

# FISHWAY STATUS REPORT

Date: 8/18/2013  
 Inspection Period: 8/11 to 08/17/2013

## 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. Additional daily monitoring done via automation system in fisheries office.

The Dalles Dam	Inspections	Criteria	Total Number of Inspections:	20	Temperature:	71.7	F
	Out of Criteria	Limit	Comments		Secchi:	5.0	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			
Entrance weir N1	0	depth (≥ 8')	Average	9.6			
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'	Raked east count station picket leads daily.				
Weir crest depth	0	1.0' ± 0.1'					
Junction pool weir JP6	2	depth (≥ 7')	Manually adjusted as needed.		Low tail water. Off by 0.3'		
East entrance differential	2	1.0' - 2.0'	Average	1.6	Over 2' due to net head fluctuations changing fish unit discharge		
Entrance weir E1	0	No criteria	Average	3.0	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average	12.5			
Entrance weir E3	0	depth (≥ 8')	Average	12.3			
Collection channel velocity	0	1.5 - 4 fps	Average	2.4	See <b>Velocities</b> tab for more complete information.		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.5			
North channel velocity	0	1.5 - 4 fps	Average	2.1			
South channel velocity	0	1.5 - 4 fps	Average	3.3			
West entrance differential	1	1.0' - 2.0'	Average	1.2	0.9'		
Entrance weir W1	0	depth (≥ 8')	Average	8.3			
Entrance weir W2	0	depth (≥ 8')	Average	8.3			
Entrance weir W3	0	No criteria	Average	closed			
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	8.8			
Entrance weir S2	0	depth (≥ 8')	Average	8.7			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	0	units 1,8,18					
Turbine trashrack drawdown	0	<1.5', wkly	Range:	0.2' to 0.5'			
Spill volume	0	40%, 24hr					
Spill Pattern	0	per FPP					
Turbine Unit Priority	5	per FPP	Transformer T8 functional testing underway. Exceeded priority by 1 unit.				
Turbine 1% Efficiency	0	per FPP					

**OTHER ISSUES:**

**Birds/Sea lions:**

Bird observation data collected twice daily. Bird numbers are low to moderate, the majority of predatory 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:**

Main Unit 15, 16, and T8 operation testing underway.

MU5 OOS 0600 7/15/2013 to 1700 8/22/2013 for 5 Yr. O/haul, As-builts, Gen Heat, Heat Exch, and Cavitation.

MU9 OOS 0600 7/15/2013 to 1700 8/22/2013 for Digital Governor install/Annual.

Gatewell drawdown completed on 8/17/13. All values were within the 1.5' criteria

**Maintenance:**

East exit backup power supply investigation underway. Plan in place and necessary equipment to be designated. Planning future electrical panel upgrades as funding allows.

Fishway grating attachment parts ordered for resecure west entrance grating during winter maintenance dewatering.

West entrance weirs lift beam and weir wheel replacement planned as funding allows. Still operational.

PUD intake rake repair near complete. Expected return to service next week.

ON 8/17/2013 Sluice gates 1-1,1-2,1-3 and 18-2,18-3 were closed from 0714-1121 in order to remove VBS from MU5 gatewell

**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. All other work completed.

**EFL** - Current design 10' intake pipe near fish lock. Value Engineering (VE) study completed and some proposals accepted.

**PUD** - Second (freedom) turbine proposal out for review. Pursuing modification of original FERC license. Public meeting and site tour planned 9/11.

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.

Also investigating feasibility of having a holding tank on project to hold collected lamprey for tribes.

**Research/Contractors:**

The Inland Avian Predation Work Group (IAPWG) meeting August 21st Westrick Center. Focus on nesting habitat abatement in NWW district.

Nez Perce staff collected lamprey 8/13. Another collection planned 8/19-20/2013.

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 continues

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

Normandeau continues fish counting 16 hrs/day through Oct.

Removed derelict Vertical Barrier Screen panels from gatewell slot on unit 5 leftover from early 90s screen bypass research. Eleven panels removed.

Inquiring if other projects can use as spares. One more set of 11 panels to be removed as time allows. ROV may be deployed to determine location.

