

# FISHWAY STATUS REPORT

Date: 4/21/2013  
 Inspection Period: 4/14 to 4/20/2013

## THE DALLES DAM



**US Army Corps  
 of Engineers**  
 Portland District

The Dalles Project-Fisheries  
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 The Dalles, OR 97058-9998  
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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:	48.6	F
	Out of Criteria	Limit	Comments		Secchi:	4.7	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	1.3	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir N1	0	depth (≥ 8')	Average	9.8			
Entrance weir N2		Closed	Bulkhead installed				
PUD Intake differential	0	≤ 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. Auto adjusted.				
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.				
East entrance differential	0	1.0' - 2.0'	Average	1.5	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir E1	0	No criteria	Average	5.4	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average	13.9			
Entrance weir E3	0	depth (≥ 8')	Average	13.9			
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	2.1			
North channel velocity	0	1.5 - 4 fps	Average	2.3			
South channel velocity	0	1.5 - 4 fps	Average	2.8			
West entrance differential	0	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	9.1			
Entrance weir W3	0	depth (≥ 8')	Average	9.1			
South entrance differential	0	1.0' - 2.0'	Average	1.4	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir S1	0	depth (≥ 8')	Average	8.4	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average	8.4			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	0	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	39.9			
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 twice daily. Gull activity steadily increasing. See Avian tab for details. USDA started hazing operations Apr 16. There were five sea lion sightings; four near the west entrance (~ 20' to 100') one taking a fish, and one sea lion observed swimming near the south entrance. USDA will haze sea lions at west entrance if frequent sightings continue.

**Operations:**

The North and East fishway, and Ice/Trash sluiceway is operational and in accordance with Fish Passage Plan. 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 4 to Apr 12 for five year overhaul, as built, generator heater, heat exchanger, and cavitation. Main Unit 5 out of service Apr 1 to May 9 for digital governor install and annual maintenance. Main Unit 4 forced out of service 1450 hrs. to ~ 1700 hrs. due to cooling water strainer leak.

**Maintenance**

Main Unit 21 will be taken out of service for overhaul on Apr 29. Tailwater bulkhead sill for MU21 is in close proximity of the east fishway entrance flow, which has resulted in debris on bulkhead sill and leakage. Per FPOM coordination, F1/F2 will be reduced and east entrance weirs closed during this procedure. The west and south entrances will remain open and operating. This operation expected from 1200-1400hr on Apr29. Calibration check completed Apr 16; entrance weirs W2 and W3 out of criteria by 0.1' and 0.3' respectively. Gatewell drawdown completed Apr 15. Values ranged from 0.1' to 0.6', well under 1.5' Fish Passage Plan criteria limit. 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 and extend guide life. North auxiliary water (PUD) intake rake crane out for hydraulic repair. Return unknown, pending budget status. To be raked by mobile crane.

**Studies:**

**PIT** - Thin Wall PIT tag Antenna working successfully. PSMFC inspection visit Apr18. Project staff starting install of north computer enclosure. Permanent PIT antenna study DDR no recent activity/meetings. Project to support 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 in design. Project requests to include replacement of fishlock 42" valve 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, pending cultural approval.  
**Lamprey** - Collecting turbine cooling water strainer juvenile lamprey data collection as available. No data this week. Possible miss of Unit 4 outage.

