

# FISHWAY STATUS REPORT

Date: 6/9/2013  
Inspection Period: 6/2 to 6/8/2013

## 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 Out of Criteria	Criteria Limit	Total Number of Inspections:	21	Temperature:	59.0 F
			Comments		Secchi:	4.5 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 9.9			
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. 156 weir out of criteria by 0.1'.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Picketed leads raked and window cleaned May 27.			
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 <b>AVGS</b> tab.		
Entrance weir E1	0	No criteria	Average 0.1	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average 13.0			
Entrance weir E3	0	depth (≥ 8')	Average 13.0			
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 2.6			
North channel velocity	0	1.5 - 4 fps	Average 2.3			
South channel velocity	0	1.5 - 4 fps	Average 3.4			
West entrance differential	0	1.0' - 2.0'	Average 1.5			
Entrance weir W1	0	depth (≥ 8')	Average 9.1			
Entrance weir W2	0	depth (≥ 8')	Average 9.1			
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 9.4	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average 9.4			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	units 1,8,18				
Turbine trashrack drawdown	0	<1.5', wkly	Range 0.1-0.6'			
Spill volume	1	40%, 24hr	35.6% on 6/6/13			
Spill Pattern	0	per FPP				
Turbine Unit Priority	1	per FPP	6/5/2013			
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 transformer oil issues. Return to service ~8/8/2013

Main Unit 21 out of service 4/29 to 6/20 for five year over haul, as built, generator heater, heat exchanger, and cavitation.

Main Unit 11 out of service 5/13 to 6/22 for digital governor install and annual maintenance.

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

Gatewell drawdown was completed on 06/09/13. All values were within the 1.5' criteria and ranged from 0.1' to 0.6'.

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

**Maintenance:**

PUD outage occurred 6/10, 0700 to 1430 to replace the feeder 2 breaker in DQ1 for spill gates 1-6. PUD operated in bypass mode.

Emergency diesel generator was available for spillgate operation if needed.

Fisheries compiling an inventory of all the fish steel equipment from boneyard eligible for the steel salvage.

ROV inspection of 3 turbine intake trashracks for debris scheduled 6/13 per Fish Passage Plan requirement. Coordinated with BPA.

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 being used as needed.

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

**Studies:**

**PIT** - Thin Wall PIT tag Antenna working successfully with 99.7% detection efficiency on over 3500 passing tagged fish. Some aluminum paneling to be replaced with different material to correct minor interference. Enclosure walls being constructed by Resources around north PIT computer room.

**EFL** - Team evaluating if fishlock valve room rehab to be included with the main construction of the of the 10' intake pipe. 60% DDR in review.

Value Engineering meeting team meeting in project admin conference room 6/13

**PUD** - Freedom turbine planning underway. Project support as needed. PUD/COE memo of understanding document reviewed and edited.

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

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

**Research/Contractors:**

As in previous years CRITFIC member tribes are planning on trapping adult lamprey for radio translocation, telemetry research, and/or brood stock at the project. Unlike last year the Nez Perce are planning to join the CTUIR and Yakama Nation with trap operation as well.

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: Effort hours - 60.5, total NPM - 157, NPM  $\geq$  230 mm - 157, sturgeon - 4, game fish - 4, non-game fish - 1.

Fish counting continues with Normandeau staff. Spring Chinook passage steadily decreasing. Shad numbers substantially increasing.

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

Pacific States Marine Fisheries Commission fish sampling of the PUD juvenile bypass. Refer to PSMFC weekly report #13-9 for results.

Project maintenance to remove I-beams at forebay pier noses this summer; divers this coming winter to remove the underwater derelict gear.

University of Idaho adult radio telemetry new antennas both fish ladders completed and operating. Conduit and two new electrical outlets to be installed next week. U of I installed an additional fixed radio telemetry antenna at the east end of Celio Park 6/7.

