

The Dalles Dam Fishway Status Report

4/25/2015

Inspection Period: 4/19/2015 to 4/25/2015

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 51.1 F
			Comments		Secchi: 4.1 feet
NORTH FISHWAY					
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'			
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'	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	9.0	
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	13.0	
Entrance weir E3	0	depth (≥ 8')	Average	9.1	
Collection channel velocity	0	1.5 - 4 fps	Average	3.0	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.9	
North channel velocity	0	1.5 - 4 fps	Average	2.4	
South channel velocity	0	1.5 - 4 fps	Average	3.9	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	10.0	
Entrance weir W2	0	depth (≥ 8')	Average	10.0	
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	8.5	
Entrance weir S2	0	depth (≥ 8')	Average	8.5	
JUVENILE PASSAGE					
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: 0.1' - 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 seen at west entrance 4/22 & 23. USDA will be called to haze sea lion.

Operations:

Gatewell drawdown competed 4/24, criteria for the difference between forebay and gatewell well within limit of 1.5'; range 0.1' to 0.5'.

Calibration check 4/20. All values were within criteria.

Spill for juvenile passage started Apr 10.

North fishladder counts were negative on 4/22 and 4/24. Investigating possible cause.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through 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.

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 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 updated 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.

March fish count video at north count station completed. Night video to start May 15 pending lighting installation. To be used with new software application.

Meetings continue for scheduling east AWS backup, tailrace crane rehab and crane rail replacement. Fish way impacts being assessed and coordinated

Research/Contractors:

USDA bird hazing continues from downstream navlock peninsula. USDA will also be used for pigeon removal and sea lion hazing as needed.

Normandau fish counters continues with two 8 hour shifts per day.

PSMFC PUD weekly sampling Apr 15; 9 Chinook yearling and 73 fry. No mortalities.

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

Columbia River DART

2015 Adult Passage Daily Ladder Counts at The Dalles

4/19/2015 - 4/25/2015

Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Lamprey							
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder					
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
4/19	60.0	3992	40.0	2665	64.7	11	35.3	6	44.4	4	55.6	5	50	4	50	4		0		0		0		0		0		0		0		0		0		0
4/20	43.4	3214	56.6	4190	81.3	26	18.8	6	72.7	8	27.3	3	78	7	22	2		0		0		0		0		0		0		0		0		0		0
4/21	52.0	4063	48.0	3749	70.0	56	30.0	24	53.8	7	46.2	6	86	6	14	1		0		0		0		0		0		0		0		0		0		0
4/22	53.6	5723	46.4	4955	79.3	92	20.7	24		12		-32		8		0		0		0		0		0		0		0		0		0		0		0
4/23	64.9	2615	35.1	1415	73.7	28	26.3	10	50.0	1	50.0	1		1		0		0		0		0		0		0		0		0		0		0		0
4/24	59.9	3887	40.1	2594	49.0	28	51.0	29		3		-30		1		-10																				
4/25	56.4	2188	43.6	1690	64.1	25	35.9	14		0		0		0		0		0		0		0		0		0		0		0		0		0		0
YTD	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder					
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
	53.9	21795	46.1	####	73.9	238	26.1	84		32		-17	78.8	26	21.2	7		0		0		0		0		0		0		0		0		0		0
Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Lamprey							

Data Courtesy of U.S. Army Corps of Engineers.

