

# FISHWAY STATUS REPORT

Date: 4/14/2013  
 Inspection Period: 4/7 to 4/13/2013

## THE DALLES DAM



**US Army Corps  
of Engineers**  
Portland District

The Dalles Project-Fisheries  
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 Phone: 541-506-3800

Fishways are inspected twice daily. Additional daily monitoring done via automation system in fisheries office.

The Dalles Dam	Inspections	Criteria	Total Number of Inspections:	21	Temperature:	49.0	F
	Out of Criteria	Limit	Comments		Secchi:	4.1	Ft.
<b>NORTH FISHWAY</b>							
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	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir N1	0	depth (≥ 8')	Average	9.6			
Entrance weir N2		Closed	Bulkhead installed				
PUD Intake differential	1	≤ 0.5'		0.6			
<b>EAST FISHWAY</b>							
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	1	1.0' ± 0.1'	Out at 1.2' due to fast forebay drop.				
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.				
East entrance differential	0	1.0' - 2.0'	Average	1.6	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir E1	0	No criteria	Average	9.4	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average	13.6			
Entrance weir E3	0	depth (≥ 8')	Average	13.6			
Collection channel velocity	0	1.5 - 4 fps	Average	2.3	See <b>Velocities</b> tab for more complete information.		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.0			
North channel velocity	0	1.5 - 4 fps	Average	2.3			
South channel velocity	0	1.5 - 4 fps	Average	2.4			
West entrance differential	1	1.0' - 2.0'	Average	1.5	Out at 0.8'.		
Entrance weir W1		Closed	Average	closed	Bulkhead installed.		
Entrance weir W2	0	depth (≥ 8')	Average	10.9			
Entrance weir W3	0	depth (≥ 8')	Average	10.9			
South entrance differential	0	1.0' - 2.0'	Average	1.5	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir S1	0	depth (≥ 8')	Average	8.6	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average	8.6			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	2	MU 1, 8, 18	MU 18 RTS 4/11. Sluiceways for MU 18 opened before unit returned.				
Turbine trashrack drawdown	0	<1.5', wkly	Range 0.1' to 0.5'.				
Spill volume	0	40%, 24hr	Average	41.4	Spill for juvenile passage started Apr 10.		
Spill Pattern	0	per FPP					
Turbine Unit Priority	0	per FPP					
Turbine 1% Efficiency	0	per FPP					

**OTHER ISSUES:****THE DALLES****Birds/Sea lions:**

Bird observation data collected twice daily. Gull and cormorant activity steadily increasing. See Avian tab for details. USDA starts hazing operations Apr 16. East powerhouse avian line pole holding 14 avian lines is showing stress. Project maintenance secured lines to assure no line loss if pole fails. Project engineering devising plan for new pole installation.

Apr 7 1508 hrs., one sealion observed swimming ~ 50' from the west entrance. Sea lion hazing will be implemented if they loiter at entrances.

**Operations:**

North and East fishway in full operation per Fish Passage Plan.

Main Unit 18 returned to service on 4/11; out of criteria sluiceways MU 18 were opened before the unit returned.

Spill for fish passage started Apr10 in accordance with 2013 Fish Operation Plan. Spillgate 2 remote operation problem corrected Apr9, with no affect to fish spill requirement.

**Maintenance**

North Fish Ladder, East Fish Ladder, and the Ice/Trash Sluiceway are operational in accordance with Fish Passage Plan (FPP).

Main Unit 15, 16, and T8 forced out of service due to transformer oil issues. Return to service ~ June 6.

Main Unit 18 out of service Mar 3 to Apr 4 for five year overhaul.

Main Unit 4 out of service Mar 3 to Apr 4 for digital governor installation and annual maintenance.

Main Unit 5 out of service Apr 4 to May 5 for digital governor installation and annual maintenance.

Gatewell drawdown completed Apr 12. The criteria for the difference between the forebay and gatewell is 1.5'. Values ranged from a 0.1' to 0.5', all well within criteria limits.

Entrance weir W1 removed for wheel replacement. Repair underway with new plastic composite wheels. Plan to install and test through remainder of passage season. If successful, these will be used on remaining weirs to reduce guide wear.

North auxiliary water (PUD) intake rake crane out for hydraulic repair. Return unknown, pending budget status. To be raked by mobile crane as needed.