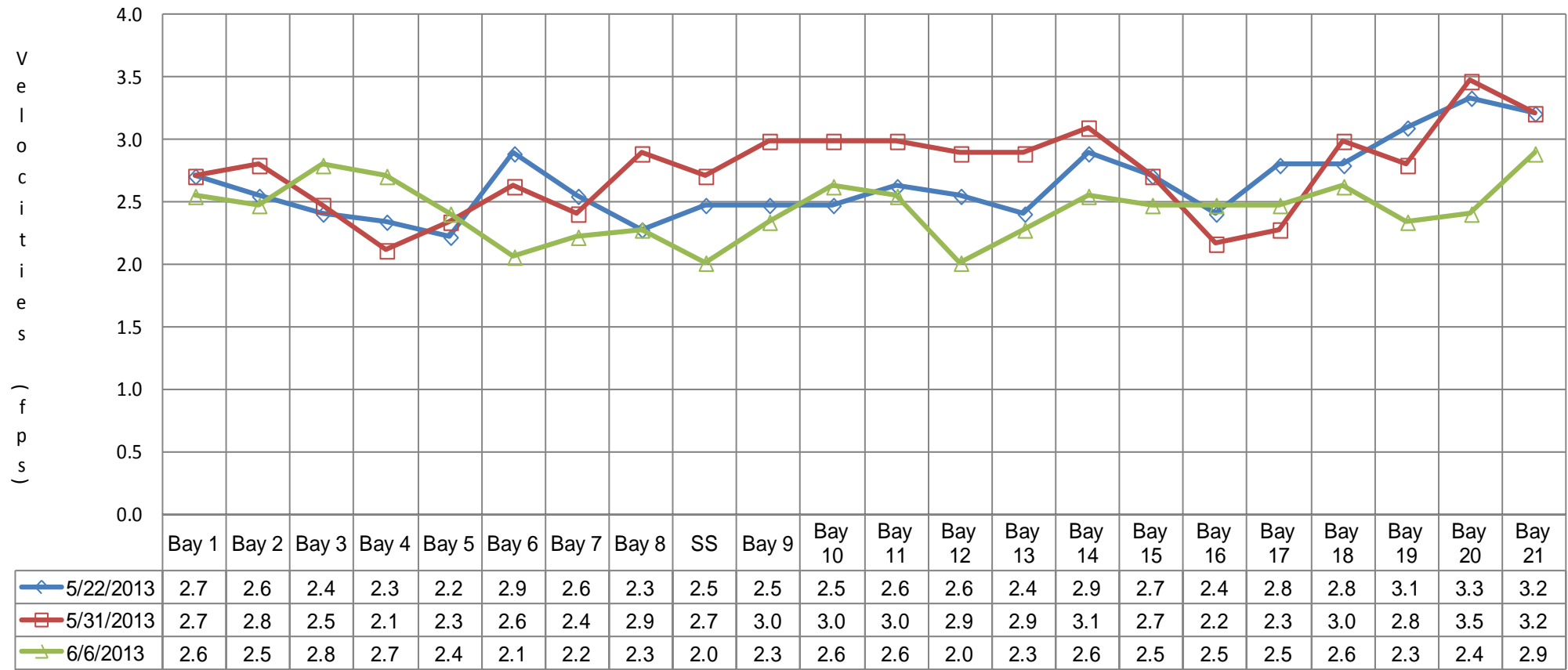
Approved by;  
Ron D. Twiner  
Operation Project Manager  
The Dalles Dam

