

# FISHWAY STATUS REPORT

Date: 05/22/11

Inspection Period: 05/15-05/21/11

## THE DALLES DAM



**US Army Corps  
of Engineers**  
Portland District

The Dalles Project-Fisheries  
P.O. Box 564  
The Dalles, OR 97058-9998  
Phone: 541-506-3800

Fishways are inspected twice daily. Additional daily monitoring done via automation system in fisheries office.

The Dalles Dam	Inspections	Criteria	Total Number of Inspections:			
	Out of Criteria	Limit	Comments	Secchi:	2.3	Ft.
<b>NORTH FISHWAY</b>						
Exit differential	0	≤ 0.5'				
Count station differential	0	≤ 0.3'	Window cleaned 5/16/11.			
Weir crest depth	0	1.0' ± 0.1'	0.8'.			
Entrance differential	0	1.0' - 2.0'	Average 1.4	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir N1	0	depth (≥ 8')	Average 10.0			
Entrance weir N2		Closed	Bulkhead installed			
PUD Intake differential	0	≤ 0.5'	Trash rack raked 5/11/11			
<b>EAST FISHWAY</b>						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	3	Per forebay	weir 155 not adjusting. Maintenance notified			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Window cleaned 5/9/11			
Weir crest depth	1	1.0' ± 0.1'	1.2' - picket leads were raked			
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.			
East entrance differential	0	1.0' - 2.0'	Average 1.6	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir E1	0	No criteria	Average 11.5	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average 11.5			
Entrance weir E3	0	depth (≥ 8')	Average 10.3			
Collection channel velocity	0	1.5 - 4 fps	Average 2.2	See <b>Velocities</b> tab for more complete information.		
West entrance differential	0	1.0' - 2.0'	Average 1.7			
Entrance weir W1	0	depth (≥ 8')	Average 10.3			
Entrance weir W2	0	depth (≥ 8')	Average 10.2			
Entrance weir W3	0	No criteria	Average 9.00			
South entrance differential	0	1.0' - 2.0'	Average 1.6	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir S1	0	depth (≥ 8')	Average 8.8			
Entrance weir S2	0	depth (≥ 8')	Average 8.7			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	units 1,5,18	MU 8 OOS 5/16, chain gate changed to sluice gate 7-2, RTS 5/19			
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.1-0.6'			
Spill volume	0	40%, 24hr	Average 41.3 Due to the gas cap.			
Spill Pattern	1	per FPP	Spillbay 9 closed ~1hr for Battelle transducer install. Spill moved to next available bay			
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

**OTHER ISSUES:****THE DALLES**

**Birds:** Gull activity moderate. USDA is hazing birds during daylight by boat. Some birds feeding inside spillway avian lines. Most downstream The Dalles bridge. See bird tab below for bird observation data.

**Pikeminnow/Bass:**

Washington Department of Fish and Wildlife (WDFW) Pikeminnow dam anglers on site.

Oregon Department of Fish and Wildlife Columbia River Investigations Dam Angling Study have a four person team fishing for smallmouth bass at The Dalles Dam, between 5/2 and 8/31. The ODFW crew are fishing primarily from powerhouse forebay and tailrace. Specific dates of fishing to be determined according to a statistical sampling design. They have added a fifth ODFW sampler who will collect data from WDFW pike minnow angling crew's catch.

**Operations:**

Gatewell drawdown was completed on 5/20/11. The differentials ranged from 0.1 - 0.6' and within criteria.

One juvenile salmonid stranded atop 6/7 spillwall

Spill priority list sent on 5/17; Alterations to the spill cap due to high flow. Spillbays 10, 11, 13, 16, 18, 23 out of service for structural concerns.

Third daily inspection/monitoring done via automation system in fisheries office not available due to PLC problems.

High flows resulting in exceedance of upper range for entrance automation. Relying on stillwell readings and some manual adjustments.

**Maintenance:**

Ice and Trash sluiceway Main Unit 8 chain gate opened and Main Unit 7 chain gate this week. Unit 8 OOS 5/16 for annual maintenance.

RTS expected 5/19. Fishladder entrance gearboxes in the bone yard to be checked to determine if any are operational and worth

saving. The north fishladder entrance lift beam on the deck near spillbay 1 to be moved to a dry location due to spray causing corrosion.

Installing warning signs at fishing sites .

