

The Dalles Dam Fishway Status Report

Date: 7/19/2014
 Inspection Period: 7/13/2014 to 7/19/2014

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:	69.3 F
			Comments	Secchi: 4.6 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	1.3		
Entrance weir N1	0	depth (≥ 8')	Average	10.0		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.		OOC at forebay 158.2	
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Raked on 7/14/14.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Average	9.8	Manually adjusted as needed.	
East entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir E1	0	No criteria	Average	6.6		
Entrance weir E2	0	depth (≥ 8')	Average	14.0		
Entrance weir E3	2	depth (≥ 8')	Average	9.6	Set to manual due to sticking weir, tailwater dropped, lowered weir	
Collection channel velocity	0	1.5 - 4 fps	Average	2.1		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.8		
North channel velocity	0	1.5 - 4 fps	Average	2.2		
South channel velocity	0	1.5 - 4 fps	Average	3.3		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	8.6		
Entrance weir W2	0	depth (≥ 8')	Average	8.6		
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir S1	0	depth (≥ 8')	Average	9.2		
Entrance weir S2	0	depth (≥ 8')	Average	9.2		
JUVENILE PASSAGE						
Sluiceway operation	0	1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	Range	N/A	See <u>Operations</u> below.	
Spill volume	0	40%+1%	Average	39.9	See average tab for daily averages	
Spill Pattern	0	per FPP				
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.

Gulls observed primarily downstream spillway.

Cormorants are roosting on the Washington shore forebay electrical towers.

Operations:

Entrance weir E3 set in manual due to sticking problems. Maintaining criteria depth. E1 and E2 set in auto.

Gatewell drawdown not completed due to equipment failure. A new measuring device has been ordered.

Current Outages:

T8 (MU15 & MU16) de-rated to single unit full load ops through 9/14/2017

Maintenance:

New weir 159 leafs fabricated. Wheel install next. Completion by Oct1. Installation mid Dec.

North fishway pump motor replacement delivered. Install prior to Jan 2015.

Collection channel pump #1 removal 8/4 for repair of motor. Removal in conjunction with east fishway grating inspection when fish units off.

Purchasing oil boom for install at east exit. Vendor consultation site visit 7/31.

Parts on order for install of equalizing valve on PUD intake bulkhead for next winter dewatering.

East entrance weir E3 sticking problem to be addressed this winter. Does not affect criteria operation.

Bathymetry survey planned for east powerhouse forebay and tailwater Aug 4 and 5 to determine rock debris accumulation. FPOM approval in process.

Long term repair plans funding dependent; Upgrade east exit weirs 154-157, charter submitted to stabilize north ladder rock walls, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels and repair/modify all east fishway dewatering pumps.

Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 10/11 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:

EFL Backup. Hole through dam, under roadway and into AWS conduit at junction pool. Starting Plans and Specs. Construction winter '15/'16.

Test pits excavation between fishladder and fishlock parking area in Nov. ADCP flow velocity survey in Aug. Both FPOM approved.

PUD - PUD 'freedom' second turbine proposal for north fishway in FERC review process. No new developments.

Flow Split - Record fall Chinook runs expected in 2014. Concern for overcrowding in east fish ladder. ERDC model trip planned for end of Aug to determine potential spill operation to attract more fish to the north fish ladder.

Research/Contractors:

PSMFC PIT tag monitoring continues at count stations. No issues.

Columbia River Northern Pikeminnow Management Dam Angling: 38.25 hours fishing for 144 pikeminnow.

Umatilla, Yakama Nation, and Nez Perce tribes started lamprey collection 6/12. Umatilla and YN have achieved collection allocations of 374 per tribe.

NP started 7/23 and will continue every Wednesday through end of August.

ODFW Northern Pikeminnow Management Program evaluation electrofishing; No sampling at The Dalles this week.

Normandeau fish counters at north and east count stations 16 hours a day 1 April through 30 October. Investigating possible visibility improvements for north count station. Modification proposals to FPOM for approval.

PSMFC PUD weekly sampling: One subyearling Chinook.

USDA hazer's launching pyrotechnics from downstream navlock peninsula. Also on call for sea lion hazing and pigeon removal as needed. Ends 7/31.

