

The Dalles Dam Fishway Status Report

Date: 6/22/2014
 Inspection Period: 6/15/2014 to 6/21/2014

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:		Temperature:	
			Comments			
			20	60.8	F	
				Secchi:	3.8	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	9.9		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	1	Per forebay	Auto adjusts 1' increments.		Out at 158.3	
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	raked on 06/17/14			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Average	11.2		Manually adjusted as needed.
East entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir E1	0	No criteria	Average	7.6		Set in auto
Entrance weir E2	0	depth (≥ 8')	Average	12.5		Set in auto
Entrance weir E3	0	depth (≥ 8')	Average	10.8		
Collection channel velocity	0	1.5 - 4 fps	Average	2.3		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.5		
North channel velocity	0	1.5 - 4 fps	Average	2.5		
South channel velocity	0	1.5 - 4 fps	Average	3.2		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	9.5		
Entrance weir W2	0	depth (≥ 8')	Average	9.5		
Entrance weir W3	closed	No criteria	closed			
South entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir S1	0	depth (≥ 8')	Average	9.7		
Entrance weir S2	0	depth (≥ 8')	Average	9.7		
JUVENILE PASSAGE						
Sluiceway operation	0	1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	Range	0-0.4'		
Spill volume	0	40%+-1%	Average	0.4		
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.

With lower tailwater, gulls moving upstream of bridge within avian lines. Hazing pyros reducing numbers by 10-20% after 10minutes.

Operations:

Spill attraction flow being proposed for October to provide more attraction to the north fishladder. Trip to ERDC model planned for end of August.

Gatewell drawdown completed on 6/21/14. All values were within criteria.

Current Outages:

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

MU20 out of service 5/19/14 to 6/26/14 for overhaul

Maintenance:

Fabrication of new weir 159 ahead of schedule and cost estimate. Completion by Oct1. Installation mid Dec.

North fishway pump motor replacement ordered. Delivery expected prior to Jan dewatering.

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 lowered to 13' depth but remains in manual due to sticking problem. Entrance weir E1 in auto.

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 2015.

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: Twenty one hours fishing for 68 pikeminnow.

CTUIR, YN, and NPT will started lamprey collection June 20. Total catch 46 lamprey from east count station. Allocation for 2014 is 374.

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

Fish counters on site at north and east count stations 16 hours a day 1 April through 30 October.

PSMFC PUD weekly sampling: 3 Chinook smolt.

Normandeau fish counting program 4/1 through 10/31. Night video starts mid June.