**Studies:**

**PIT** - Temporary Thin Wall PIT tag Antenna continues to work successfully. Apr 9 site visit by PSMFC to inspect system.

Permanent PIT antenna study DDR continues. Project supporting as needed.

**EFL** - ladder backup water supply study continues. Alternative of a single 10' pipe through monolith near fish lock to provide full 1400 cfs needed.

Project requested to include replacement of fishlock 42" valve as best cost benefit and to include removal of all old unneeded fish lock equipment.

**PUD** freedom turbine planning underway. Project support as needed. Relocation of osprey platform planned for next fall.

**Lamprey** - Collecting turbine cooling water strainer juvenile lamprey data as available when strainer is opened. No data this week.

**Research/Contractors:**

United States Department of Agriculture Wildlife Service avian hazing scheduled to start Apr 16.

Washington Department of Fish and Wildlife (WDFW) 2013 Pikeminnow Dam Angling similar to past 3 years. Start May 1; 2012 report pending.

Pacific States Marine Fisheries Commission fish sampling in the Northern Wasco County PUD: this is the first sample of the 2013 monitoring season at the PUD, with 723 fry in the sample (2 morts). Also six clipped yearling Chinook. Debris was heavy with sticks and small wood.

Refer to PSMFC weekly reports for further detail.

Northern Pikeminnow Management Program Oregon Department of Fish and Wildlife evaluation: All of the electrofishing, gillnetting, and tagging concentrated at Bonneville Dam this week. *Note; this was mistakenly referred to Oregon State University in previous report.*

Project maintenance to remove 45' I-beams at Main Unit 1, 5, and 19 forebay pier noses. Date to be determined. Requires CRFM funding.

University of Idaho adult radio telemetry new antennas both fish ladders completed. Also plan to evaluate the spillwall and half duplex PIT lamprey.

Tribal lamprey collection at count stations expected. Date to be determined.

Normandeau fish counters started 16hr daily fish counting at north and east count stations Apr 1.

USFWS lamprey camera equipment/power cords at count stations removed by project fisheries staff. Further removal planned for next winter outage.

Approved by;

