

# FISHWAY STATUS REPORT

Date: 7/21/2013  
 Inspection Period: 7/14-20/2013

## 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:	21	Temperature:	69.0	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	1.3			
Entrance weir N1	0	depth (≥ 8')	Average	9.9			
Entrance weir N2		Closed	Bulkhead installed.				
PUD Intake differential	0	≤ 0.5'	Raked on 7/16/13.				
<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'	Picketed leads raked 7/14, 7/15, 7/17.				
Weir crest depth	0	1.0' ± 0.1'					
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	12.4			
Entrance weir E3	0	depth (≥ 8')	Average	12.3			
Collection channel velocity	0	1.5 - 4 fps	Average	2.3	See <b>Velocities</b> tab for more complete information.		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.8			
North channel velocity	0	1.5 - 4 fps	Average	2.1			
South channel velocity	0	1.5 - 4 fps	Average	3.7			
West entrance differential	0	1.0' - 2.0'	Average	1.5			
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	1.5	Daily differentials & weir depths, see <b>AVGS</b> tab.		
Entrance weir S1	0	depth (≥ 8')	Average	9.0	Manually adjusted.		
Entrance weir S2	0	depth (≥ 8')	Average	9.0			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	1	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' - 0.8'			
Spill volume	0	40%, 24hr					
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:

MU15, MU16, and T8 OOS due to transformer oil issues RTS ~8/8/2013. Will not test units outside 1% operation as originally planned.

MU1 OOS 0600 6/24/2013 to 1700 8/1/2013 for Digital Governor Installation

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

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

Calibration completed 7/13. All entrance weirs, channel/tailwater and exit staff gauges in criteria within +/- 0.3'.

Gatewell drawdown completed on 7/20. All values were within the 1.5' criteria and ranged from 0.2' - 0.8'.

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

MU 17/18 T9 outage on 7/18 from 0921 -1130 hrs.

Refer to daily operations status report for details.

**Maintenance:**

The I/T sluiceway lift beams have been installed for 1-1, 1-2, 1-3 gates. Lift beams for 1-2 and 1-3 have recessed bars for less passage interference; 1-1 side bars do not have recessed bars and need to be fixed.

The control room fish unit discharge dial is going to be replaced with a digital read out that indicates flow.

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.

District ROV sonar scan of turbine intake trashracks planned for 8/5 and 8/6. Cordie to hold safety clearances.

Project ROV inspection of fishway diffuser grating for mid season inspection requirement planned for 8/5. Keller to hold safety clearances.

**Studies:**

**PIT** - Temporary Thin Wall PIT tag Antenna continues to work successfully. Plans to replace all aluminum shade paneling over north count slot to correct minor data interference. All other follow on work completed by project and PSMFC.

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

**PUD** - Second (freedom) turbine proposal out for review. PUD/COE memorandum of understanding for present operation edited and awaiting approval.

**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 Lamprey Collection 2013 from east count station picket leads. Umatilla collected 45 and Yakama 113. 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; 85 total NPM, NPM  $\geq$  230 mm - 84, sturgeon - 1, game fish - 2.

Pacific States Marine Fisheries Commission fish sampling of the PUD juvenile bypass. See NWC PUD report #13-14 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