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

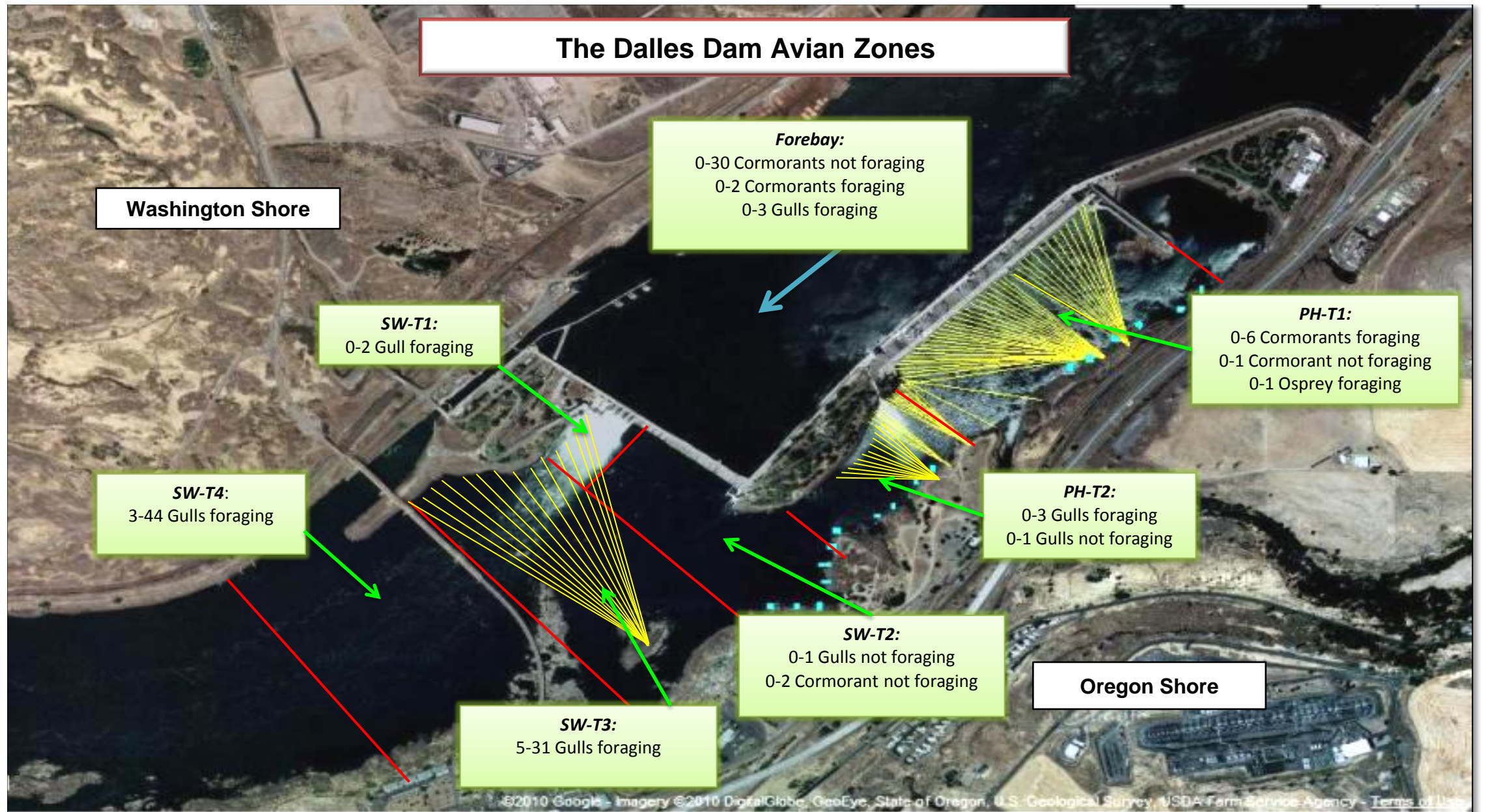
University of Idaho maintaining antennas and continuing downloads.

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



Hazing activity primarily in SW-T4
 Numbers reflect weekly range of daily average

