5.9	0.0
			1.2		8.6	8.6	8.0	1.3	8.6	0.1		1.1	6.6	0.0
14-Feb-14			1.3		8.2	8.2	9.0	1.2	3.0	8.2		1.0	6.1	0.0
			1.4		8.2	8.1	9.4	1.4	3.0	8.2		1.1	6.0	0.0
15-Feb-14			1.3		8.2	8.2		1.1	5.1	8.2		0.7	8.1	0.1
			1.3		8.3	8.3	10.5	1.2	5.1	8.3		0.9	8.1	0.0
<b>AVG:</b>	#DIV/0!	#DIV/0!	1.2	#DIV/0!	8.3	8.1	8.6	1.2	7.1	3.1	closed	1.0	6.5	0.0



Display for newly installed digital governors on both fish units, replacing original mechanical ones. This upgrade was completed on all powerhouse units and will increase the reliability. It will also provide better control on discharge with changing net head.