University of Idaho maintaining antennas and continuing downloads.

Removal last set of 3 derelict Vertical Barrier Screens from MU 12 gate well slot scheduled week of Aug11. Funding allocated.

Approved by;

Ron D. Twiner

Operation Project Manager The Dalles Dam

The Dalles East

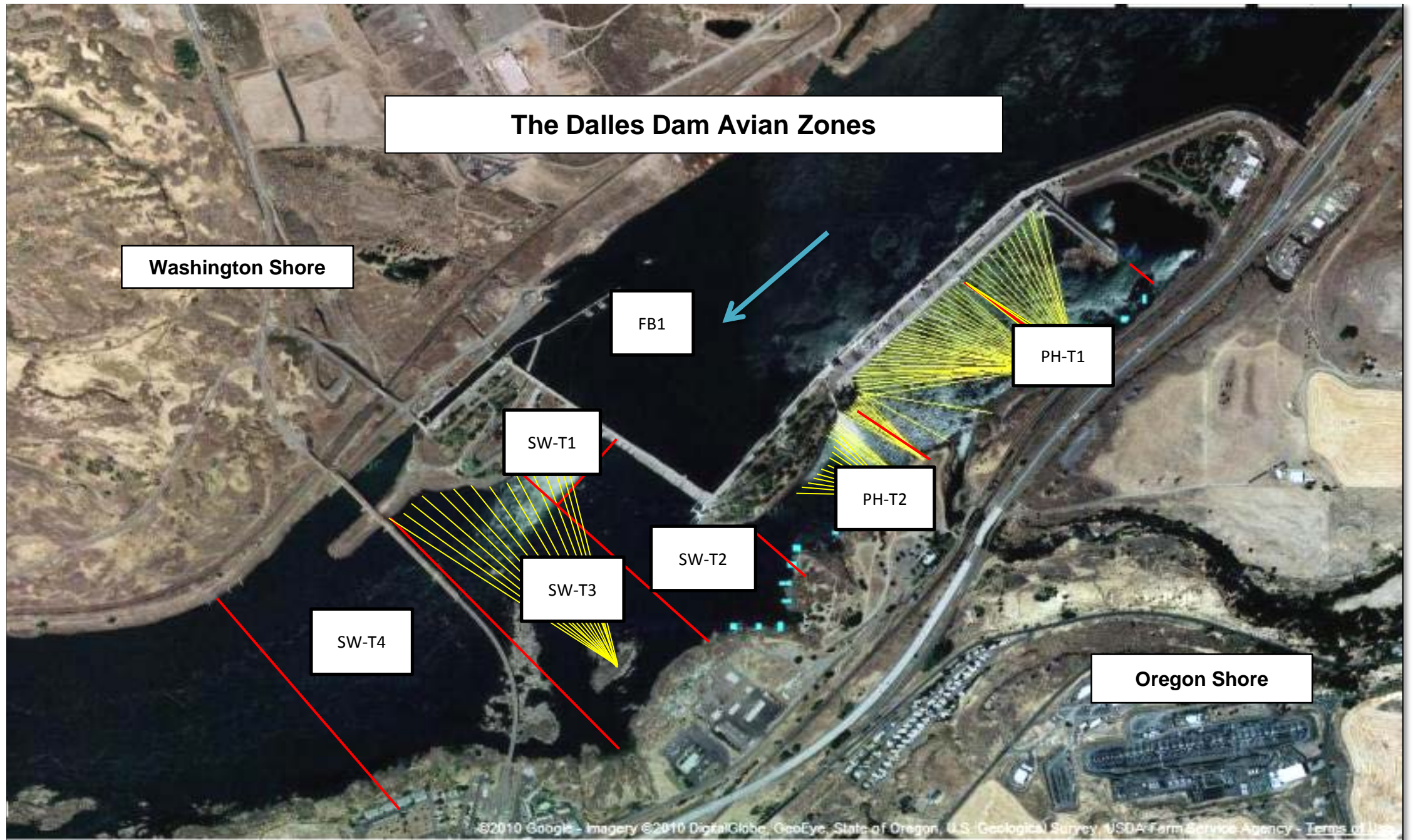
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
13-Jul-14	1376	1141	235	1409	592	817	0	0	0	6066	0	0	113
14-Jul-14	1221	871	350	1465	625	840	0	0	0	5958	0	0	211
15-Jul-14	808	616	192	1145	463	682	0	0	0	3036	0	0	208
16-Jul-14	1041	812	229	1572	750	822	0	0	0	3694	0	0	100
17-Jul-14	798	600	198	1474	642	832	0	0	0	3154	0	0	88
18-Jul-14	902	696	206	1647	781	866	0	0	0	3841	0	0	73
19-Jul-14	929	655	274	1494	654	840	0	0	0	2455	0	0	254
total	7075	5391	1684	10206	4507	5699	0	0	0	28204	0	0	1047