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

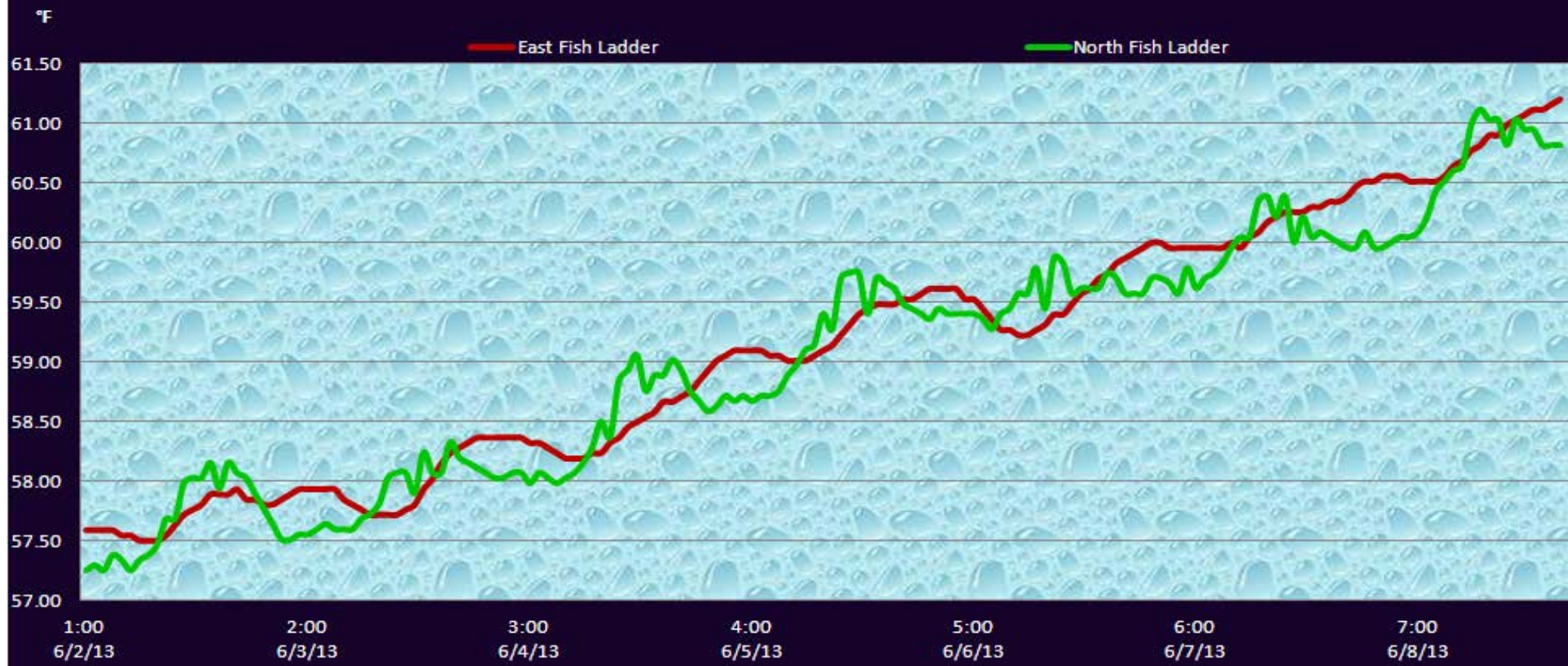
Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct [Right]	Outflow (kcfs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#		
6/2/13	54	455	46	384	73	175	27	64	86	6	14	1	100	1	0	0	80	16	20	4	0	0	0	0	0	0	0	0	0	0	0	0	40.0	194.4
6/3/13	67	396	33	197	96	236	4.5	11	92	11	8.3	1	0	0	0	0	94	17	5.6	1	0	0	0	0	0	0	0	0	0	0	0	0	39.8	253.2
6/4/13	61	714	39	452	88	314	12	43	88	14	13	2	33	1	67	2	94	29	6.5	2	0	0	0	0	0	0	0	0	0	0	0	0	39.9	221.8
6/5/13	44	563	56	708	74	257	26	89	100	23	0	0	100	2	0	0	94	60	6.2	4	0	0	0	0	0	0	0	0	100	1	0	0	39.9	235.3
6/6/13	46	754	54	870	79	281	22	77	96	18	4.2	1	100	7	0	0	95	83	4.6	4	0	0	0	0	0	0	0	0	50	1	50	1	38.5	247.2
6/7/13	38	876	63	1459	56	304	44	239	67	33	9	67	4	33	2	74	162	25.7	56	0	0	0	0	0	0	0	100	2	100	0	40.2	161.9		
6/8/13	34	728	66	1442	58	266	42	190	100	18	0	0	100	2	0	0	82	242	17.7	52	0	0	0	0	0	0	0	0	62	8	39	5	39.6	232.1
Weekly total		4486		5512		1833		713		90		14		17		4		609		123		0		0		0		0		12		6		
Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct	Outflow
YTD	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	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	Spill Pct	Outflow				
	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct						
	72.6	27.4	97	3	98.3	1.7	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							