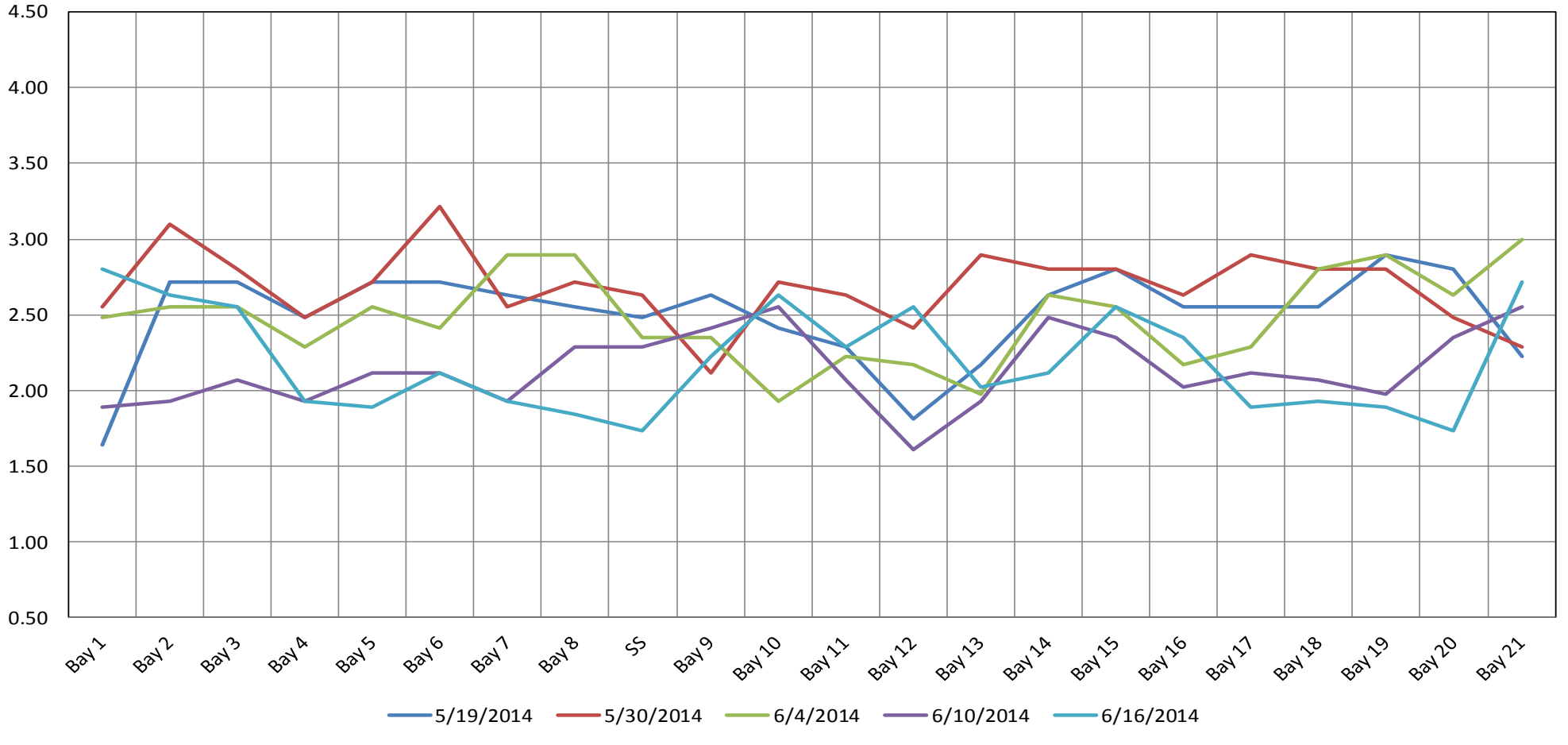
DART The Dalles Adult Ladders Daily Usage with Spill Percent and Outflow

Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Adult & Jack Coho	Lamprey				Outflow (kcfs)
	Left		Right		Left		Right		Left		Right		Left		Right		Left		Right			Left		Right		
	Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder			Ladder		Ladder		
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#		Pct	#	Pct	#	
6/15	60.4	1789	39.6	1171	67.5	308	32.5	148	83.5	71	16.5	14	73.3	22	26.7	8	76.8	3119	23.2	941	97.4	37	2.6	1	198.2	
6/16	79.1	1518	20.9	402	82.4	257	17.6	55	83.9	52	16.1	10	100	24	0	0	77.3	2610	22.7	766	100	10	0	0	190.5	
6/17	67	888	33	438	94.6	335	5.4	19	90.7	78	9.3	8	100	29	0	0	88.3	2993	11.7	396	75	18	25	6	213.2	
6/18	88.4	1432	11.6	188	91.7	210	8.3	19	90.3	65	9.7	7	96	24	4	1	97.1	3798	2.9	115	72	18	28	7	250.2	
6/19	78.8	1284	21.2	346	98.8	491	1.2	6	95.6	86	4.4	4	94.9	37	5.1	2	96.2	4848	3.8	190	29	18	71	44	235	
6/20	67.2	1728	32.8	842	78.5	263	21.5	72	86.7	85	13.3	13	79.5	31	20.5	8	90.5	6734	9.5	709	12.1	8	87.9	58	222.2	
6/21	69	1229	31	552	97.2	385	2.8	11	93	107	7	8	85.7	42	14.3	7	94	7481	6	475	20	8	80	32	246.4	
YTD	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				not present YTD	Lamprey				Outflow AVG
	Left		Right		Left		Right		Left		Right		Left		Right		Left		Right			Left		Right		
	Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder			Ladder		Ladder		
	Pct		Pct		Pct		Pct		Pct		Pct		Pct		Pct		Pct		Pct			Pct		Pct		
	71.5	28.5	87.2	12.8	89.5	10.5	88.9	11.1	89.8	10.2					44.2	55.8	222.2									

