

# The Dalles Dam Fishway Status Report

4/19/2015

Inspection Period: 4/12/2015 to 4/18/2015

## 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: 49.6 F
			Comments		Secchi: 4.4 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	9.5	
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	1	1.0' ± 0.1'	momentary OOC via SCADA spot-check, - quickly resumed to ~1.0' differential		
Count station differential	0	≤ 0.3'	Picket leads raked as needed.		
Weir crest depth	0	1.0' ± 0.1'			
Junction pool weir JP6	0	depth (≥ 7')	Average	10.4	
East entrance differential	0	1.0' - 2.0'	Average	1.6	
Entrance weir E1	0	No criteria	Average	No criteria; manually adjusted as needed.	
Entrance weir E2	0	depth (≥ 8')	Average	13.0	
Entrance weir E3	0	depth (≥ 8')	Average	10.5	
Collection channel velocity	0	1.5 - 4 fps	Average	3.1	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.8	
North channel velocity	0	1.5 - 4 fps	Average	2.1	
South channel velocity	0	1.5 - 4 fps	Average	4.0	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	11.0	
Entrance weir W2	0	depth (≥ 8')	Average	10.9	
Entrance weir W3	0	No criteria	Average	No criteria; manually adjusted as needed.	
South entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir S1	0	depth (≥ 8')	Average	8.6	
Entrance weir S2	0	depth (≥ 8')	Average	8.6	
<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: 0.0' - 0.5'.		
Spill volume	0	40%+-1%	Average	40.0	
Spill Pattern	0				
Turbine Unit Priority.	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

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

Bird observation data collected once daily. Refer to Avian Zone Map. Sea lion observed near west entrance at 0823 hrs 4/16 .  
No sightings inside fishway entrance to date.

**Operations:**

Gateway drawdown completed 4/13, criteria for the difference between forebay and gateway well within limit of 1.5'; range 0.0' to 0.5'.  
Calibration check 4/18. South entrance weirs out of calibration (Not OOC).  
Spill for juvenile passage started Apr 10.

**Current Outages:**

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017.  
MU6 out of service 3/30/2015 to 5/7/2015 for overhaul.

**Maintenance:**

Sluiceway configured for Unit 1 and 2 annual maintenance. Returned to normal operation per Fish Passage Plan.  
East fishway entrance weir E2 cable failure over weekend. TDS repairing. East fishway exit weir 156 brake failed. TDM repaired.  
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 prep work completed. Planning and parts purchase underway for installation next outage season.  
*Future repair plans*; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,  
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:**

North fishladder rock stabilization project. No new development.  
Fish count video at north count station completed. Recordings to be used for improved software technology.  
Meetings continue for scheduling east AWS backup, tailrace crane rehab and crane rail replacement. Fish way impacts being assessed and coordinated  
as needed.  
East AWS backup (auxiliary water system) plans and specifications underway. Hydroacoustic survey of the forebay wall occurred Apr 9 and 10.  
PUD 'freedom' second turbine study proposal cancelled until further notice.

**Research/Contractors:**

USDA commenced bird hazing on 4/16, located on North downstream peninsula  
Normandau fish counters started 01 April with 2-8 hour shifts per day.  
PSMFC PUD weekly sampling Apr 15; 9 Chinook yearling and 73 fry.  
WDFW to conduct hook and line removals of predatory northern pikeminnow from the BRZ adjacent to the project 5/1/2015 through 10/15/2015.  
University of Idaho maintaining antennas. Continuing downloads of winter steelhead.  
Research approval letters forwarded for; ODFW forbay Northern Pikeminnow Management Program, PSMFC sampling at PUD intake structure, University  
of Idaho monitoring fallback movements of steelhead outfitted with radio tags and adult Pacific Lamprey outfitted with half-duplex PIT tags, PSMFC for  
monitoring and maintaining thin walled PIT tag antennas and computer equipment and USGS total dissolved gas monitoring .  
Scheduling for EFL AWS backup, crane rail rehab and deck rail replacement being determined for next winter. FPOM coordination expected.

