

The Dalles Dam Fishway Status Report

5/24/2015

Inspection Period: 5/17/2015 to 5/23/2015

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: 58.7	F
			Comments		Secchi: 4.0	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	9.6		
Entrance weir N2	0	Closed	Bulkhead installed.			
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	1	Per forebay	Auto adjusts 1' increments. Weir 156 out at forebay 158.3.			
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'				
Junction pool weir JP6	0	depth (≥ 7')	Average	8.8		
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	11.9		
Entrance weir E3	0	depth (≥ 8')	Average	11.8	out at 7.8'. manually adjusted.	
Collection channel velocity	0	1.5 - 4 fps	Average	2.7		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6		
North channel velocity	0	1.5 - 4 fps	Average			
South channel velocity	0	1.5 - 4 fps	Average	3.6		
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	1.4		
Entrance weir S1	0	depth (≥ 8')	Average	8.5		
Entrance weir S2	0	depth (≥ 8')	Average	8.7		
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:			
Spill volume	0	40%±1%	Average	40.0		
Spill Pattern	0	per FPP				
Turbine Unit Priority.	1	per FPP	MU7 out for a 5 yr overhaul			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map.

Operations:

All fishways in operation per Fish Passage Plan requirements.

Calibration completed on 5/17. East entrance tailwater and E2 were found off. Maintenance notified.

Current Outages:

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW operation through 2017

MU7 out 5/4/2015 to 6/25/2015 for overhaul

Maintenance:

East fishway entrances weir wheel and guide work to resume next winter outage.

Three collection channel dewatering pumps on deck for rehab. AWS backup project funding supported. 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 trunnion pin replacement, HDC updated fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.

Studies:

North fishladder rehab of rock walls product development team initial meetings starting. Construction expected in 2018.

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

East AWS backup - Construction start this winter. Biweekly progress meetings continue. FPOM coordination meeting June 2.

Crane rail replacement - tailrace and intake decks winter of 2016-2017. Schedule planning underway. FPOM coordination meeting June 2.

Research/Contractors:

USDA gull hazer's on site 12 hours/day. No sealion hazing required this week. Pigeon and rodent removal underway.

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

PSMFC PUD weekly sampling continues.

Columbia River Northern Pikeminnow Management Program dam angling continues.

University of Idaho maintaining antennas. Removing un needed equipment as needed.

ODFW Northern Pikeminnow Management Program evaluation electrofishing continues.

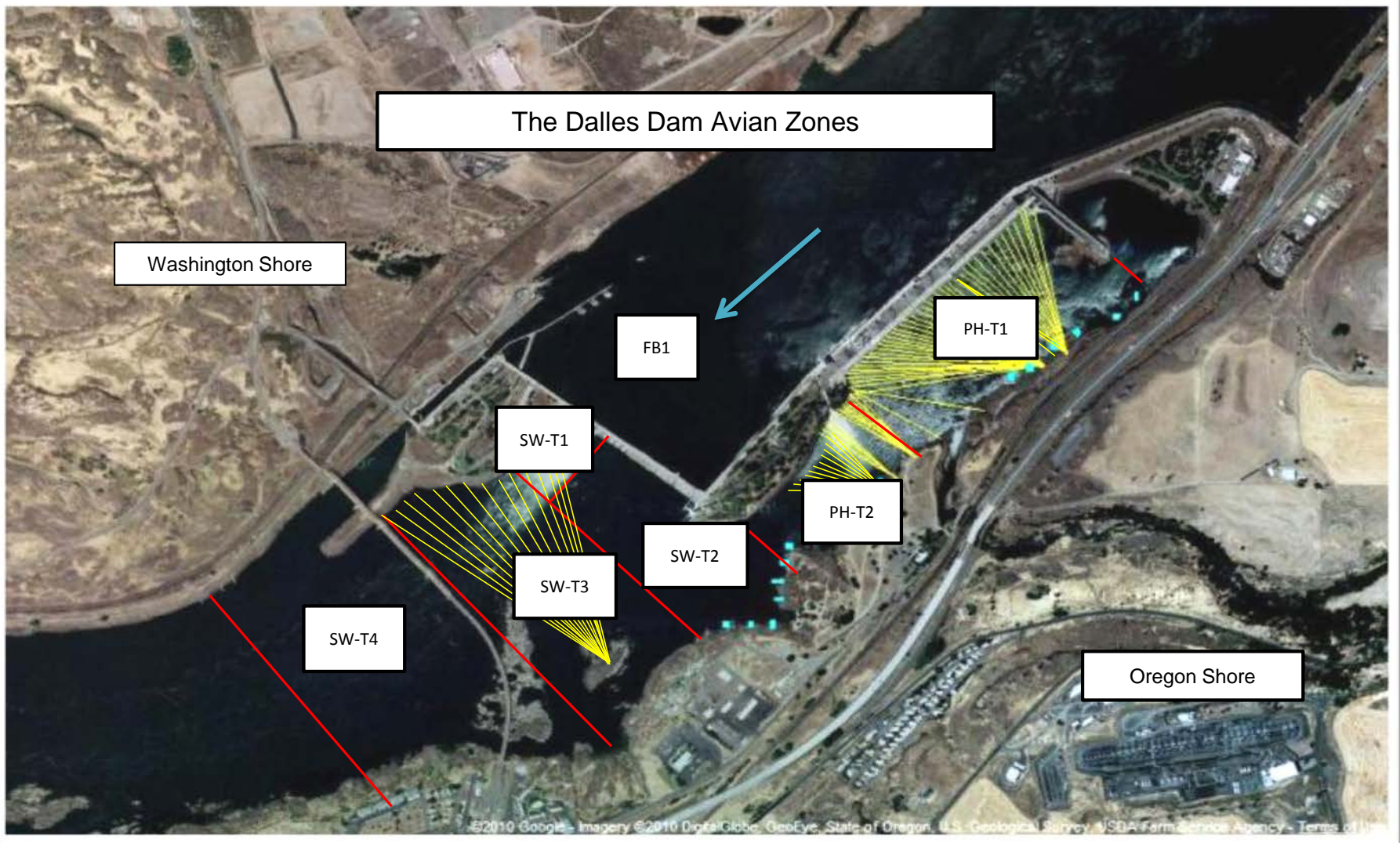
Coordination underway for tribal lamprey trapping at east count station. On site planning meeting scheduled for June 23.