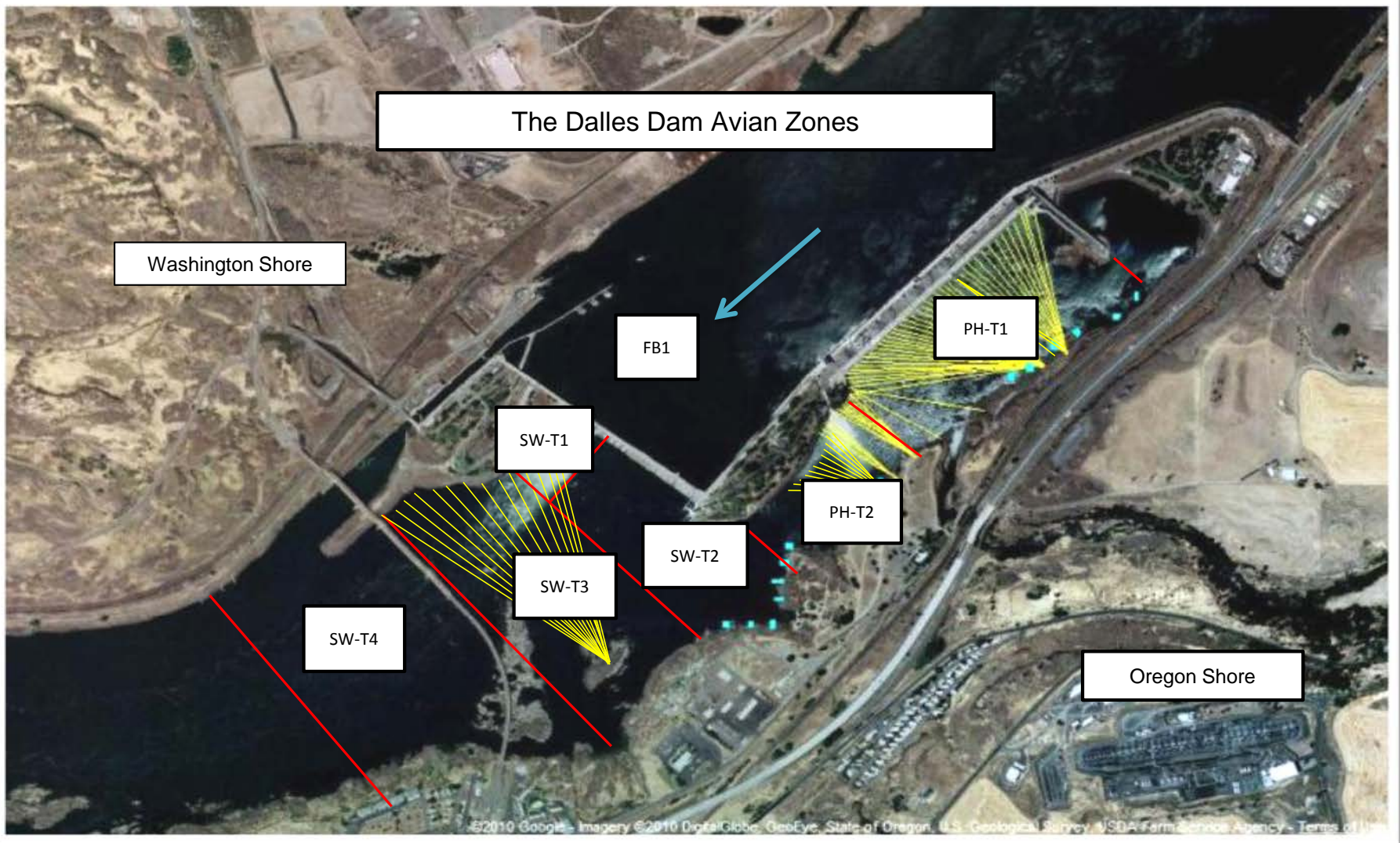
1. Last possible Data Date included is 04/26/2015.

2. Ladder orientations reference the side of the river when facing downstream.

3. USACE Data Disclaimer: These data are furnished with the understanding that the U.S. Army Corps of Engineers makes no warranties concerning the accuracy, reliability, or suitability of this data for any particular purpose.

