

FISHWAY STATUS REPORT

Date: 5/26/2013
Inspection Period: 5/19-25/2013

THE DALLES DAM



**US Army Corps
of Engineers**
Portland District

The Dalles Project-Fisheries
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Fishways are inspected twice daily. Additional daily monitoring done via automation system in fisheries office.

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:	18	Temperature:	56.5 F
			Comments		Secchi:	4.2 Ft.
NORTH FISHWAY						
Exit differential	0	≤ 0.5'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'	Out of criteria at 0.8'			
Entrance differential	0	1.0' - 2.0'	Average 1.3	Daily differentials & weir depths, see AVGS tab.		
Entrance weir N1	0	depth (≥ 8')	Average 9.9			
Entrance weir N2		Closed	Bulkhead installed			
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'	Depth over weir changed from 1.0' to 1.3' due to shad passage > 5000/day May 18.			
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 AVGS tab.		
Entrance weir E1	0	No criteria	Average 4.4	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average 13.3			
Entrance weir E3	0	depth (≥ 8')	Average 13.3			
Collection channel velocity	0	1.5 - 4 fps	Average 2.4	See Velocities 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 1.8			
South channel velocity	0	1.5 - 4 fps	Average 2.2			
West entrance differential	0	1.0' - 2.0'	Average 1.5			
Entrance weir W1	0	depth (≥ 8')	Average 10.7			
Entrance weir W2	0	depth (≥ 8')	Average 10.6			
Entrance weir W3	0	No criteria	Average #DIV/0!			
South entrance differential	0	1.0' - 2.0'	Average 0.0	Daily differentials & weir depths, see AVGS tab.		
Entrance weir S1	0	depth (≥ 8')	Average 9.6	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average 9.7			
JUVENILE PASSAGE						
Sluiceway operation	0	units 1,8,18				
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.4 to 0.8'			
Spill volume	10	40%, 24hr	Gas cap restrictions per teletype guidance			
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 numbers high downstream of bridge. New avian zone (SW-T5) created due to high numbers of gulls resting, flyby, and foraging below SW-T4, downstream from the green coast guard marker to the islands. See avian zones map and distribution tabs. Boat hazer's from John Day were borrowed for two days due to high numbers of gulls downstream of bridge, but there was a noticeable increase at John Day immediately afterwards. There was one sea lion sightings during this week.

New avian line pole installed to replace failing east powerhouse pole. One of 14 lines lost in process. No loss of effectiveness expected.

Operations:

Current Outages:

Main Unit 15, 16, and T8 forced out of service due to transformer oil issues. Return to service ~ Aug 8.

Main Unit 6 out of service Apr 22 to May 5 for digital governor install and annual maintenance.

Main Unit 21 out of service Apr 29 to June 20 for five year overhaul, as built, gen heat, heat exch and cavitation.

Main Unit 11 out of service May 13 to June 22 for digital governor installation and annual maintenance.

Gatewell drawdown was completed on 5/10/13. All values were within the 1.5' criteria and ranged from 0.4-0.8'.

Calibration check completed on 5/16/13. All values within criteria.

The east and north fishways, sluiceway, and spillways are in operation for fish passage in accordance to the Fish Passage Plan (FPP).

Maintenance:

Work postponed on west entrance W2 weir wheel replacement due to budget constraints. All west entrance weirs remain operable.

PUD trashrack rake out of service for hydraulic line failure. Maintenance disassembling to assess repair cost. Mobile crane used in the meantime.

Oil Accountability and Leak Protocols on the fishway equipment being reviewed. Assessing leak/repair plans for several weirs gearboxes.

Fish unit F1 taken off line 0500-0600hr on 5/22 to repair sensor probe. Increased discharge on F2 during that time.

Studies:

PIT - Temporary Thin Wall PIT tag Antenna continues to work successfully. Plans to replace all aluminum paneling over north count station to correct the noticable minor interference. Walls being constructed by project around north PIT computer room to protect equipement better.

EFL - Team evaluating if fishlock valve room rehab to be included with the main construction of the of the 10' intake pipe.

PUD - Freedom turbine planning underway. Project support as needed. Reviewing PUD/COE memo of understanding.

Lamprey - Unit 11 cooling water strainer disassembled. Five juvenile lamprey mortalities found. Saved for future lab work if needed.

Lamprey Improvements PDT developing weir orifice floor plating in lower ladders to improve lamprey passage through high velocity areas.

Research/Contractors:

ODFW and Pacific States Marine Fisheries Commission collecting gut samples of pikeminnow from dam anglers through August.