USGS total dissolved gas monitoring ongoing.

PSMFC monitoring and maintaining thin walled PIT tag antennas and computer equipment ongoing.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



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		
5/17/15	jwr	12:54	FB	0	0	0	10	0	0	2	4	0	0	0	0	16	
		12:19	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		12:26	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		12:57	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		12:31	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		12:32	SW3	20	24	0	0	0	0	0	0	0	0	0	0	0	44
		12:35	SW4	77	18	0	0	0	0	0	0	0	0	0	0	95	
5/18/15	jwr	9:15	FB	0	0	0	18	0	0	0	9	0	0	0	0	27	
		8:22	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:31	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:56	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:34	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:52	SW3	26	80	0	0	0	0	0	0	0	0	0	0	0	106
		8:54	SW4	54	31	0	0	0	0	0	0	0	0	0	0	85	
5/19/15	PSK	15:01	FB	0	0	0	14	0	0	0	9	0	0	0	0	23	
		13:40	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:05	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:18	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:00	SW2	0	0	0	3	0	0	0	0	0	0	0	0	3	
		14:13	SW3	0	34	0	0	0	0	0	0	0	0	0	0	0	34
		14:15	SW4	41	0	0	0	0	0	0	0	0	0	0	0	41	
5/20/15	jwr	7:57	FB	0	1	0	30	0	0	0	7	0	0	0	1	39	Osprey
		7:28	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7:32	PH2	1	0	0	0	0	0	0	0	0	0	0	0	1	
		7:58	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7:34	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7:35	SW3	36	47	0	0	0	0	0	0	0	0	0	0	0	83
		7:38	SW4	53	37	0	0	0	0	0	0	0	0	0	0	90	
5/21/15	BC	1330	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1245	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1250	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1255	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1300	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1310	SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	5
		1315	SW4	39	0	0	0	0	0	0	0	0	0	0	0	39	
5/22/15	EHK	9:23	FB	0	0	0	19	0	0	0	0	0	0	0	0	19	
		8:51	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:59	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:25	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:02	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:48	SW3	14	48	0	0	0	0	0	0	0	0	0	0	0	62
		9:52	SW4	112	0	0	0	0	0	0	0	0	0	0	0	112	
5/23/15	EHK	15:16	FB	0	0	0	17	0	0	0	0	0	0	0	0	17	
		14:32	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:41	PH2	5	0	0	0	0	0	0	0	0	0	0	0	5	
		15:10	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
		14:44	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:35	SW3	14	28	0	0	0	0	0	0	0	0	0	0	0	42
		15:38	SW4	99	0	0	0	0	0	0	0	0	0	0	0	99	
Totals:				596	348	0	111	0	0	2	29	0	0	0	1	1087	

