

# The Dalles Dam Fishway Status Report

6/29/2015

Inspection Period: 6/21/2015 - 6/27/2015

## 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 plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 68.6	F
			Comments		Secchi: 5.2	feet
<b>NORTH FISHWAY</b>						
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	Bulkhead installed.			
PUD Intake differential	0	≤ 0.5'				
<b>EAST FISHWAY</b>						
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'	Picket leads raked as needed.			
Weir crest depth	0	1.0' ± 0.1'	currently at 1.3' for shad passage			
Junction pool weir JP6	0	depth (≥ 7')	Average	7.9		
East entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir E1	0	No criteria	Average	No criteria; manually adjusted as needed.		
Entrance weir E2	0	depth (≥ 8')	Average	11.3		
Entrance weir E3	0	depth (≥ 8')	Average	11.3		
Collection channel velocity	0	1.5 - 4 fps	Average	3.1		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.9		
North channel velocity	0	1.5 - 4 fps	Average	2.6		
South channel velocity	0	1.5 - 4 fps	Average	2.5		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	9.2		
Entrance weir W2	0	depth (≥ 8')	Average	9.2		
Entrance weir W3	0	No criteria	Average	No criteria; manually adjusted as needed.		
South entrance differential	0	1.0' - 2.0'	Average	1.4		
Entrance weir S1	0	depth (≥ 8')	Average	8.2		
Entrance weir S2	0	depth (≥ 8')	Average	8.2		
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open			
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.2' - 0.5'			
Spill volume	0	40%±1%	Average	40.0		
Spill Pattern	0	per FPP				
Turbine Unit Priority.	2	per FPP	BPA scheduled line #3 outage 6/27 till 1800 hrs.			
Turbine 1% Efficiency	0	per FPP				

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

Bird observation data collected once daily. Refer to Avian Zone Map. No sea lions observations this week.

Gull predation primarily upstream of bridge within avian lines. Boat hazing attempt with limited success. Pelicans feeding in SW3/4. see avian zone map.

**Operations:**

Gateway drawdown completed on 6/21. All values were within criteria.

Calibration completed 6/4; exit weir 158 off by 0.1'. All other entrance weirs, channel/tailwater meeting criteria.

**Current Outages:**

MU5 to MU8 out 6/27 0800, BPA line #3 work. Return 1800 hrs.

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017.

**Maintenance:**

Entrance weir wheel and guide work to resume next winter outage.

Three collection channel dewatering pumps on deck for rehab, repair delayed due to lack of funding. Two of 6 collection channel pumps remain stuck.

FCQ7 electrical panel for east exit upgrade funding in place. Planning and parts purchase underway. Installation next outage season pending funding.

*Future repair plans*; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,

*Fish related /non-fish funded items*; spillway evaluation, spillway crane rehab, spillgate 9 trunnion pin replace, fish unit breaker and transformer replace.

All spillway items on Critical Infrastructure list and Unfunded Requirement list. Spill gate 9 repair planning underway through small projects team.

**Studies:**

North fishladder rehab study for rock wall started. Construction dates to be determined.

Fish count video at north count station recording started. IR light testing underway. FPOM update 7/1.

East fishladder backup system construction start this winter. FPOM coordination completed.

Crane rail replacement on tailrace and intake decks winter of 2016-2017. FPOM coordination completed.

Transformer replacement planning underway. Potential elimination of TA transformers with fish unit tie through T1 with another tie for backup.

**Research/Contractors:**

Columbia River Northern Pikeminnow Management Program dam angling 6/21; total for week NPM  $\geq$  230mm - 324, YTD NPM  $\geq$  230mm - 3,170.

ODFW biological data collected from harvested pikeminnow showing smaller fish, but potentially a record year for total pikeminnow.

Fish counters at east and north count stations 16 hr/day.

PSMFC Wasco Co PUD weekly sampling ongoing. No fish in sample this week.

CRITFC and member tribes (YN, CTUIR, and NPT) to trap adult pacific lamprey starting 6/30.