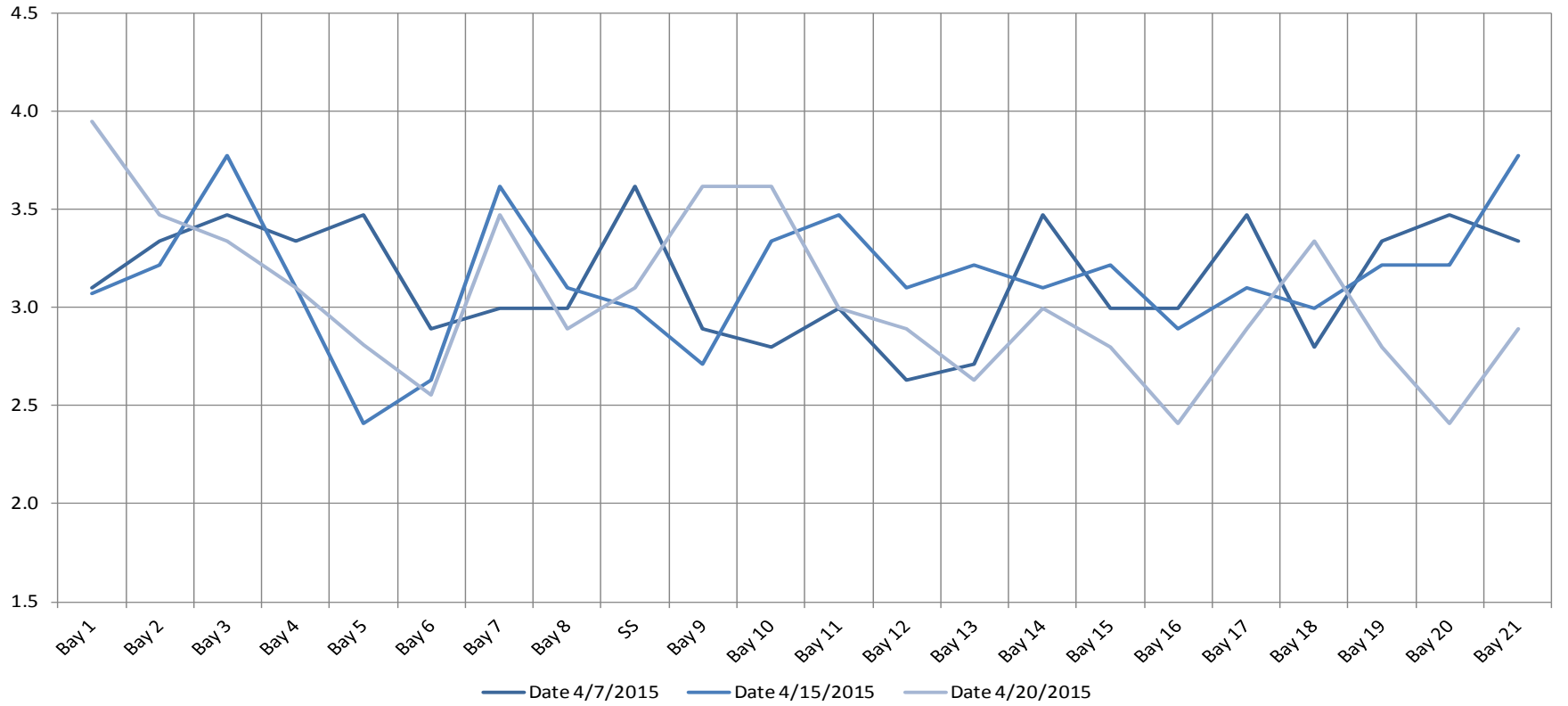
27 Apr 2015 09:36:46 PDT. Columbia River DART (Data Access in Real Time) www.cbr.washington.edu/dart.

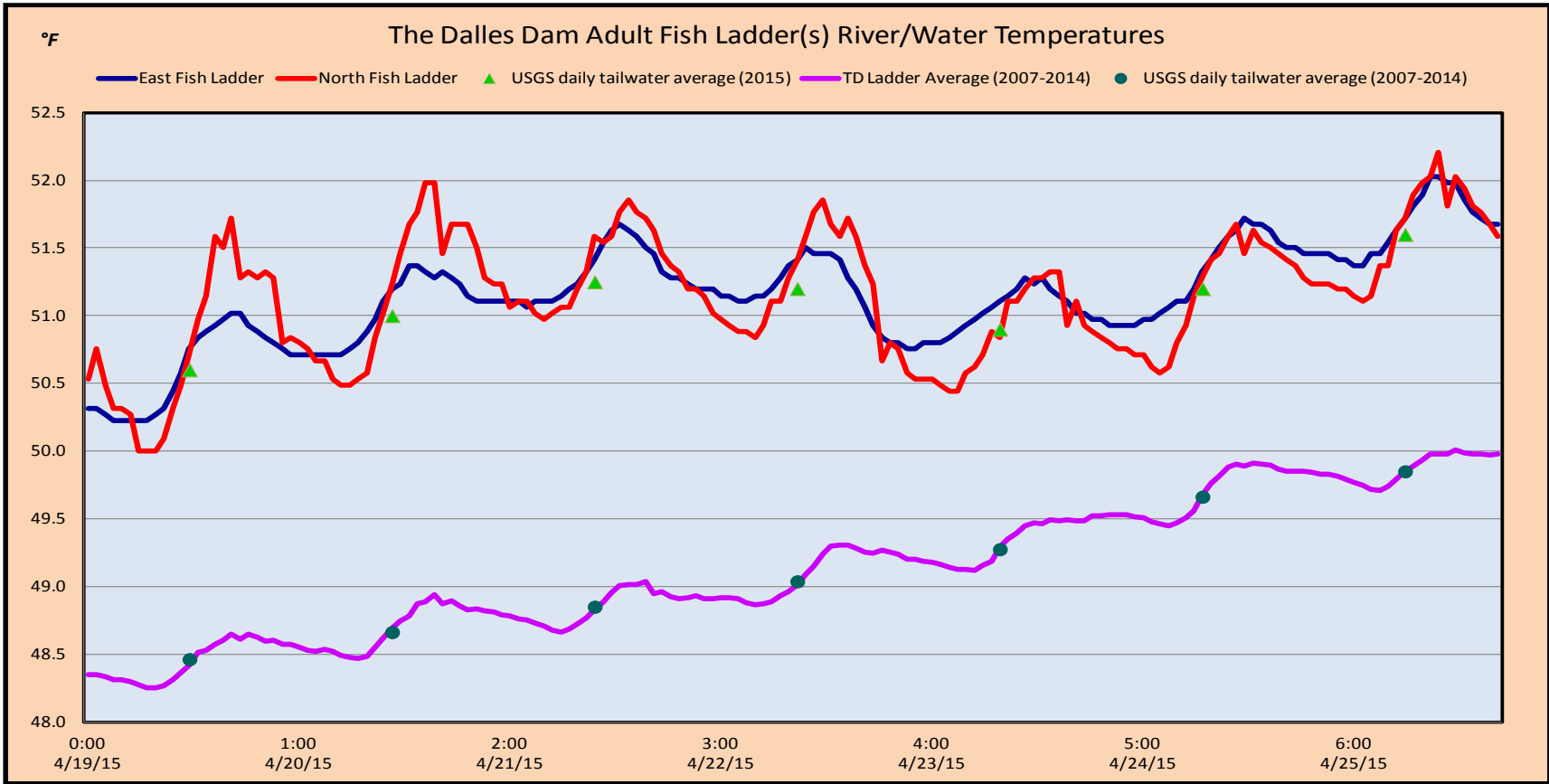
Columbia River DART, Columbia Basin Research, University of Washington. (2015). Adult Passage Daily Ladder Counts. Available from http://www.cbr.washington.edu/dart/query/adult_ladder_sum