Derelict U of I "I beams" on pier noses to be removed this month by project maintenance. Planning underway for removal of remaining pier nose antennas.

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	#	Pct	#								
8/11/2013	58	476	42.2	347	60	78	40	52	62	989	39	618	61	485	39	305	86	6	14	1		0		0		0		0		0		0	54	40	46	34	40.3	101.2
8/12/2013	68	576	32.1	272	81	121	19	28	74	1004	27	362	72	466	28	182	62	8	39	5	100	4	0	0		0		0		0		0	61	36	39	23	39.9	139.9
8/13/2013	73	704	26.7	257	88	134	12	18	74	894	27	322	72	373	28	146	71	10	29	4	100	1	0	0		0		0		0		0	33	22	67	44	39.9	156.4
8/14/2013	68	608	31.8	283	78	158	22	44	73	833	27	308	72	360	28	139	78	7	22	2		0		0		0		0		0		0	47	31	53	35	40	153.8
8/15/2013	64	674	35.7	374	72	121	28	47	63	438	37	262	61	208	39	131	83	10	17	2		0		0		0		0		0		0	58	40	42	29	40.1	130.7
8/16/2013	62	744	38.2	460	82	127	18	28	68	414	32	198	64	197	36	109	50	1	50	1		0		0		0		0		0		0	46	26	54	30	40.1	147.1
8/17/2013	70	1542	29.8	654	71	203	29	84	71	461	29	192	66	209	34	107	78	7	22	2		0		0		0		0		0		0	64	42	36	24	40.1	141.6
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										
	66.8	33.2	75.8	24.2	69	31	67.3	32.7	74.2	25.8	100	0	0	0	0	52	48																					

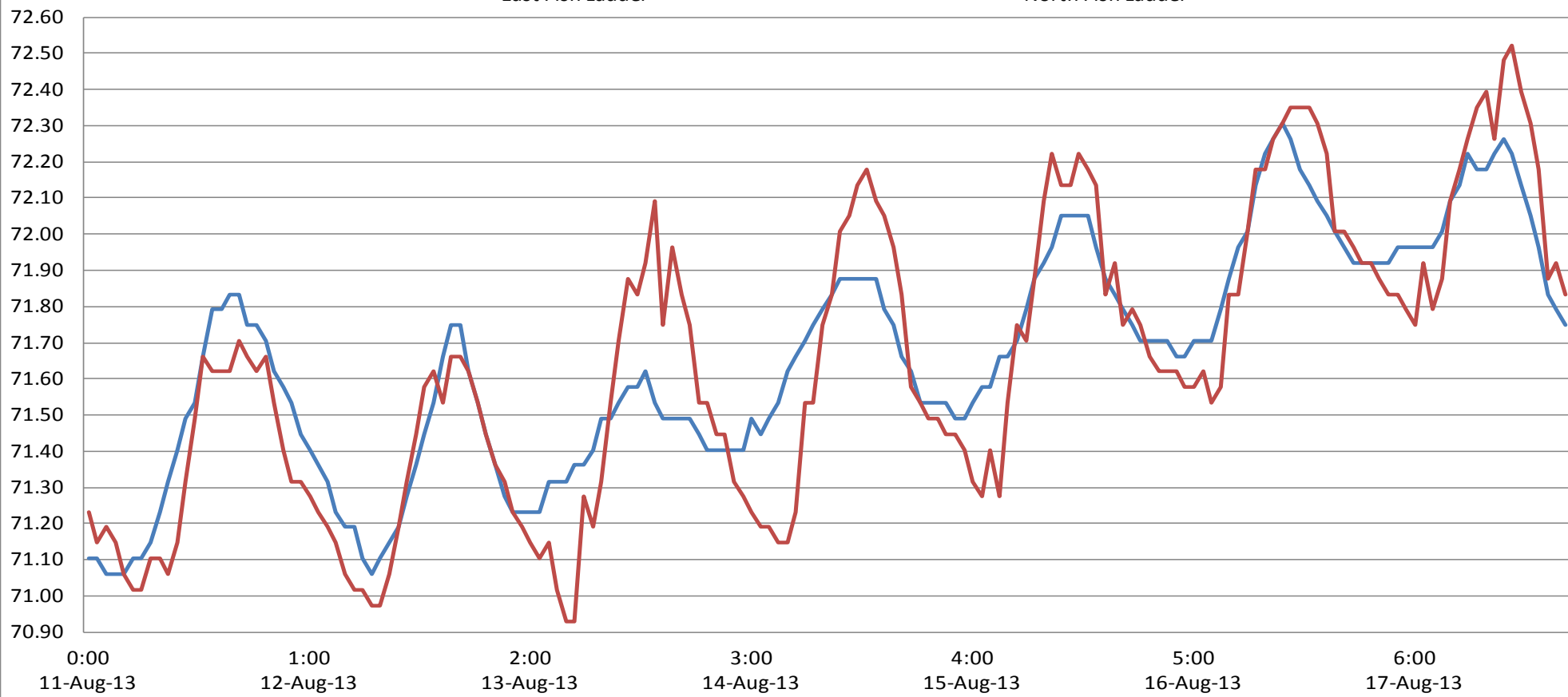
Ladder orientations reference the side of the river when facing downstream

