

The Dalles Dam Fishway Status Report

Date: 9/1/2013
 Inspection Period: 8/25-31/2013

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	Criteria	Total Number of Inspections:	21	Temperature:	72.1 F
	Out of Criteria	Limit	Comments		Secchi:	5.1 Ft.
NORTH FISHWAY						
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	9.8		
Entrance weir N2		Closed	Bulkhead installed.			
PUD Intake differential	1	≤ 0.5'	OOC at 0.6'. Trash rack raked.			
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'	Raked east count station on 8/27/13. Debris has been light this year.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.			
East entrance differential	1	1.0' - 2.0'	Average	1.6		
Entrance weir E1	0	No criteria	Average	12.6	Manually adjusted.	
Entrance weir E2	0	depth (≥ 8')	Average	12.6		
Entrance weir E3	0	depth (≥ 8')	Average	12.6		
Collection channel velocity	0	1.5 - 4 fps	Average	2.2	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	3.4		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	8.2		
Entrance weir W2	0	depth (≥ 8')	Average	8.2		
Entrance weir W3	0	No criteria	Average	closed		
South entrance differential	0	1.0' - 2.0'	Average	1.2	Daily differentials & weir depths, see AVGS tab.	
Entrance weir S1	0	depth (≥ 8')	Average	8.1		
Entrance weir S2	2	depth (≥ 8')	Average	8.1	Low tailwater, manually adjusted.	
JUVENILE PASSAGE						
Sluiceway operation	0	units 1,8,17	MU18 is out of service. The sluiceways have been changed to MU 17.			
Turbine trashrack drawdown	0	<1.5', wkly	Range:	0.3-0.8'		
Spill volume	0	40%, 24hr				
Spill Pattern	0	per FPP				
Turbine Unit Priority	1	per FPP	Control room operator notified and adjusted.			
Turbine 1% Efficiency	0	per FPP				

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

Bird observation data collected twice daily. Bird numbers are low, the majority of piscivorous birds are gulls upstream and downstream of the bridge and cormorants resting on forebay electrical towers. See avian zones map and distribution tabs. There were no sea lion sightings this week.

Operations:

Main Unit 15, 16, and T8 limited to 120 MW & +/- 50MVAR - Through ~ 2016.

MU21 OOS 0600 8/5/2013 to 1700 9/19/2013 for Digital Governor installation.

MU18 OOS 0600 8/26/2013 to 1700 10/3/2013 for Digital Governor Installation.

The Dalles north Ladder, east ladder, and I/T sluiceway are operational in accordance with the Fish Passage Plan except sluiceways open at MU 17 instead of MU 18.

Gatewell drawdown was completed on 8/31/13. The differential values ranged from 0.3-0.8' and were within criteria.

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 rake repair complete. Debris loading low.

Spill response team practice occurred 8/29. Priority to protect fishway exits from upstream oil spills.

Sluiceway 1-3 lift beam drags in flow at >159' forebay. Not considered fish impact, but possible debris buildup. Investigation underway to correct.

Studies:

PIT - Temporary Thin Wall PIT tag Antenna continues to work successfully. Minor shad paneling repair planned for winter.

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

PUD - "Freedom" turbine proposal out for review. Pursuing modification of original FERC license. Public meeting and site tour planned 9/11.

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:

USFWS plans to remove all of their old equipment this winter dewatering and maintenance period from the fish ladders.

The Yakama Nation, Confederated Tribes and Bands of the Umatilla Indian Reservation, and Nez Perce have concluded summer lamprey trapping for restocking efforts.

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 with low catch rates. Most fishing primarily from powerhouse deck. Dam angling effort hours - 5.75, Total NPM - 4, NPM \geq 230 4, Sturgeon - 1.

University of Idaho adult RT new antennas both fish ladders completed and operating. Plans to clean up unused antennas this winter.

Normandeau fish counters continue 16/day fish counts through October. Chinook and steelhead passage steadily increasing. Peak expected around mid September.

Derelict USGS I-beams on pier noses to be removed by project maintenance. Plans to remove remaining pier nose antennas this winter by dive.

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

Checking with other projects if usable. One more set of 11 panels to be removed as time allows.