PSMFC monitoring and maintaining thin walled PIT tag antennas and computer equipment. No issues.

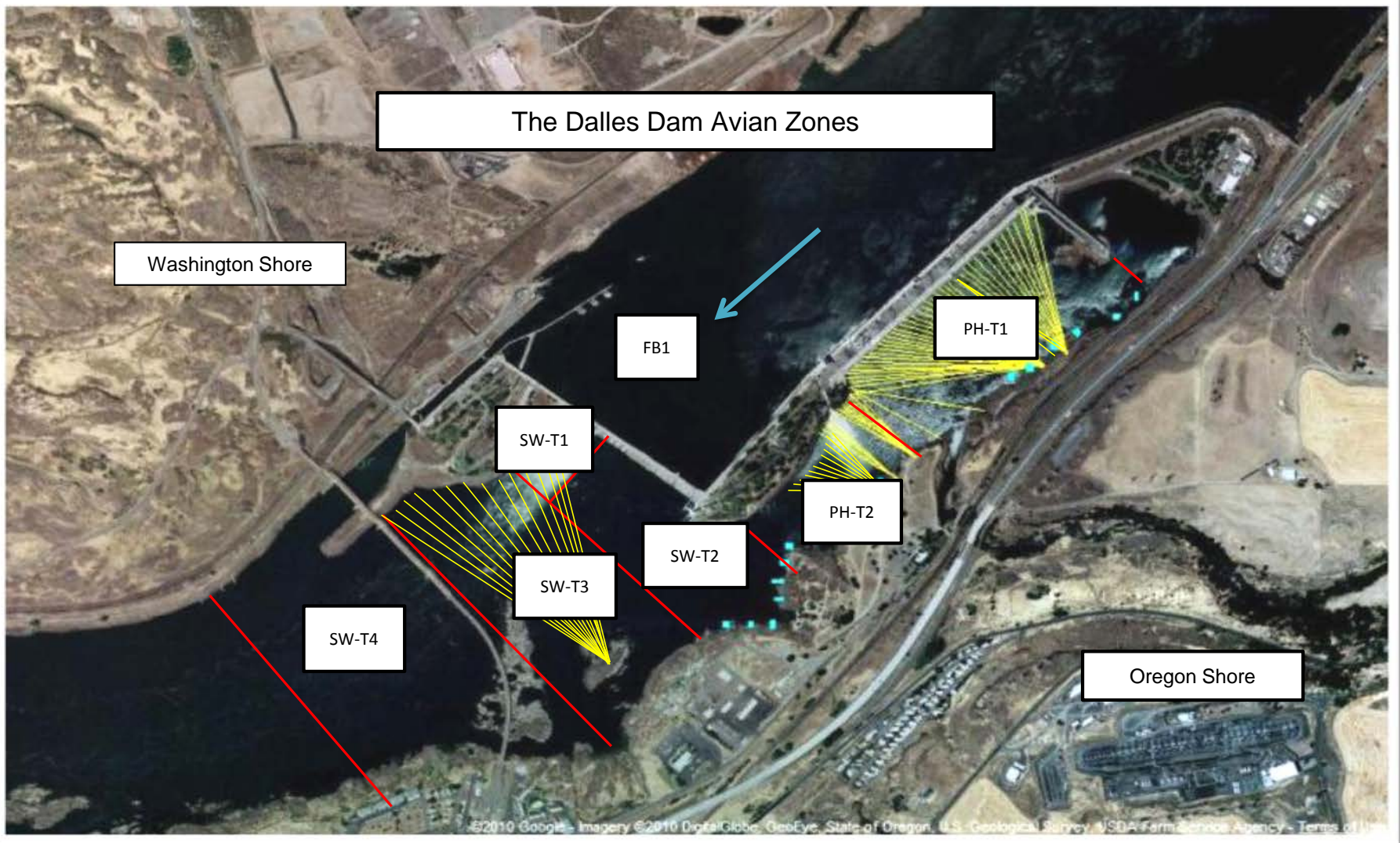
USGS total dissolved gas monitoring continues.