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
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The Dalles North

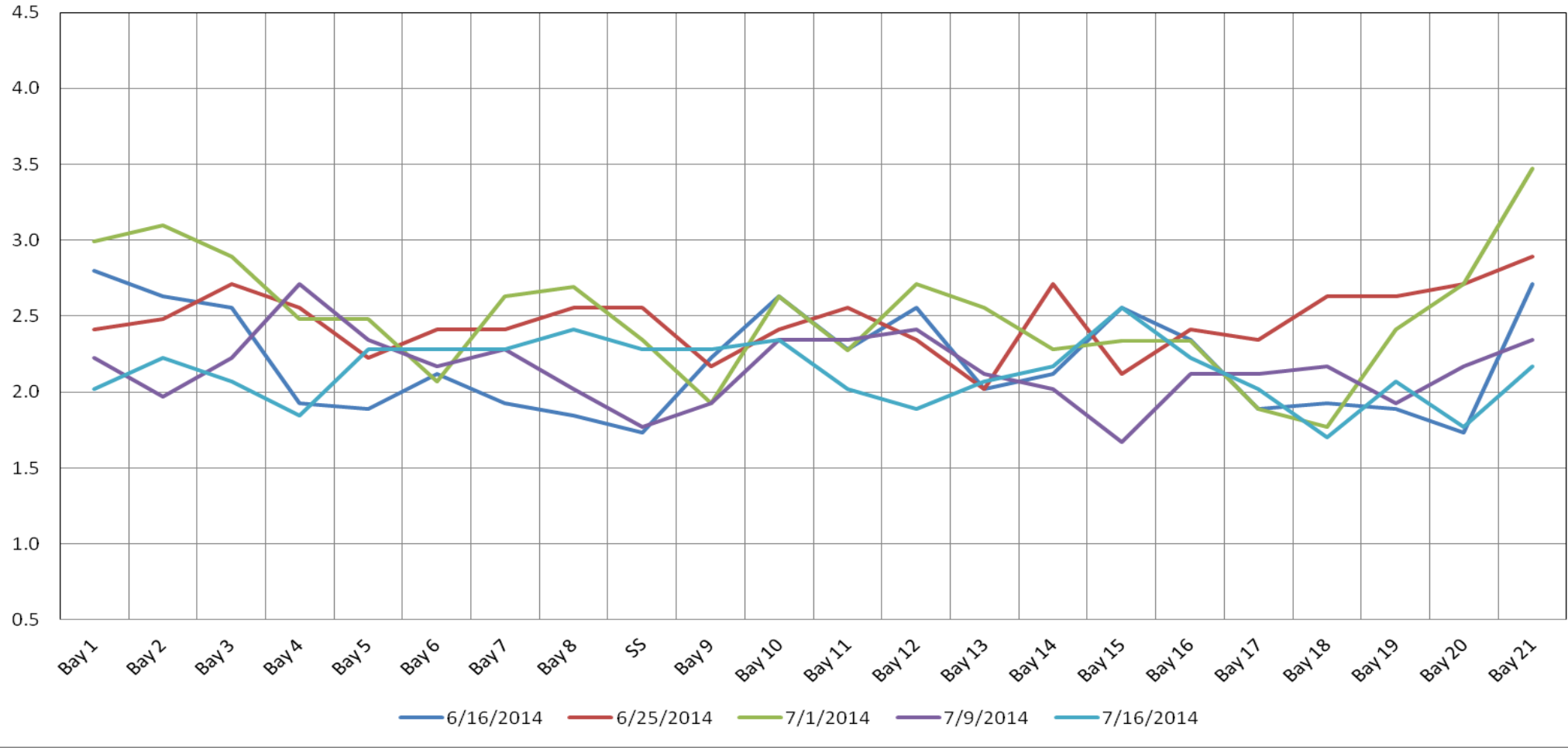
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
13-Jul-14	381	328	53	345	125	220	0	0	0	3778	0	0	31
14-Jul-14	242	214	28	329	120	209	0	0	0	1446	0	0	34
15-Jul-14	165	131	34	269	112	157	0	0	0	1358	0	0	22
16-Jul-14	189	155	34	225	92	133	0	0	0	2059	0	0	46
17-Jul-14	185	151	34	384	167	217	0	0	0	949	0	0	37
18-Jul-14	199	175	24	371	125	246	0	0	0	1055	0	0	94
19-Jul-14	311	241	70	400	178	222	0	0	0	1392	0	0	116
total	1672	1395	277	2323	919	1404	0	0	0	12037	0	0	380