°F

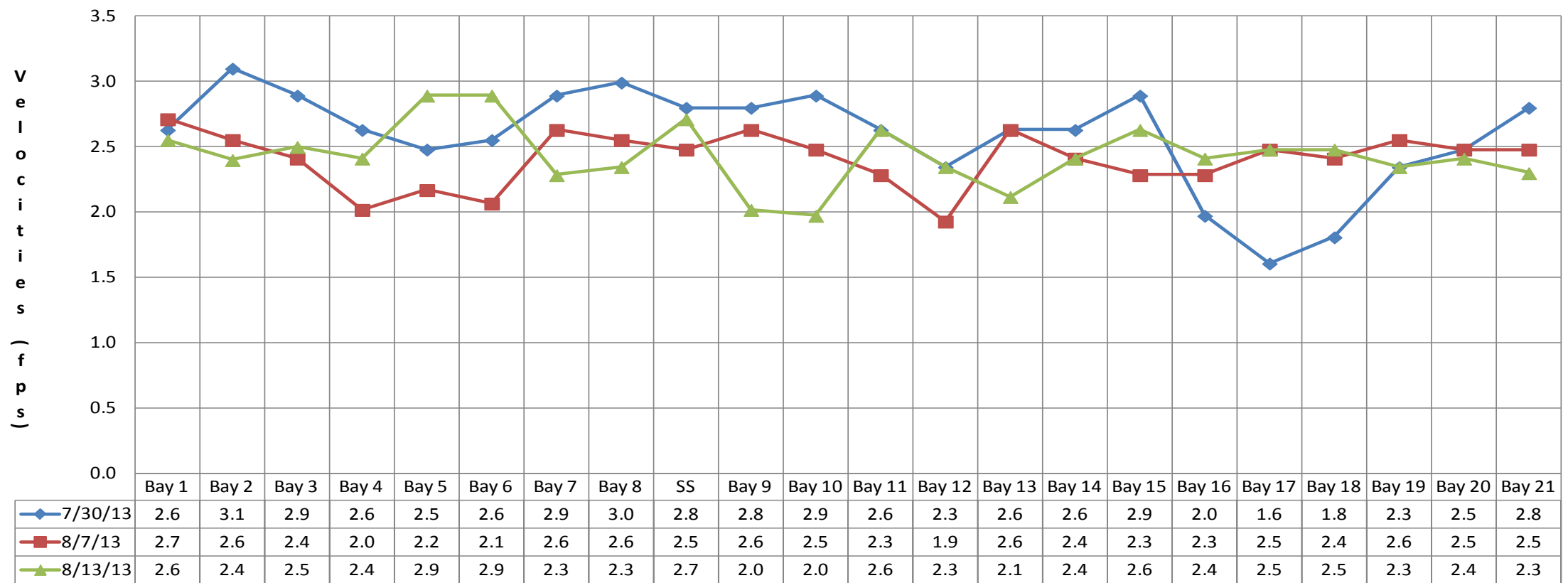
### The Dalles Dam Adult Fish Ladder River/Water Temperatures