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

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

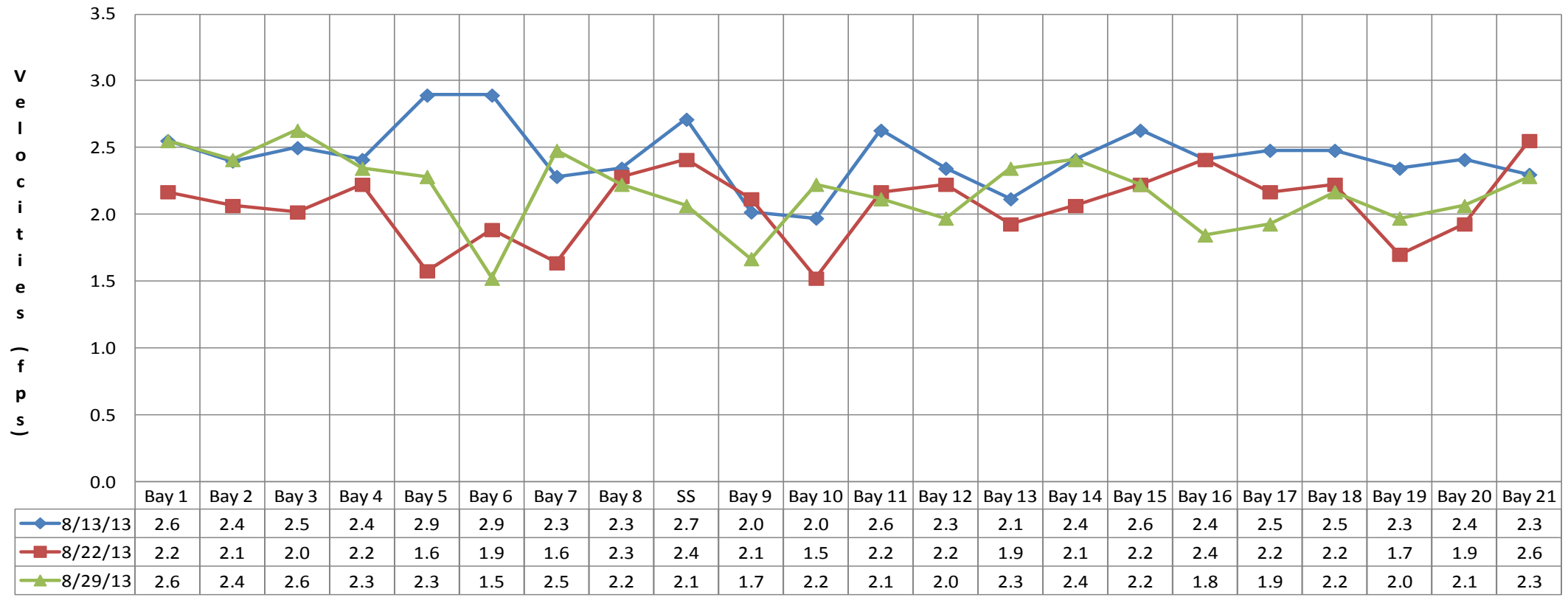
Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct [Right]	Outflow (kcfs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#				
8/25/2013	81	4396	19	1055	81	862	19	202	61	694	39.1	446	58.3	260	42	186	0	0	100	2	65.8	25	34.2	13	92.9	13	7.1	1	19	4	81	17	39.9	99.9
8/26/2013	72	2836	29	1130	79	695	21	185	69	491	30.6	216	69.3	192	31	85	100	2	0	0	83.3	30	16.7	6	100	6	0	0	94.7	18	5.3	1	40.2	122.8
8/27/2013	82	4211	18	925	85	955	15	169	62	675	38.4	420	57.7	226	42	166		0		0	60.5	26	39.5	17	86.7	13	13.3	2	27.3	6	72.7	16	40.1	113.7
8/28/2013	64	2653	36	1506	77	816	23.5	251	60	743	39.7	490	63.1	274	37	160	0	0	100	1	73.8	31	26.2	11	85.7	6	14.3	1	55.6	20	44.4	16	40.1	119.9
8/29/2013	57	3671	43	2778	67	722	33.5	364	56	690	43.9	541	51.6	206	48	193		0		0	46.3	25	53.7	29	41.7	5	58.3	7	35.7	10	64.3	18	40.3	122.8
8/30/2013	50	4681	50	4685	63	870	37.3	517	56	625	44	491	52.5	210	48	190	33	1	67	2	43.9	61	56.1	78	63.2	12	36.8	7	25.8	8	74.2	23	39.9	125.8
8/31/2013	54	9500	46	8011	79	2176	20.8	571	54	1018	46.1	872	55.1	348	45	284	100	1	0	0	63.2	187	36.8	109	61.9	13	38.1	8	31.6	6	68.4	13	40.2	102
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	Left Ladder Pct	Right Ladder Pct				
	61.4	38.6	75.9	24.1	58.7	41.3	57.6	42.4	44.4	55.6	59.4	40.6	72.3	27.7	40.9	59.1																		