**Studies:**

Project fisheries and engineering supporting East Fishladder backup study as needed. Focusing on fishlock and turbine equalizing headers.

**Research:**

Fisheries Field Unit (FFU) conducting avian observations.

Battelle/Pacific Northwest National Laboratory (PNNL) juvenile salmonid acoustic telemetry (JSAT) tag research underway.

Washington Department of Fish and Wildlife (WDFW) fish counters started 4/1.

Washington Department of Fish and Wildlife (WDFW) Pikeminnow dam angling underway. Pikeminnow regurgitated juvenile lamprey are being collected for University of Idaho study.

Peoples' Utility District (PUD) juvenile sampling underway.

US Department of Agriculture (USDA) bird hazing started mid April.

US Fish and Wildlife lamprey passage and monitoring to occur 6/1 through 10/30. Cameras mounted inside count station picket leads.

Project Fisheries will meet with Yakama Nation to discuss coordination of sturgeon brood stock collection from cul-de-sac.

Approved by;

Ron D. Twiner

Operation Project Manager

The Dalles Dam

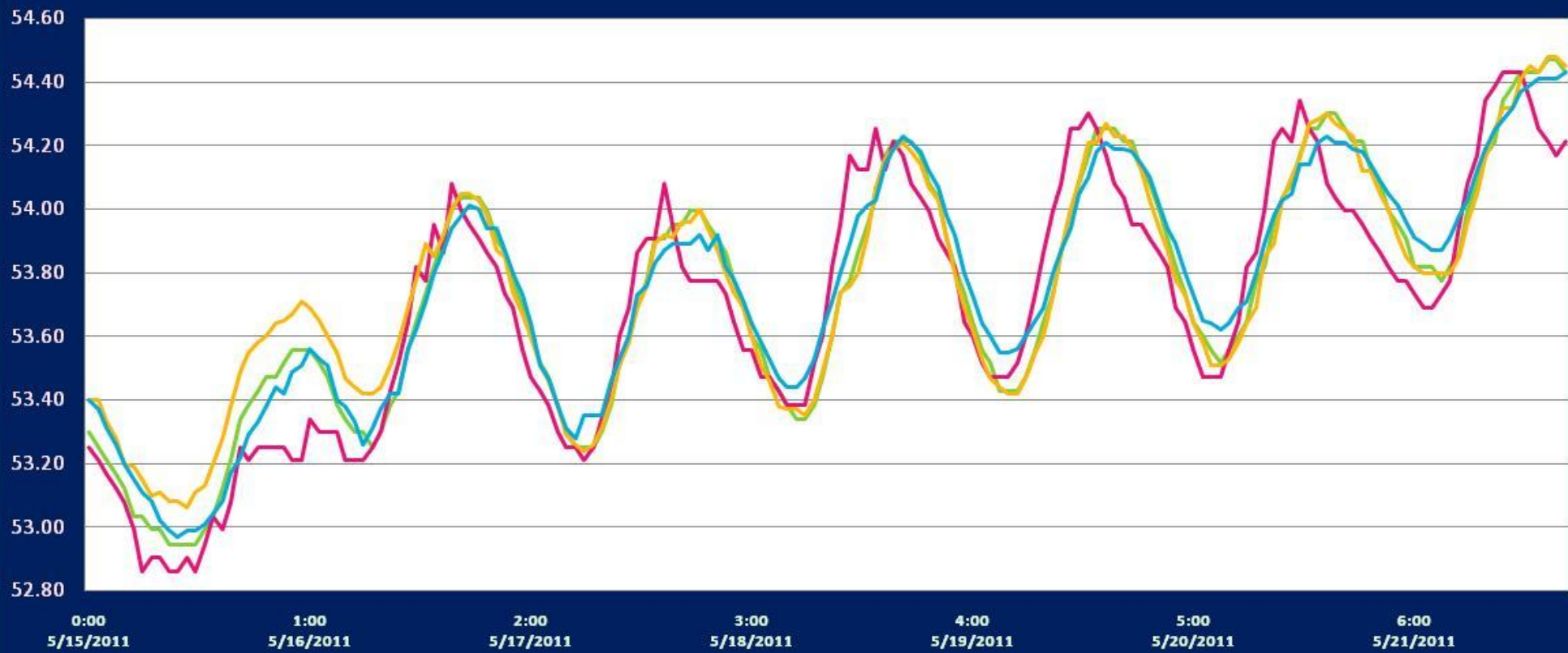