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

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





USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201504.lcol.html>

Temperatures		Secchi:
50.6	Sun	4.0
51.0	Mon	4.0
51.3	Tue	4.0
51.2	Wed	4.5
50.9	Thurs	4.5
51.2	Fri	4.0
51.6	Sat	4.0
AVG:	51.1	AVG 4.1

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

= Out of criteria

North Ladder			East Ladder												
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
4/19/15			1.5	5.1	13.0	9.6	9.5	1.5	10.5	10.6	closed	1.5	8.5	8.5	40.0
	1.4	9.5	1.5	5.0	13.0	9.5	9.5	1.5	10.5	10.5		1.5	8.4	8.4	
	1.5	9.4	1.5	4.8	13.0	9.3	9.3	1.5	10.5	10.5		1.5	8.5	8.5	
4/20/15			1.5	5.0	13.1	9.7	9.6	1.6	10.0	10.0		1.6	8.5	8.6	39.8
	1.4	9.4	1.5	4.7	13.2	9.7	9.7	1.6	10.5	10.4		1.6	8.5	8.5	
	1.4	9.4	1.6	4.4	12.9	9.6	9.6	1.5	10.2	10.4		1.5	8.5	8.5	
4/21/15			1.7	4.6	13.1	8.4	8.3	1.3	10.3	10.4		1.4	8.6	8.6	39.8
	1.4	9.5	1.4	5.4	13.0	8.2	8.4	1.5	9.5	9.5		1.5	8.5	8.5	
	1.5	9.5	1.6	5.5	13.1	8.3	8.3	1.5	9.5	9.6		1.6	8.4	8.4	
4/22/15			1.6	5.5	13.0	7.4	7.3	1.5	9.5	9.4		1.5	8.4	8.5	40.3
	1.5	9.1	1.6	5.6	13.0	7.2	7.2	1.7	9.5	9.5		1.5	8.4	8.5	
	1.5	9.2	1.5	5.5	13.0	8.0	8.0	1.5	9.5	9.4		1.5	8.4	8.5	
4/23/15			1.5	5.5	13.0	8.6		1.5	9.5	9.6		1.6	8.5	8.4	40.0
	1.4	9.6	1.5	5.5	12.9	8.9	8.9	1.5	10.0	10.0		1.6	8.5	8.5	
	1.4	9.5	1.4	5.5	12.9	8.5	8.5	1.5	9.9	9.9		1.5	8.6	8.4	
4/24/15			1.5	5.5	13.1	9.1		1.6	10.0	10.1	1.5	8.5	8.6	40.3	
	1.2	9.5	1.4	5.6	13.0	9.2	9.1	1.5	10.0	10.0	1.6	8.5	8.6		
	1.4	9.5	1.4	5.5	13.1	9.2	9.2	1.6	10.1	10.0	1.5	8.5	8.6		
4/25/15			1.4	5.6	13.1	9.9		1.7	10.0	9.9	1.6	8.5	8.4	40.0	
	1.4	9.6	1.5	5.6	13.1	13.1	10.0	1.6	10.5	10.6	1.5	8.5	8.5		
	1.4	9.6	1.5	5.5	13.0	10.7	10.7	1.7	10.5	10.6	1.6	8.4	8.4		
AVG:	1.4	9.5	1.5	No criteria	13.0	9.1	9.0	1.5	10.0	10.0	closed	1.5	8.5	8.5	40.0

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