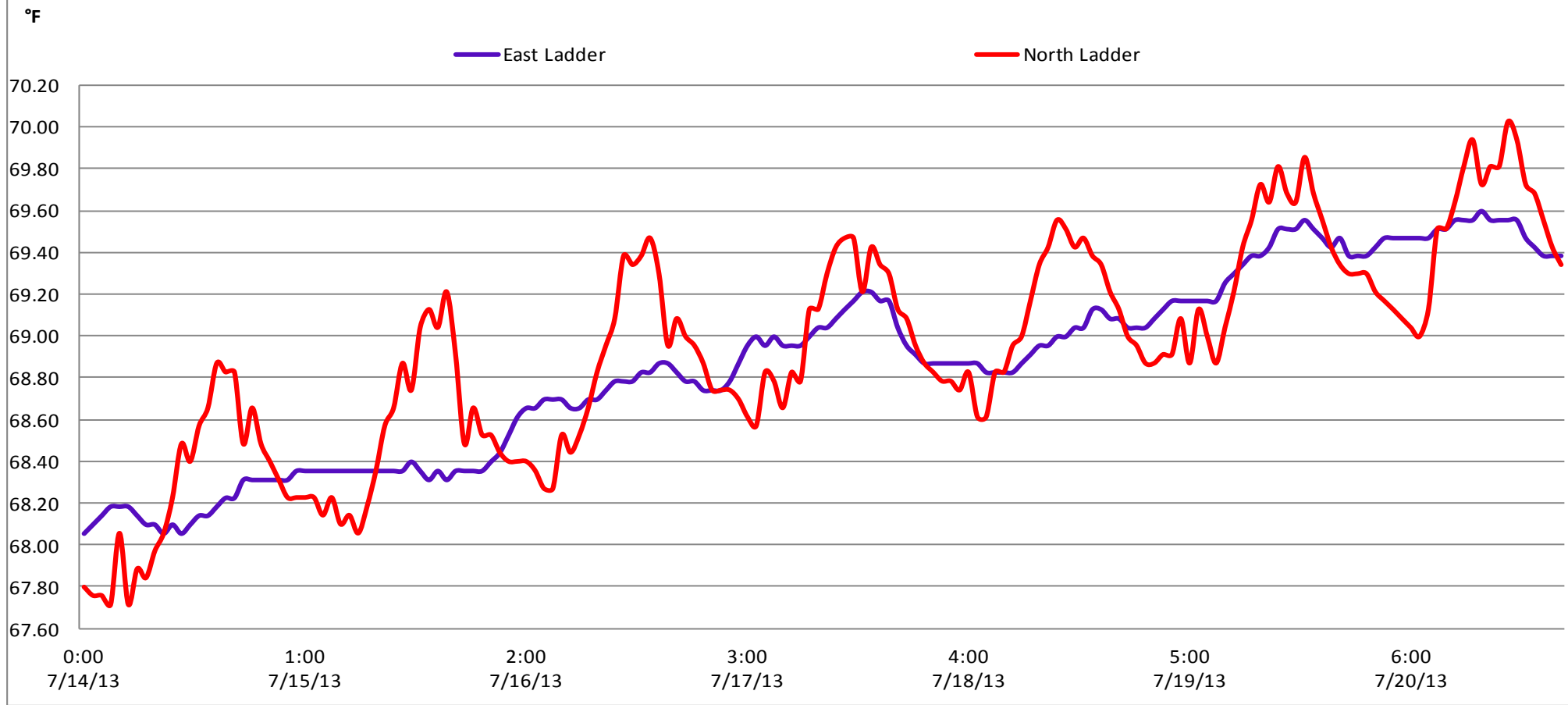
Plans to finish USGS derelict gear removal from powerhouse pier-noses this winter.

