

The Dalles Dam Fishway Status Report

Date: 6/30/2014
 Inspection Period: 6/22/2014 to 6/28/2014

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:	20	Temperature:	62.3 F
			Comments	Secchi: 4.4 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.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Average	12.9	Manually adjusted as needed.	
East entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir E1	0	depth (≥ 8')	Average	6.7	Set in auto	
Entrance weir E2	0	depth (≥ 8')	Average	12.4	Set in auto	
Entrance weir E3	0	No criteria	Average	12.1	Manually adjusted as needed.	
Collection channel velocity	0	1.5 - 4 fps	Average	2.5		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.4		
North channel velocity	0	1.5 - 4 fps	Average	2.2		
South channel velocity	0	1.5 - 4 fps	Average	3.5		
West entrance differential	0	1.0' - 2.0'	Average	1.6		
Entrance weir W1	0	depth (≥ 8')	Average	10.2		
Entrance weir W2	0	depth (≥ 8')	Average	9.8		
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	9.8		
Entrance weir S2	0	depth (≥ 8')	Average	9.8		
JUVENILE PASSAGE						
Sluiceway operation	0	1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	Range	0.0' - 0.6'		
Spill volume	3	40%+1%	Average	40.5	< 40% due to gas cap.	
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.

Gull numbers have increased for zones SW-T3 and SW-T4 above and below the bridge, highest since late May. Approximately 50% of gulls return 10 minutes after hazing. Cormorants are mainly roosting on the Washington shore forebay electrical towers.

Operations:

Calibration for entrance weirs, channels and tailwater completed 6/23; all within criteria except entrance weir W1 off by 0.1'.

Gatewell drawdown completed on 6/23. All values were well within criteria.

Entrance weir E3 sticks in guides resulting in slack cables. Therefore it is set in manual and adjusted as needed. It has maintained criteria depth.

Entrance weir E1 and E2 are set in auto.

Current Outages:

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

MU20 5/19/2014 to 7/17/2014 for overhaul.

Maintenance:

Fabrication of new weir 159 leafs fabricated. Next step sandblast/paint and install wheels. Completion by Oct1. Installation mid Dec.

North fishway pump motor replacement ordered. Delivery expected prior to Oct1. Install prior to Jan 2015.

Collection channel pump #1 to be removed 8/4 for repair of grounded motor.

Purchasing oil boom for install at east exit. FPOM approved.

Planning for install equalizing valve on PUD intake bulkhead for next winter dewatering.

East entrance weir E3 sticking problem to be addressed this winter.

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.

Research/Contractors:

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

Columbia River Northern Pikeminnow Management Dam Angling: 35 hours fishing for 134 pikeminnow.

Umatilla, Yakama, and Nez Perce tribes started lamprey collection June 20. Two mortalities in traps at east count station. Investigation continues.

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: on going.

