

# FISHWAY STATUS REPORT

Date: 7/7/2013  
 Inspection Period: 6/30 to 7/6/2013

## THE DALLES DAM



**US Army Corps  
 of Engineers**  
 Portland District

The Dalles Project-Fisheries  
 P.O. Box 564  
 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:	64.9	F
	Out of Criteria	Limit	Comments		Secchi:	4.4	Ft.
<b>NORTH FISHWAY</b>							
Exit differential	0	≤ 0.5'					
Count station differential	0	≤ 0.3'					
Weir crest depth	2	1.0' ± 0.1'	0.8' Adjusted manually				
Entrance differential	0	1.0' - 2.0'	Average	1.4			
Entrance weir N1	0	depth (≥ 8')	Average	9.9			
Entrance weir N2		Closed	Bulkhead installed.				
PUD Intake differential	0	≤ 0.5'					
<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'	Window cleaned 6/30, 7/2, 7/3, 7/4.				
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	1.6	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir E1	0	No criteria	Average	2.4	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	2.5	See <b>Velocities</b> tab for more complete information.		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6			
North channel velocity	0	1.5 - 4 fps	Average	2.1			
South channel velocity	0	1.5 - 4 fps	Average	3.0			
West entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir W1	0	depth (≥ 8')	Average	9.6			
Entrance weir W2	0	depth (≥ 8')	Average	9.7			
Entrance weir W3	0	No criteria	Average	closed			
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	9.5	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average	9.5			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	0	units 1,8,18	Gates 2-1, 2-2, 2-3, 8-2, 18,2, and 18.3 open. MU1 OOS for digital governor repair.				
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0-0.3'				
Spill volume	9	40%, 24hr	Out of criteria at 34.6-38.7%. Fish passage cap 107kcfs.				
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. The majority of the foraging piscivorous birds are gulls, upstream and downstream of the bridge, See avian zones map and distribution tabs. There were no sea lion sightings this week.

**Operations:**

Current Outages:

Main Unit 15, 16, and T8 forced out of service due to gas issues in the transformer oil. Return to service ~8/8/2013.

Main Unit 17 out of service 6/3 to 7/11 for digital governor installation and annual maintenance.

Main Unit 1 out of service 6/24 to 8/1 for digital governor installation.

Main Unit 19 out of service 6/24 to 7/11 for annual maintenance and packing box repair.

Calibration completed 6/26. All entrance weirs, channel/tailwater and exit staff gauges in criteria within +/- 0.3'.

Gatewell drawdown completed on 7/6. All values were within the 1.5' criteria and ranged from 0 to 0.3'.

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

**Maintenance:**

Entrance weir W2 wheel replacement on hold due to budget constraints. Still operable,

East exit backup power supply on hold due to budget constraints.

Fishway grating attachment parts for next winter on hold due to budget constraints. Plan to purchase with FY 14 funds.

Entrance weirs lift beam repairs on hold due to budget constraints. Still operable.

New lift beams installed on sluiceway 1-2 and 1-3 providing a recessed bar for less passage interference.

**Studies:**

**PIT** - Temporary Thin Wall PIT tag Antenna continues to work successfully. Plans to replace all aluminum paneling over north count station to correct minor data interference. Wall enclosure constructed by Natural Resources around north PIT computer room and AC installed in east station.

**EFL** - Current design is 10' intake pipe near fish lock. VE study complete. 60% DDR in review.

**PUD** - Second (freedom) turbine planning continues. PUD/COE memorandum of understanding for present operation edited and awaiting approvals.

Moving osprey platform contingent on approval of second turbine.

**Lamprey** - Lamprey improvements; PDT developing weir orifice floor plating in lower ladders to improve lamprey passage through high velocity areas.

Collecting turbine cooling water strainer juvenile lamprey data as available. No data this week.

**Research/Contractors:**

CRITFC tribes trapping adult lamprey from east count station picket leads started 6/24; total collected - 5. Collection allocation 281 per tribe.

