

FISHWAY STATUS REPORT

Date: 7/29/2013
 Inspection Period: 7/21 to 7/27/2013

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
 P.O. Box 564
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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:	70.0	F
	Out of Criteria	Limit	Comments		Secchi:	4.8	Ft.
NORTH FISHWAY							
Exit differential	0	≤ 0.5'					
Count station differential	0	≤ 0.3'	Window cleaned 7/24.				
Weir crest depth	0	1.0' ± 0.1'					
Entrance differential	0	1.0' - 2.0'	Average	1.3			
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'	Window cleaned 7/22, 7/24. Raked picket leads 7/22, 7/24, 7/25, 7/26, 7/27.				
Weir crest depth	1	1.0' ± 0.1'	Out of criteria at 0.8'; changed program logic control setting to correct weir crest depth.				
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	0.0	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average	12.4			
Entrance weir E3	0	depth (≥ 8')	Average	12.4			
Collection channel velocity	0	1.5 - 4 fps	Average	2.1	See Velocities tab for more complete information.		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.7			
North channel velocity	0	1.5 - 4 fps	Average	2.4			
South channel velocity	0	1.5 - 4 fps	Average	3.5			
West entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir W1	0	depth (≥ 8')	Average	8.6			
Entrance weir W2	0	depth (≥ 8')	Average	8.5			
Entrance weir W3	0	No criteria	Average	closed			
South entrance differential	0	1.0' - 2.0'	Average	1.5	Daily differentials & weir depths, see AVGS tab.		
Entrance weir S1	0	depth (≥ 8')	Average	9.1			
Entrance weir S2	0	depth (≥ 8')	Average	9.0			
JUVENILE PASSAGE							
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: 0.2' to 0.6'.				
Spill volume	1	40%, 24hr	OOB at 38% 7/26 am. The values are spot checks; the average 7/26/ 24hrs. Was 40%.				
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. Bird numbers are low to moderate, the majority of which 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 transformer 8 forced out of service due to high levels of combustible gas in the transformer oil. Return to service ~8/8.

Main Unit 1 out of service 0600 hrs. 6/24 to 1700 hrs. 8/1 for digital governor installation.

Main Unit 5 out of service 0600 hrs. 7/15 to 1700 hrs. 8/22 for five year overhaul, as-builts, gen heat, heat exchanger, and cavitation.

One dead adult shad observed between east count station picket leads 7/25.

At 1141 hrs. 7/25, line 1 tripped resulting in Fish Units 1 and 2 out of service. FU 1 and FU 2 1204 hrs. breakers closed and returned to service.

Gatewell drawdown completed on 7/22. All values were within the 1.5' criteria and ranged from 0.2' to 0.6'.

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

Fisheries attended Fish Passage Operation and Maintenance (FPOM) at Columbia River Inter-Tribal Fish Commission (CRITFC). The Dalles Dam issues discussed were transformer 8 startup running MU 15 and 16 out of 1% peak efficiency (not approved) , time limit for adjusting unit priority sluiceway operation (approved), and project discretion for which MU's trashracks to ROV inspect for mid season (approved).

Maintenance:

Remote Operated Vehicle (ROV) inspection of turbine trashracks with District ROV and sonar scanner 8/5 and 8/6 blocks of 3 and 4 units at a time.

ROV inspection of east and north fishway diffuser grating 8/6 per Fish Passage Plan (FPP) mid season requirement.

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.

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. Value Engineering (VE) study completed.

PUD - Second (freedom) turbine proposal out to project for review. Pursuing modification of the original FERC license. Comments due by 8/23.

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:

Tribal lamprey trappers collecting lamprey from between picketed leads at the east count station. Umatilla collected 45 and Yakama Nation collected 113 to date. Collection allocation is 281 per Tribe.

Nez Perce Fisheries staff are planning on participating in trap collections for lamprey the last week of July/first week of August.

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 catch rates slightly decreasing from previous weeks.