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.

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



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



# The Dalles Dam Avian Zone Map

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

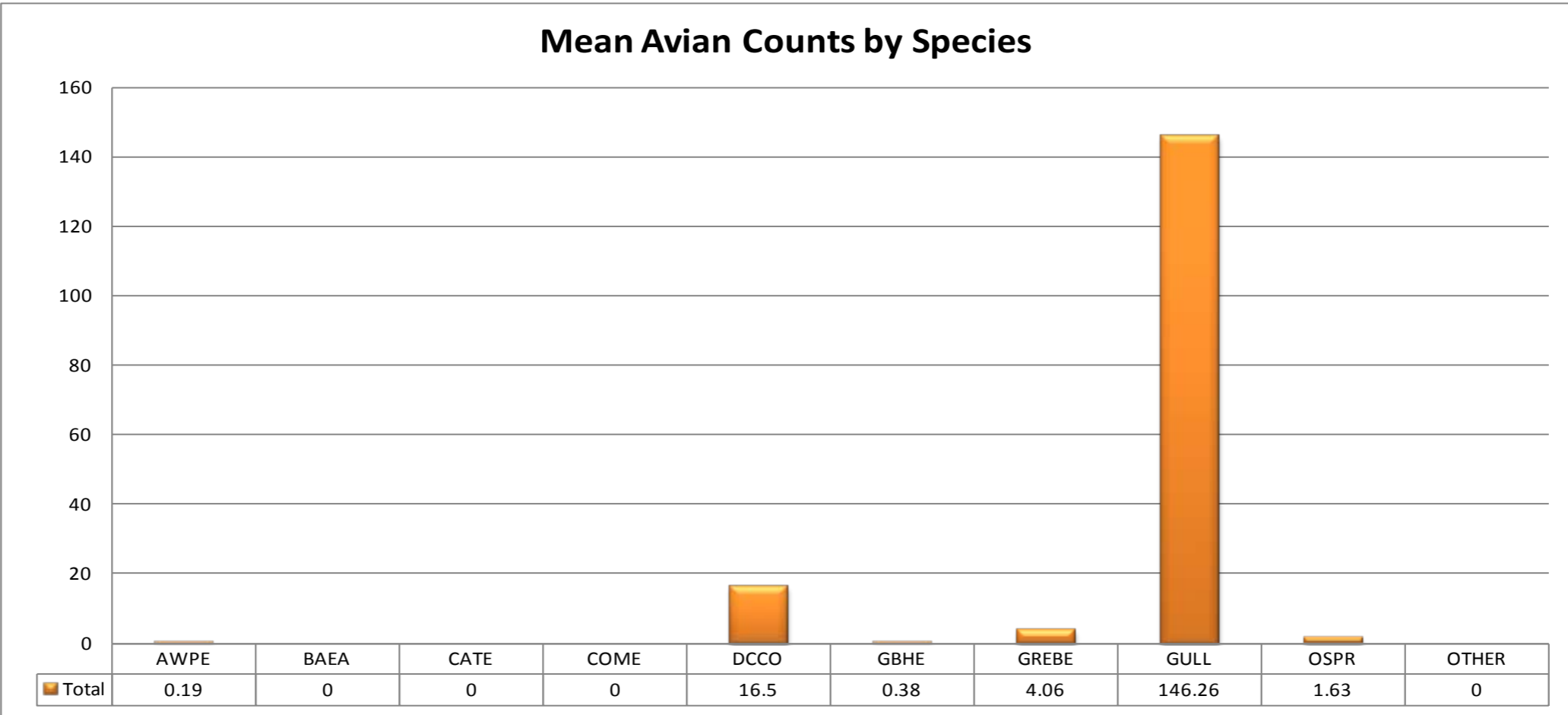
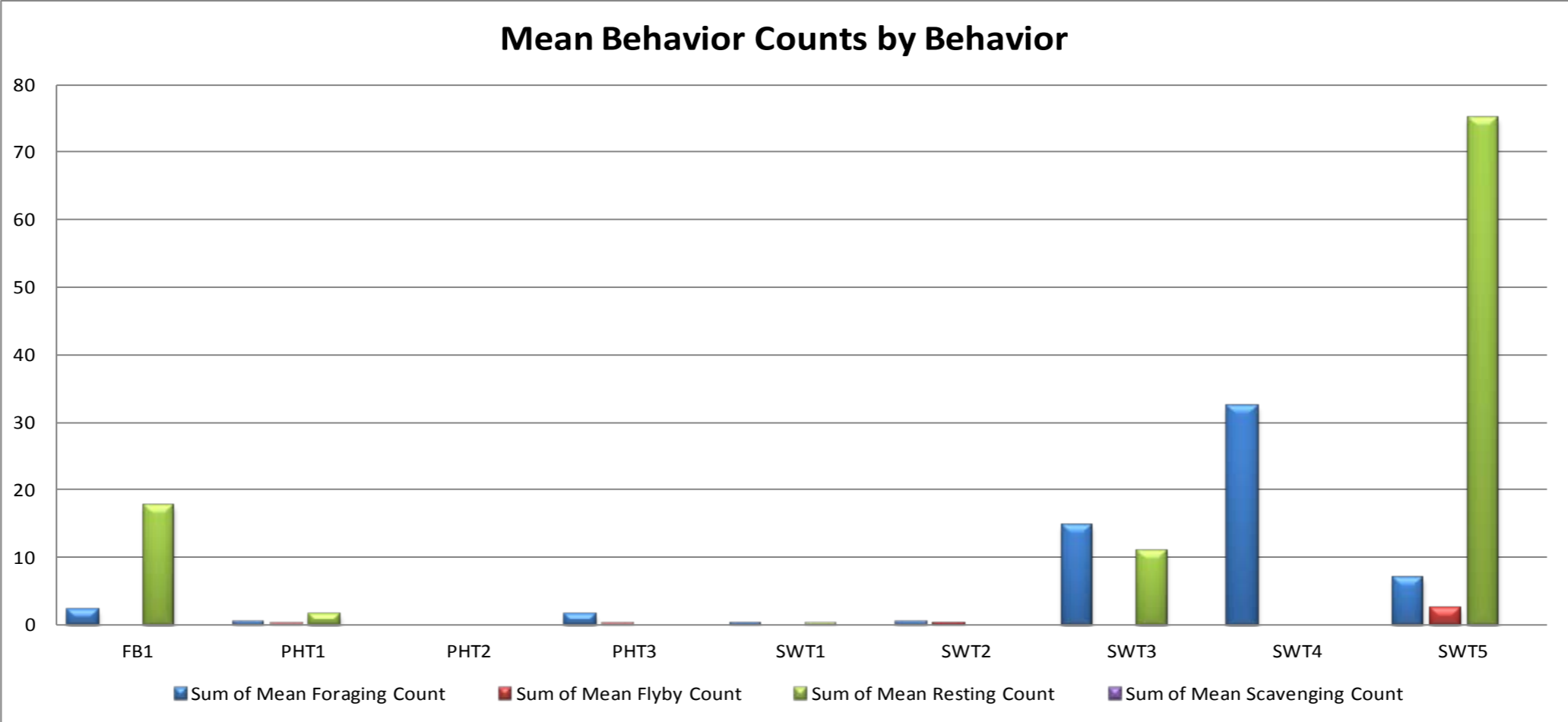
SW-T2