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

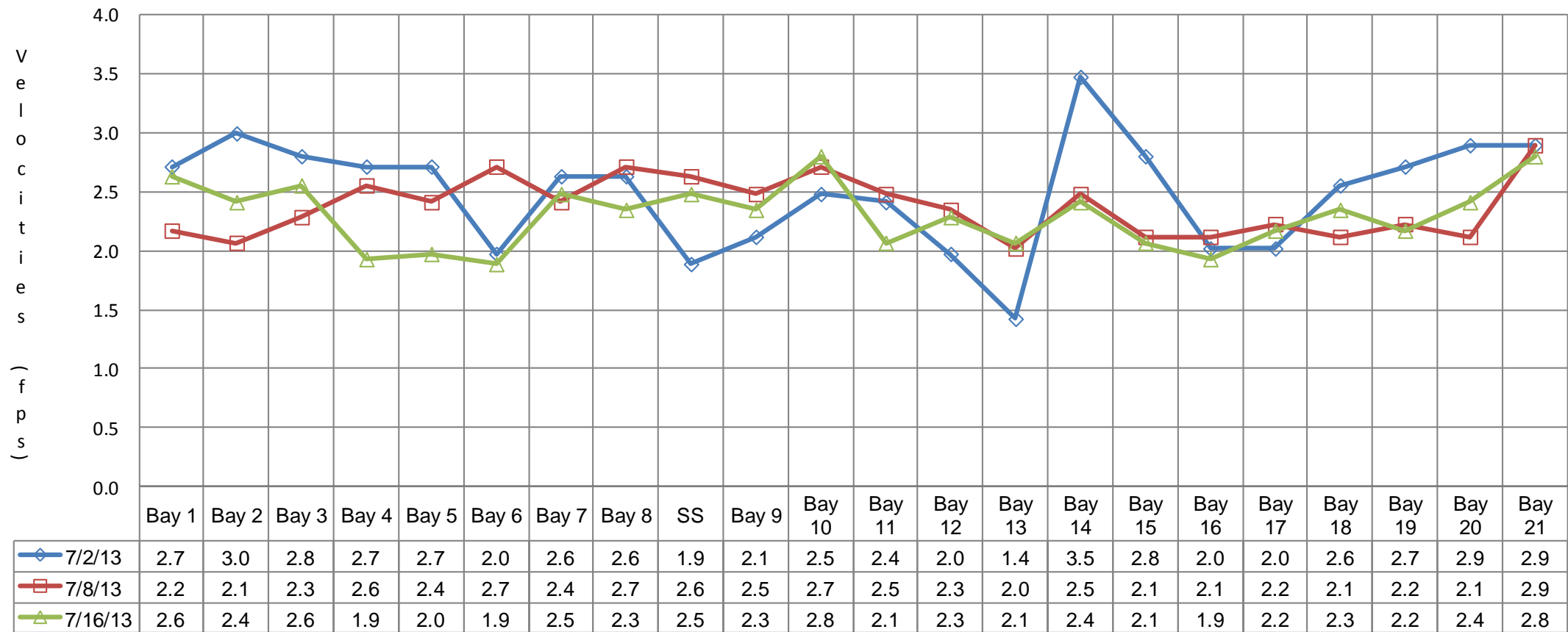
Approved by;  
Ron D. Twiner  
Operation Project Manager  
The Dalles Dam

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	#				
7/14/2013	77.7	904	22.3	260	86	227	14	37	82.7	492	17.3	103	74.7	215	25.3	73	81.5	1909	18.5	433		0		0		0		0	43.9	79	56.1	101	39.9	188.5
7/15/2013	82	760	18	167	86.6	149	13.4	23	89.7	723	10.3	83	87.9	445	12.1	61	88.4	1832	11.6	241		0		0		0		0	54.5	42	45.5	35	39.9	196.3
7/16/2013	82	420	18	92	87.8	101	12.2	14	86.3	542	13.7	86	84.7	271	15.3	49	70.5	965	29.5	403		0		0		0		0	43.6	48	56.4	62	40.1	181.5
7/17/2013	81	816	19	191	85.8	109	14.2	18	86.3	776	13.7	123	86.8	478	13.2	73	77.4	1496	22.6	437		0		0		0		0	69.4	161	30.6	71	40.1	173.6
7/18/2013	68.4	438	31.6	202	86.7	130	13.3	20	76.8	902	23.2	272	72.5	486	27.5	184	64.5	784	35.5	432		0		0		0		0	35	71	65	132	39.8	176.2
7/19/2013	71.5	486	28.5	194	80.8	80	19.2	19	74.7	1064	25.3	361	74.5	684	25.5	234	66.3	695	33.7	353		0		0		0		0	46.4	98	53.6	113	39.9	176.9
7/20/2013	74.5	458	25.5	157	90.3	102	9.7	11	73.6	1154	26.4	414	72.1	702	27.9	271	72	482	28	187		0		0		0		0	63.7	188	36.3	107	40	187.2
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							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#						
	72.2		22.8		86.3		13.7		79.7		20.3		77.6		22.4		76.7		23.3		0		0		0		0		52.5		47.5			