Columbia River DART

2015 Adult Passage Daily Ladder Counts at The Dalles

5/17/2015 - 5/23/2015

Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye			
	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	#	P	#	Pct	#	Pct	#	Pct	#
5/17	66.4	1202	34	607	79	259	21	67	83	5	17	1		0		0		0		0
5/18	69.3	1378	31	611	89	286	11	36	88	7	13	1	50	1	50	1		0		0
5/19	80.2	1574	20	388	93	398	7	30		5		0		1		0		0		0
5/20	76.6	1153	23	353	84	396	16	73	83	5	17	1		0		1		0		0
5/21	82.3	1170	18	251	94	373	6.5	26		5		0		0		0		0		0
5/22	78.9	1410	21	377	92	516	8.5	48	50	4	50	4		0		0		2		0
5/23	79.9	1074	20	270	93	367	7.1	28		6		-2		1		-2		1		0
YTD	Left Ladder		Right		Left		Right		Left		Right		Left		Right		Left		Right	
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	P	#	Pct	#	Pct	#	Pct	#
	75.8	8961	24	2857	89	###	11	308	88	37	12	5		3		0		3		0
Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye			

Notes: Left Ladder=East, Right Ladder=North

1. Last possible Data Date included is 05/23/2015.
2. Data Courtesy of U.S. Army Corps of Engineers.
3. USACE Data Disclaimer: These data are furnished with the understanding that the U.S. Army Corps of Engineers makes warranties concerning the accuracy, reliability, or suitability of this data for any particular purpose.
4. USACE Dams Video and Live Counting: From November through March, video tape fish counting occurs at US Army Corps of Engineers dams with fish ladders on the Columbia and Snake Rivers. Fish counting by video tape takes at least a few days the fish counters have to make, collect, and read the tapes, and then submit their fish counts. DART retrieves and posts the soon as it is made available. On April 1, live fish counting resumes at all 8 Columbia River and Snake River Corps dams with