USDA gull hazer's on site 12 hours/day, primarily hazing from the navlock peninsula. Pigeon removal and sea lion hazing as needed.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

The Dalles East													
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/21	1793	1642	151	82	24	58	0	0	0	5329	0	0	89
6/22	2310	1982	328	77	36	41	0	0	0	11149	0	0	176
6/23	2155	1891	264	47	25	22	0	0	0	13463	0	0	136
6/24	2394	2071	323	99	62	37	0	0	0	14560	0	0	67
6/25	2357	2092	265	122	70	52	0	0	0	12134	0	0	52
6/26	3118	2807	311	95	64	31	0	0	0	7765	0	0	95
6/27	2180	1921	259	90	43	47	0	0	0	9337	0	0	80
<b>total</b>	<b>16307</b>	<b>14406</b>	<b>1901</b>	<b>612</b>	<b>324</b>	<b>288</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73737</b>	<b>0</b>	<b>0</b>	<b>695</b>
The Dalles North													
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/21	1023	866	157	54	34	20	0	0	0	10836	0	0	64
6/22	1227	1102	125	66	52	14	0	0	0	15586	0	0	53
6/23	815	689	126	27	13	14	0	0	0	10216	0	0	59
6/24	1009	900	109	24	7	17	0	0	0	9887	0	0	53
6/25	1222	1055	167	63	31	32	0	0	0	12163	0	0	143
6/26	1495	1278	217	57	23	34	0	0	0	10997	0	0	71
6/27	1995	1846	149	88	59	29	0	0	0	12154	0	0	62
<b>total</b>	<b>8786</b>	<b>7736</b>	<b>1050</b>	<b>379</b>	<b>219</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>81839</b>	<b>0</b>	<b>0</b>	<b>505</b>



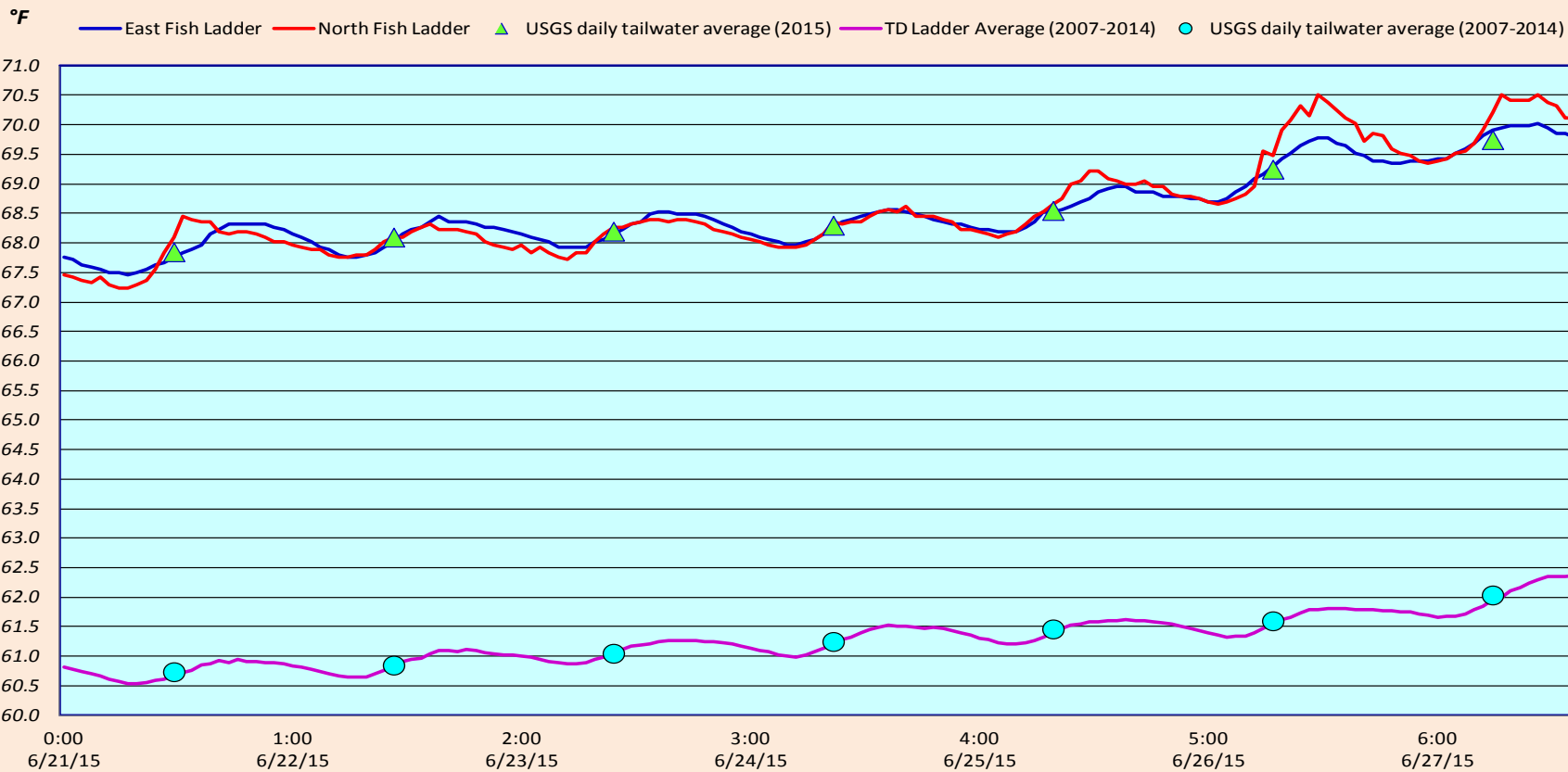
Avian lines in yellow, zones in red, river flow in blue.