Pacific States Marine Fisheries Commission fish sampling at Northern Wasco County PUD juvenile bypass; one subyearling Chinook sampled with caudal injury. See report #13-16 for additional information.

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

USDA continues bird hazing through 7/31.

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

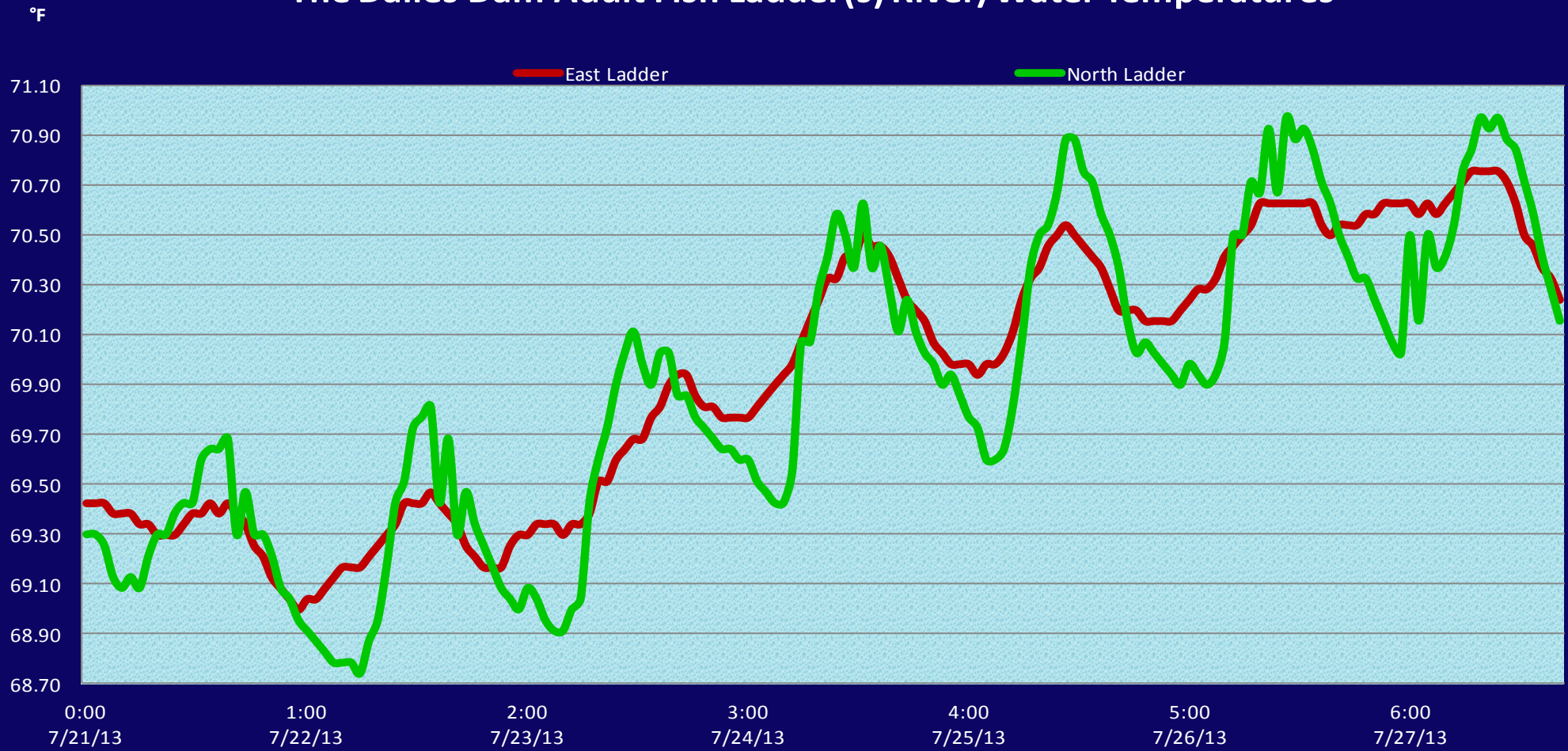
DART The Dalles Adult Ladders Daily Usage with Spill Percent and Outflow