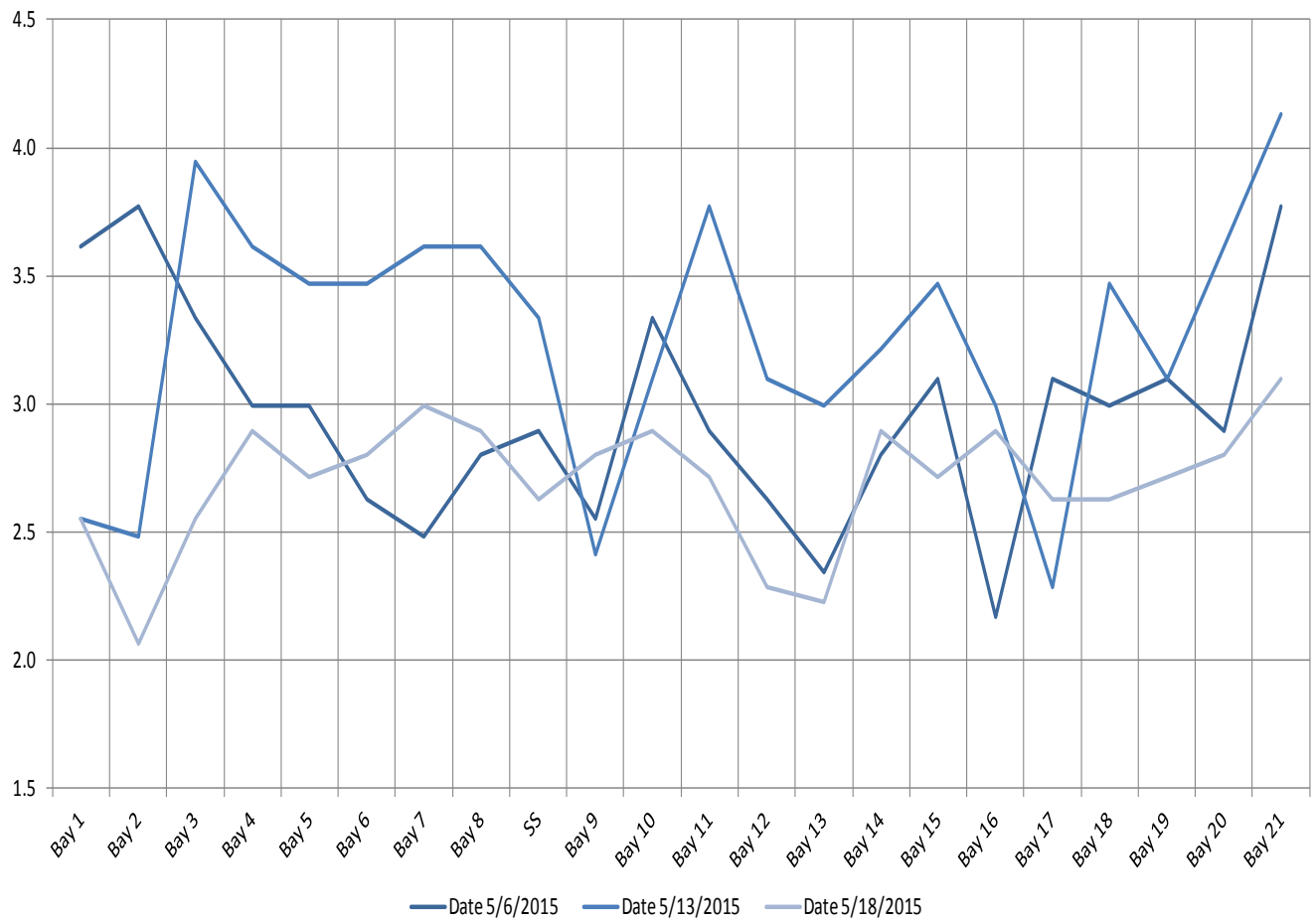
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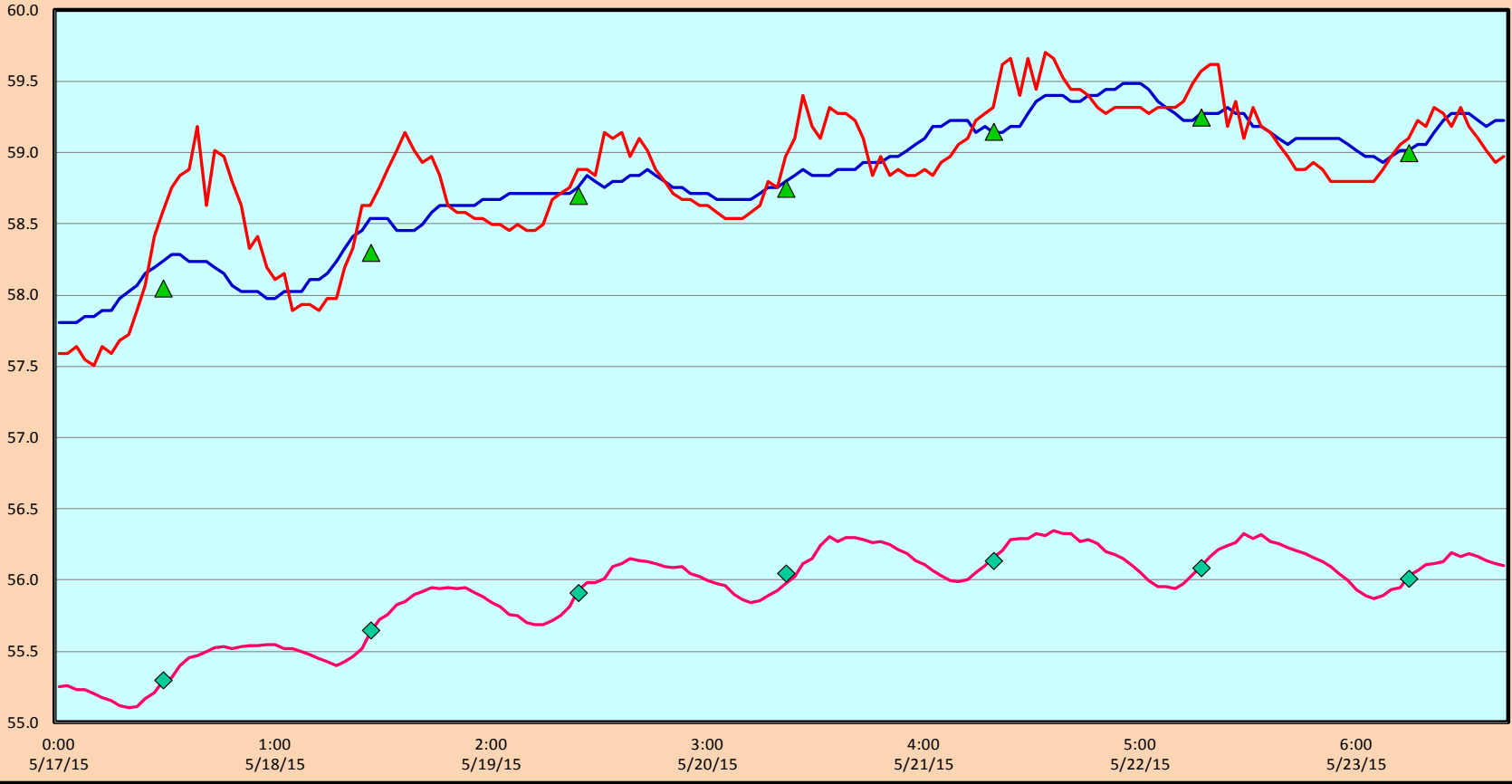
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The Dalles Dam Collection Channel Velocities (In criteria 1.5 - 4.0 fps)