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
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Hazing activity primarily in SW-T3 and SW-T4

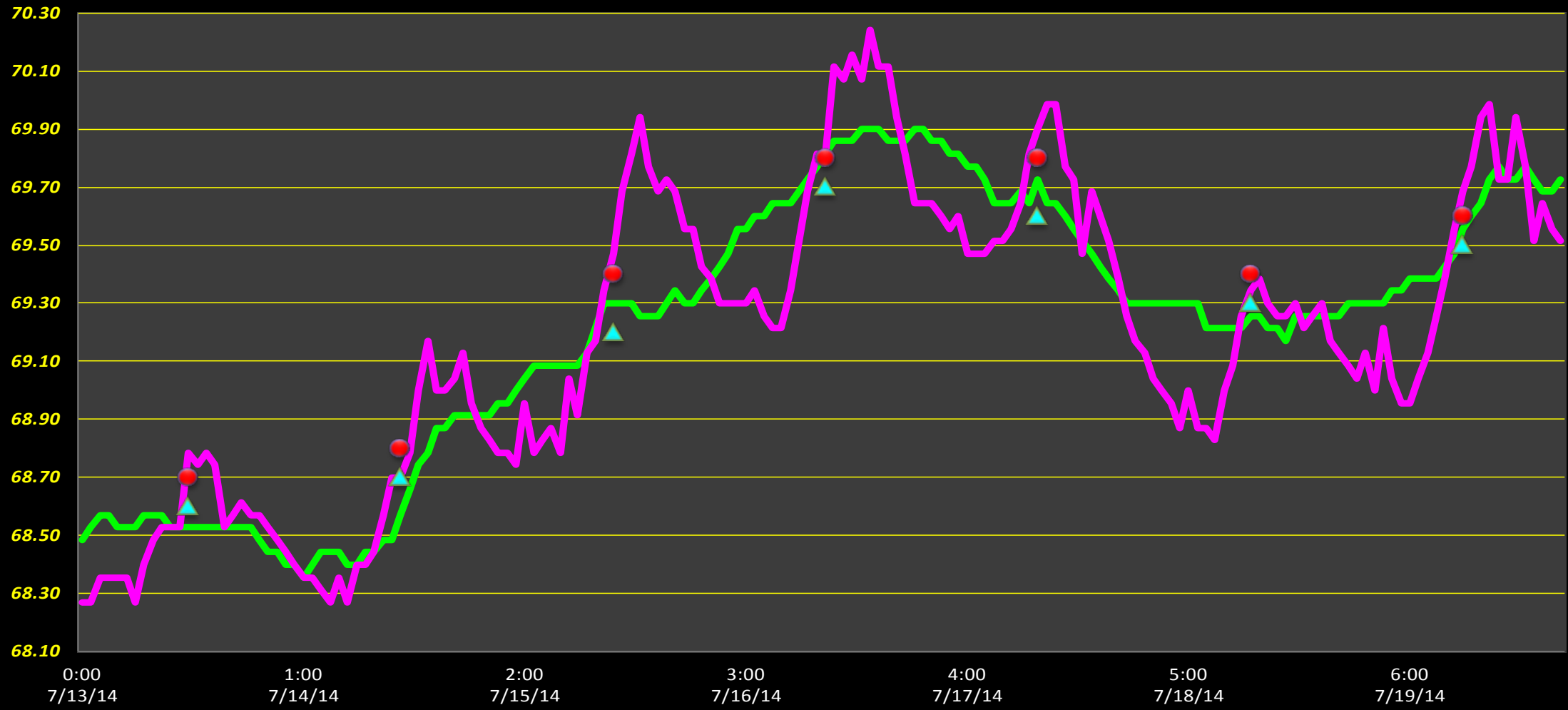
The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)