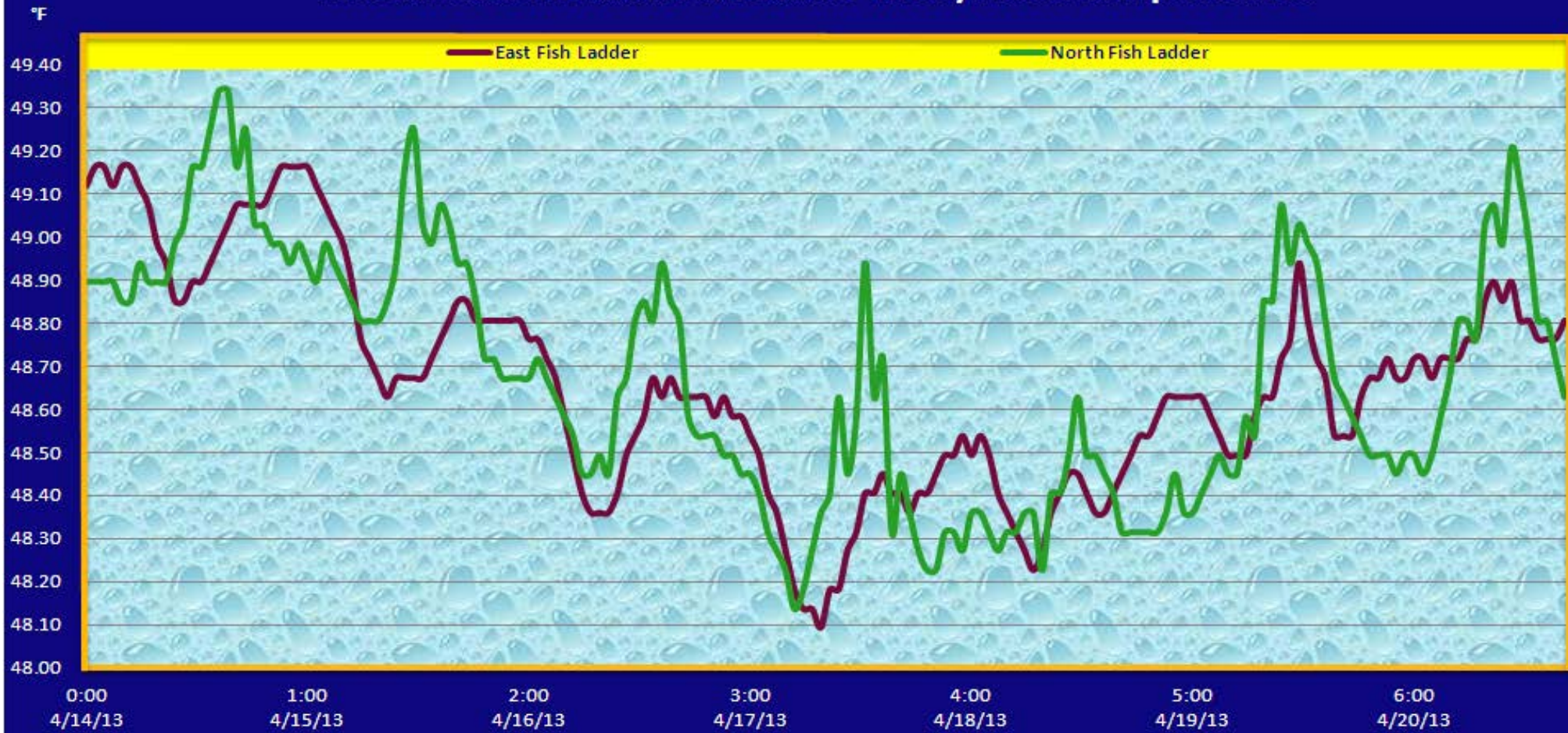
**Research/Contractors:**

The Yakama Nation and The Confederated Tribes and Bands of the Umatilla Indian Reservation (CTUIR) Fisheries Resources Management Program to restore Pacific lamprey to the Yakima River and other sub basins within the tribes' Ceded Lands: coordination underway. 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 to start May 1; 2012 report pending. Pacific States Marine Fisheries Commission fish sampling in the Northern Wasco County PUD. Refer to PSMFC weekly report for details. Northern Pikeminnow Management Program Oregon Department of Fish and Wildlife evaluation: nothing to report for this week. Project maintenance to remove 45' I-beams at 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.