— East Fish Ladder

— North Fish Ladder



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



# The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T2

SW-T3

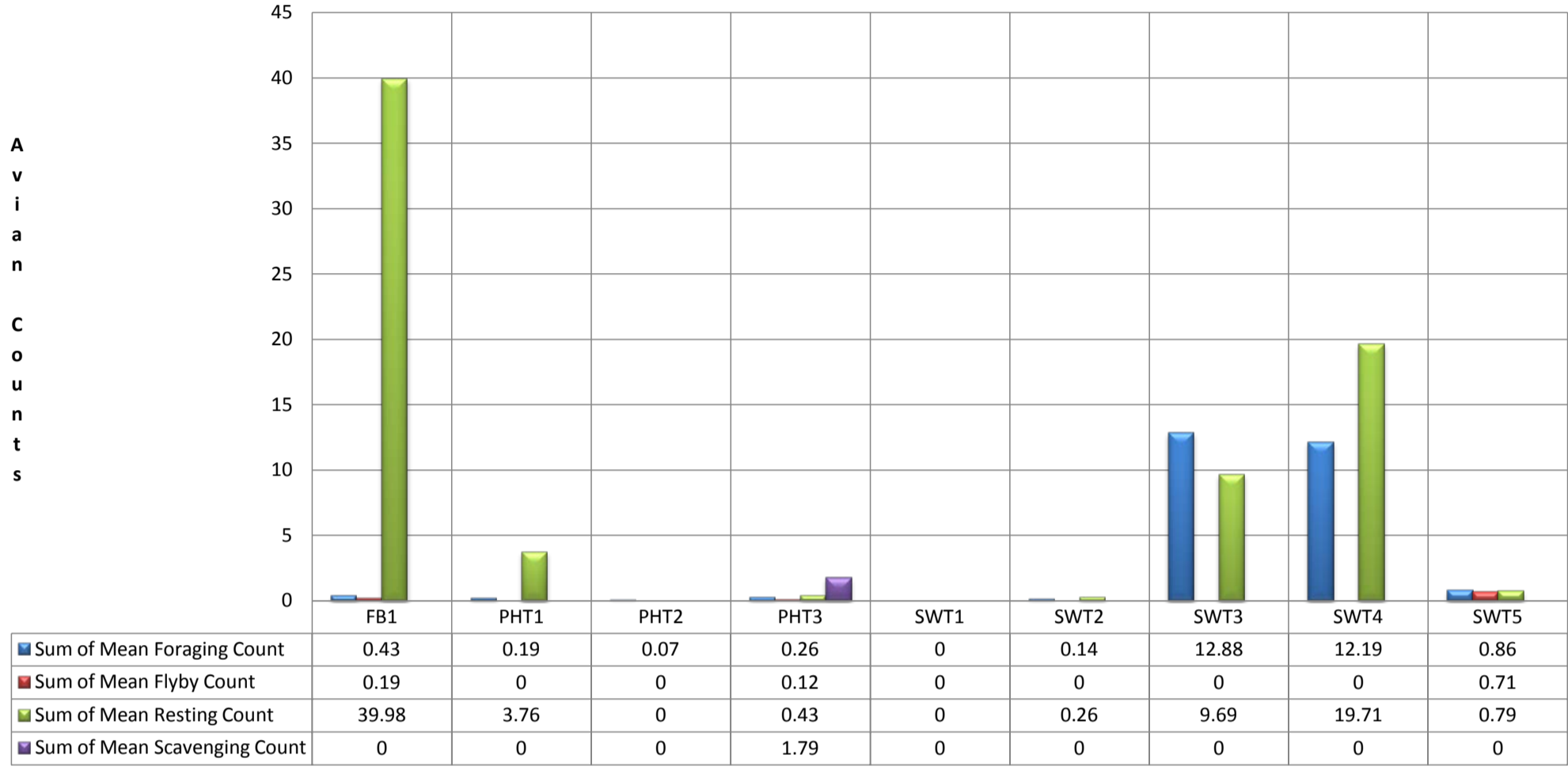
SW-T4

SW-T5

Oregon Shore

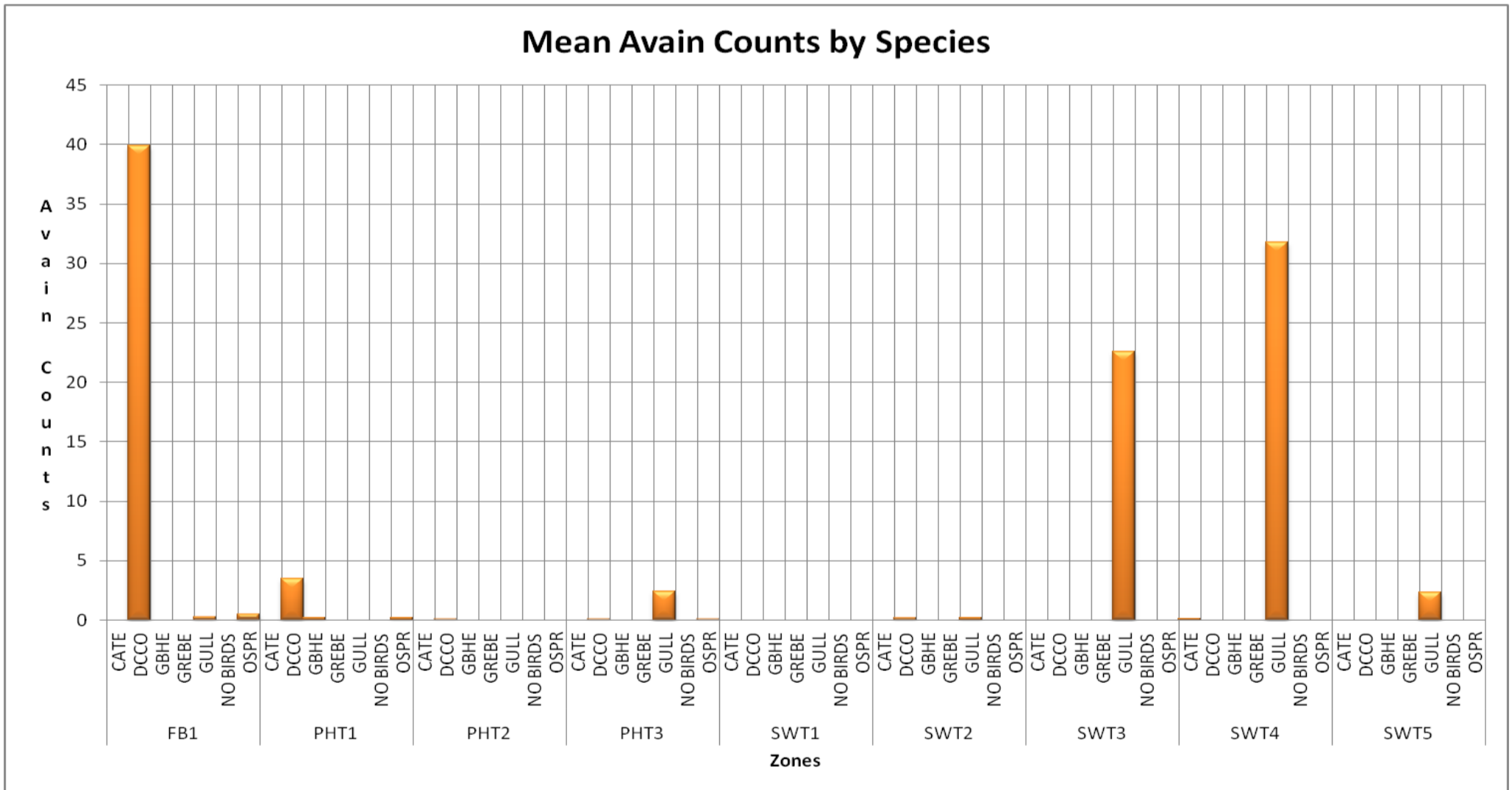


### Avian Mean Counts by Behavior



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

### Mean Avian Counts by Species



Temp:		Secchi:
71.5	SUN	5.0
71.4	MON	5.0
71.5	TUES	5.0
71.6	WED	5.0
71.8	THUR	5.0
71.9	FRI	5.0
72.0	SAT	5.0
AVG: 71.7	AVG:	5.0