Ron D. Twiner

Operation Project Manager

The Dalles Dam



# The Dalles Dam Avian Zone Map

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

SW-T2

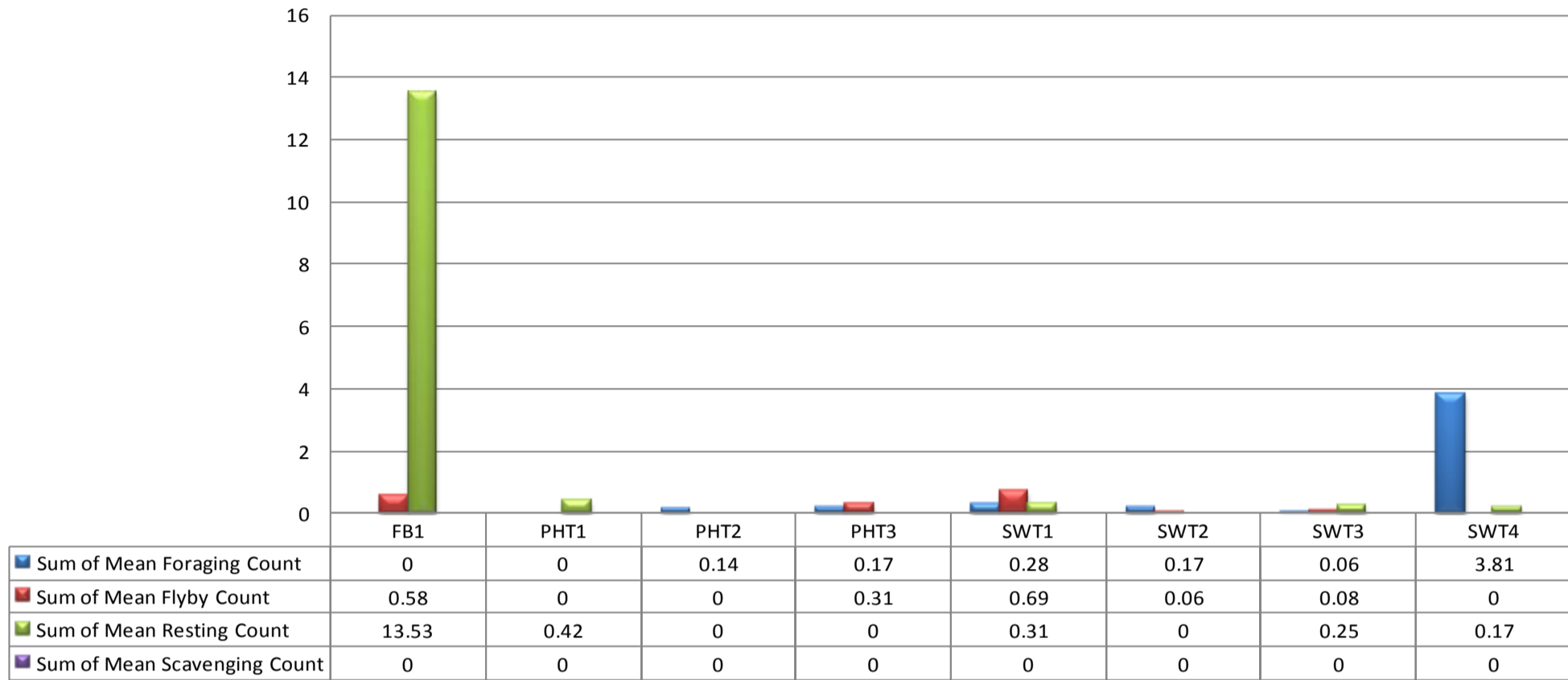
SW-T4

Oregon Shore

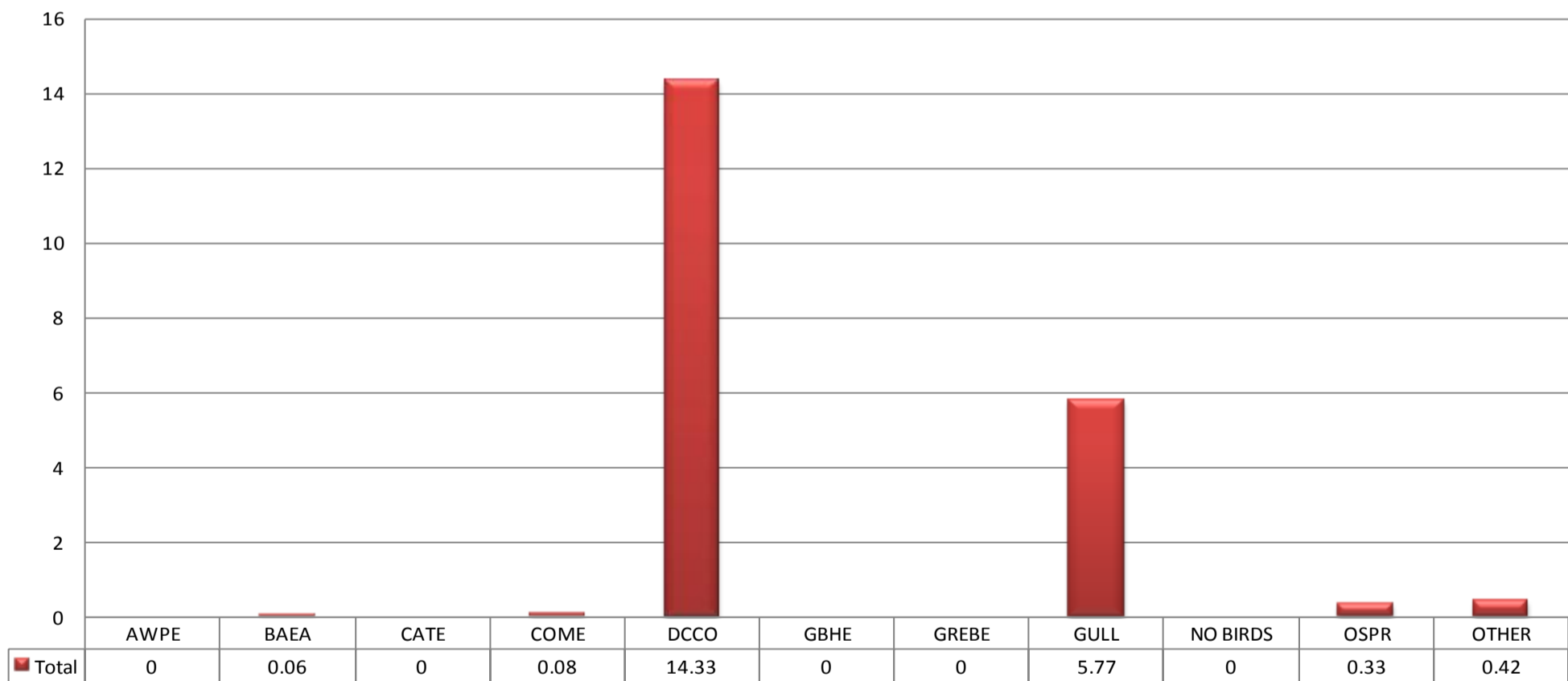