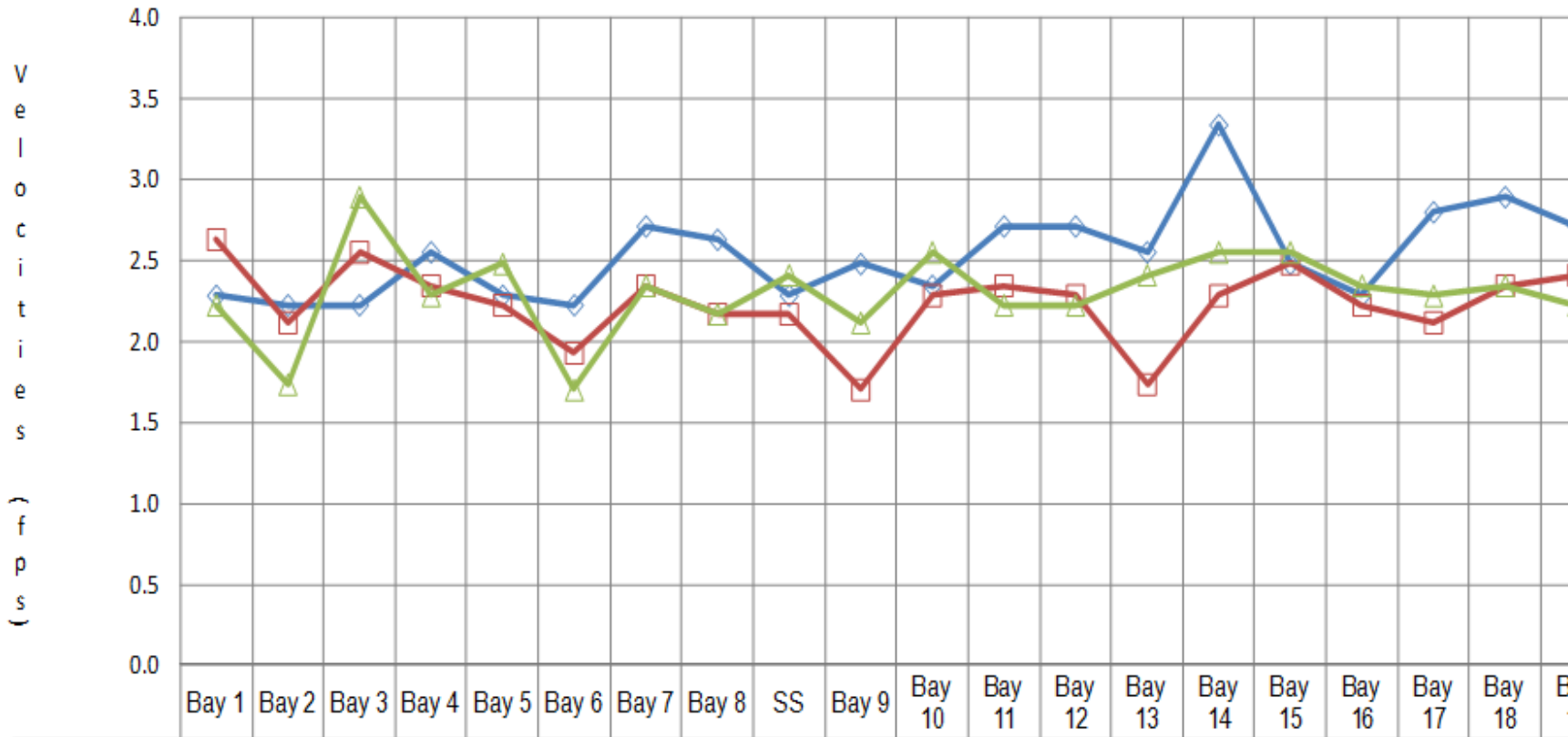
Approved by;  
Ron D. Twiner  
Operation Project Manager  
The Dalles Dam



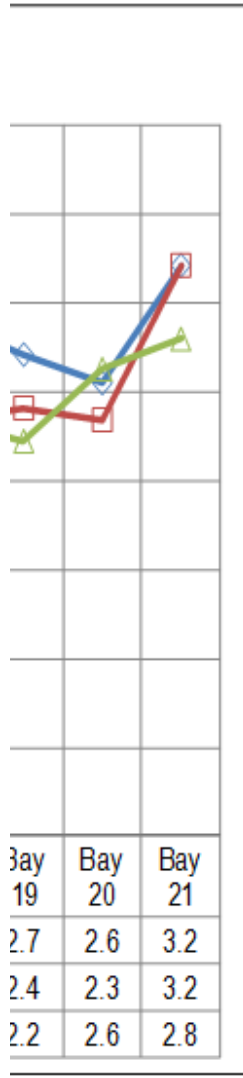
# The Dalles Dam Adult Fish Ladder River/Water Temperatures