Approved by: Ron Twiner

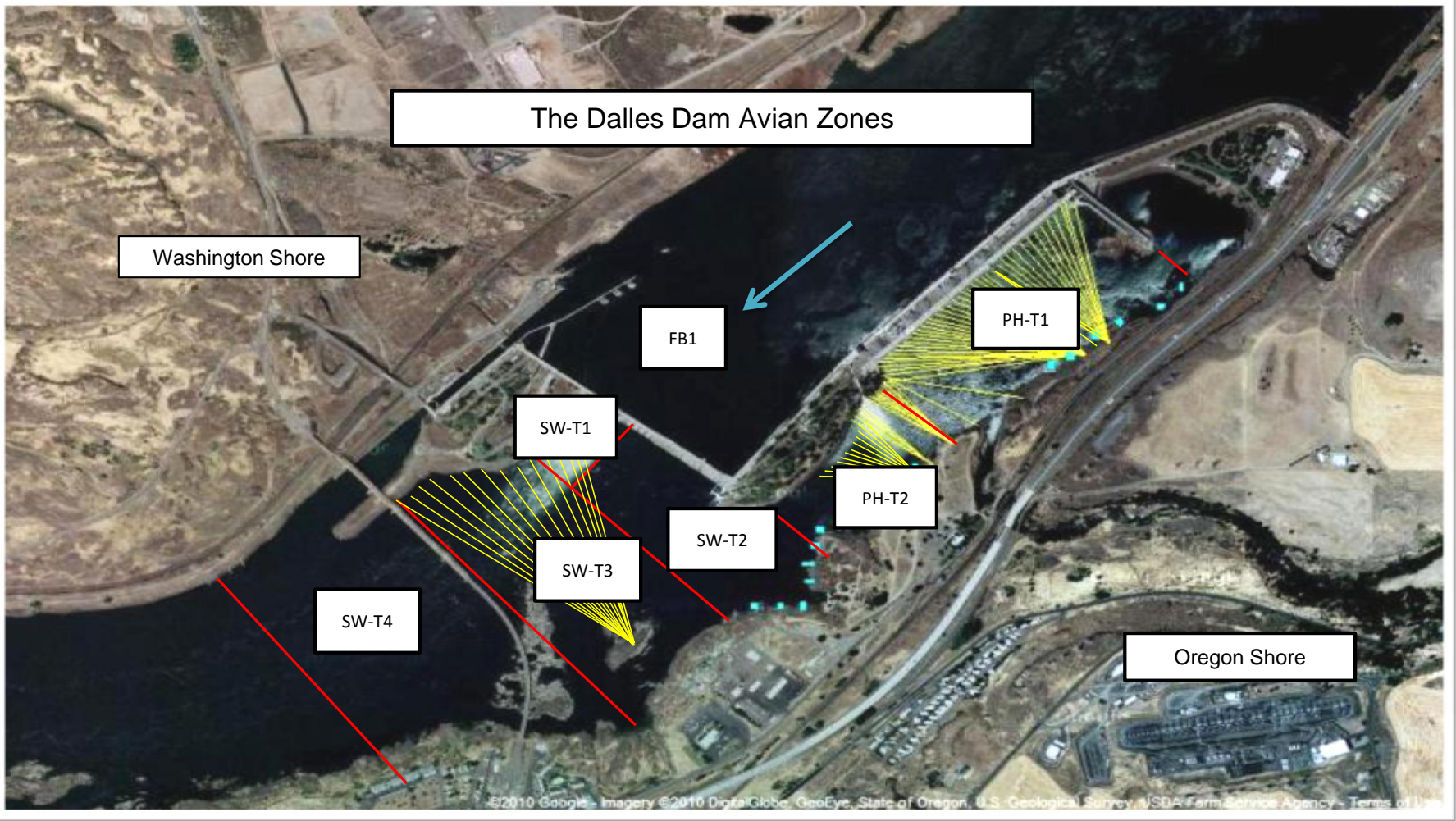
Operation Project Manager The Dalles Dam

**Running Sum Adult Fish Counts**  
**U.S. Army Corps of Engineers - Portland District**  
**The Dalles 4/12/2015 - 4/18/2015**