## 2015 Piscivorous Bird Counts

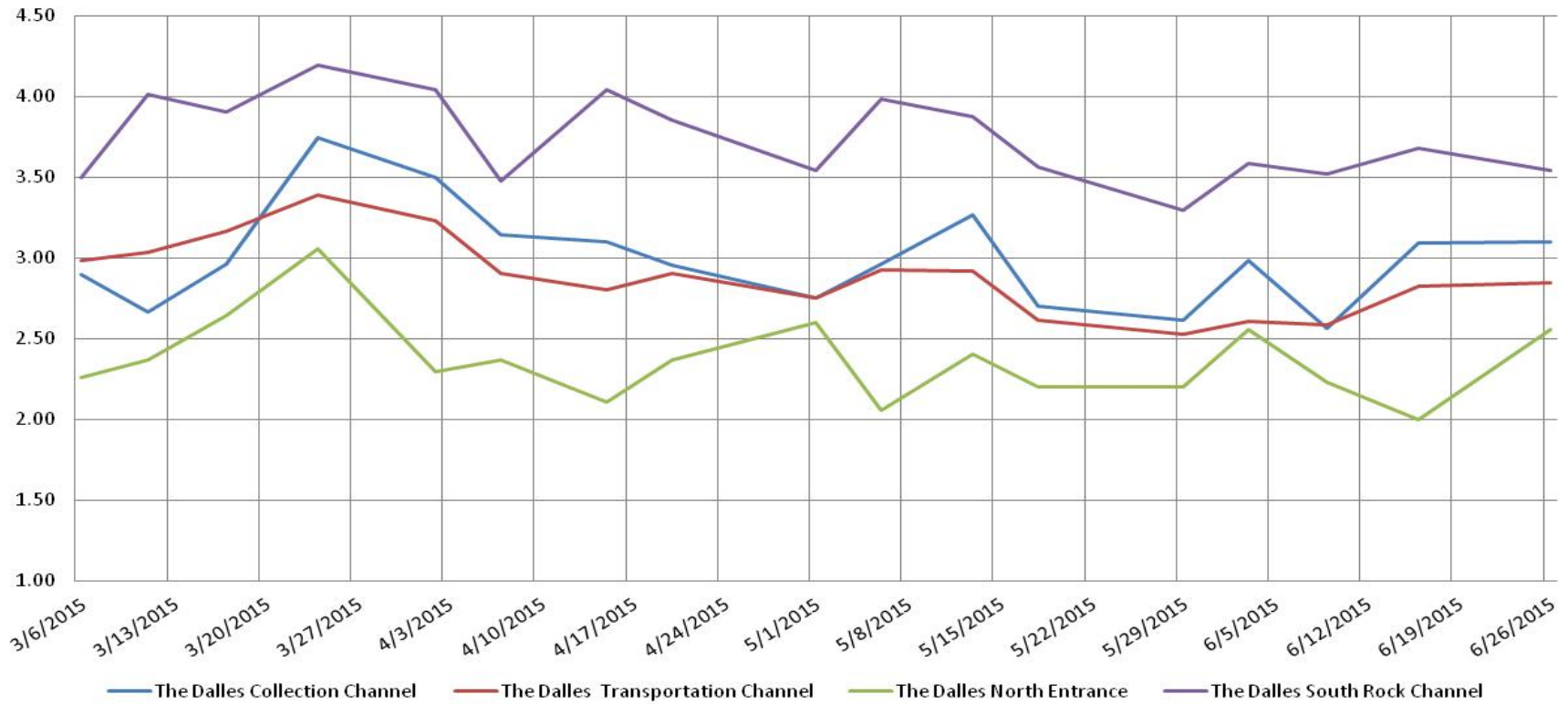
*F=foraging, NF=non-foraging*

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in	Notes		
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF				
6/21	EHK	15:14	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:13	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:22	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:23	SW1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
		14:23	SW2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
		15:29	SW3	77	0	0	0	0	0	0	0	0	0	0	0	0	0	77	
		15:30	SW4	25	14	0	1	0	0	0	0	0	0	2	0	0	0	42	
6/22	JWR	10:00	FB	0	0	6	40	0	0	0	0	0	0	0	0	0	46		
		10:12	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		10:16	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:50	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:55	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:51	SW3	25	45	1	0	0	0	0	0	3	0	0	0	0	0	74	
		9:56	SW4	7	9	0	0	0	0	0	0	0	0	0	0	0	0	16	
6/24	JWR	10:33	FB	0	0	0	26	0	0	0	0	0	0	0	0	0	26		
		9:48	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:55	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		10:26	SW1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	
		9:55	SW2	1	0	1	0	0	0	0	0	1	0	0	0	0	0	3	
		10:04	SW3	27	41	0	0	0	0	0	0	17	0	0	0	0	0	85	