Columbia River Northern Pikeminnow Management Program WDFW Dam Angling started May 1. Catch rates steadily increasing.

Normandeau digital video fish counting at count stations to occur June 15 - Sept 30 from 2000 hrs to 0400 hrs.

Yakama and Umatilla tribes to collect lamprey via traps from count stations starting mid June for restocking efforts. Coordination underway.

Pacific States Marine Fisheries Commission fish sampling of the PUD juvenile bypass. Refer to PSMFC weekly report #13-7 for results.

Project maintenance to remove I-beams at forebay pier noses. Date to be determined. Awaiting CRFM funding.

University of Idaho adult radio telemetry new antennas both fish ladders completed and operating. Two new electrical outlets to be installed by project.

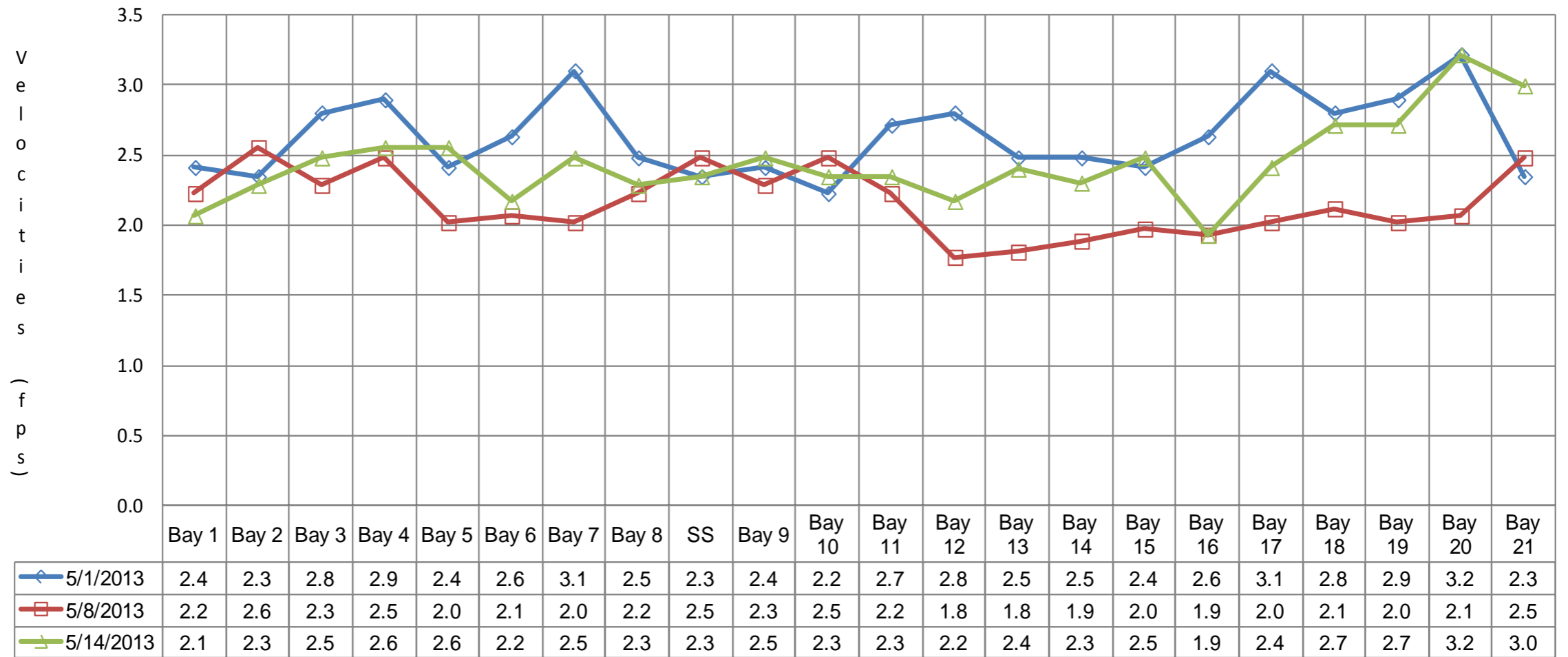
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Ron D. Twiner