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

WDFW Columbia River Northern Pikeminnow Management Program Dam Angling 6/24 thru 6/30: effort hrs - 36.25, total NPM - 114, NPM  $\geq$  230 mm 113, sturgeon - 1, game fish - 4, non-game fish - 3. No electro fishing occurred.

Pacific States Marine Fisheries Commission fish sampling of the PUD juvenile bypass.

University of Idaho adult RT new antennas both fish ladders completed and operating.

Fish counting continues with Normandeau staff. Refer to fish count web site for latest results. Nighttime video counts will occur at The Dalles from mid-June through September 30. Direct visual counting will cease at all projects on October 31, 2013

Plans to finish USGS derelict gear removal from powerhouse pier-noses this winter.

Funding now available for the removal of "I - beams" on the powerhouse forebay pier-noses. Structural currently trying to fit into their work schedule.

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

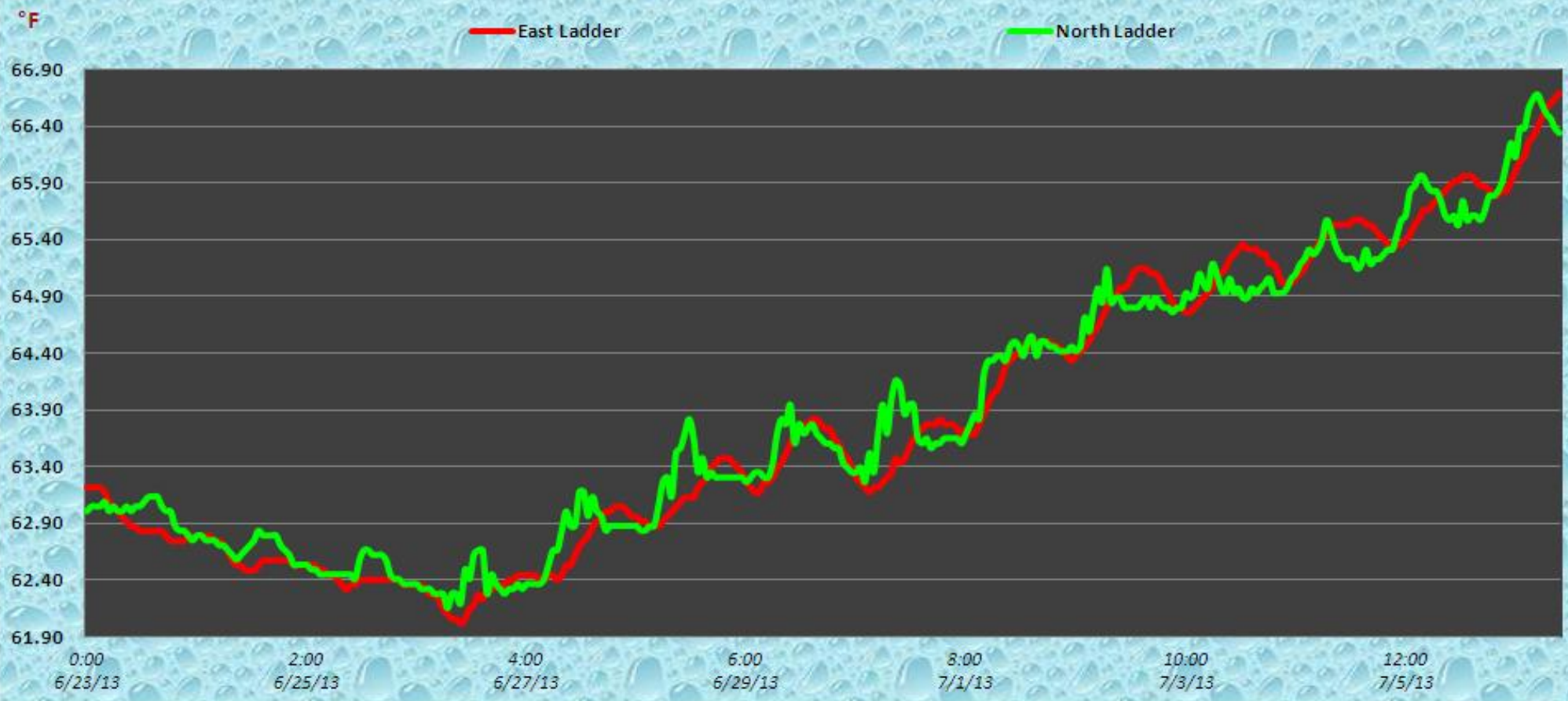
DART The Dalles Adult Ladders Daily Usage with Spill Percent and Outflow

Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct [Right]	Outflow (kcfs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#						
6/30/2013	73	1292	27	469	87	247	13	36	84	118	16	22	79	38	21	10	90	5651	9.9	624	0	0	0	0	0	0	41	14	59	20	39	246		
7/1/2013	87	1722	13	265	97	492	3.1	16	92	180	8.2	16	89	77	12	10	96	5842	4.2	257	0	0	0	0	0	0	88	53	12	7	37	262		
7/2/2013	78	1295	22	370	79	290	21	76	88	162	12	22	91	79	9.2	8	83	4652	18	986	0	0	0	0	0	0	70	79	30	34	37	264		
7/3/2013	85	1332	15	229	94	544	6	35	85	133	15	24	79	53	21	14	89	4529	11	578	0	0	0	0	0	0	79	73	22	20	39	256		
7/4/2013	85	1955	15	347	88	388	12	54	88	221	12	29	90	107	10	12	92	4842	8.3	440	0	0	0	0	0	0	74	91	26	32	38	255		
7/5/2013	86	1858	14	304	91	318	8.6	30	91	231	9.4	24	85	88	15	16	93	5166	7	391	0	0	0	0	0	0	73	198	27	74	41	236		
7/6/2013	93	1532	6.9	113	96	295	3.6	11	98	271	2.5	7	99	101	1	1	96	4343	3.9	174	0	0	0	0	0	0	59	89	41	61	40	244		
Week Total		10986		2097		2574		258		1316		144		543		71		35025		3450	0	0	0	0	0	0		597		248				
Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct	Outflow
YTD	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct	Left Ladder Pct	Right Ladder Pct				
	84	16	90.9	9.1	90.1	9.9	88.4	11.6	91	9	0	0	0	0	70.7	29.3																		

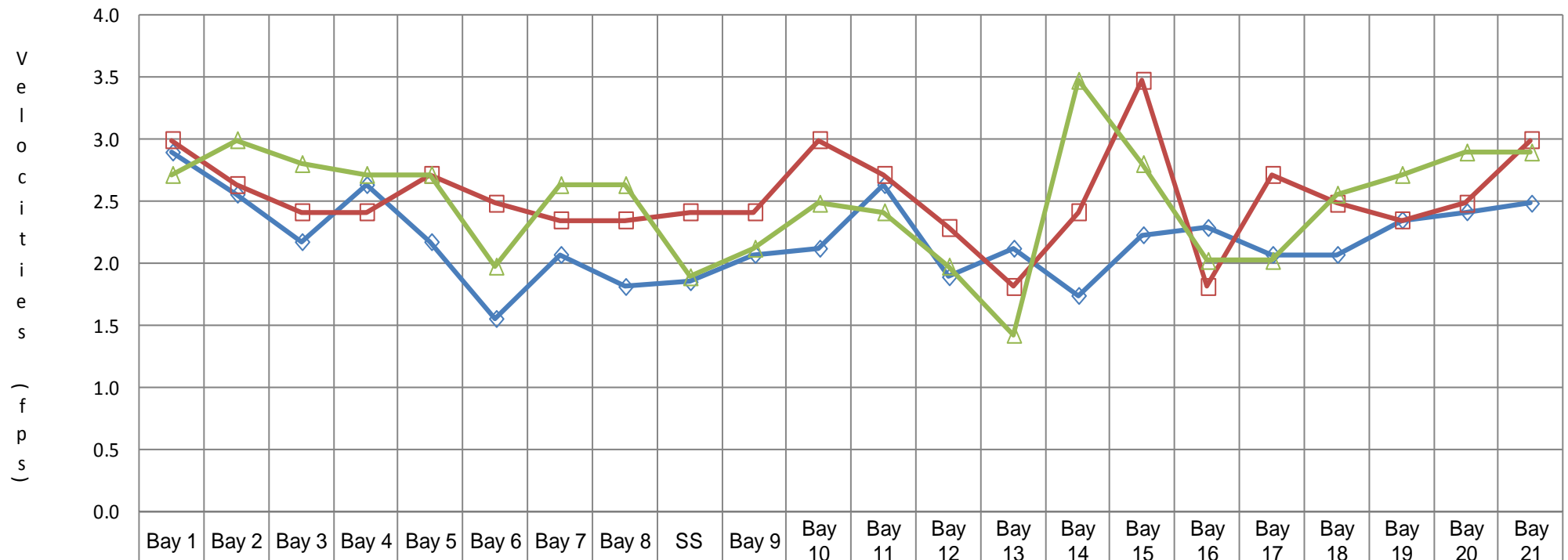
NOTES:

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 Adult Fish Ladder River/Water Temperatures



### The Dalles Dam Collection Channel Velocities (fps)



6/19/13	2.9	2.6	2.2	2.6	2.2	1.6	2.1	1.8	1.8	2.1	2.1	2.6	1.9	2.1	1.7	2.2	2.3	2.1	2.1	2.3	2.4	2.5
6/28/13	3.0	2.6	2.4	2.4	2.7	2.5	2.3	2.3	2.4	2.4	3.0	2.7	2.3	1.8	2.4	3.5	1.8	2.7	2.5	2.3	2.5	3.0
7/2/13	2.7	3.0	2.8	2.7	2.7	2.0	2.6	2.6	1.9	2.1	2.5	2.4	2.0	1.4	3.5	2.8	2.0	2.0	2.6	2.7	2.9	2.9

# The Dalles Dam Avian Zone Map

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T2

SW-T3

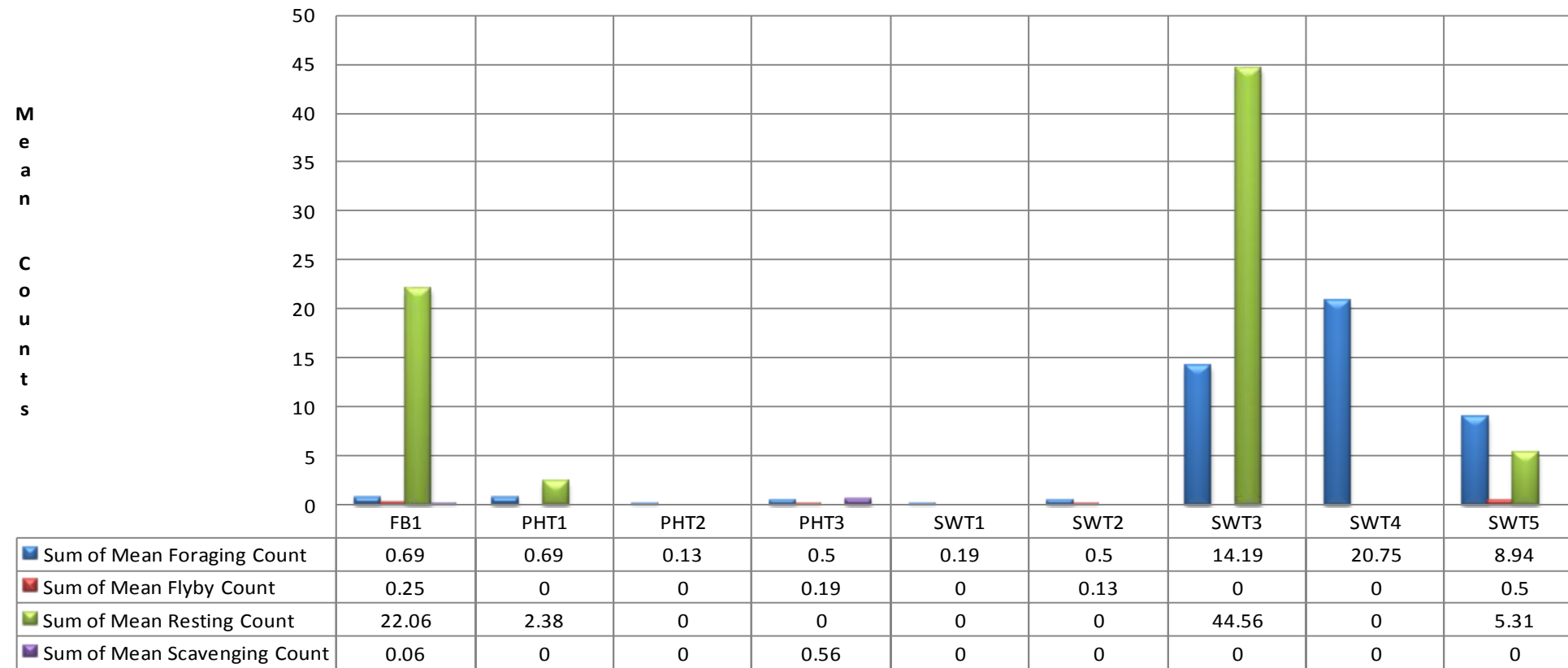
SW-T4

Oregon Shore

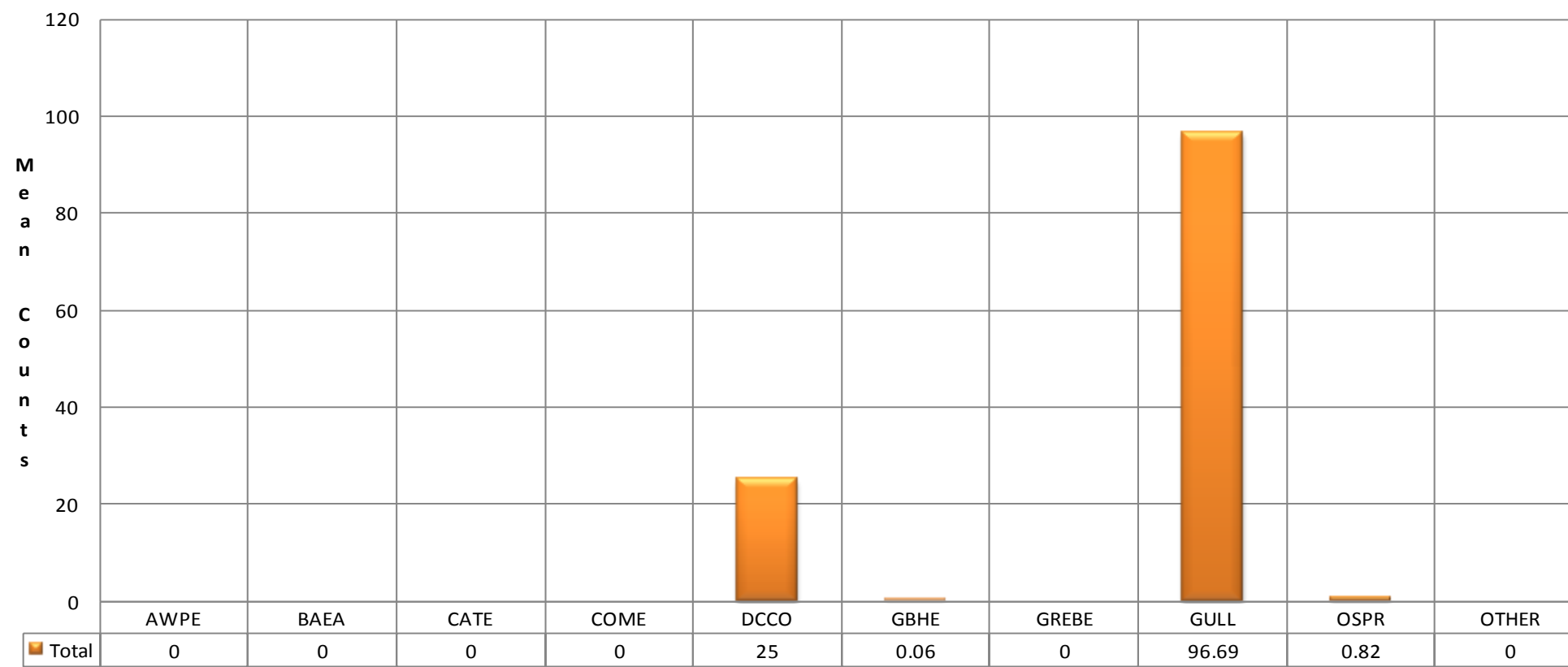
SW-T5



### Avian Mean Counts by Behavior



### Avian Mean 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:	
	63.6	SUN		4.0
	64.1	MON		5.0
	64.6	TUES		4.0
	64.9	WED		5.0
	65.2	THUR		4.0
	65.5	FRI		4.5
	66.1	SAT		4.0