		10:06	SW4	14	0	0	0	0	0	0	0	3	12	0	0	0	0	29	
6/25	PSK	15:20	FB	0	0	0	12	0	0	0	0	0	0	0	1	0	13	OSPR	
		14:20	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:28	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:34	SW1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
		14:38	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:46	SW3	0	20	0	0	0	0	0	0	0	0	0	0	1	0	21	GBHE
		15:49	SW4	9	26	0	3	0	0	0	0	0	7	0	0	0	0	45	
6/26	JWR	8:00	FB	0	0	2	67	0	0	0	0	0	0	0	0	0	69		
		6:15	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		6:22	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7:57	SW1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5	
		6:26	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7:54	SW3	20	30	0	0	0	0	0	0	3	0	0	0	0	0	53	
		7:56	SW4	4	0	0	0	0	0	0	0	3	7	0	0	0	0	14	
6/27	PSK	9:23	FB	0	0	0	38	0	0	0	0	0	0	0	0	0	38		
		8:22	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:30	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:35	SW1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
		8:36	SW2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	
		10:09	SW3	22	95	0	0	0	0	0	0	0	0	0	0	1	0	118	
		10:12	SW4	17	5	0	0	0	0	0	0	0	5	0	0	0	0	27	GBHE
<b>Totals</b>				<b>275</b>	<b>295</b>	<b>12</b>	<b>188</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>33</b>	<b>0</b>	<b>3</b>	<b>836</b>			