Date	All Chinook		Adult Chinook		Jack Chinook		All Steelhead		Clipped Steelhead		Unclipped Steelhead		All Coho		Adult Coho		Jack Coho		Sockeye		Chum		Pink	
	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum	daily	sum
4/12	573	2798	563	2748	10	50	6	129	2	54	4	75	0	0	0	0	0	0	0	0	0	0	0	0
4/13	977	3775	959	3707	18	68	9	138	6	60	3	78	0	0	0	0	0	0	0	0	0	0	0	0
4/14	939	4714	936	4643	3	71	13	151	7	67	6	84	0	0	0	0	0	0	0	0	0	0	0	0
4/15	905	5619	899	5542	6	77	7	158	2	69	5	89	0	0	0	0	0	0	0	0	0	0	0	0
4/16	1138	6757	1129	6671	9	86	6	164	2	71	4	93	0	0	0	0	0	0	0	0	0	0	0	0
4/17	3622	10379	3612	10283	10	96	5	169	4	75	1	94	0	0	0	0	0	0	0	0	0	0	0	0
4/18	2945	13324	2928	13211	17	113	12	181	6	81	6	100	0	0	0	0	0	0	0	0	0	0	0	0

Report Run: 4/19/2015 7:13:11 AM

Content POC: John Dalen, 541-374-8801



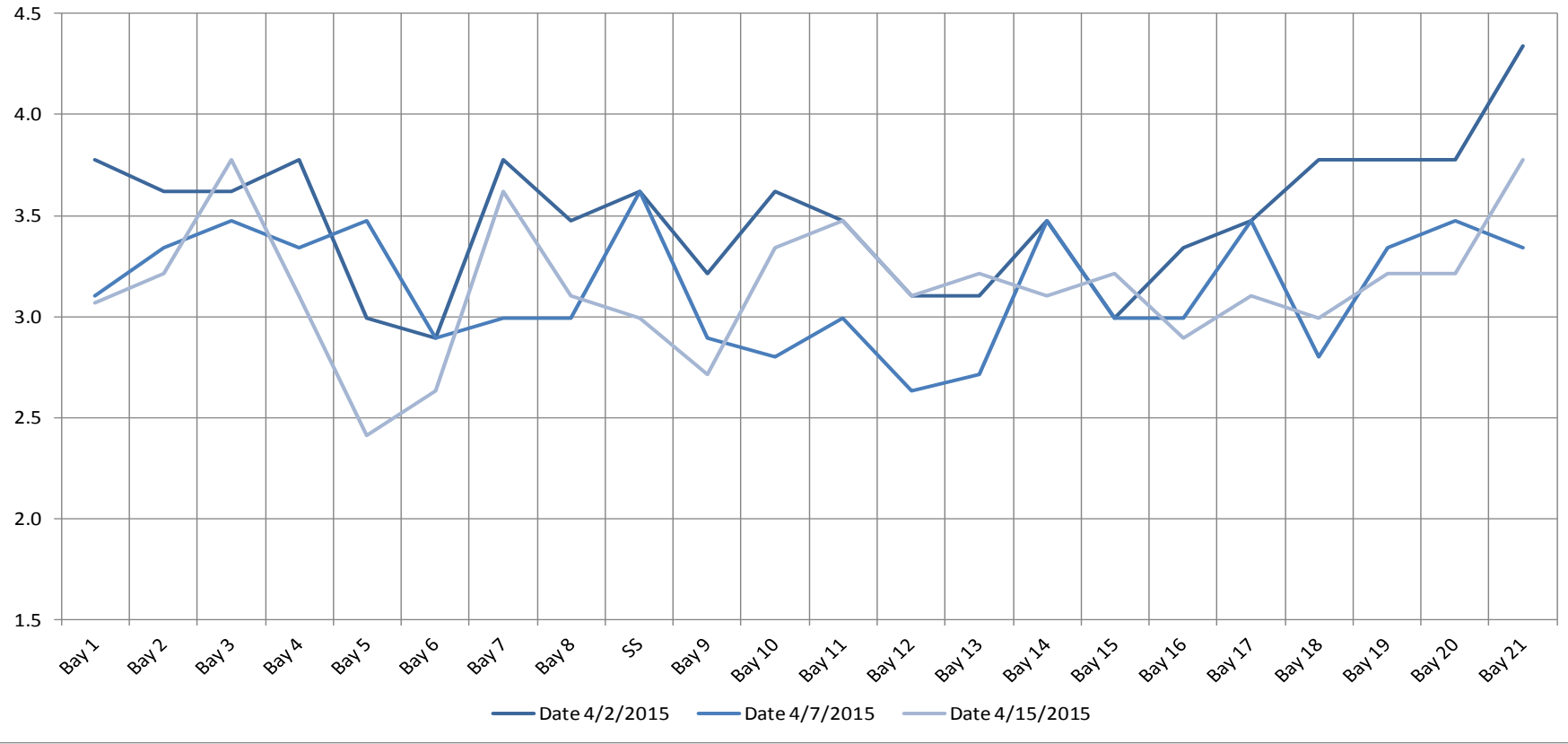
Avian lines in yellow, zones in red, river flow in blue.