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

°F

— East Fish Ladder — North Fish Ladder ▲ USGS Forebay daily average ● USGS Tailwater daily average



	Forebay	Tailwater	Secchi:
USGS	68.6	68.7	5.0
	68.7	68.8	4.0
	69.2	69.4	5.0
	69.7	69.8	5.0
	69.6	69.8	5.0
DATA	69.3	69.4	4.5
	69.5	69.6	4.0
AVG:	69.3		AVG 4.6

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

= out of criteria

Date:	North Ladder		East Ladder											Spill%	
	North Entrance		East Entrance					West Entrance			South Entrance				
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth		S2 Depth
7/13			1.6	5.4	14.0	9.8	10.3	1.4	9.0	9.0	Closed	1.5	9.4	9.4	39.8
	1.2	10.0	1.5	6.0	13.9	9.5	10.0	1.5	8.9	8.9		1.6	9.4	9.4	
	1.2	10.0	1.5	6.0	13.9	9.4	10.0	1.5	8.5	8.5		1.5	9.4	9.4	
7/14			1.5	6.0	13.9	8.6	9.1	1.6	8.4	8.5		1.5	9.4	9.5	40.1
	1.3	10.0	1.6	6.0	13.9	8.6	9.1	1.6	8.5	8.4		1.4	9.6	9.5	
	1.3	10.0	1.4	6.0	14.1	11.1	11.7	1.7	8.4	8.4		1.5	9.6	9.5	
7/15			1.5	6.0	14.0	7.8	8.3	1.5	8.5	8.5		1.5	9.4	9.4	39.9
	1.2	9.9	1.7	6.1	13.9	7.8	8.0	1.5	8.2	8.2		1.6	9.8	9.8	
	1.3	10.0	1.6	6.1	14.1	10.3	10.5	1.7	8.3	8.2		1.6	9.0	9.0	
7/16			1.5	6.0	14.0	8.7	8.8	1.6	8.2	8.3		1.5	9.1	9.0	39.8
	1.3	10.0	1.6	6.0	14.1	11.0	11.3	1.7	8.3	8.4		1.6	9.0	9.0	
	1.2	10.0	1.6	6.0	14.0	9.4	9.7	1.5	8.5	8.4		1.5	9.1	9.1	
7/17			1.5	6.1	14.0	8.6	8.8	1.3	8.9	8.9		1.5	9.0	9.1	40.0
	1.3	10.0	1.5	7.5	14.1	9.0	9.3	1.4	8.3	8.4		1.6	9.0	9.0	
	1.3	9.9	1.6	7.6	14.8	9.7	10.0	1.6	8.3	8.2		1.6	9.0	9.0	
7/18			1.5	7.6	14.1	9.6		1.6	8.3	8.3	1.6	8.9	8.9	39.9	
	1.3	10.0	1.6	7.5	14.0	9.7	9.8	1.5	8.4	8.4	1.6	9.0	9.0		
	1.3	10.1	1.5	7.6	13.0	11.4	11.5	1.6	8.7	8.7	1.6	9.1	9.1		
7/19			1.3	7.5	14.0	9.8		1.3	9.2	9.2	1.6	8.9	9.0	40.0	
	1.3	10.0	1.5	7.4	14.0	10.1	10.2	1.4	9.0	9.1	1.5	9.1	9.0		
	1.2	10.2	1.5	7.5	14.9	11.5	10.7	1.4	9.0	9.0	1.6	9.0	9.0		
AVG:	1.3	10.0	1.5	6.6	14.0	9.6	9.8	1.5	8.6	8.6	Closed	1.5	9.2	9.2	39.9

Spill % values represent daily average from operations status report