### 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
4/5/2013	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
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
4/16/2013	2.2	1.7	2.9	2.3	2.5	1.7	2.3	2.2	2.4	2.1	2.6	2.2	2.2	2.4	2.6	2.6	2.3	2.3	2.3	2.2



# The Dalles Dam Avian Zone Map

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

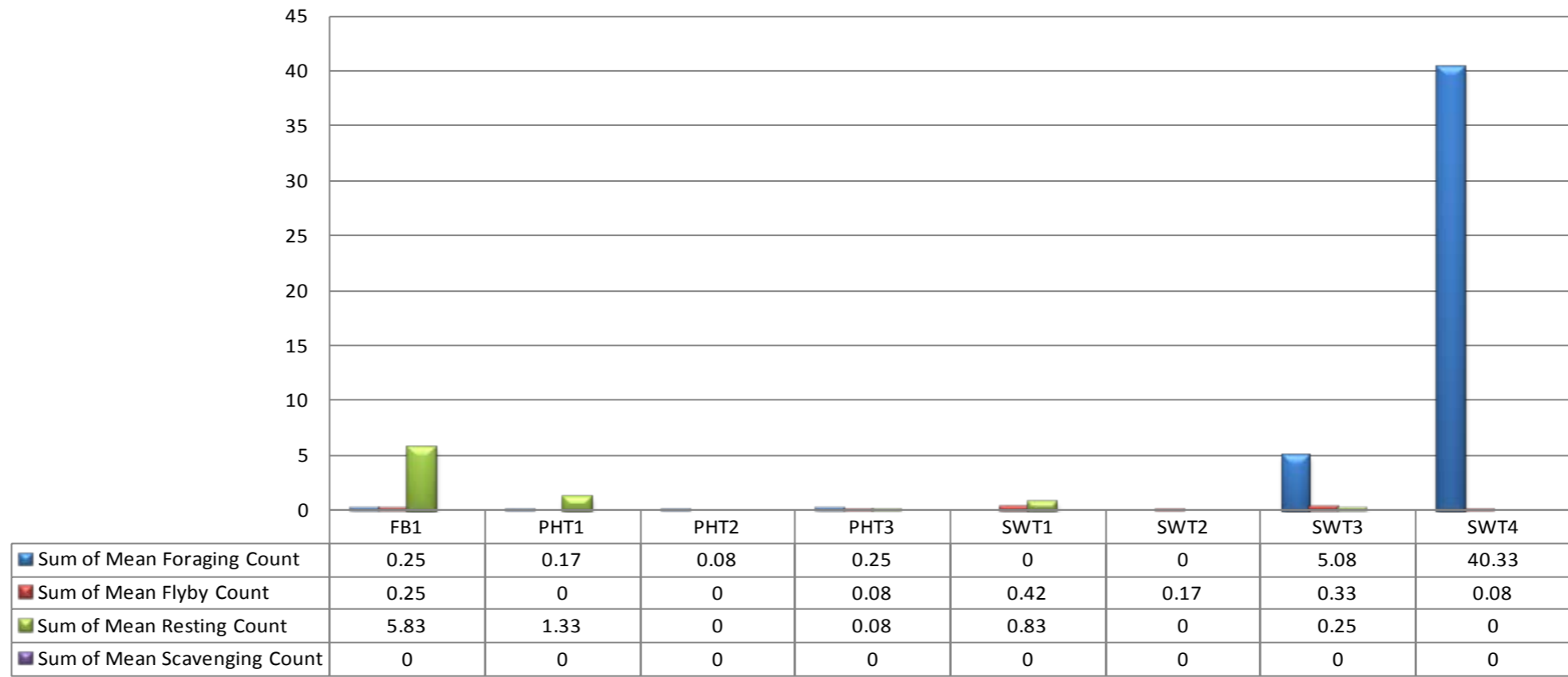
SW-T2

SW-T4

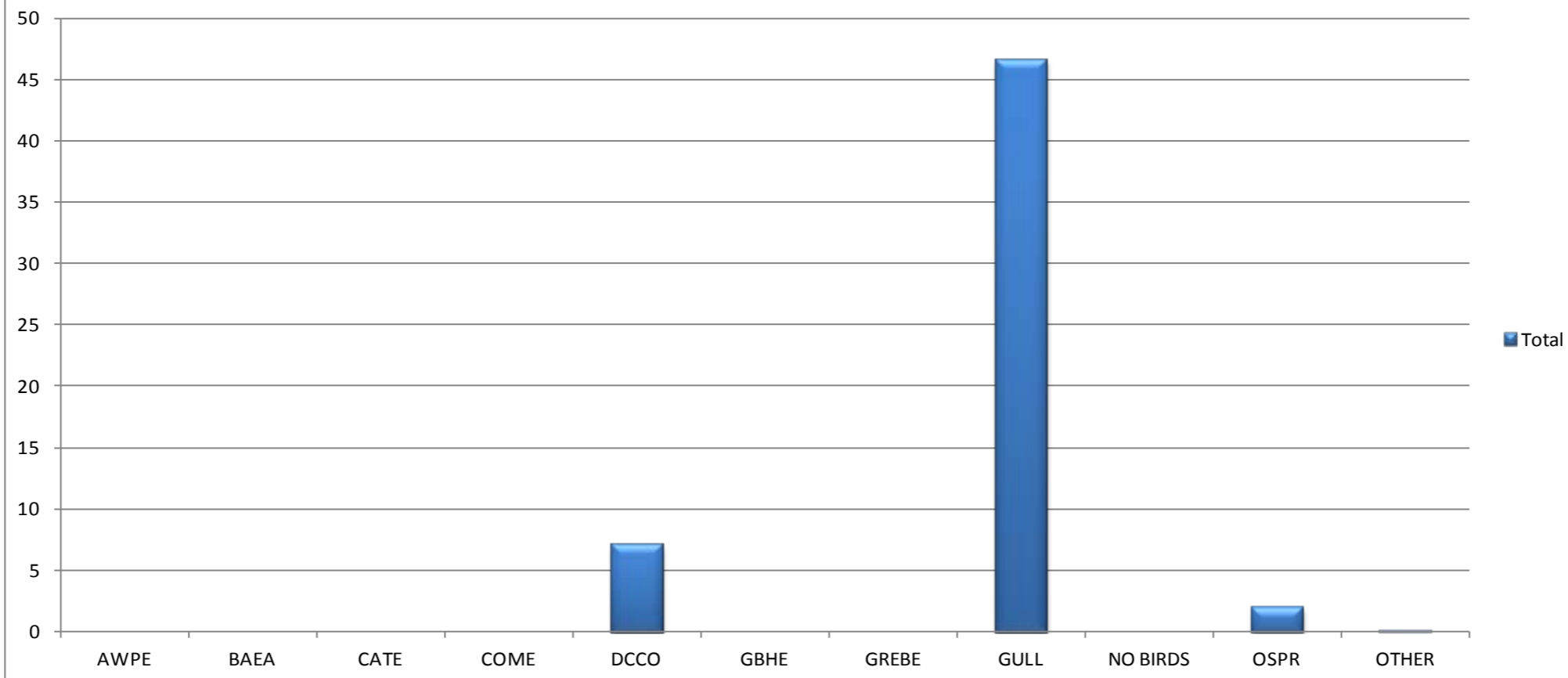
Oregon Shore



### 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)



USGS Temperatures		Secchi:
Forebay	Tailwater	
49.0	48.9	SUN 5.0
48.8	48.8	MON 4.0
48.5	48.5	TUES 5.0
48.3	48.3	WED 5.0
48.3	48.3	THUR 4.5
48.5	48.5	FRI 4.5
48.7	48.6	SAT 5.0
48.6	48.6	AVGS: 4.7