AVG:	64.9	AVG:		4.4

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

North Fish Ladder			East Fish Ladder												KCFS
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
6/30/13	1.3	9.9	1.6	1.0	13.6	13.4	12.4	1.5	9.5	9.5		1.6	9.4	9.5	41.0
6/30/13	1.3	9.9	1.6	1.0	13.4	13.6	13.1	1.5	9.5	9.5		1.5	9.5	9.5	38.4
6/30/13			1.6	0.9	13.4	13.5		1.5	9.4	9.4		1.5	9.5	9.4	
7/1/13	1.4	9.9	1.6	1.5	14.1	14.0	13.4	1.6	9.5	9.6		1.5	9.5	9.5	38.6
7/1/13	1.3	9.9	1.5	1.6	14.0	14.1	14.1	1.7	9.6	9.6		1.5	9.6	9.7	38.7
7/1/13			1.5	0.9	13.4	13.3		1.6	9.3	9.4		1.5	9.5	9.5	
7/2/13	1.3	10.0	1.5	1.5	14.1	14.1	13.9	1.6	9.5	9.5		1.5	9.5	9.4	34.6
7/2/13	1.3	10.0	1.7	1.4	13.5	13.5	16.2	1.8	9.4	9.6		1.0	10.0	10.1	37.4
7/2/13			1.4	1.6	14.1	14.0		1.4	9.6	9.6		1.4	9.7	9.6	
7/3/13	1.4	9.8	1.7	2.0	13.5	13.5	13.9	1.5	10.0	10.1		1.5	9.6	9.6	35.3
7/3/13	1.3	9.9	1.6	2.9	14.0	13.9	14.8	1.6	9.9	10.0		1.6	9.4	9.4	36.2
