

The Dalles Dam Fishway Status Report

Date: 3-November-2013
Inspection Period: 10/27-11/02/2013

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 Out of Criteria	Criteria Limit	Total Number of Inspections: 20	Temperature: 56.9 F
			Comments	Secchi: in ' 5.0
NORTH FISHWAY				
Exit differential	0	≤ 0.5'	Cleaned north forebay staff gauge 10/31.	
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 8.7	
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'	Picketed leads raked several times per week.	
Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	depth (≥ 7')	Out of criteria due to low tailwater and was pulled out of the water on 10/21/13.	
East entrance differential	0	1.0' - 2.0'	Average 1.6	
Entrance weir E1	0	No criteria	Average 11.3	Manually adjusted.
Entrance weir E2	0	depth (≥ 8')	Average 11.2	
Entrance weir E3	0	depth (≥ 8')	Average 11.5	
Collection channel velocity	0	1.5 - 4 fps	Average 2.3	See Velocities tab for more complete information.
Transportation channel velocity	0	1.5 - 4 fps	Average 2.3	
North channel velocity	0	1.5 - 4 fps	Average 2.6	
South channel velocity	0	1.5 - 4 fps	Average 3.2	
West entrance differential	0	1.0' - 2.0'	Average 1.4	Daily differentials & weir depths, see AVGS tab.
Entrance weir W1	0	depth (≥ 8')	Average 8.2	Out of criteria at 7.9'.
Entrance weir W2	0	depth (≥ 8')	Average 8.2	Out of criteria at 7.9'.
Entrance weir W3	0	No criteria	Average Closed	
South entrance differential	3	1.0' - 2.0'	Average 1.1	OOC at 0.9', 0.8'; manually adjusted; Low tailwater.
Entrance weir S1	0	depth (≥ 8')	Average 8.2	
Entrance weir S2	0	depth (≥ 8')	Average 8.1	
JUVENILE PASSAGE				
Sluiceway operation	0	units 1,8,18		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.1' - 0.3'	
Spill volume	0	40%, 24hr	On seal.	
Spill Pattern	0	per FPP	On seal.	
Turbine Unit Priority	0	per FPP		
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:**Birds/Sea lions:**

Bird observation data collected twice daily. Gull and cormorant numbers increasing on rocks upstream of bridge, grebes in the forebay and mergansers and cormorants in PH1. See avian zones map and distribution tabs. No sea lion sightings this week.

Operations:

North and south entrance bulkhead sills to be cleaned via ROV or diver Nov 12.
Gateway drawdown completed 10/28. Values ranged from 0.1' - 0.3' (within criteria).
Calibration of entrance weirs, entrance channel/tailwater, exit staff gauges 11/1. Few out of criteria by 0.1'.

Current Outages:

Main Unit 15 out of service 0700 9/17/2013 to 1700 10/31/2013 for five year overhaul.
Station Service 01 OOS 0600 10/15/2013 to 1700 11/29/2013 for digital governor installation.
Transformer five OOS 0600 10/21/2013 to 1700 10/31/2013 for bushing replacement.
One generic MU OOS rolling daily 0630 10/28/2013 to 1700 11/1/2013 for WECC model validation testing.
MU 7 and MU8 out of service 0600 on 10/30 for scheduled disconnect upgrade measurements; return to service 1557 10/30.
MU 9 returned to service 1448 on 10/31 from scheduled T5 transformer bushing replacement.

Maintenance:

Fishway PLC automation inaccuracy problem for east fishway entrance weir E2 corrected.
Fishway winter maintenance dewatering schedule; East fishway Dec 4 to mid Jan. North fishway Jan 15 through end of Feb.
Main jobs to be addressed; west entrance grating attachment upgrade, east exit weir upgrades, East exit water leak over electrical panel repair, west entrance wheel replacement, north ladder brush removal and fish lock back flushing operation.
The south entrance differential trend was out of criteria 0336 - 0415 hrs. 10/29.

Studies:

PIT - Temporary Thin Wall PIT tag Antenna continues to work successfully. Slight modification to north upstream antenna positioning planned.
EFL - Project resumed after Government shutdown. Plan to run 10' pipe through dam directly to AWS conduit under east fishladder.
PUD - "Freedom" turbine proposal out for review. Modification of original FERC license underway. PUD consultant meeting Nov 7 at NOAA office.
Lamprey - A pre-construction meeting completed for lamprey plating modifications in east ladder. Work to begin Dec 9.