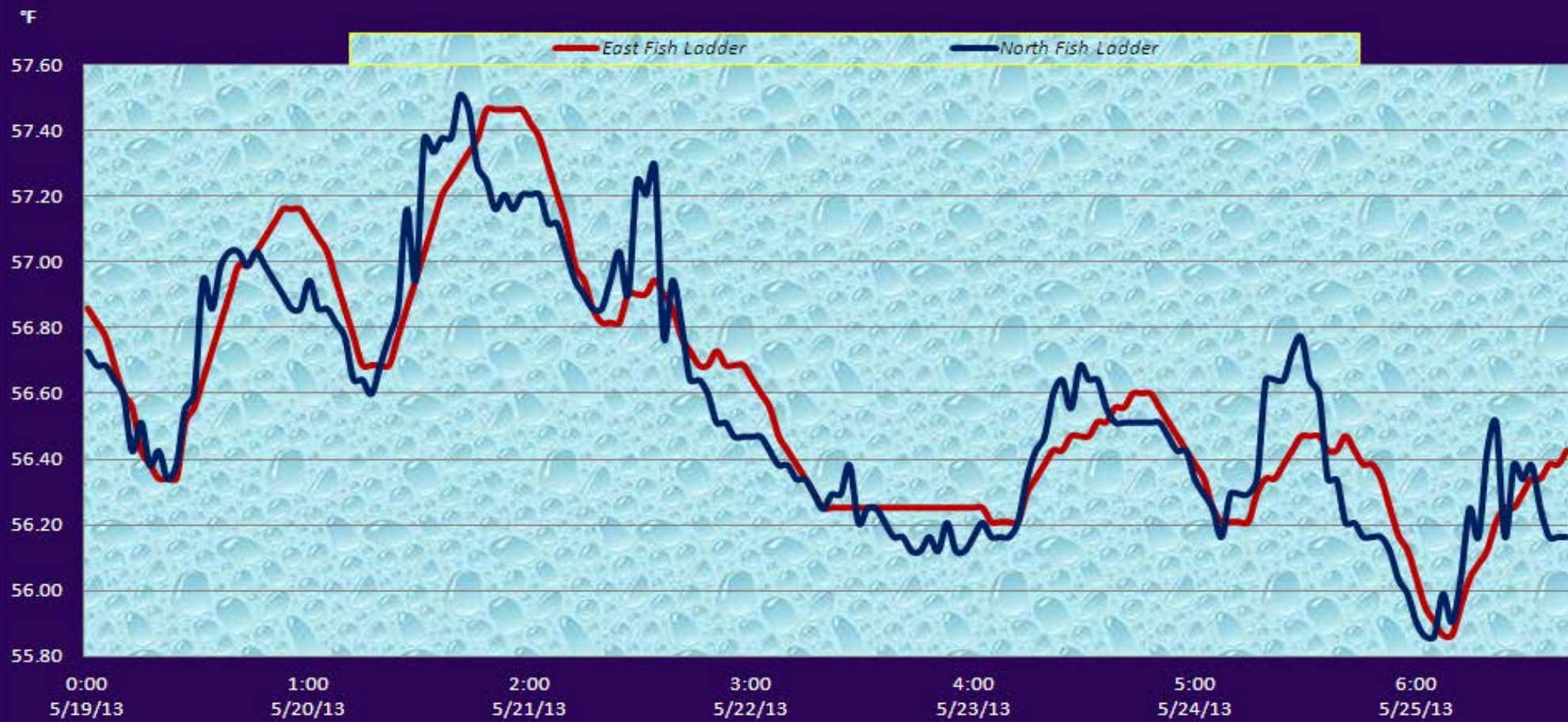
Operation Project Manager

The Dalles Dam

The Dalles Dam Collection Channel Velocities (fps)