7/3/13			1.7	2.8	13.9	14.0		1.6	9.9	9.9		1.7	9.5	9.5	
7/4/13	1.4	9.9	1.5	3.6	14.2	14.1	14.4	1.6	10.0	10.0		1.5	9.6	9.6	35.0
7/4/13	1.4	9.9	1.5	3.9	14.0	14.0	15.7	1.5	11.5	11.5		1.6	10.4	10.4	35.1
7/4/13			1.5	3.2	14.1	14.2		1.4	10.1	10.1		1.3	9.7	9.6	
7/5/13	1.4	10.0	1.6	4.0	13.4	13.4	13.5	1.5	10.0	10.0		1.4	9.7	9.7	40.2
7/5/13	1.4	9.8	1.6	4.0	13.5	13.5	14.6	1.5	10.0	10.0		1.6	9.5	9.4	40.6
7/5/13			1.5	4.2	13.5	13.5		1.5	9.2	9.1		1.4	8.5	8.5	
7/6/13	1.4	9.9	1.6	3.0	12.0	11.9	11.1	1.5	8.6	8.5		1.5	9.5	9.6	39.3
7/6/13	1.4	9.9	1.4	3.1	13.1	13.1	12.6	1.5	9.7	9.7		1.6	9.4	9.4	40.5
7/6/13			1.5	2.9	11.9	12.0		1.6	8.4	8.5		1.5	9.5	9.4	
<b>AVG:</b>	1.4	9.9	1.6	2.4	13.6	13.6	13.8	1.5	9.6	9.7	closed	1.5	9.5	9.5	37.9

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





New lift beam with recessed bars installed at sluiceways 1-2 and 1-3.