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

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 Ladder

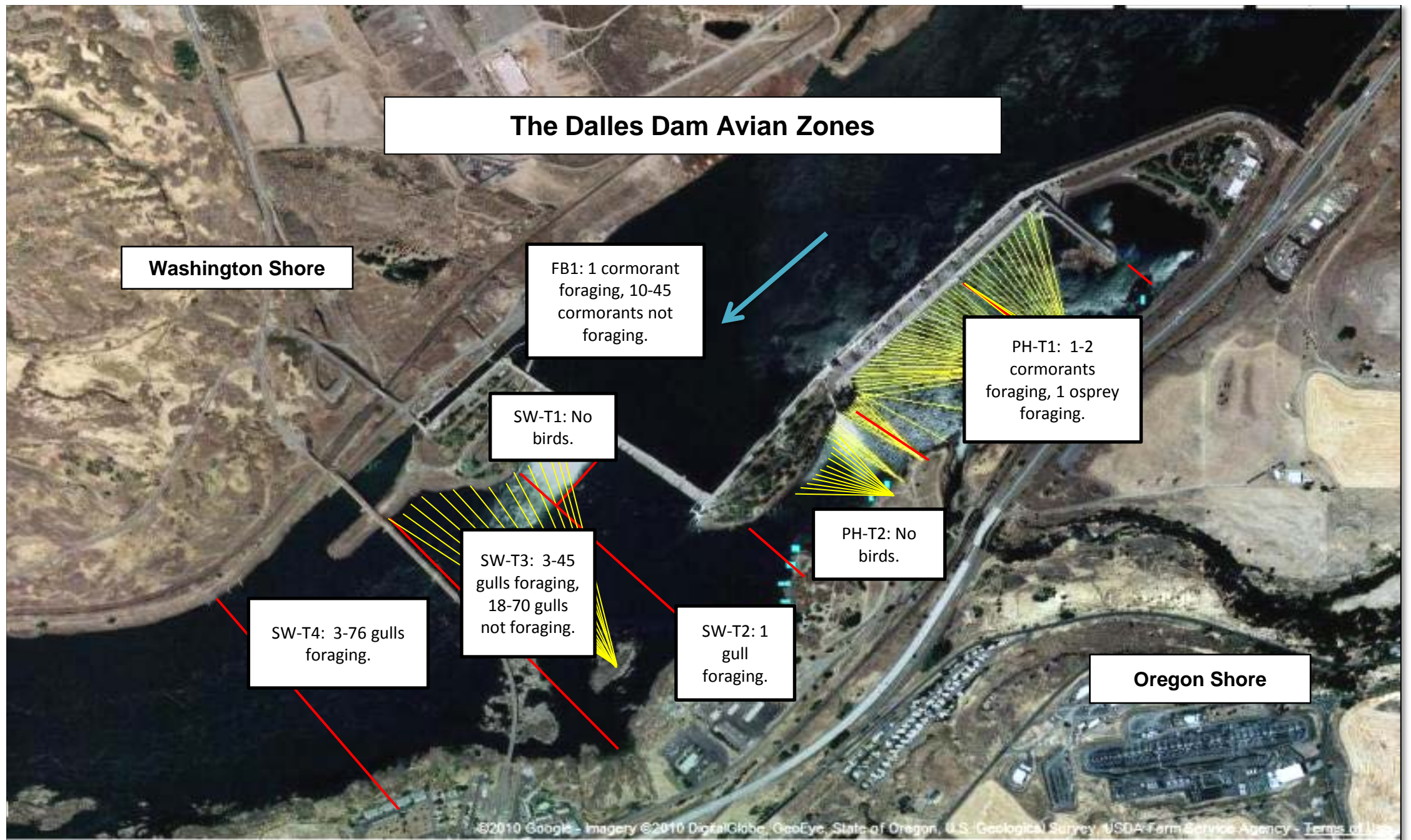
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
22-Jun-14	2110	1896	214	153	80	73	0	0	0	16540	0	0
23-Jun-14	2512	2015	497	198	138	60	0	0	0	22206	0	0
24-Jun-14	2318	1896	422	218	115	103	0	0	0	20866	0	0
25-Jun-14	2412	1994	418	246	161	85	0	0	0	22537	0	0
26-Jun-14	2445	2023	422	355	170	185	0	0	0	27694	0	0
27-Jun-14	3679	3193	486	440	220	220	0	0	0	28759	0	0
28-Jun-14	2923	2340	583	426	194	232	0	0	0	25955	0	0
Total	18399	15357	3042	2036	1078	958	0	0	0	164557	0	0

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

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
22-Jun-14	244	236	8	3	1	2	0	0	0	65	0	0
23-Jun-14	595	570	25	17	5	12	0	0	0	1060	0	0
24-Jun-14	300	277	23	13	8	5	0	0	0	780	0	0
25-Jun-14	480	454	26	26	13	13	0	0	0	1078	0	0
26-Jun-14	408	389	19	27	14	13	0	0	0	2482	0	0
27-Jun-14	241	218	23	26	14	12	0	0	0	1453	0	0
28-Jun-14	271	254	17	14	6	8	0	0	0	1576	0	0
Total	2539	2398	141	126	61	65	0	0	0	8494	0	0