## The Dalles Dam Fish Counts

Date	East Chinook Adult	North Chinook Adult	East Chinook Jack	North Chinook Jack	Total East Sthd	Total North Sthd	East Wild Sthd	North Wild Sthd	East Sock	North Sock	East Coho	North Coho	East Coho Jack	North Coho Jack	East Lamprey	North Lamprey	Spill Volume
5/15/11	3773	654	3134	48	10	0	5	0	0	0	0	0	0	0	0	0	36.6
5/16/11	2158	152	2294	12	15	0	1	0	0	0	0	0	0	0	0	0	38.7
5/17/11	1350	65	1597	2	14	0	1	0	0	0	0	0	0	0	1	0	43.6
5/18/11	1074	48	941	1	2	0	1	0	0	0	0	0	0	0	0	0	45.2
5/19/11	698	76	875	2	7	0	2	0	0	0	0	0	0	0	0	0	45.3
5/20/11	772	79	1015	0	10	0	0	0	0	0	0	0	0	0	0	0	44.4
5/21/11	836	127	1307	8	14	2	4	1	0	0	0	0	0	0	0	0	46.7
Wkly Tot	10661	1201	11163	73	72	2	14	1	-1	0	0	0	0	0	1	0	
% Split	89.9%	10.1%	99.4%	0.6%	97.3%	2.7%	93.3%	6.7%	#DIV/0!	0.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.0%	0.0%	

Spill range: 36.6 to 46.7%

# The Dalles River/Water Temperatures

Deg F



# The Dalles Dam Maximum Daily Bird Observations

Washington Shore

SW-T1: Nesting osprey pair, active throughout

SW-T3: 10 active gulls.

SW-T4: 63 active gulls.

FB1: 2 gulls active, six cormorants in towers, 2 grebe present

SW-T2: 14 gulls active

PH-T1: 1 Heron-active

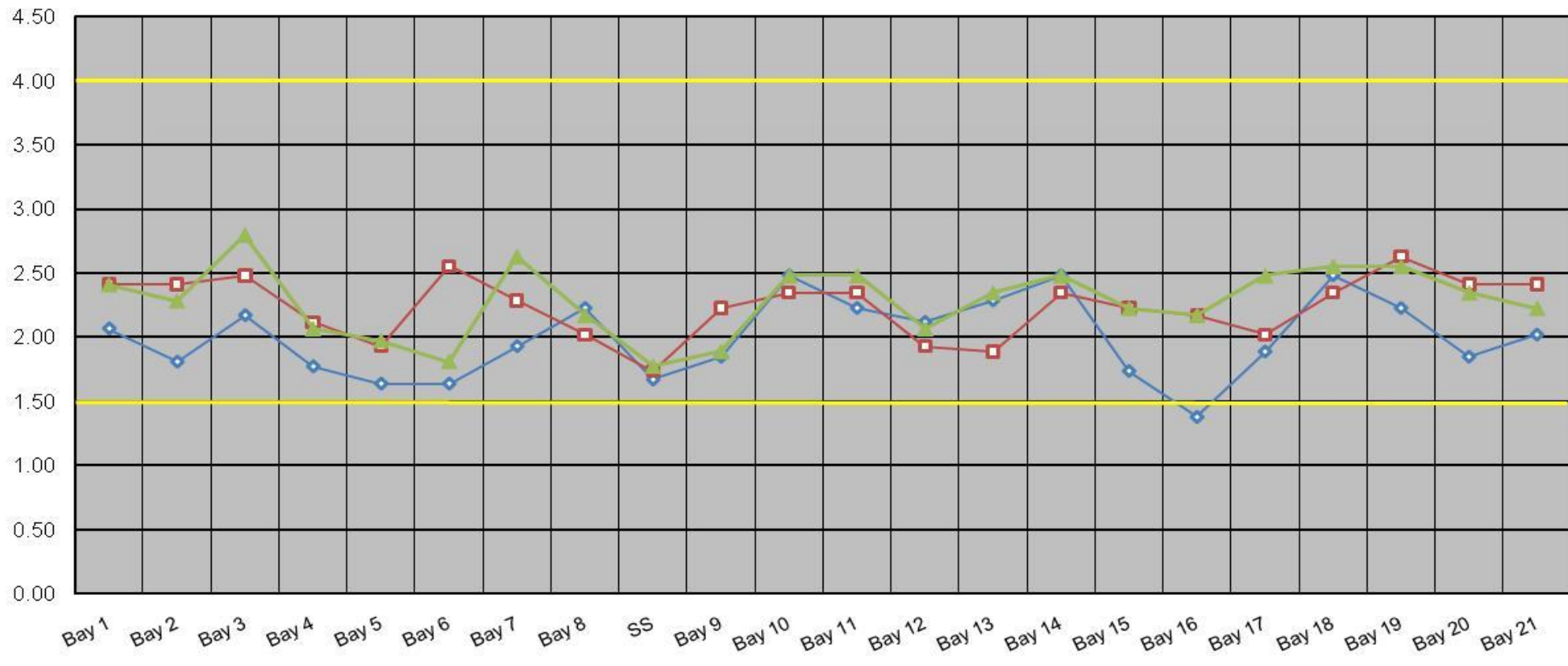
PH-T2: 8 active gull.