NOTES:

1. The species passage percent is not calculated for either ladder on a day, if either the Right Ladder or Left Ladder species count is: negative or null for the day.
2. Ladder orientations reference the side of the river when facing downstream.
3. Data Provided Courtesy of U.S. Army Corps of Engineers

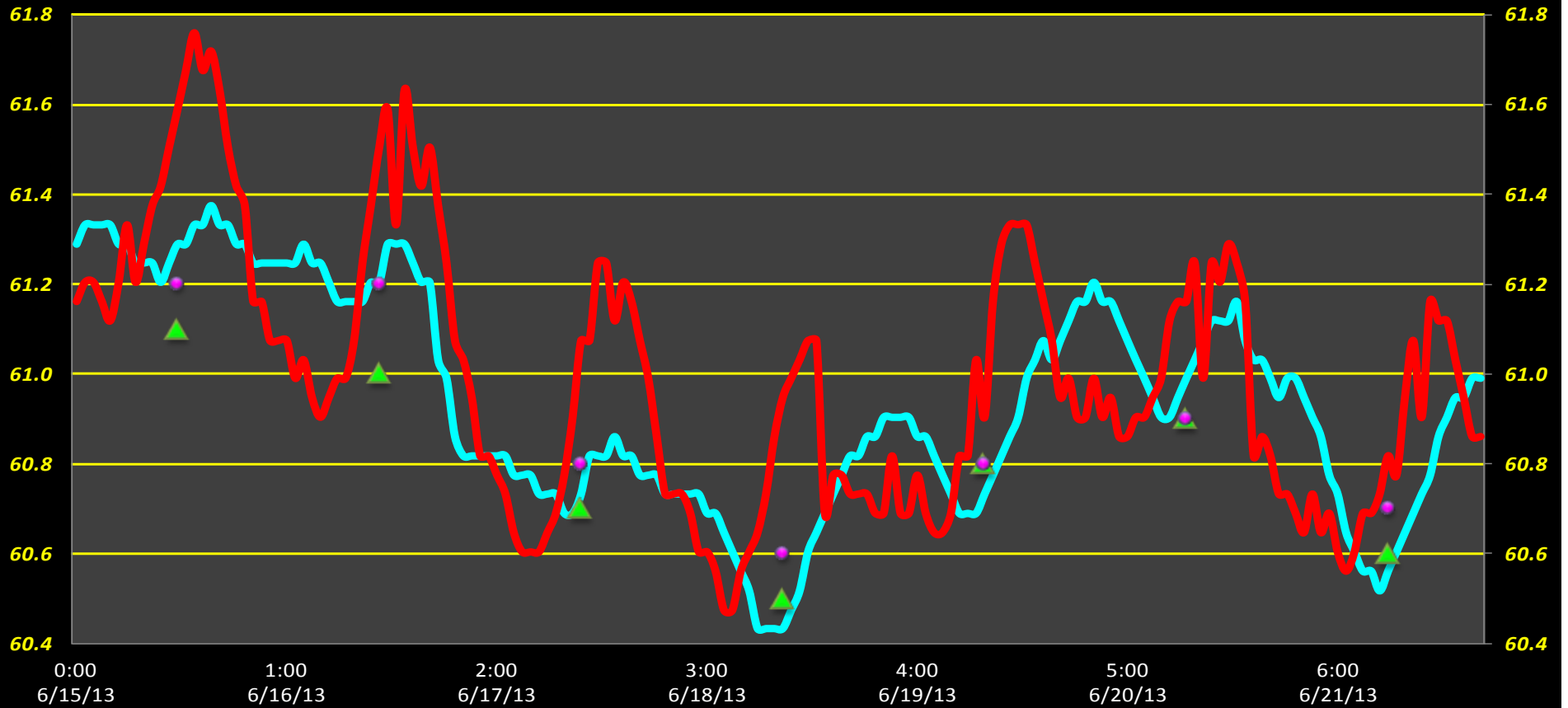
The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)