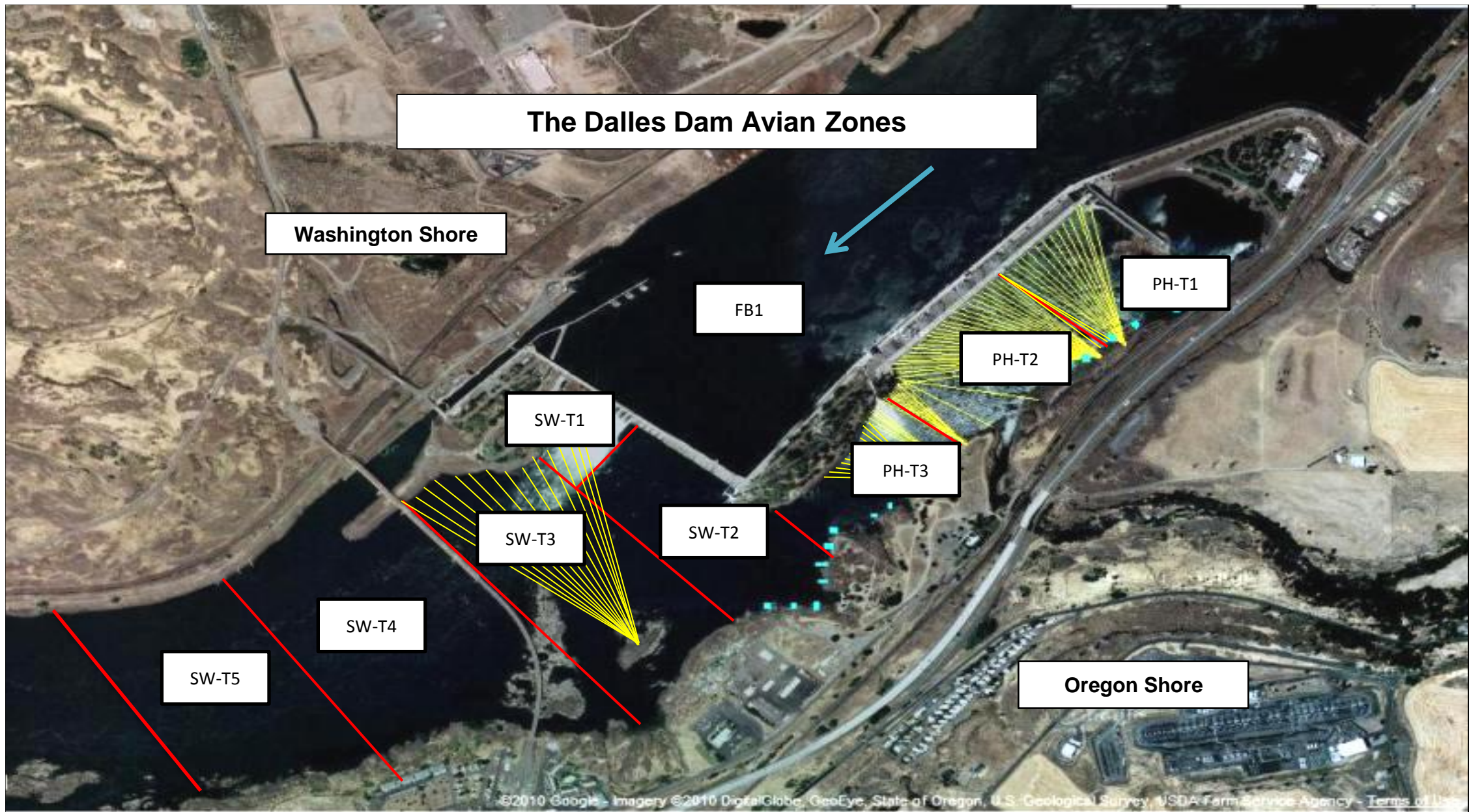
NOTES:

, if either the Right Ladder or Left Ladder species count is: negative or null for the day.

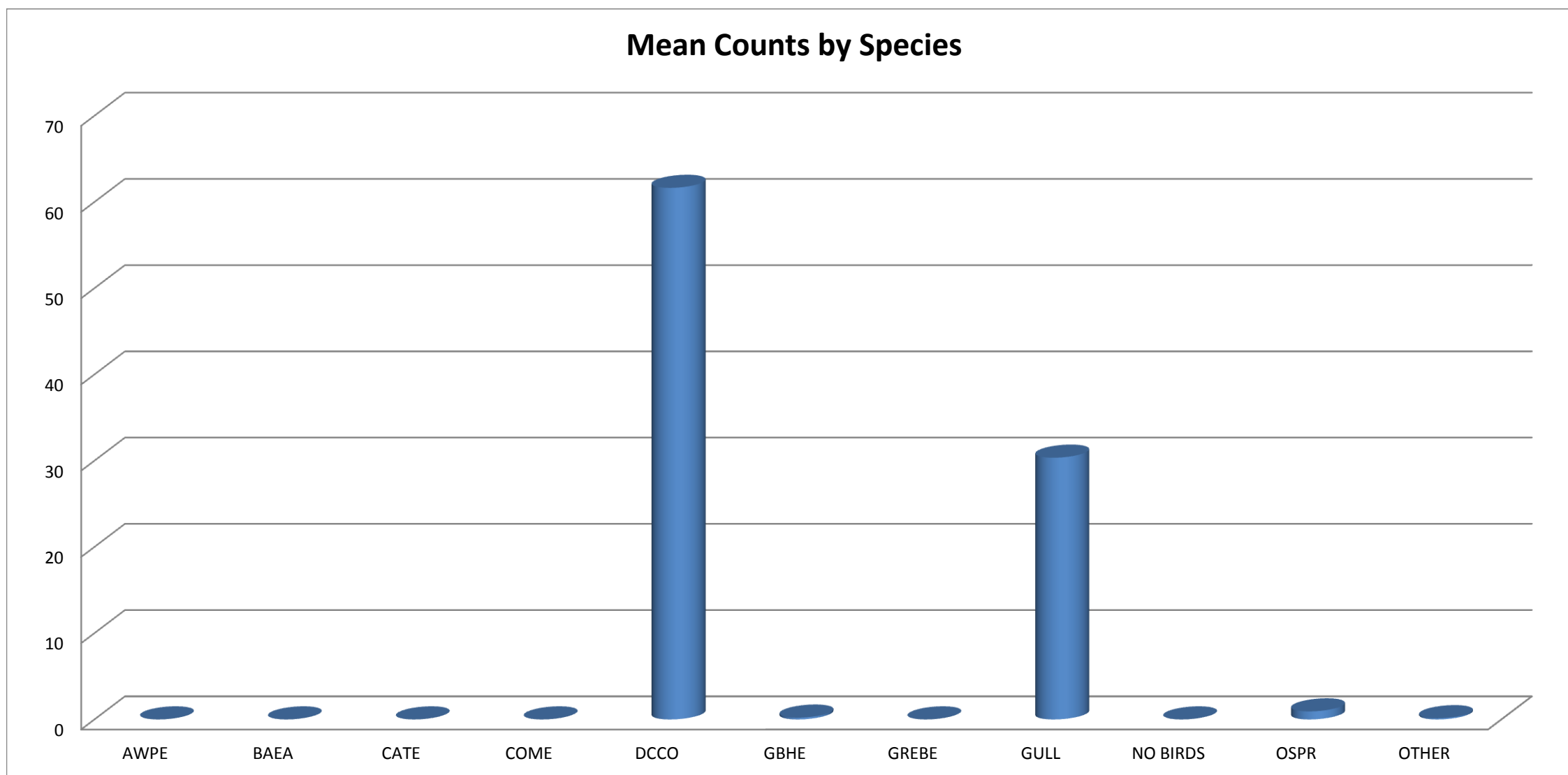
he side of the river when facing downstream.