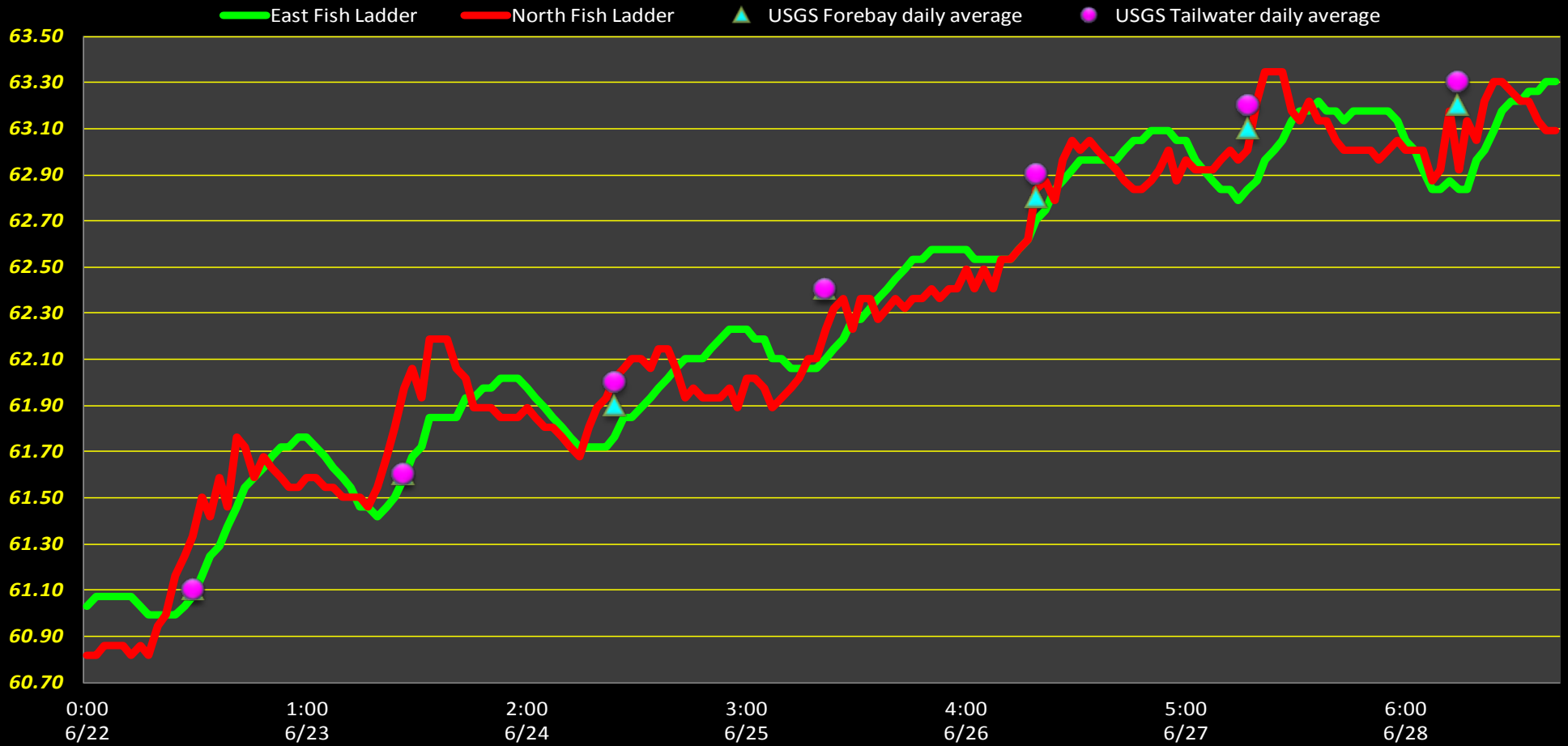
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
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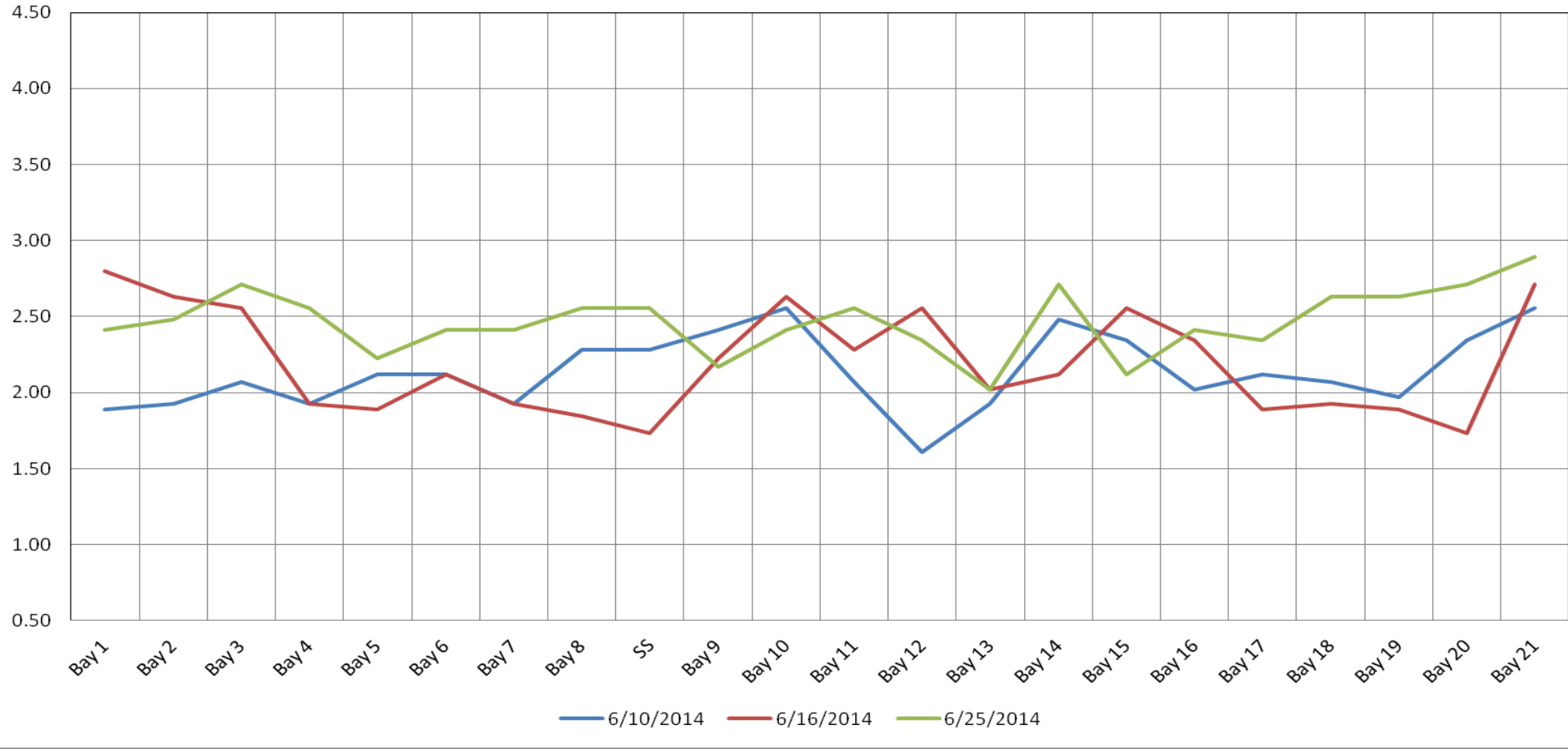
Hazing activity primarily in SW-T3 and SW-T4