Research/Contractors:

Tribal lamprey trapping completed.
WDFW Northern Pike minnow dam Angling completed.
Plans underway for dive removal of remaining pier nose antennas this winter.
USFWS camera lamprey monitoring at both count stations completed. Equipment removal this winter.
Normandeau fish counters performing video counting through 9/30 and visual counting to 10/31.
Last set of 3 derelict Vertical Barrier Screens (VBS) from 90's research remains in MU 12 gateway slot. To be removed as time/funding allows.
University of Idaho adult RT new antennas both fish ladders completed and operating. Plans to clean up unused antennas this winter.

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

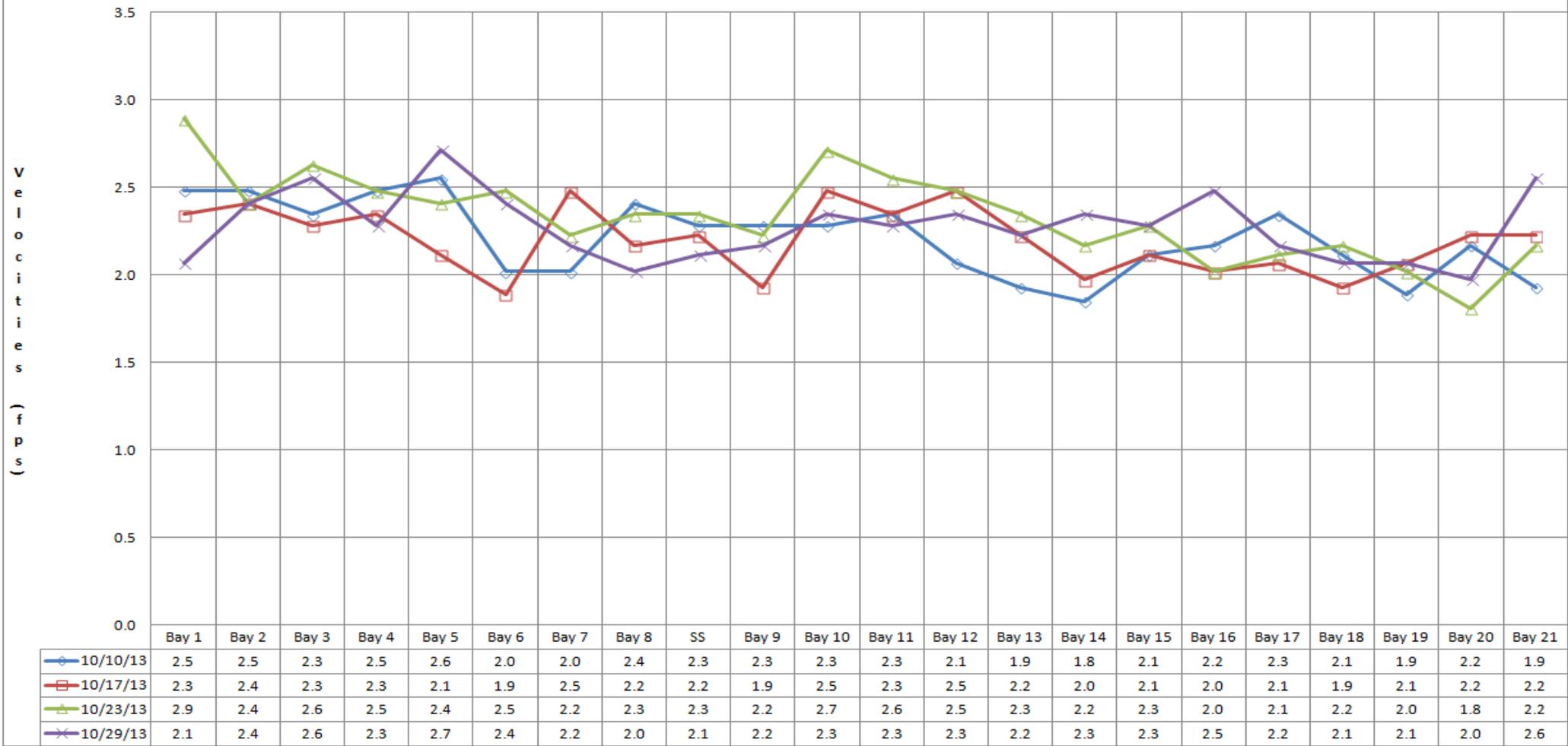
DART The Dalles Adult Ladders Daily Usage with Spill Percent and Outflow

Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Coho				Jack Coho				Lamprey				Spill Pct	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							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#				
27-Oct-13	76	493	24	156	65.2	43	34.8	23	81.2	69	18.8	16	80	20	20	5	79.2	19	20.8	5	67	4	33.3	2		0	0	0	83.5	
28-Oct-13	79.8	331	20.2	84	96.8	60	3.2	2	77.1	84	22.9	25	83.8	31	16.2	6	93.3	28	6.7	2	100	4	0	0		0	0	0	104.4	
29-Oct-13	83	385	17	79	89.4	59	10.6	7	85.9	79	14.1	13	82.2	37	17.8	8	58.8	20	41.2	14	100	2	0	0	0	0	100	1	0	102.4
30-Oct-13	74.2	331	25.8	115	78.8	41	21.2	11	90	81	10	9	86.1	31	13.9	5	73.9	17	26.1	6	50	2	50	2		0	0	0	93.4	
31-Oct-13	79.4	246	20.6	64	97.3	71	2.7	2	80	60	20	15	60.7	17	39.3	11	89.7	35	10.3	4		0		0	100	4	0	0	0	61.5

Ladder orientations reference the side of the river when facing downstream.

LAST FISH COUNTS AT THE DALLES DAM ADULT FISH LADDERS 10/31/2013

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-T3

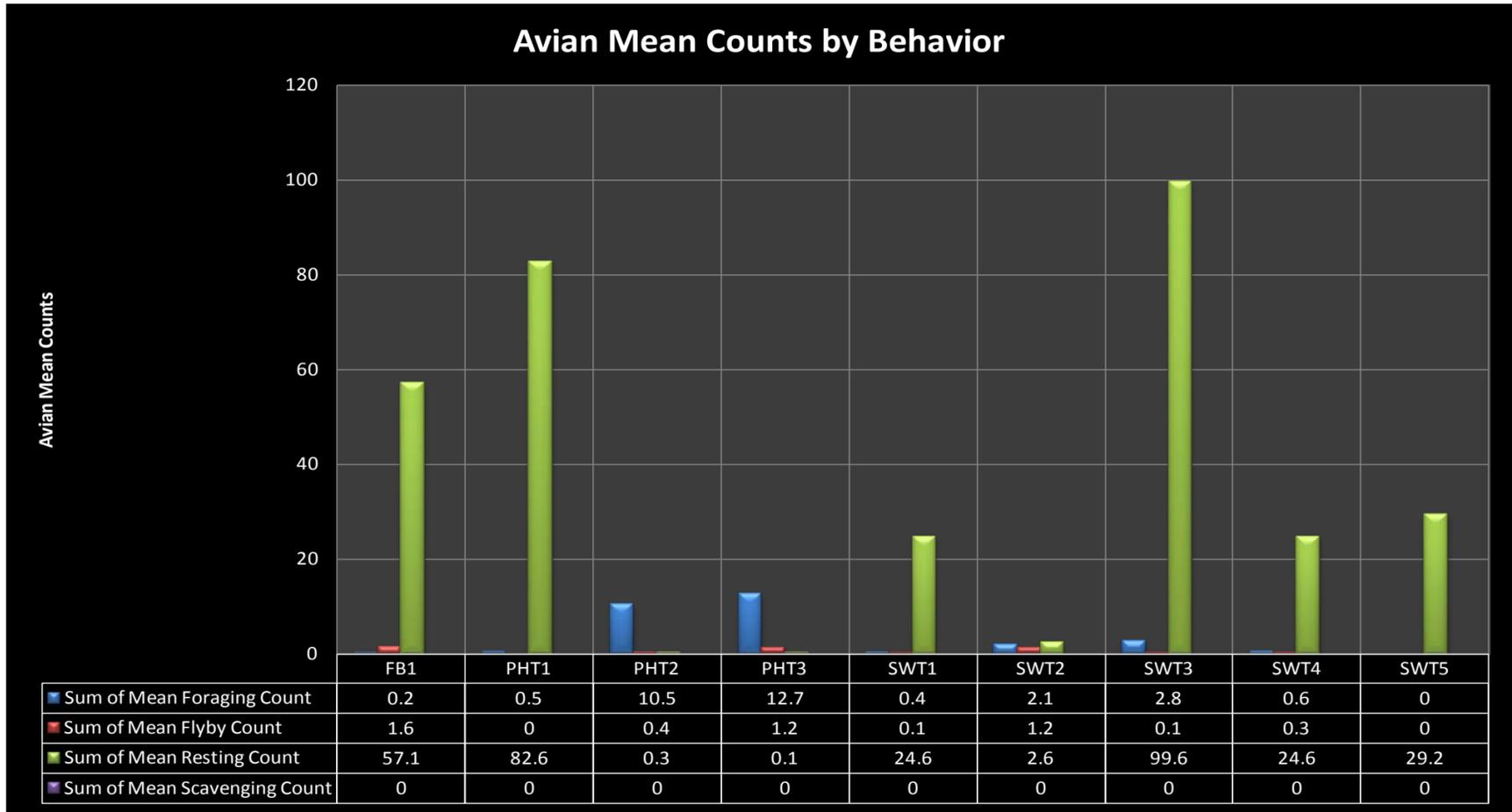
SW-T2

SW-T4

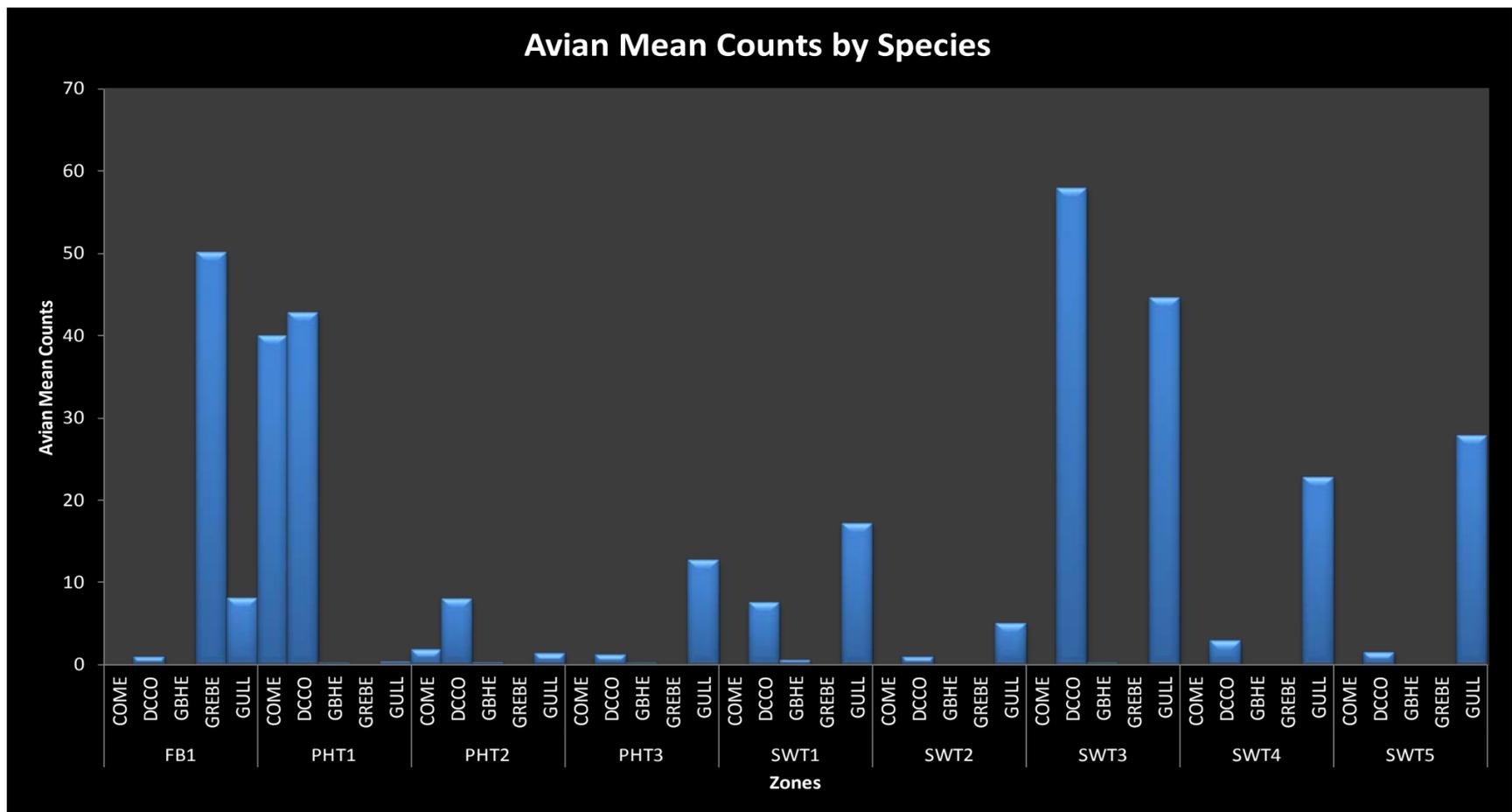
SW-T5

Oregon Shore



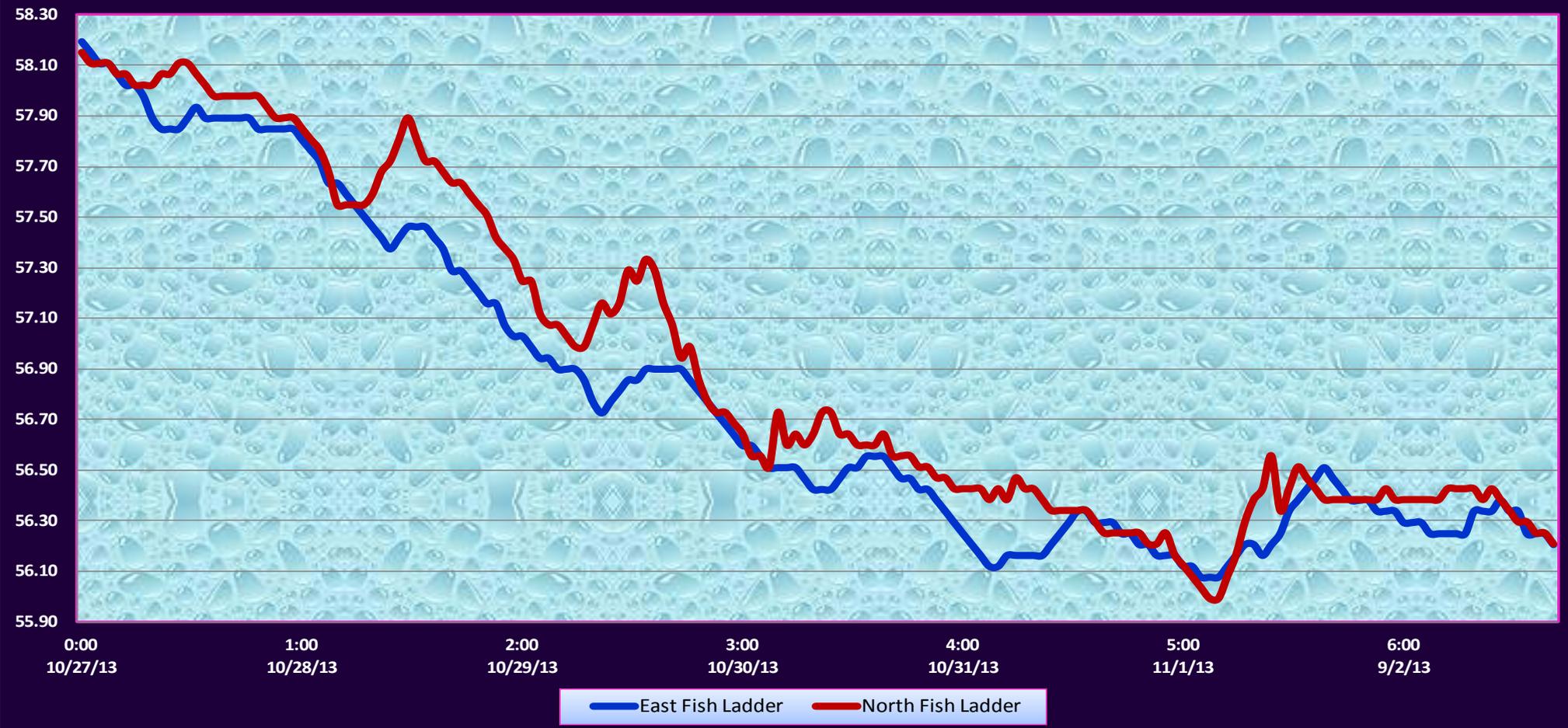


AWPE - American White Pelican; BAEA - Bald Eagle; CATE - Caspian Tern; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species); OSPR - Osprey