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	#						
20-Jul-13	75	458	26	157	90	102	9.7	11	74	1154	26	414	72	702	28	271	72	482	28	187	0	0	0	0	0	0	64	188	36	107	39.9	187.2		
21-Jul-13	58	398	43	294	68	61	32	29	69	1122	32	516	67	692	33	338	50	382	50	382	0	0	0	0	0	65	144	35	79	40.0	160.9			
22-Jul-13	64	338	37	194	91	85	8.6	8	76	1248	24	400	73	758	27	278	67	282	34	142	0	0	0	0	0	48	88	52	94	39.8	181.8			
23-Jul-13	85	283	16	52	72	48	28	19	72	912	28	357	76	580	25	188	64	200	36	113	0	0	0	0	0	58	110	42	80	39.9	151.3			
24-Jul-13	72	300	28	119	86	79	14	13	61	789	39	500	56	443	44	344	50	155	50	156	0	0	0	0	0	38	48	62	79	40.0	137.0			
25-Jul-13	64	289	36	163	65	52	35	28	60	1278	40	838	63	833	37	480	73	180	27	66	0	0	0	0	0	39	61	61	97	39.9	154.8			
26-Jul-13	75	461	26	158	88	92	12	13	72	1692	28	658	72	1120	28	443	73	200	27	74	0	0	0	0	0	47	76	53	85	40.0	138.2			
Weekly Total		2527		1137		519		121		8195		3683		5128		2342		1881		1120		0		0		0		715		621				
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						
	69.0	31.0	81.1	18.9	69.0	31.0	68.6	31.4	62.7	37.3	0.0	0.0	0.0	0.0	53.5	46.5																		

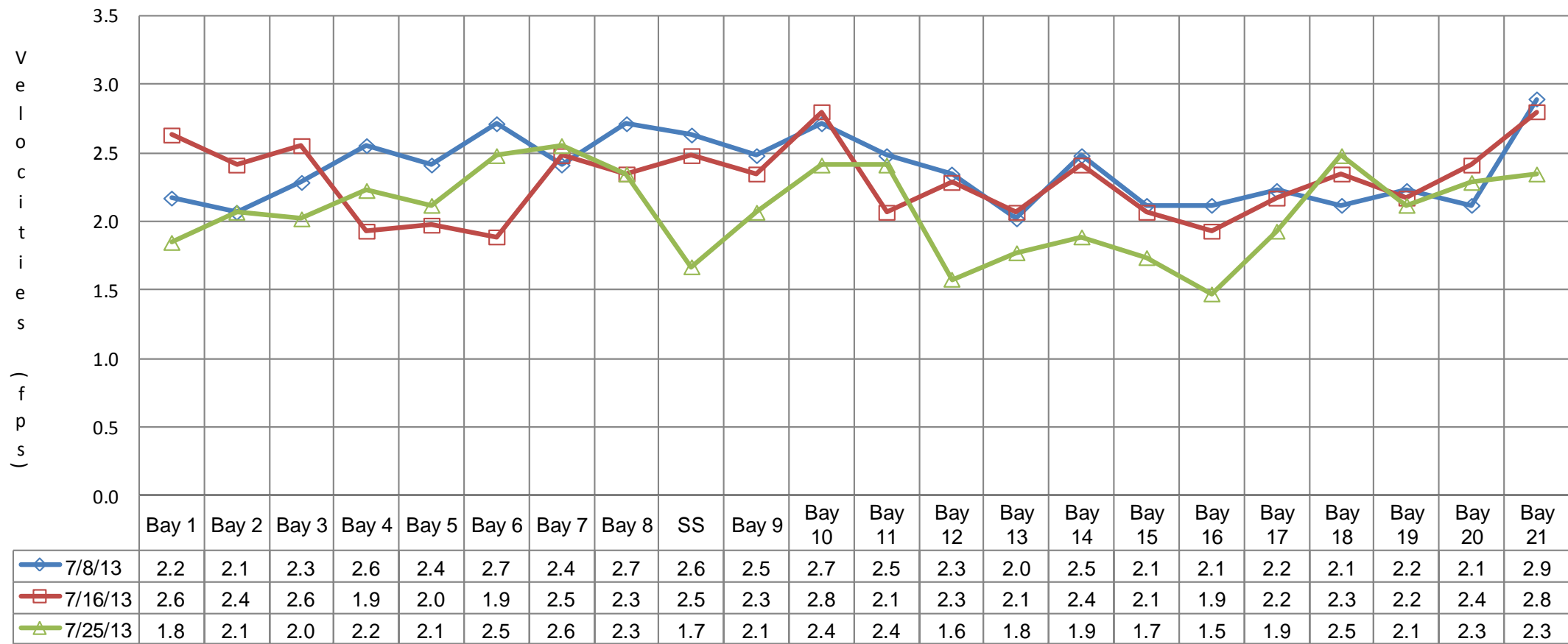
NOTES:

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(s) River/Water Temperatures



The Dalles Dam Collection Channel Velocities (fps)



The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

SW-T2

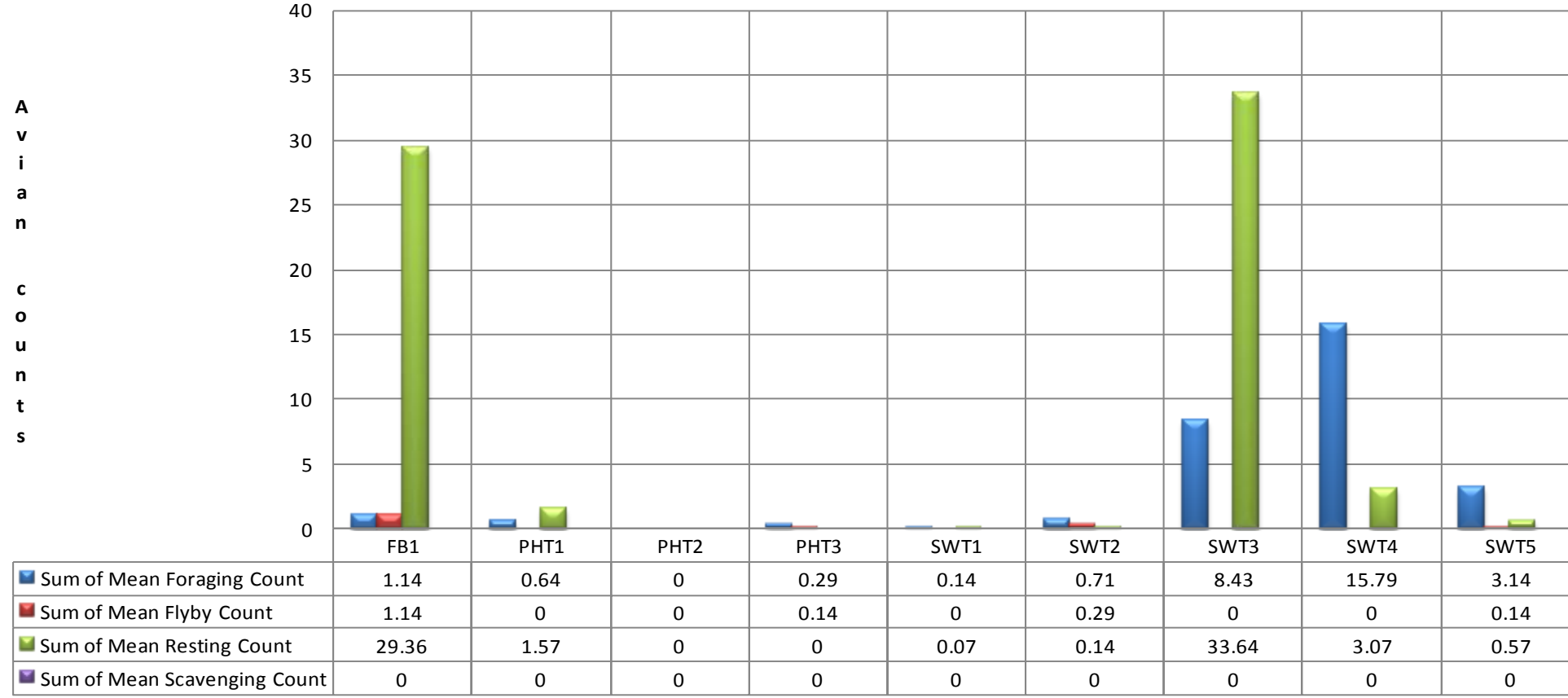
SW-T4

SW-T5

Oregon Shore

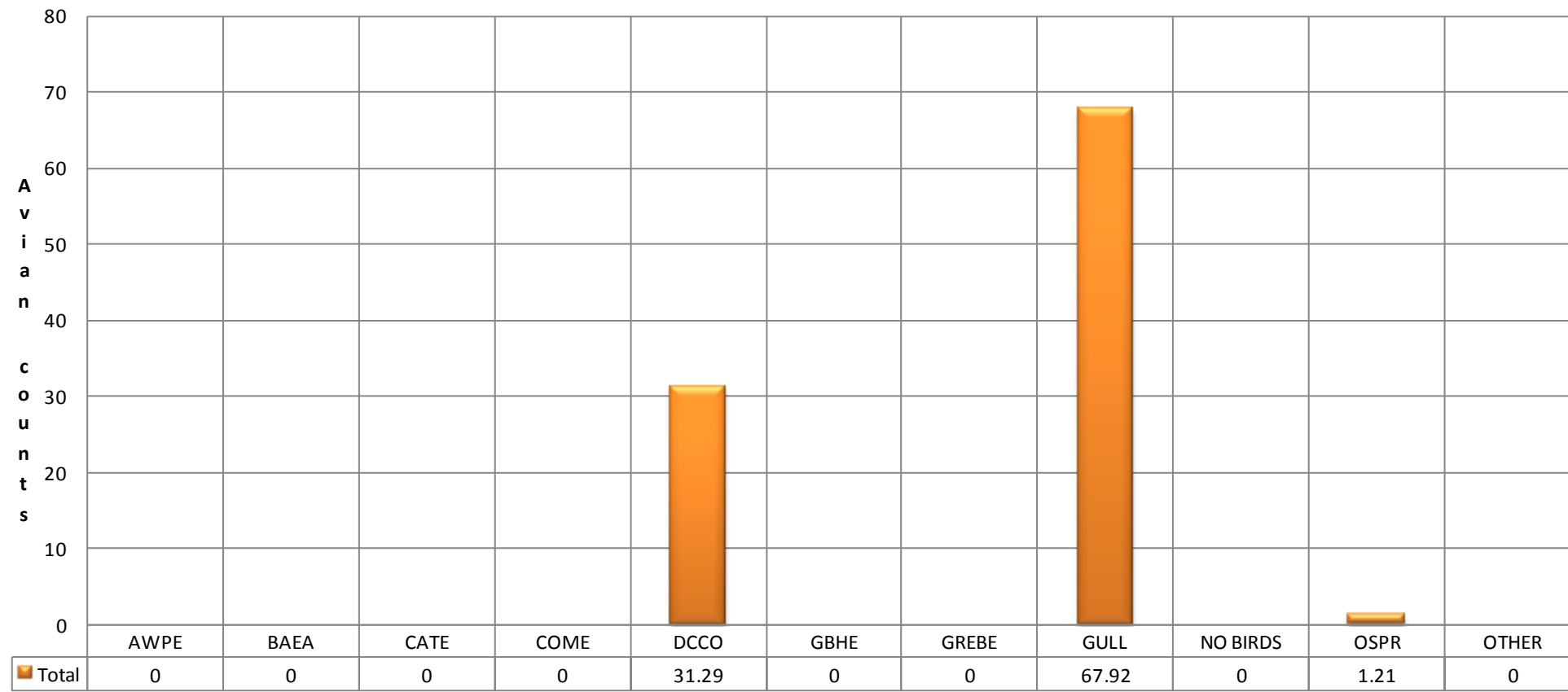


Mean Avian Counts by Behavior



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:	
69.5	SUN	4.5	
69.3	MON	4.5	
69.6	TUES	5.0	
70.1	WED	5.0	
70.3	THUR	5.0	
70.4	FRI	5.0	
70.7	SAT	4.3	
AVG: 70.0	AVG:	4.8	

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

Out of Criteria

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
21-Jul-13	1.3	9.9	1.4	0.0	13.1	13.0	12.4	1.6	8.6	8.2		1.5	9.0	9.1	40.2