### Mean Avian Counts by Behavior



### Mean Avian Counts by Species

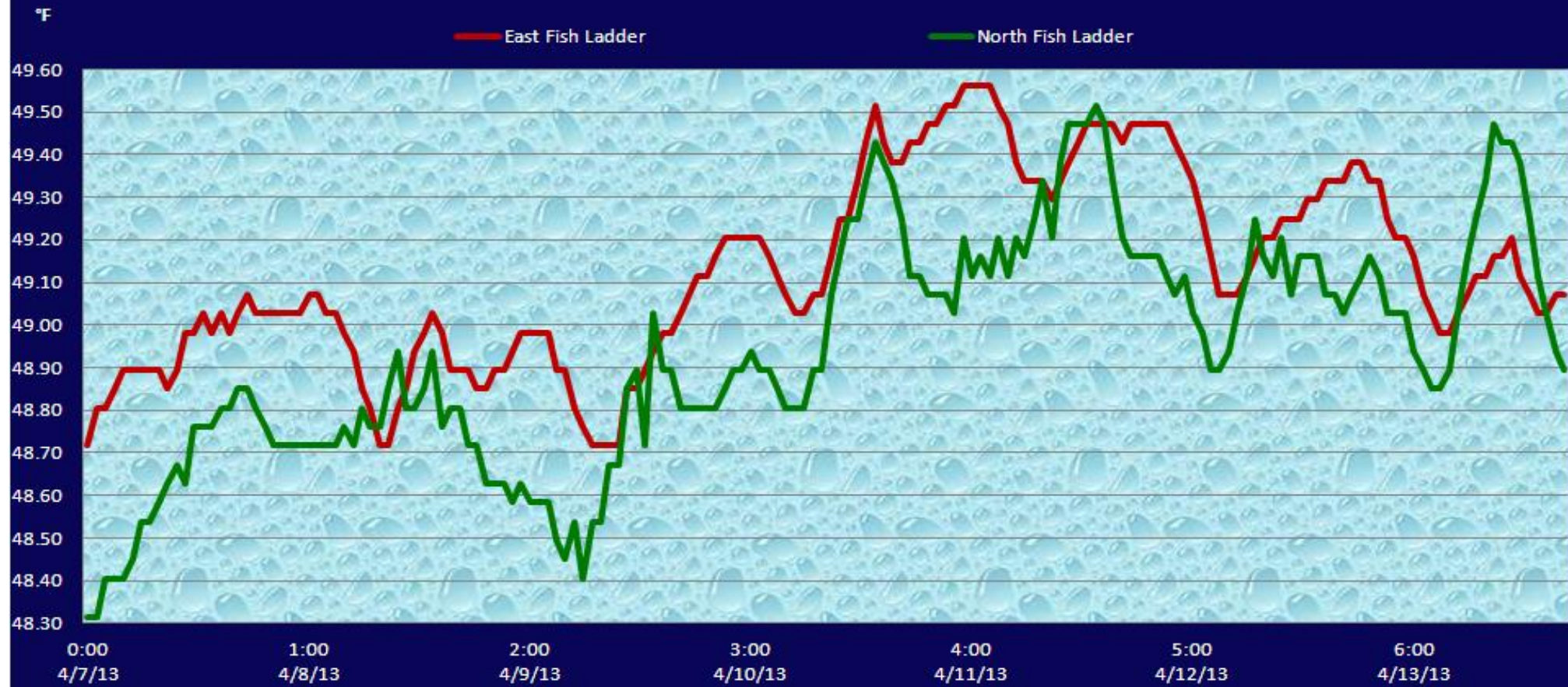


American White Pelican - (AWPE); Bald Eagle - (BAEA); Caspian Tern - (CATE); Common Merganser - (COME)