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



The Dalles Dam Maximum Daily Bird Observations

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T2

SW-T3

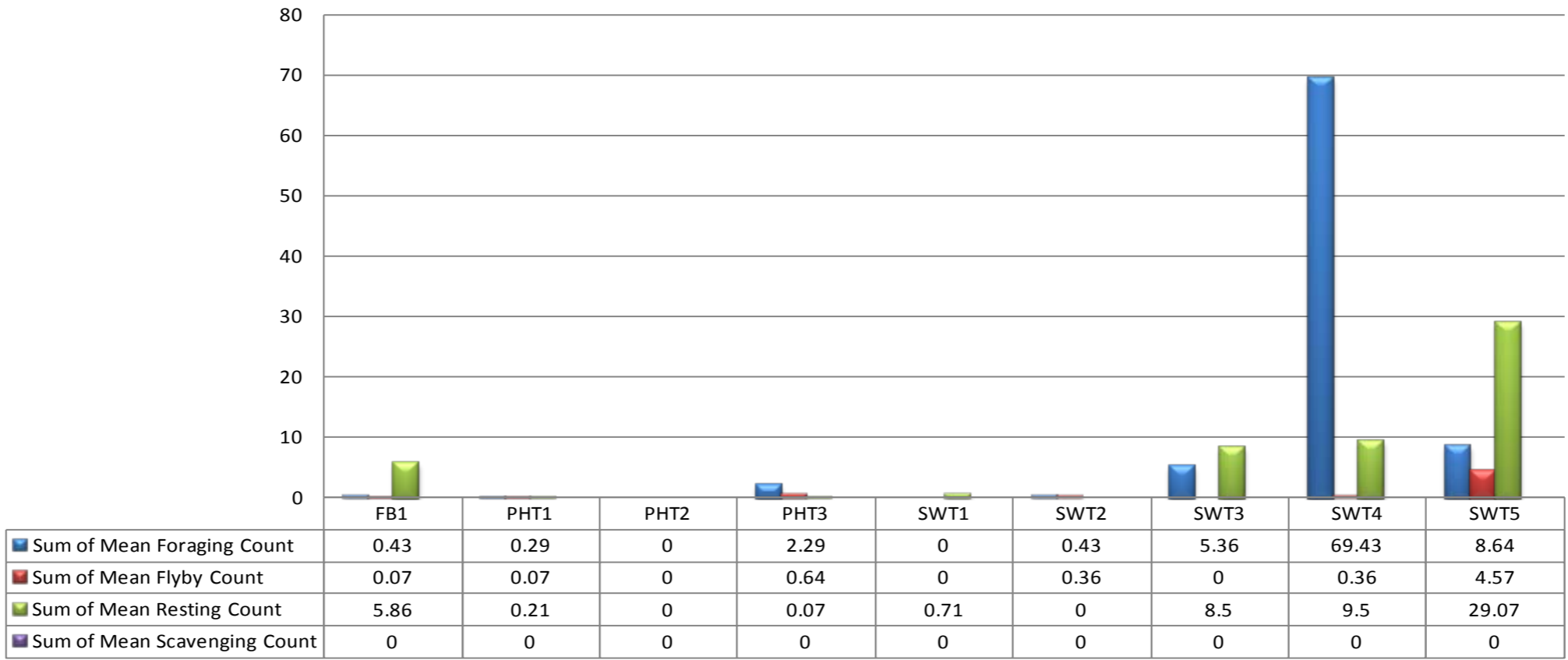
SW-T4

Oregon Shore

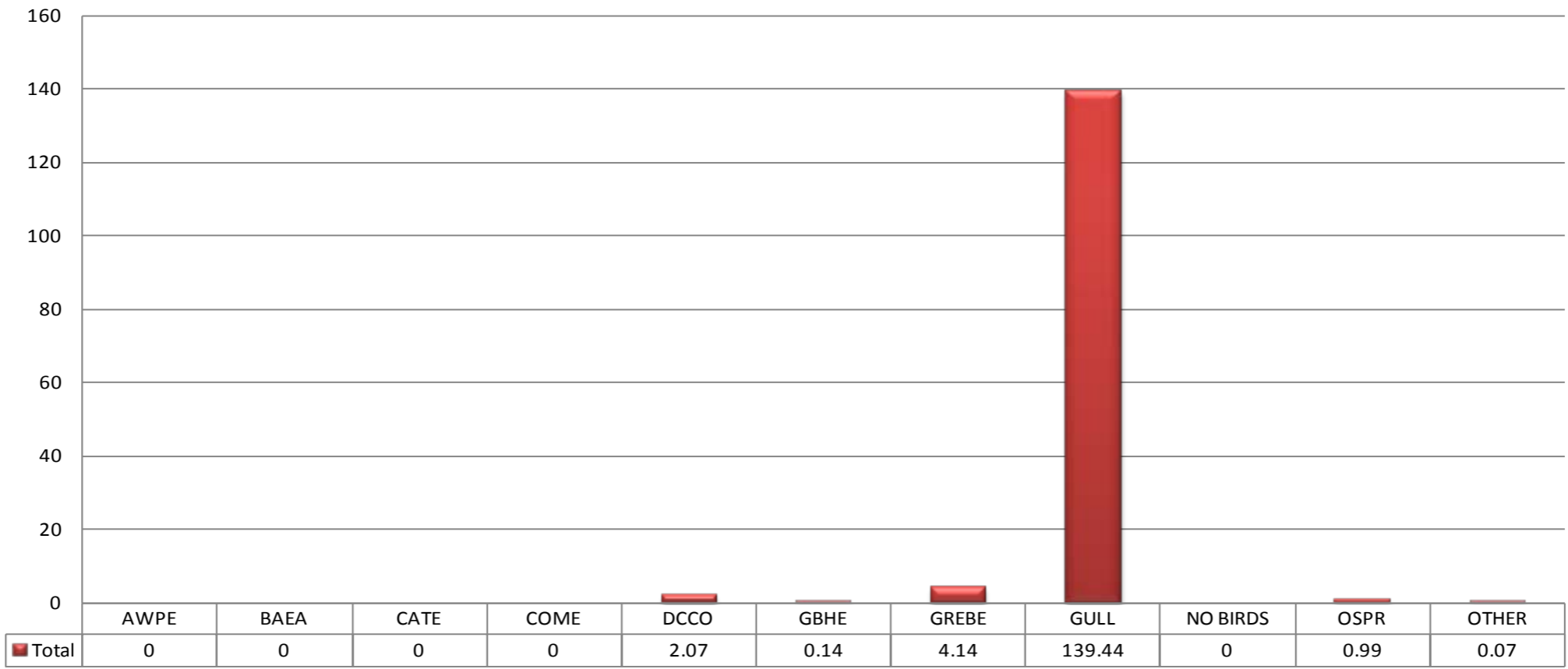
SW-T5



Mean Avian Counts by Behavior



Mean Avian Counts by Species



AWPE - American White Pelican; BAEA - Bald Eagle; CATE - Caspian Tern; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species); OSPR - Osprey

Temp:			Secchi:	
	56.7	SUN		3.0
	57.0	MON		4.0
	57.0	TUES		4.5
	56.4	WED		4.5
	56.3	THUR		4.5
	56.3	FRI		4.5
	56.1	SAT		4.5
AVG:	56.5	AVG:		4.2

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

North Fish Ladder			East Fish Ladder												
North Entrance			East Entrance					West Entrance				South Entrance			
Date:	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	% Spill
5/19/13	1.3	9.9	1.7	9.0	14.1	14.0	15.4	1.4	11.5	11.6		1.5	8.5	8.6	36.7
5/19/13															
5/19/13			1.6	8.9	13.4	13.5	14.7	1.5	10.4	10.4		1.6	8.3	8.3	
5/20/13	1.3	9.9	1.6	5.0	13.0	12.8	14.4	1.5	10.9	10.9		1.5	10.0	10.0	40.2
5/20/13	1.3	9.8	1.6	5.0	13.0	13.0	14.2	1.4	11.0	11.0		1.5	9.9	9.9	40.5