°F

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

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



	Forebay	Tailwater		Secchi:
USGS	61.1	61.2	SUN	4.0
	61.0	61.2	MON	4.0
	60.7	60.8	TUES	4.0
	60.5	60.6	WED	4.0
DATA	60.8	60.8	THUR	4.5
	60.9	60.9	FRI	3.0
	60.6	60.7	SAT	3.0
AVG:	60.8		AVG:	3.8

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

= out of criteria

Date:	North Fish Ladder		East Fish 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	
6/15/14			1.6	6.4	12.4	10.1	10.6	1.5	9.5	9.4	c l o s e d	1.5	9.6	9.6	40.0
	1.3	9.9	1.5	7.9	12.5	10.0	10.5	1.5	9.5	9.5		1.5	9.5	9.5	
	1.3	9.9	1.5	8.0	12.4	9.9	10.4	1.5	9.6	9.4		1.6	9.4	9.4	
6/16/14			1.6	8.0	12.6	9.2	9.7	1.5	9.0	9.0		1.5	9.5	9.5	40.0
	1.3	10.0	1.6	8.0	12.4	9.2	9.7	1.5	8.9	8.9		1.6	9.6	9.4	
	1.3	9.9	1.6	10.0	12.4	9.9	10.4	1.4	9.1	9.1		1.5	9.5	9.6	
6/17/14			1.4	10.1	12.7	9.7	10.2	1.5	9.0	9.0		1.5	9.5	9.5	40.0
	1.3	9.9	1.8	8.0	12.5	10.3	10.8	1.6	9.0	9.0		1.6	9.5	9.5	
	1.4	9.9	1.4	8.1	12.5	12.0	12.5	1.7	9.0	9.0		1.6	9.4	9.4	
6/18/14			1.4	8.0	12.6	11.2	11.7	1.5	9.9	9.9		1.6	9.5	9.4	40.0
	1.4	10.0	1.5	5.9	12.4	11.8	12.3	1.6	10.0	9.9		1.6	9.4	9.5	
	1.3	10.0	1.4	5.0	12.4	13.4	13.4	1.6	10.6	10.6		1.5	10.0	10.1	
6/19/14			1.8	8.8	12.6	9.8	10.3	1.5	9.6	9.6		1.5	10.0	10.1	39.9
	1.3	9.9	1.5	7.0	12.6	11.8	12.9	1.6	9.5	9.6		1.5	10.0	10.0	
	1.3	9.9	1.3	7.2	12.5	12.2	10.7	1.3	9.9	9.9		1.5	9.9	10.0	
6/20/14			1.5	7.1	12.6	10.4	10.9	1.5	9.5	9.5	1.4	10.1	10.1	40.1	
	1.3	10.0	1.6	7.0	12.5	10.3	10.8	1.4	9.5	9.5	1.5	10.0	10.0		
	1.4	9.9	1.7	7.0	12.5	11.1	11.6	1.5	9.5	9.6	1.5	10.1	10.1		
6/21/14			1.5	6.9	12.4	11.3	11.8	1.7	9.5	9.5	1.5	9.9	10.0	39.9	
	1.3	9.9	1.5	7.0	12.4	11.4	11.9	1.6	9.5	9.5	1.4	10.0	10.0		
AVG:	1.3	9.9	1.5	7.6	12.5	10.8	11.2	1.5	9.5	9.5		1.5	9.7	9.7	40.0



First recorded lamprey mortality removed from downstream picket lead at east counts station. Investigation underway. Memo provided to FPOM.



Dying sturgeon found in downstream entrance to navlock with bloated stomach. Cause unknown. Consulted USGS - possible cause from being pulled up from depth by angler.