The Dalles Dam Adult Fish Ladder River/Water Temperatures

°F



Temp:			Secchi:	
58		SUN	5.0	
57.6		MON	5.0	
57.0		TUES	5.0	
56.6		WED	5.0	
56.3		THUR	5.0	
56.8		FRI	5.0	
56.2		SAT	5.0	
AVG:	56.9	AVG:	5.0	

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

= out of criteria

North Fish Ladder			East Fish Ladder											S P I L L O N S E A L
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	
27-Oct-13			1.5	11.0	9.9	11.4	7.3	1.2	8.1	8.0	B U L K H E A D I N S T A L L E D	1.0	8.2	8.1
27-Oct-13	1.4	8.4	1.5	11.3	10.2	11.7	7.6	1.2	8.2	8.1		1.0	8.1	8.2
27-Oct-13	1.3	8.5	1.6	10.9	9.8	11.3	7.2	1.1	8.2	8.1		0.9	8.2	8.3
28-Oct-13			1.6	11.4	10.3	11.8	7.7	1.1	8.2	8.3		1.0	8.1	8.1
28-Oct-13	1.4	8.5	1.5	11.5	10.4	11.5	7.8	1.3	8.1	8.0		1.1	8.1	8.0
28-Oct-13	1.4	9.0	1.5	11.6	11.7	11.6	8.4	1.2	8.1	8.1		1.1	8.2	8.1
29-Oct-13			1.6	11.5	11.1	11.7	8.6	1.3	8.2	8.1		1.0	8.2	8.2
29-Oct-13	1.3	9.0	1.7	11.4	10.9	11.6	9.6	1.6	8.0	8.0		1.2	8.2	8.2
29-Oct-13	1.5	9.0	1.7	12.0	12.7	12.0	9.2	1.6	8.0	8.0		1.2	8.1	8.1
30-Oct-13			1.7	11.2	12.1	11.6	7.5	1.4	8.1	8.2		1.0	8.3	8.3
30-Oct-13	1.3	8.8	1.5	11.7	12.0	12.1	8.0	1.4	8.1	8.1		1.2	8.2	8.1
30-Oct-13	1.4	8.7	1.7	11.0	11.0	11.1	9.5	1.5	8.1	8.2		1.3	8.1	8.1
31-Oct-13			1.5	10.9	10.6	11.0	7.8	1.2	8.4	8.4		0.8	8.4	8.3
31-Oct-13	1.4	8.8	1.6	11.0	11.1	11.0	9.5	1.4	8.2	8.2		1.2	8.1	8.2
31-Oct-13	1.3	8.6	1.6	11.1	11.0	11.0	8.6	1.3	8.2	8.2		1.2	8.2	8.1
1-Nov-13			1.6	11.1	11.1	11.1	9.1	1.5	8.3	8.3		1.2	8.1	8.1
1-Nov-13	1.4	8.6	1.6	11.3	11.3	11.3	9.5	1.5	8.2	8.2		1.3	8.1	8.1
1-Nov-13	1.4	8.7	1.7	11.0	11.0	11.0	9.2	1.5	8.3	8.4		1.3	8.1	8.1
2-Nov-13			1.7	11.1	11.1	11.1	10.1	1.6	8.3	8.3		1.3	8.1	8.1
2-Nov-13	1.4	8.6	1.5	11.5	12.0	11.9	10.6	1.6	8.2	8.2		1.3	8.1	8.0
2-Nov-13	1.5	8.7	1.5	11.4	12.9	12.9	11.6	1.4	9.0	9.0	1.4	8.0	8.0	
AVG:	1.4	8.7	1.6	11.3	11.2	11.5	8.8	1.4	8.2	8.2	closed	1.1	8.2	8.1

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