## 2015 Piscivorous Bird Counts

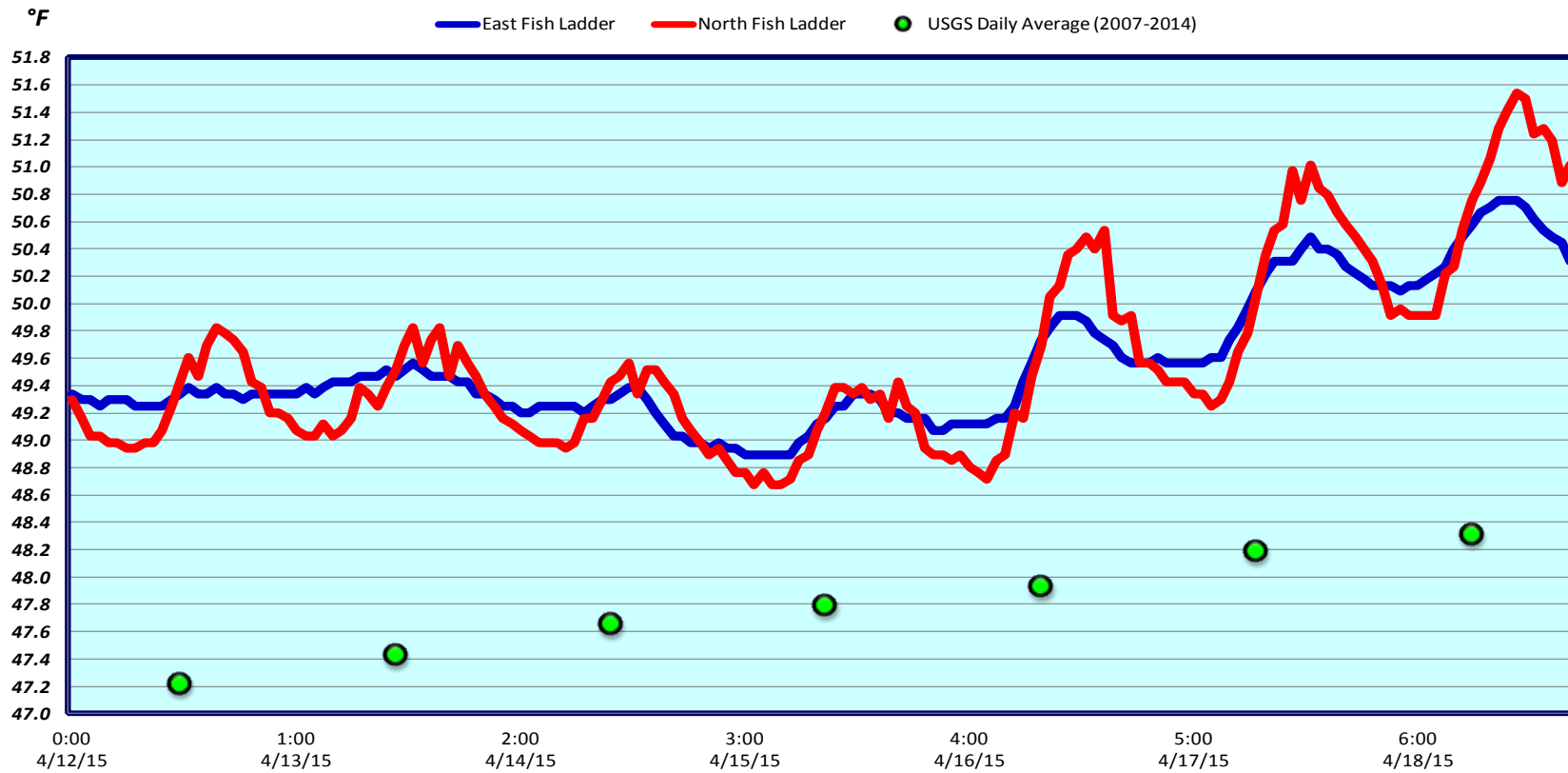
*F=foraging, NF=non-foraging*

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Other		Total birds in zone	Notes
				F	NF	F	NF	F	NF	F	NF		
4/12/15	EHK	15:12	FB	0	0	0	13	0	0	0	0	13	
		14:31	PH1	0	0	0	3	0	0	0	0	3	
		14:35	PH2	0	0	0	0	0	0	0	0	0	
		15:31	SW1	0	0	0	0	0	0	0	0	0	
		14:42	SW2	0	0	0	0	0	0	0	0	0	
		14:44	SW3	0	0	0	0	0	0	0	0	0	
		15:14	SW4	0	0	0	0	0	0	0	0	0	
4/13/15	EHK	8:47	FB	0	0	0	24	0	0	0	4	28	4 grebes
		8:19	PH1	0	0	0	0	0	0	0	0	0	
		8:44	PH2	0	1	0	0	0	0	0	0	1	
		8:55	SW1	0	0	0	0	0	0	0	0	0	
		8:28	SW2	0	0	0	0	0	0	0	0	0	
		8:30	SW3	5	0	0	0	0	0	0	0	5	
		8:49	SW4	23	0	0	0	0	0	0	0	23	
4/14/15	JWR	13:47	FB	0	0	0	0	0	0	0	0	0	
		10:21	PH1	0	0	0	0	0	0	0	0	0	
		10:26	PH2	0	0	0	0	0	0	0	0	0	
		13:44	SW1	0	0	0	0	0	0	0	0	0	
		10:33	SW2	0	0	0	0	0	0	0	0	0	
		10:34	SW3	0	0	0	10	0	0	0	0	10	
		10:35	SW4	0	0	0	0	0	0	0	0	0	