21-Jul-13	1.4	9.7	1.5	0.0	13.0	13.0	12.4	1.5	8.6	8.2		1.5	9.1	9.1	39.8
21-Jul-13			1.2	0.0	13.0	13.0		1.3	8.5	8.6		1.4	8.9	9.0	
22-Jul-13	1.4	10.0	1.4	-0.1	12.9	12.9	12.0	1.4	8.4	8.4		1.5	8.9	8.9	39.3
22-Jul-13	1.3	9.9	1.4	0.0	13.0	13.0	11.7	1.5	8.5	8.6		1.6	9.0	9.0	40.3
22-Jul-13			1.3	0.0	12.9	13.0		1.4	8.4	8.4		1.4	9.0	9.0	
23-Jul-13	1.2	9.8	1.7	-0.1	11.5	11.5	9.0	1.3	8.5	8.5		1.4	9.1	9.0	39.5
23-Jul-13	1.2	9.9	1.4	0.1	11.5	11.6	9.1	1.3	8.4	8.4		1.4	8.9	9.0	39.4
23-Jul-13			1.5	0.1	11.6	11.6		1.4	8.4	8.4		1.5	9.0	8.9	
24-Jul-13	1.2	9.9	1.5	-0.1	11.4	11.5	8.5	1.3	8.5	8.4		1.4	9.0	8.9	40.0
24-Jul-13	1.3	9.9	1.5	0.0	11.5	11.6	12.4	1.4	8.6	8.2		1.5	9.0	8.9	40.4
24-Jul-13			1.5	0.0	11.5	11.6		1.2	8.6	8.5		1.4	9.1	9.0	