SW-T4

Oregon Shore

SW-T5





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:	
	57.6	SUN		4.5
	57.9	MON		5.0
	58.4	TUES		5.0
	59.1	WED		4.5
	59.5	THUR		3.5
	60.0	FRI		4.0
	60.6	SAT		5.0
AVG:	59.0	AVG:		4.5

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
6/2/13	1.3	9.9	1.8	0.1	12.1	12.0	10.7	1.5	8.2	8.2		1.7	8.4	8.4	38.8
6/2/13	0.3	9.8	1.4	0.1	12.0	12.0	9.3	1.3	8.1	8.1		1.5	8.5	8.6	42.0
6/2/13			1.7	0.1	11.9	12.0		1.6	8.2	8.2		1.6	8.5	8.5	
6/3/13	1.4	9.8	1.6	1.0	14.0	13.5	13.6	1.6	10.5	10.4		1.5	9.9	9.9	39.6
6/3/13	1.3	10.0	1.5	0.1	13.4	13.6	12.7	1.6	9.4	9.4		1.5	9.5	9.6	39.4
6/3/13			1.5	0.1	13.5	13.6		1.5	9.5	9.5		1.5	9.6	9.6	
6/4/13	1.3	10.0	1.1	0.1	13.5	13.5	10.7	1.3	9.0	9.1		1.4	9.4	9.5	39.6
6/4/13	1.4	9.8	1.5	0.1	12.5	12.6	11.6	1.6	9.0	9.0		1.6	9.4	9.4	39.7
6/4/13			1.5	0.0	13.2	12.7		1.4	9.6	9.3		1.4	9.6	9.6	
6/5/13	1.3	9.8	1.5	0.0	13.1	13.2	11.8	1.5	9.1	9.1		1.5	9.6	9.6	38.8
6/5/13	1.4	9.8	1.5	0.0	13.1	13.2	12.7	1.6	9.0	9.1		1.5	9.6	9.6	39.7
6/5/13			1.5	0.0	12.5	12.5		1.5	8.8	8.8		1.5	9.3	9.3	
6/6/13	1.3	10.0	1.5	0.0	13.1	13.2	12.7	1.6	9.0	9.0		1.5	9.6	9.6	39.7
6/6/13	1.4	9.8	1.5	0.0	13.1	13.2	12.7	1.6	9.0	9.1		1.5	9.6	9.6	35.8
6/6/13			1.5	0.0	13.2	13.1		1.6	9.0	9.1		1.5	9.6	9.5	
6/7/13	1.4	9.7	1.5	0.0	13.0	13.0	12.2	1.6	9.0	9.0		1.5	9.6	9.6	39.8
6/7/13	1.3	9.9	1.5	0.0	13.7	13.8	13.1	1.5	9.5	9.5		1.5	9.4	9.4	39.8
6/7/13			1.4	0.0	13.1	13.0		1.3	9.7	9.7		1.3	9.6	9.6	
6/8/13	1.4	9.8	1.5	0.0	12.9	12.9	11.6	1.5	9.1	9.1		1.5	9.6	9.6	39.4
6/8/13	1.3	9.8	1.6	0.0	13.4	13.5	12.3	1.6	9.0	9.0		1.5	9.5	9.5	39.6
6/8/13			1.1	0.0	13.5	13.5		1.2	9.5	9.5		1.4	9.4	9.4	
<b>AVG:</b>	1.3	9.9	1.5	0.1	13.0	13.0	12.0	1.5	9.1	9.1	closed	1.5	9.4	9.4	39.4

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