4/15/15	JWR	10:34	FB	0	0	0	15	0	0	0	0	15	
		9:32	PH1	0	0	0	1	0	0	0	0	1	
		9:39	PH2	0	0	1	0	0	0	0	0	1	
		10:30	SW1	0	0	0	0	0	0	0	0	0	
		9:44	SW2	0	0	0	0	0	0	0	0	0	
		9:45	SW3	0	0	0	0	0	0	0	0	0	
		9:48	SW4	0	0	0	15	0	0	0	0	15	
4/16/15	PSK	10:32	FB	0	0	0	9	0	0	0	2	11	2 grebes
		9:30	PH1	0	0	0	0	0	0	0	0	0	
		9:45	PH2	0	0	0	0	0	0	0	0	0	
		10:51	SW1	0	0	0	0	0	0	0	0	0	
		9:52	SW2	0	1	0	0	0	0	0	0	1	
		11:23	SW3	14	0	0	0	0	0	0	0	14	
		11:25	SW4	16	0	0	0	0	0	0	0	16	
4/17/15	PSK	14:04	FB	0	0	0	0	0	0	0	0	0	
		12:50	PH1	0	0	0	0	0	0	0	0	0	
		12:59	PH2	0	0	0	0	0	0	0	0	0	
		14:14	SW1	0	0	0	0	0	0	0	0	0	
		13:05	SW2	0	0	0	0	0	0	0	0	0	
		13:08	SW3	8	0	1	0	0	0	0	0	9	
		13:10	SW4	18	4	0	0	0	0	0	0	22	
4/18/15	JWR	8:36	FB	0	0	0	8	0	0	0	1	9	grebe  Osprey
		7:41	PH1	0	0	0	0	0	0	0	0	0	
		7:48	PH2	0	3	0	0	0	0	0	1	4	
		8:33	SW1	0	0	0	0	0	0	0	0	0	
		7:55	SW2	0	0	0	0	0	0	0	0	0	
		7:56	SW3	15	0	0	0	0	0	0	0	15	
		7:58	SW4	32	1	0	0	0	0	0	0	33	