25-Jul-13	1.3	9.9	1.4	-0.1	12.5	12.4	10.3	1.9	8.1	8.1		1.4	9.1	9.0	40.5
25-Jul-13	1.2	9.9	1.6	0.0	11.5	11.5	9.8	1.5	8.4	8.5		1.5	9.0	9.1	39.0
25-Jul-13			1.5	-0.2	11.5	11.6		1.3	8.5	8.5		1.4	9.0	9.0	
26-Jul-13	1.4	9.8	1.6	0.0	12.5	12.5	10.7	1.7	10.3	8.6		1.6	9.1	9.0	38.0
26-Jul-13	1.3	9.9	1.6	0.1	13.5	13.5	12.1	1.8	8.9	8.9		1.4	10.4	9.1	40.3
26-Jul-13			1.6	0.1	12.5	12.6		1.6	8.6	8.5		1.6	8.9	9.0	
27-Jul-13	1.2	9.9	1.5	0.1	12.6	12.6	10.2	1.6	8.5	8.5		1.6	9.0	9.1	40.2
27-Jul-13	1.2	9.9	1.5	0.0	12.5	12.5	10.3	1.6	8.5	8.4		1.6	9.0	9.1	41.2
27-Jul-13			1.2	0.0	13.4	13.6		1.3	9.1	9.1		1.5	8.9	9.0	
AVG:	1.3	9.9	1.5	0.0	12.4	12.4	10.8	1.5	8.6	8.5	closed	1.5	9.1	9.0	39.9

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