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



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



	Forebay	Tailwater	Secchi:
	61.1	61.1	4.5
USGS	61.6	61.6	4.5
	61.9	62.0	4.5
	62.4	62.4	4.5
DATA	62.8	62.9	4.5
	63.1	63.2	4.5
	63.2	63.3	4.0
AVG:	62.3		4.4

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
6/22/14			1.5	7.1	12.5	11.8		1.5	9.5	9.5	Closed	1.4	10.0	10.0	39.8
	1.3	10.0	1.4	7.1	12.5	12.1	12.7	1.7	9.8	9.9		1.5	9.9	9.7	
	1.4	9.9	1.3	7.0	12.6	13.0	13.6	1.6	10.0	10.0		1.5	10.1	10.1	
6/23/14			1.4	6.9	12.4	12.2		1.6	9.9	9.9		1.4	10.0	10.0	39.8
	1.3	10.1	1.4	4.9	12.5	13.3	13.9	1.8	10.5	10.5		1.4	10.2	10.2	
	1.3	10.0	1.5	5.0	12.5	13.3	14.2	1.5	11.1	11.0		1.5	10.0	10.0	
6/24/14			1.7	5.1	12.5	11.3		1.6	10.0	10.0		1.5	9.5	9.5	42.1
	1.3	10.0	1.4	7.5	11.0	11.8	12.4	1.4	10.5	10.6		1.5	9.6	9.5	
	1.4	9.9	1.5	6.9	12.5	12.2	12.8	1.6	10.5	10.5		1.5	9.5	9.6	
6/25/14			1.5	6.9	12.4	12.5		1.5	10.6	10.5		1.5	9.5	9.6	40.1
	1.3	10.0	1.4	7.1	12.4	12.4	13.0	1.6	10.5	10.5		1.6	9.4	9.5	
	1.3	10.0	1.5	7.1	12.6	12.6	13.2	1.5	10.5	10.5		1.5	9.5	9.6	
6/26/14			1.7	6.8	12.3	10.5		1.5	9.4	9.4		1.5	9.5	9.5	39.8
	1.3	9.9	1.5	9.6	12.5	11.9	12.4	1.7	9.5	9.4		1.5	9.5	9.6	
	1.3	10.0	1.5	N/A	12.5	11.9	12.4	1.7	9.5	9.4		1.5	9.5	9.6	
6/27/14			1.7	6.4	12.4	12.2		1.7	10.0	10.0	1.6	9.4	9.4	39.7	
	1.3	10.0	1.5	6.5	12.5	12.3	12.8	1.5	10.4	10.5	1.5	10.0	9.9		
	1.3	10.0	1.5	6.6	12.5	12.4	13.0	1.5	10.5	10.5	1.3	10.3	10.3		
6/28/14			1.5	6.6	12.5	10.9		1.3	10.6	10.6	1.4	10.2	10.1	42.5	
	1.3	9.9	1.6	6.5	12.6	11.2	11.7	1.3	10.6	10.6	1.4	10.1	10.0		
	1.3	10.0	1.4	6.5	12.5	12.6	13.1	1.5	10.6	1.6	1.4	10.1	10.1		
AVG:	1.3	10.0	1.5	6.7	12.4	12.1	12.9	1.6	10.2	9.8	Closed	1.5	9.8	9.8	40.5

Spill % values represent daily average from operations status report



Still many large sturgeon feeding on shad in transportation channel. Hopefully they spit out sockeye, knowing they're ESA listed.