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

°F
— East Fish Ladder — North Fish Ladder ▲ USGS daily tailwater average (2015) — TD Ladder Average (2007-2014) ◆ USGS daily tailwater average (2007-2014)



USGS Temperatures		Secchi:	
58.1	Sun	4.5	
58.3	Mon	4.0	
58.7	Tue	4.5	
58.8	Wed	4.5	
59.2	Thurs	4.5	
59.3	Fri	3.0	
59.0	Sat	3.0	
AVG:	58.7	AVG	4.0

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

**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-24hr avg
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	
5/17			1.6	2.7	11.7	10.2		1.4	10.8	10.8		1.5	8.5	8.5	
	1.4	9.6	1.5	2.6	11.6	10.9	9.4	1.5	10.6	10.6		1.6	8.6	8.6	40.0
	1.4	9.6	1.6	2.5	11.5	10.9	9.5	1.5	10.7	10.7		1.6	8.4	8.4	
5/18			1.8	3.2	12.1	10.6		1.7	10.4	10.4		1.6	8.2	8.2	
	1.4	9.6	1.7	8.9	11.9	10.0	8.8	1.5	10.3	10.3		1.5	8.4	8.4	40.0
	1.3	9.8	1.7	8.9	11.9	10.4	9.0	1.5	9.9	9.9		1.4	8.5	8.5	
5/19			1.6	9.0	12.0	9.7		1.4	10.1	10.1		1.5	8.5	8.5	
	1.4	9.6	1.4	5.5	12.0	12.5	8.5	1.5	10.1	10.1		1.5	8.4	8.4	40.0
	1.4	9.7	1.5	5.5	12.0	12.3	8.3	1.5	9.9	10.0		1.5	8.2	8.2	
5/20			1.3	5.6	12.1	11.7		1.3	10.1	10.1		1.4	8.4	8.4	
	1.4	9.5	1.6	4.0	12.0	11.7	7.7	1.7	9.4	9.4		1.5	8.1	8.1	40.0
	1.5	9.4	1.7	4.0	11.9	12.0	8.0	1.7	9.3	9.3		1.5	8.2	8.3	
5/21			1.5	4.0	12.1	12.3		1.6	9.7	9.7		1.3	8.4	8.5	
	1.4	9.5	1.4	4.1	12.0	12.8	8.8	1.6	10.0	10.0		1.6	8.2	8.1	40.3
	1.6	9.4	1.5	3.9	11.9	13.0	9.0	1.6	10.1	10.0		1.6	8.2	8.1	
5/22			1.6	4.0	12.0	12.4		1.4	10.0	10.0		1.2	8.8	9.6	
	1.3	9.4	1.5	3.9	11.9	12.5	8.5	1.5	10.0	10.0		1.3	8.8	9.4	39.9
	1.4	9.6	1.4	4.0	12.0	12.6	8.6	1.4	10.0	10.0		1.2	8.9	9.5	
5/23			1.4	4.0	12.1	12.2		1.5	9.8	9.8		1.3	8.3	9.4	
	1.4	9.5	1.5	4.1	12.1	13.0	9.0	1.5	9.7	9.7		1.2	9.3	9.6	39.9
	1.4	9.6	1.6	3.9	12.0	13.8	9.8	1.6	9.7	9.7		1.2	9.9	9.4	
AVG:	1.4	9.6	1.5	No criteria	11.9	11.8	8.8	1.5	10.0	10.0	closed	1.4	8.5	8.7	40.0

Fishways are inspected twice daily plus one SCADA inspection.