# The Dalles Dam Adult Fish Ladder River/Water Temperatures



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



# The Dalles Dam Avian Zone Map

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T2

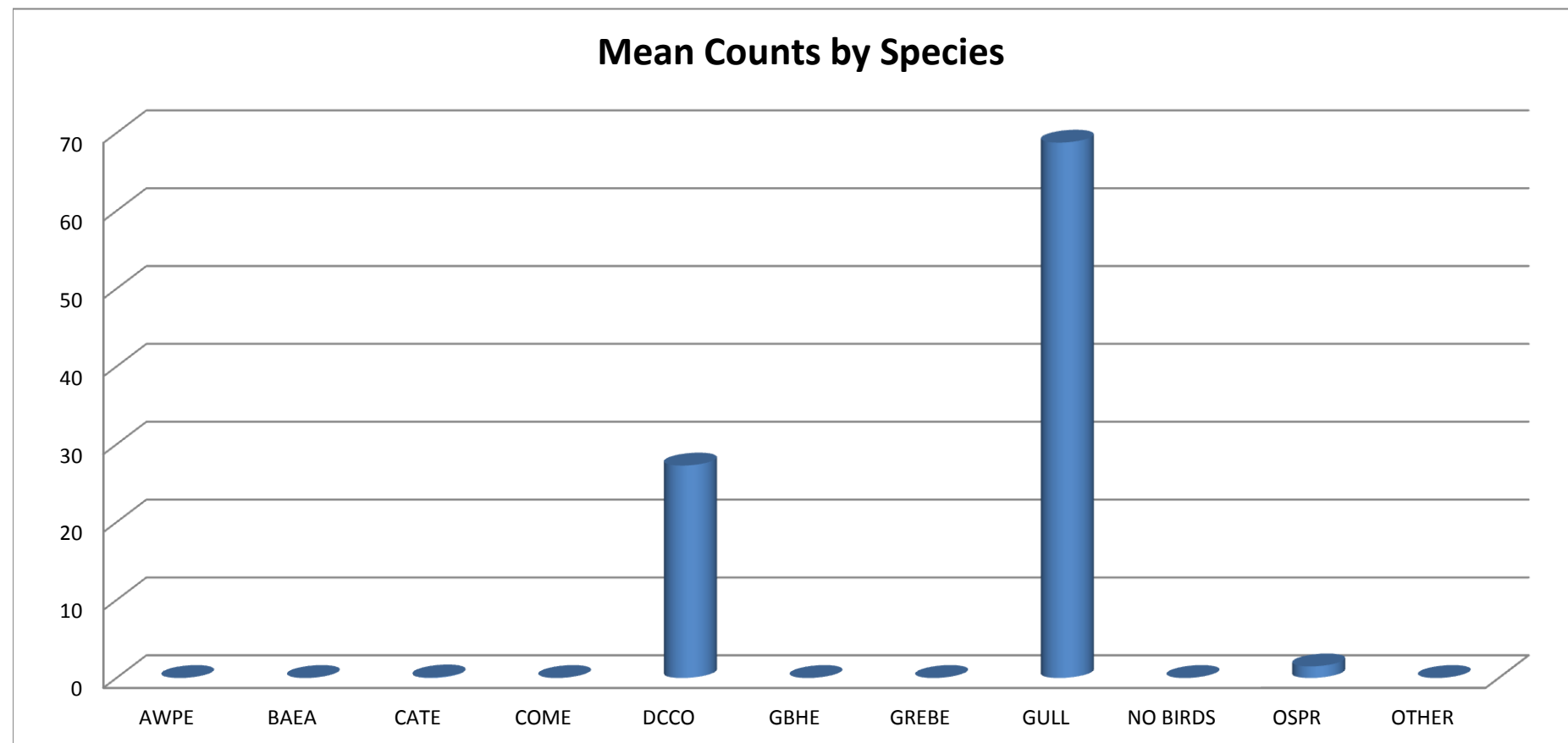
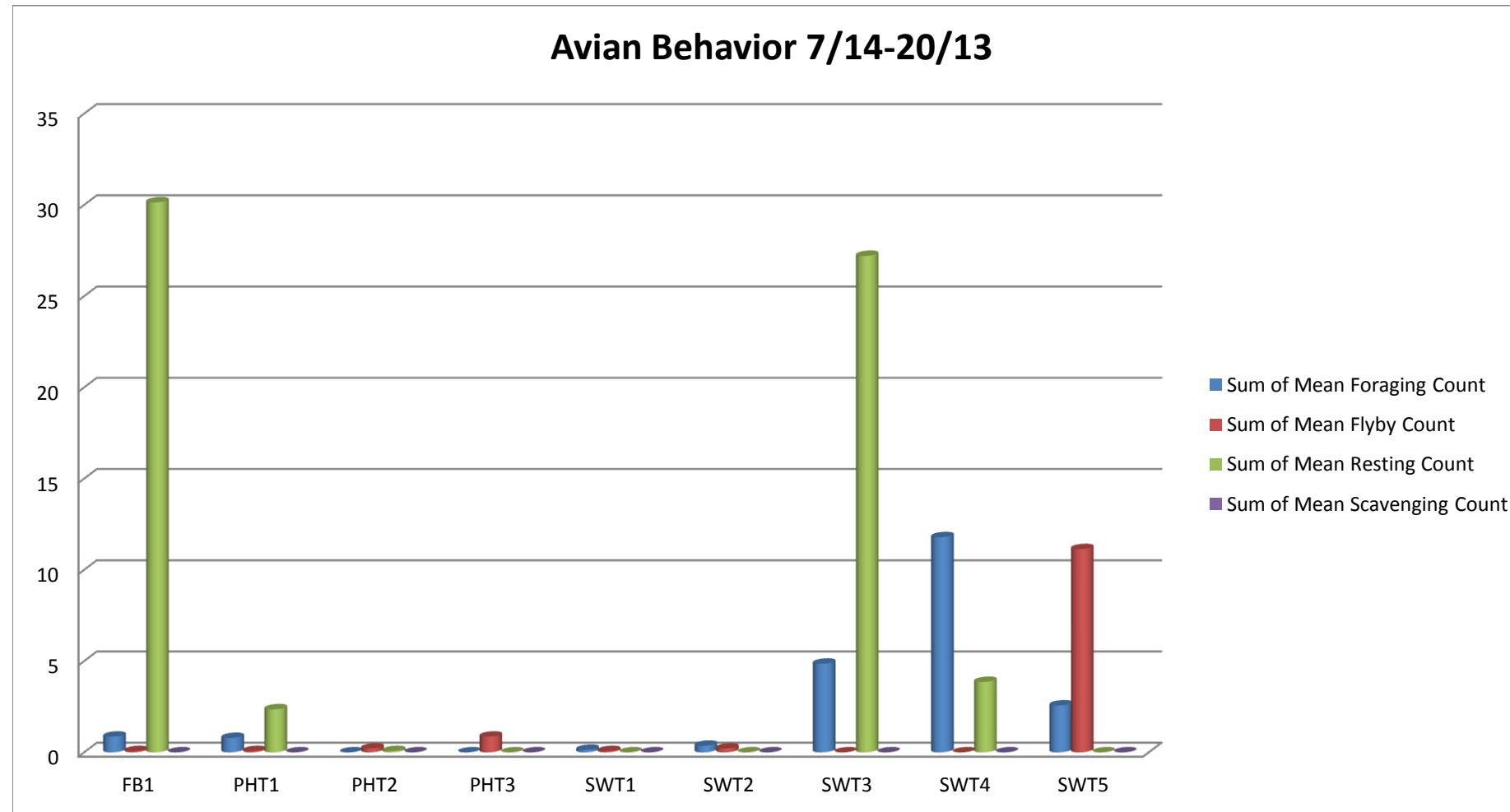
SW-T3