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

Date:	North Fish Ladder		East Fish Ladder											% Spill	
	<b>North Entrance</b>		<b>East Entrance</b>					<b>West Entrance</b>			<b>South Entrance</b>				
	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
4/14/13	1.3	9.8	1.4	5.9	13.7	13.7	13.1	1.5	W 1  e n t r a n c e  c l o s e d	8.5	8.6	1.3	8.4	8.3	40.5
4/14/13	1.3	9.9	1.7	6.4	14.0	13.8	14.6	1.7		8.7	8.8	1.4	8.4	8.4	39.5
4/14/13	SCADA INSPECTION		1.4	8.0	13.7	13.7	13.5	1.3		9.3	9.2	1.2	8.6	8.5	
4/15/13	1.3	9.9	1.8	7.5	14.0	14.0	15.3	1.8		9.6	9.5	1.5	8.3	8.3	40.6
4/15/13	1.3	9.9	1.5	8.1	14.0	14.0	15.3	1.6		9.9	10.0	1.4	8.4	8.3	39.5
4/15/13	SCADA INSPECTION		1.6	6.8	13.9	13.9	15	1.9		8.9	9.0	1.4	8.4	8.4	
4/16/13	1.3	9.9	1.6	7.1	14.0	14.0	15.3	1.4		10.5	10.6	1.6	8.2	8.3	40.3
4/16/13	1.4	9.9	1.6	6.9	14.0	14.0	15.5	1.6		10.4	10.5	1.5	8.3	8.4	39.1
4/16/13	SCADA INSPECTION		1.5	8.0	14.0	14.0	15.5	1.6		10.0	10.1	1.6	8.2	8.2	
4/17/13	1.4	9.9	1.3	8.6	14.1	14.0	14.5	1.4		9.0	9.0	1.5	8.1	8.1	39.8
4/17/13	1.3	9.9	1.3	6.2	14.0	13.9	14.0	1.5		8.9	9.1	1.4	8.4	8.4	39.7
4/17/13	SCADA INSPECTION		1.4	7.0	14.0	14.1	14.6	1.3		10.1	10.2	1.4	8.3	8.4	
4/18/13	1.3	9.9	1.5	8.0	14.0	14.0	12.1	1.5		9.0	9.0	1.4	8.4	8.4	38.9
4/18/13	1.3	9.9	1.5	11.9	14.0	13.9	10.8	1.5		8.2	8.2	1.4	8.4	8.4	40.5
4/18/13	SCADA INSPECTION		1.4	5.9	14.0	14.0	12.3	1.5		9.0	9.0	1.4	8.4	8.4	
4/19/13	1.3	9.8	1.4	-0.1	13.9	13.9	11.5	1.5		8.5	8.6	1.5	8.4	8.7	40.5
4/19/13	1.2	8.8	1.4	-0.2	13.5	13.5	10.7	1.5		8.3	8.3	1.4	8.9	8.9	40.6
4/19/13	SCADA INSPECTION		1.4	-0.4	14.1	14.1	11.1	1.6		8.3	8.3	1.5	8.3	8.3	
4/20/13	1.3	9.8	1.5	0.2	14.2	14.2	11.6	1.6		8.6	8.6	1.4	8.3	8.3	40.0
4/20/13	1.3	9.8	1.5	1.0	14.0	14.0	11.8	1.6		8.4	8.4	1.4	8.3	8.3	39.7
4/20/13	SCADA INSPECTION		1.5	-0.4	13.6	13.6	11.5	1.6	8.5	8.5	1.4	8.4	8.4		
<b>AVG:</b>	1.3	9.8	1.5	5.4	13.9	13.9	13.3	1.5	closed	9.1	9.1	1.4	8.4	8.4	39.9

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



California Sea Lion at the west entrance. Sightings at this location have increased. USDA hazers will apply deterrence.