The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)



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



<b>USGS:</b>	<a href="http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201504.lcol.html">http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201504.lcol.html</a>	
Temperatures		Secchi:
49.4	Sun	5.0
49.4	Mon	4.0
49.3	Tue	5.0
49.2	Wed	4.5
49.6	Thurs	4.5
50.0	Fri	4.0
50.5	Sat	4.0
AVG: 49.6	AVG	4.4

**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
4/12/15			1.6	3.1	13.1	9.9	9.8	1.3	11.3	11.2	closed	1.5	8.9	8.8	40.0
	1.5	9.5	1.6	3.0	13.0	9.8	9.7	1.4	11.3	11.1		1.5	8.7	8.7	
	1.5	9.5	1.5	3.0	12.9	10.1	10.1	1.4	11.3	11.2		1.5	8.7	8.7	
4/13/15			1.5	3.2	13.1	11.7	11.6	1.6	11.3	11.3		1.4	8.9	8.8	39.9
	1.4	9.6	1.6	3.1	13.0	11.6	11.5	1.3	11.3	11.4		1.5	8.8	8.9	
	1.5	9.4	1.5	3.1	13.2	12.1	12.1	1.6	11.7	11.8		1.4	8.8	8.7	
4/14/15			1.7	3.0	13.0	11.5	11.5	1.4	11.8	11.9		1.5	8.8	8.8	40.0
	1.4	9.6	1.5	4.6	13.0	11.4	11.3	1.4	11.8	11.7		1.4	8.8	8.8	
	1.4	9.6	1.6	3.9	12.9	10.8	10.8	1.5	11.3	11.3		1.5	8.8	8.8	
4/15/15			1.5	3.4	12.9	10.8	10.7	1.6	11.0	11.0		1.6	8.8	8.8	40.0
	1.4	9.6	1.5	3.5	13.0	10.9	10.8	1.6	11.0	10.9		1.6	8.4	8.4	
	1.4	9.6	1.7	3.5	12.9	10.1	10.1	1.5	11.1	11.1		1.5	8.6	8.5	
4/16/15			1.6	2.7	12.2	10.1	10.0	1.5	11.0	11.0		1.5	8.5	8.5	39.9
	1.4	9.5	1.6	3.6	13.1	10.7	10.7	1.6	11.1	11.0		1.5	8.5	8.5	
	1.4	9.5	1.6	3.5	13.1	10.3	10.3	1.5	11.0	11.0		1.5	8.5	8.5	
4/17/15			1.8	3.5	13.0	9.0	8.9	1.2	10.0	10.1	1.5	8.6	8.6	40.2	
	1.4	9.5	1.5	5.1	13.1	9.7	9.6	1.7	10.0	10.0	1.5	8.5	8.5		
	1.4	9.5	1.4	5.0	13.1	9.3	9.3	1.6	9.9	9.9	1.5	8.5	8.5		
4/18/15			1.5	5.0	13.0	10.0	9.9	1.7	10.0	9.9	1.6	8.4	8.4	40.1	
	1.4	9.4	1.5	5.1	13.0	10.0	10.0	1.5	10.5	10.5	1.5	8.5	8.5		
	1.4	9.5	1.5	4.9	13.0	9.8	9.8	1.5	10.5	10.5	1.6	8.4	8.5		
AVG:	1.4	9.5	1.6	No criteria	13.0	10.5	10.4	1.5	11.0	10.9	closed	1.5	8.6	8.6	40.0

*Fishways are inspected twice daily plus one SCADA inspection. **Spill started Apr 10 for juvenile passage.***