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

Out of Criteria

Date:	North Fish Ladder		East Fish Ladder					East Fish Ladder			South Entrance			KCFS	
	North Entrance		East Entrance					West Entrance			South Entrance				
	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	% Spill
11-Aug-13	1.3	9.5	1.5	1.0	11.6	11.5	8.9	1.2	8.2	8.3		1.5	9.0	8.9	40.8
11-Aug-13	1.3	9.7	1.5	1.1	11.0	11.0	8.9	1.4	8.2	8.3		1.4	9.1	9.0	40.6
11-Aug-13			1.4	1.1	11.9	12.0	9.0	1.3	8.2	8.3		1.5	9.0	8.9	
12-Aug-13	1.3	9.6	1.5	-0.6	10.4	10.5	6.7	1.2	8.0	8.1		1.4	8.5	8.5	40.0
12-Aug-13	1.4	9.6	1.7	-0.4	11.0	11.0	8.8	1.3	8.2	8.1		1.6	8.5	8.5	40.0
12-Aug-13			1.5	-0.6	10.4	10.5	6.7	1.1	8.1	8.0		1.4	8.5	8.5	
13-Aug-13	1.3	9.5	1.5	1.1	12.0	12.0	9.7	1.4	8.5	8.5		1.4	9.1	9.1	39.7
13-Aug-13	1.4	9.5	1.8	1.1	12.1	12.1	10.8	1.6	8.5	8.5		1.5	9.1	9.0	39.5
13-Aug-13			2.6	-1.0	11.5	10.9	9.4	1.8	8.1	8.2		1.8	8.5	8.5	
14-Aug-13	1.3	9.7	2.1	-0.1	13.0	13.0	8.8	1.2	8.3	8.5		1.4	8.9	8.9	41.3
14-Aug-13	1.5	9.5	1.9	4.6	13.6	13.6	8.0	1.4	8.6	8.6		1.5	9.0	9.1	39.7
14-Aug-13			1.5	1.0	12.0	12.0	10.2	1.5	8.6	8.5		1.5	9.1	9.0	
15-Aug-13	1.4	9.6	1.5	5.6	13.1	13.0	7.6	1.1	8.3	8.3		1.2	9.1	8.9	40.2
15-Aug-13	1.4	9.4	1.5	5.5	13.0	12.9	8.1	1.0	8.1	8.2		1.4	8.9	8.8	40.2
15-Aug-13			1.6	2.0	13.8	12.9	7.4	1.2	8.5	8.5		1.3	9.2	9.1	
16-Aug-13	1.3	9.6	1.4	5.6	13.5	13.8	7.3	1.0	8.1	8.2		1.4	8.4	8.5	40.1
16-Aug-13	1.4	9.6	1.7	5.6	13.6	13.6	9.2	1.1	8.2	8.2		1.4	8.5	8.5	40.3
16-Aug-13			1.5	5.7	13.4	12.7	7.2	1.0	8.3	8.3		1.2	8.7	8.6	
17-Aug-13	1.3	9.7	1.4	8.0	13.5	12.6	7.2	1.0	8.2	8.1		1.3	8.5	8.6	40.0
17-Aug-13	1.4	9.6	1.4	9.6	13.6	13.6	9.4	1.1	8.1	8.0		1.4	8.4	8.4	40.3
17-Aug-13			1.4	8.0	13.6	12.9	7.4	0.9	8.2	8.1		1.4	8.4	8.1	
<b>AVG:</b>	1.4	9.6	1.6	3.0	12.5	12.3	8.4	1.2	8.3	8.3	closed	1.4	8.8	8.7	40.2

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





Vertical Barrier Screen panels removed from unit 5 gatewell. Leftover from early 1990s travelling screen testing.