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



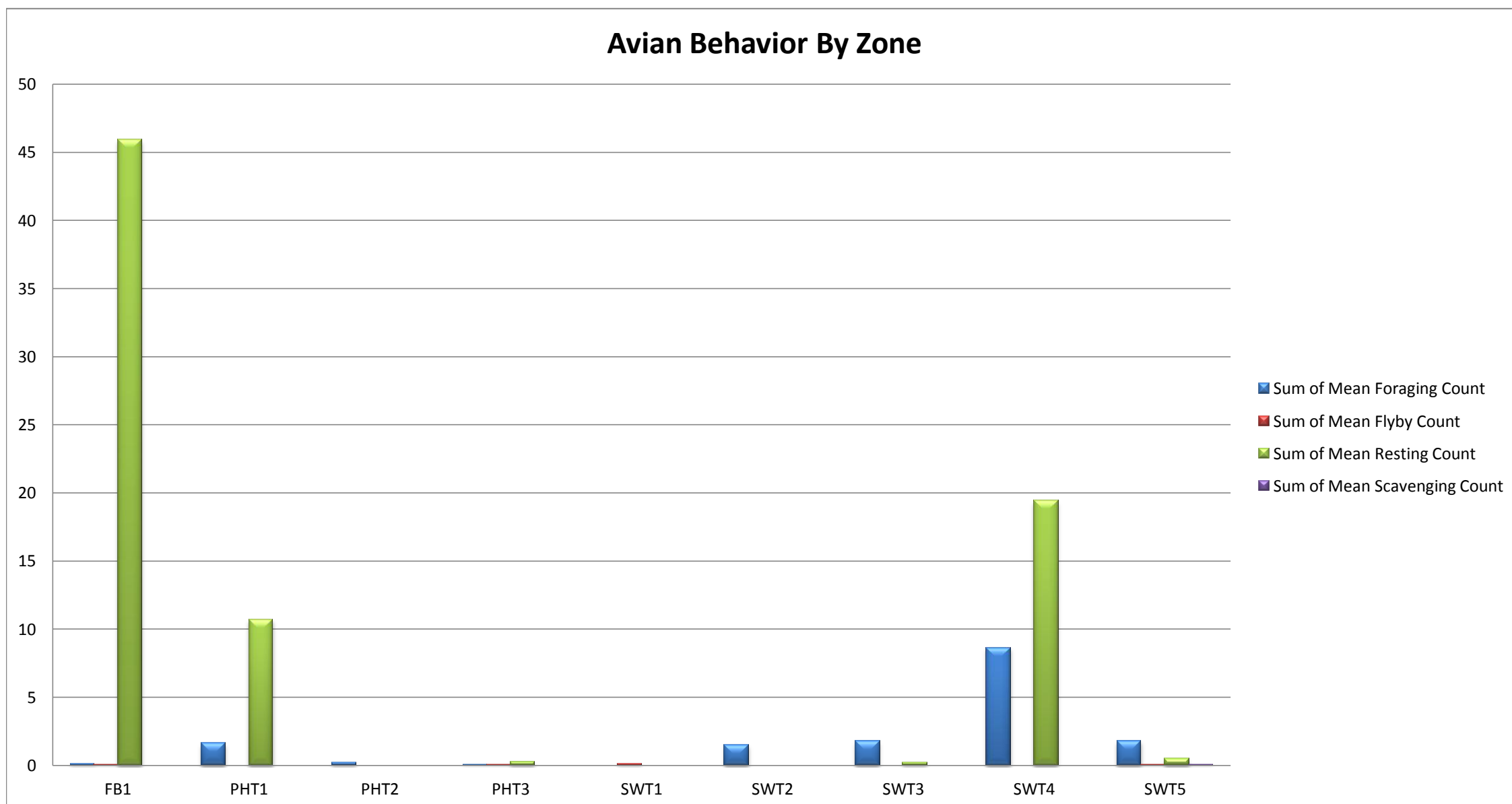


Mean Counts by Species



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

Avian Behavior By Zone



Temp:			Secchi:	
72.2	SUN		5.5	
72.4	MON		5.0	
72.1	TUES		5.0	
72.1	WED		5.0	
72.1	THUR		5.0	
72.2	FRI		5.0	
71.8	SAT		5.0	
AVG: 72.1	AVG:		5.1	

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

Out of Criteria

Date:	North Fish Ladder		East Fish Ladder											KCFS % Spill	
	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	
25-Aug-13	1.2	9.8	1.6	12.5	11.9	11.9	7.6	1.5	8.0	8.1		1.2	8.0	8.1	39.8
25-Aug-13	1.2	9.8	1.5	12.9	13.0	13.0	8.0	1.4	8.1	8.1		1.2	8.1	8.0	39.8
25-Aug-13			1.6	12.5	11.9	11.9		1.5	8.0	8.1		1.2	8.0	8.1	
26-Aug-13	1.3	9.7	1.5	12.2	11.9	11.9	7.3	1.4	8.1	8.0		1.1	8.1	8.1	40.3
26-Aug-13	1.3	9.8	1.6	13.0	12.0	12.0	8.1	1.4	8.2	8.1		1.1	8.2	8.2	
26-Aug-13			1.5	12.2	11.9	11.9		1.4	8.2	8.1		1.1	8.2	8.2	
27-Aug-13	1.3	9.7	1.6	12.4	12.5	12.5	8.1	1.5	8.4	8.4		1.2	8.0	7.9	40.0
27-Aug-13	1.3	9.7	1.6	12.4	12.5	12.5	7.4	1.4	8.3	8.3		1.2	8.1	8.1	40.1