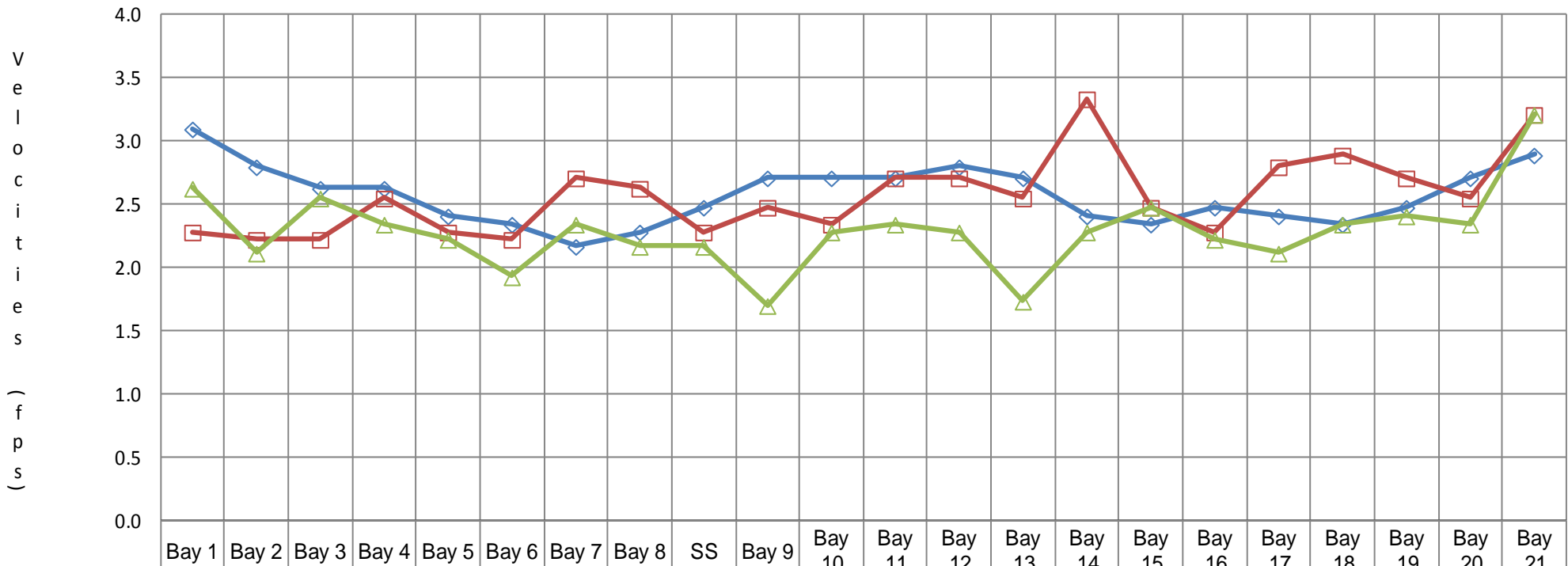
Double Crested Cormorant - (DCCO); Great Blue Heron - (GBHE); Grebe - (GREBE);

Gull - all species (GULL); Osprey (Ospr)

## The Dalles Dam Adult Ladder River/Water Temperatures



The Dalles Dam Collection Channel Velocities (fps)



	Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8	SS	Bay 9	Bay 10	Bay 11	Bay 12	Bay 13	Bay 14	Bay 15	Bay 16	Bay 17	Bay 18	Bay 19	Bay 20	Bay 21
3/27/13	3.1	2.8	2.6	2.6	2.4	2.3	2.2	2.3	2.5	2.7	2.7	2.7	2.8	2.7	2.4	2.3	2.5	2.4	2.3	2.5	2.7	2.9
4/5/13	2.3	2.2	2.2	2.6	2.3	2.2	2.7	2.6	2.3	2.5	2.3	2.7	2.7	2.6	3.3	2.5	2.3	2.8	2.9	2.7	2.6	3.2
4/10/2013	2.6	2.1	2.6	2.3	2.2	1.9	2.3	2.2	2.2	1.7	2.3	2.3	2.3	1.7	2.3	2.5	2.2	2.1	2.3	2.4	2.3	3.2