SW-T4

Oregon Shore

SW-T5





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:	
68.3	SUN	5.0	
68.5	MON	5.0	
68.8	TUES	5.0	
69.1	WED	5.0	
69.4	THUR	5.0	
69.6	FRI	5.0	
69.5	SAT	5.0	
AVG: 69.0	AVG:	5.0	

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

= scada inspection

North Fish Ladder		East Fish Ladder										South Entrance			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
7/14/13	1.4	9.9	1.6	0.0	12.4	12.4	10.3	1.5	8.3	8.2		1.5	9.0	8.9	40.0
7/14/13	1.3	9.8	1.5	0.0	12.4	12.4	10.1	1.5	8.4	8.3		1.5	9.1	9.0	39.6
7/14/13			1.5	0.0	12.5	12.4	10.1	1.5	8.3	8.4		1.5	9.1	9.0	
7/15/13	1.3	10.0	1.6	0.1	12.6	12.6	11.2	1.6	8.3	8.3		1.6	9.0	9.0	40.3
7/15/13	1.3	9.9	1.6	0.1	12.4	12.4	11.2	1.6	8.3	8.3		1.6	9.1	9.0	39.7
7/15/13			1.4	0.1	12.7	12.6	10.6	1.5	8.3	8.3		1.5	9.1	9.0	
7/16/13	1.3	10.0	1.5	0.0	12.0	12.0	9.9	1.5	8.3	8.4		1.5	9.0	9.0	40.5
7/16/13	1.4	9.8	1.5	0.0	12.1	12.1	9.7	1.5	8.4	8.3		1.5	9.1	9.1	39.9
7/16/13			1.5	0.1	12.1	12.1	9.8	1.4	8.3	8.4		1.5	8.9	8.9	
7/17/13	1.2	9.8	1.5	0.2	11.8	11.8	9.4	1.6	8.2	8.2		1.6	8.8	8.8	39.8
7/17/13	1.3	9.9	1.8	0.0	12.1	12.0	11.4	1.7	8.1	8.3		1.6	8.9	9.1	
7/17/13			1.6	0.0	11.9	11.9	9.7	1.4	8.3	8.3		1.6	8.9	8.9	
7/18/13	1.3	9.9	1.5	0.0	11.9	11.9	9.3	1.5	8.3	8.2		1.5	8.9	8.9	41.9
7/18/13	1.4	9.8	1.5	0.1	12.4	12.4	10.4	1.5	8.3	8.2		1.6	9.0	9.0	40.2
7/18/13			1.5	0.1	11.9	12.0	9.6	1.5	8.3	8.2		1.5	8.9	8.9	
7/19/13	1.3	9.8	1.4	0.1	12.5	12.6	9.3	1.4	8.5	8.2		1.3	9.0	9.1	40.4
7/19/13	1.3	10.0	1.5	0.1	12.5	12.5	10.6	1.6	8.3	8.2		1.5	9.1	9.1	39.6
7/19/13			1.3	0.1	12.5	12.5		1.4	8.2	8.2		1.4	8.9	9.0	
7/20/13	1.4	10.1	1.5	0.0	12.5	12.5	11.6	1.5	8.4	8.2		1.5	9.0	9.0	40.2
7/20/13	1.4	9.8	1.6	0.1	13.7	13.7	12.7	1.6	8.8	8.2		1.4	9.1	9.2	39.8
7/20/13			1.5	0.9	12.5	12.5		1.5	8.3	8.3		1.5	9.0	8.9	
<b>AVG:</b>	1.3	9.9	1.5	0.1	12.4	12.3	10.4	1.5	8.3	8.3	closed	1.5	9.0	9.0	40.1

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