27-Aug-13			1.7	13.1	12.0	12.0		1.7	8.0	8.0		1.2	8.2	8.2	
28-Aug-13	1.2	9.9	1.5	12.5	13.0	13.1	8.4	1.5	8.2	8.2		1.2	8.1	8.1	40.3
28-Aug-13	1.3	9.8	1.6	12.6	13.1	13.0	8.5	1.5	8.3	8.3		1.2	8.0	8.0	39.4
28-Aug-13			2.4	12.6	12.6	12.5		1.5	8.3	8.3		1.2	8.1	8.1	
29-Aug-13	1.2	9.9	1.5	12.6	13.2	13.1	8.1	1.5	8.3	8.3		1.2	8.1	8.1	40.1
29-Aug-13	1.2	9.9	1.5	12.5	13.0	13.1	8.7	1.5	8.3	8.4		1.2	8.2	8.2	
29-Aug-13			1.4	12.5	12.9	13.0		1.5	8.3	8.2		1.3	8.0	8.0	
30-Aug-13	1.2	9.8	1.5	12.6	13.0	13.0	8.3	1.4	8.3	8.4		1.2	8.1	8.0	40.3
30-Aug-13	1.3	9.7	1.7	12.5	13.1	13.0	9.0	1.5	8.4	8.3		1.2	8.2	8.1	39.5
30-Aug-13			1.5	12.5	12.9	12.8		1.4	8.4	8.3		1.3	8.0	7.9	
31-Aug-13	1.2	9.8	1.5	12.7	13.1	13.1	8.3	1.5	8.2	8.2		1.2	8.2	8.2	39.2
31-Aug-13	1.3	9.8	1.7	12.4	12.9	12.9	9.2	1.6	8.3	8.3		1.2	8.2	8.1	
31-Aug-13			1.4	12.4	12.9	12.9		1.5	8.2	8.2		1.2	8.1	8.0	
AVG:	1.3	9.8	1.6	12.6	12.6	12.6	8.2	1.5	8.2	8.2	closed	1.2	8.1	8.1	39.9
Third fish way inspection for east fish ladder, east, west, and south entrances completed via automation system in fisheries office (SCADA).															



Shad at downstream pool of east count station