Temp:			Secchi:	
	48.8	SUN		4.0
	48.8	MON		4.0
	48.7	TUES		4.0
	49.1	WED		4.0
	49.2	THUR		4.0
	49.1	FRI		4.0
	49.0	SAT		4.8
AVG:	49.0	AVG:		4.1

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

North Fish Ladder			East Fish Ladder												
<b>North Entrance</b>			<b>East Entrance</b>					<b>West Entrance</b>			<b>South Entrance</b>				
Date:	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	% Spill
4/7/13	1.5	9.1	2.0	7.9	13.4	13.5	15.3	1.5	closed	13.0	12.9	1.4	9.0	8.9	
4/7/13	1.4	9.3	1.7	7.8	13.5	13.6	15.6	1.6		12.8	12.8	1.4	8.7	9.0	
4/7/13	SCADA INSPECTION		1.9	5.1	13.6	13.6		2.0		10.9	10.9				
4/8/13	1.4	9.4	1.6	9.0	13.4	13.4	15.1	1.6		11.5	11.4	1.5	8.6	8.6	
4/8/13	1.4	9.3	1.6	9.0	13.6	13.6	15.3	1.6		11.5	11.6	1.4	8.9	8.9	48.9
4/8/13	SCADA INSPECTION		1.5	11.1	13.6	13.6	15.5	1.6		13.0	13.0	1.4	9.1	9.0	
4/9/13	1.5	10.1	1.7	8.9	13.5	13.5	15.5	1.6		11.5	11.5	1.5	8.4	8.4	46.1
4/9/13	1.4	9.9	1.6	8.9	13.4	13.4	14.8	1.5		11.4	11.4	1.3	9.2	9.2	
4/9/13	SCADA INSPECTION		1.6	9.1	13.4	13.4	15.2	1.7		11.4	11.4	1.7	8.3	8.3	
4/10/13	1.4	9.9	1.4	13.5	13.5	13.5	15.7	1.5		9.0	9.0	1.6	8.5	8.4	40.3
4/10/13	1.3	9.8	1.5	11.9	13.5	13.5	15.7	1.4		10.9	10.9	1.5	8.2	8.3	39.5
4/10/13	SCADA INSPECTION		1.5	12.7	13.5	13.5	15.3	1.6		10.9	10.9	1.5	8.5	8.4	
4/11/13	1.4	9.8	1.6	9.0	13.6	13.5	15.5	1.6		10.0	10.0	1.5	8.3	8.3	40.3
4/11/13	1.4	8.8	1.5	9.0	13.5	13.4	15.6	1.6		8.9	8.9	1.5	8.3	8.2	39.4
4/11/13	SCADA INSPECTION		1.5	9.0	13.5	13.4	15.6	1.6		10.0	9.9	1.5	8.2	8.3	
4/12/13	1.4	9.7	1.5	10.0	13.9	14.0	16.6	1.4		11.4	11.4	1.5	8.6	8.6	40.0
4/12/13	1.3	9.8	1.5	10.0	14.1	14.0	15.9	1.4		11.2	11.2	1.3	8.9	8.9	39.9
4/12/13	SCADA INSPECTION		1.9	9.2	13.6	13.6		2.0		10.6	10.6	1.8	8.4	8.4	
4/13/13	1.4	9.8	1.3	8.5	14.0	14.1	13.7	1.3		9.7	9.7	1.3	8.5	8.5	39.5
4/13/13	1.3	9.8	1.5	8.0	13.6	13.7	13.7	1.5		9.3	9.2	1.3	8.5	8.6	40.5
4/13/13	SCADA INSPECTION		1.1	10.0	13.9	13.9		0.8	11.0	11.0	1.2	8.8	8.8		
<b>AVG:</b>	1.4	9.6	1.6	9.4	13.6	13.6	15.3	1.5	closed	10.9	10.9	1.5	8.6	8.6	41.4

Third fish way inspection for east fish ladder, east, west, and south entrances completed via automation system in fisheries office.