5/20/13			1.6	4.9	12.9	12.9	14.5	1.7	10.5	10.5		1.7	9.5	9.4	
5/21/13	1.4	9.8	1.5	5.1	13.1	13.1	14.8	1.6	10.6	10.5		1.4	10.1	10.1	40.1
5/21/13	1.3	9.9	1.6	5.1	13.1	13.1	13.9	1.5	10.6	10.5		1.4	10.0	10.1	40.6
5/21/13			1.5	4.9	12.9	12.9	14.8	1.5	10.6	10.5		1.5	10.1	10.1	
5/22/13	1.4	9.9	1.0	4.9	12.9	13.0	12.4	1.2	9.9	9.9		1.5	9.0	9.0	38.9
5/22/13	1.3	9.8	1.8	0.1	13.0	13.0	13.8	1.8	10.0	10.1		1.8	8.9	9.0	39.3
5/22/13			1.5	4.8	12.9	12.9	13	1.6	10.3	10.2		1.7	9.7	9.7	
5/23/13	1.4	9.8	1.5	3.2	13.5	13.5	14.1	1.3	11.0	11.0		1.4	10.0	10.1	39.8
5/23/13	1.3	9.9	1.5	3.1	13.6	13.6	14.6	1.4	11.1	11.1		1.6	9.9	10.0	40.6
5/23/13															
5/24/13	1.4	9.8	1.6	3.2	13.6	13.7	14	1.5	11.0	11.0		1.4	10.1	10.1	39.8
5/24/13	1.3	9.9	1.3	3.1	13.5	13.6	13.5	1.3	11.0	11.0		1.3	10.1	10.1	39.8
5/24/13			1.5	3.0	13.4	13.5	13.8	1.4	10.9	10.9		1.5	10.0	10.0	
5/25/13	1.4	9.8	1.5	3.0	13.5	13.5	13.3	1.5	10.2	10.2		1.4	9.8	9.8	40.3
5/25/13	1.4	9.9	1.5	3.0	13.5	13.5	13.5	1.4	10.4	10.2		1.5	9.7	9.7	39.3
5/25/13															
AVG:	1.3	9.9	1.5	4.4	13.3	13.3	14.0	1.5	10.7	10.6	#DIV/0!	1.5	9.6	9.7	39.7

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