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



The Dalles Dam Averages Velocities (In criteria 1.0 - 4.0 fps)



<b>USGS:</b>	<a href="http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201506.lcol.html">http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201506.lcol.html</a>	
Temperatures		Secchi:
67.9	Sun	5.0
68.1	Mon	5.0
68.2	Tue	5.0
68.3	Wed	5.0
68.6	Thurs	6.0
69.3	Fri	5.0
69.8	Sat	5.3
AVG:	68.6	AVG 5.2

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

= Out of criteria

<b>North Ladder</b>			<b>East Ladder</b>													
North Entrance			East Entrance					West Entrance				South Entrance				% Spill
Date:	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth		
6/21			1.6	8.0	10.0	10.0		1.5	8.9	8.9	closed	1.4	8.2	8.2	39.9	
	1.4	9.2	1.5	8.6	10.5	10.5	7.0	1.5	9.0	9.0		1.5	8.1	8.1		
	1.5	9.2	1.5	8.6	10.5	10.5	7.0	1.4	9.0	9.0		1.4	8.2	8.2		
6/22			1.5	8.6	10.9	10.9		1.6	9.0	9.0		1.4	8.2	8.2	39.9	
	1.4	9.2	1.5	8.8	11.1	11.1	7.6	1.5	9.5	9.5		1.4	8.2	8.2		
	1.4	9.2	1.4	8.8	11.3	11.3	7.8	1.4	9.5	9.5		1.5	8.1	8.1		
6/23			1.5	8.7	11.2	11.2		1.4	9.6	9.6		1.4	8.3	8.3	39.9	
	1.4	9.2	1.5	7.5	11.2	11.2	7.7	1.5	9.0	9.0		1.4	8.3	8.3		
	1.4	9.3	1.6	7.5	11.2	11.2	7.7	1.6	9.0	9.0		1.4	8.3	8.3		
6/24			1.5	7.5	11.8	11.8		1.6	9.0	9.0		1.4	8.2	8.2	40.0	
	1.4	9.2	1.4	7.5	11.9	11.9	8.4	1.5	9.8	9.8		1.4	8.3	8.3		
	1.4	9.3	1.5	6.0	12.1	12.1	8.6	1.6	9.4	9.4		1.5	8.2	8.2		
6/25			1.5	6.1	12.1	12.1		1.6	9.5	9.5		1.6	8.0	8.0	40.1	
	1.4	9.2	1.7	6.0	11.4	11.4	7.9	1.5	9.5	9.4		1.4	8.2	8.1		
	1.5	9.2	1.7	6.0	11.4	11.4	7.9	1.6	9.3	9.3		1.4	8.3	8.3		
6/26			1.7	5.9	11.2	11.2		1.6	9.3	9.3	1.5	8.3	8.2	40.0		
	1.4	9.2	1.5	8.1	11.1	11.1	7.6	1.6	9.3	9.3	1.5	8.2	8.2			
	1.5	9.2	1.4	8.0	11.5	11.5	8.0	1.6	9.3	9.2	1.4	8.2	8.2			
6/27			1.4	8.0	11.8	11.8		1.6	9.1	9.1	1.4	8.2	8.2	39.9		
	1.4	9.3	1.4	8.0	11.8	11.8	8.3	1.6	9.0	9.1	1.6	8.0	8.0			
	1.3	9.4	1.5	7.9	11.9	11.9	8.5	1.6	9.2	9.1	1.4	8.3	8.3			
AVG:	1.4	9.2	1.5	No criteria	11.3	11.3	7.9	1.5	9.2	9.2	closed	1.4	8.2	8.2	40.0	

*Fishways are inspected twice daily plus one SCADA inspection.*