PH-T3: 12 gulls active.

Oregon Shore

The Dalles Dam Collection Channel Velocities (fps)

5/17/2011 5/18/2011 5/19/2011



Temp:		Secchi:	
	53.13	SUN	3.0
	53.61	MON	2.5
	53.62	TUES	2.5
	53.78	WED	2.0
	53.86	THUR	2.0
	53.91	FRI	2.0
	54.09	SAT	2.0
AVG:	53.71	AVG:	2.3

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

North Fish Ladder			East Fish Ladder												
North Entrance		East Entrance						West Entrance				South Entrance			% Spill
Date:	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
5/15/11	1.2	10.0	1.8	10.9	10.8	10.9	9.1	1.8	12.1	12.0	7.3 7.4 9.5 10.6 9.9 9.6	1.5	9.0	9.1	34
5/15/11	1.4	10.1	1.8	10.6	10.7	10.6	14.2	1.8	12.3	12.2		1.6	8.8	8.8	33
5/15/11			1.6	10.9	11.1	11.1		1.5	12.2	12.1		1.2	8.9	8.8	
5/16/11	1.5	10.0	1.7	10.2	10.2	9.2	15.9	1.6	11.7	11.8		8.2	8.1	36.8	
5/16/11	1.4	10.1	1.6	10.2	10.2	9.6	10.2	1.6	11.9	11.9		8.3	8.2	38.7	
5/16/11				10.5	10.5	10.5		1.5	12.3	12.4		8.8	8.8		
5/17/11	1.4	10.0	1.6	11.2	11.2	10.2	11.1								43.7
5/17/11	1.5	10.0	1.7	10.9	11.0	10.0	10.4	2.0	8.9	8.8		2.0	8.5	8.4	43.7
5/17/11															
5/18/11	1.5	10.0	1.5	12.3	12.2	10.3	10.7	1.8	8.9	8.7		1.9	8.5	8.4	43.5
5/18/11	1.5	10.0	1.5	12.3	12.3	10.4	10.8	1.8	9.0	8.8		1.8	8.7	8.6	46.2
5/18/11															
5/19/11	1.4	10.1	1.5	12.6	12.6	10.6	11.1	1.9	8.9	8.8		2.1	8.3	8.2	42.9
5/19/11	1.5	10.0	1.5	12.2	12.2	10.1	10.7	1.6	8.9	8.9		1.9	8.4	8.3	41.4
5/19/11															
5/20/21	1.5	10.0	1.6	11.8	11.9	10.0	10.9	1.6	9.0	8.7		1.8	8.8	8.8	42.9
5/20/21	1.4	10.1	1.4	12.2	12.2	10.3	11.3	1.4	10.0	9.9		2.0	9.7	9.7	42.4
5/20/21															
5/21/11	1.4	10.0	1.4	12.6	12.6	10.7	11.6	1.5	9.2	9.2		1.6	9.7	9.7	44
5/21/11	1.4	10.0	1.5	12.3	12.3	10.3	11.3	1.6	9.0	8.9		1.8	9.3	9.3	44.6
5/21/11															
<b>AVG:</b>	1.4	10.0	1.6	11.5	11.5	10.3	11.4	1.7	10.3	10.2	9.1	1.8	8.8	8.7	41.3

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



Spillwall overview at 200K spill



View from north entrance at 200K spill



strong cross flow over top of spillbay 15 plunge