

# FISHWAY STATUS REPORT

Date: 8/11/2013  
 Inspection Period: 8/04 to 08/10/2013

# 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:	20	Temperature:	71.4 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	9.7		
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.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Raked east count station picket leads daily.			
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		
Entrance weir E1	0	No criteria	Average	0.7	Manually adjusted.	
Entrance weir E2	0	depth (≥ 8')	Average	11.9		
Entrance weir E3	0	depth (≥ 8')	Average	11.9		
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	2.5		
North channel velocity	0	1.5 - 4 fps	Average	2.1		
South channel velocity	0	1.5 - 4 fps	Average	3.3		
West entrance differential	0	1.0' - 2.0'	Average	1.4		
Entrance weir W1	0	depth (≥ 8')	Average	8.4		
Entrance weir W2	0	depth (≥ 8')	Average	8.4		
Entrance weir W3	0	No criteria	Average	closed		
South entrance differential	0	1.0' - 2.0'	Average	1.6	Daily differentials & weir depths, see <b>AVGS</b> tab.	
Entrance weir S1	0	depth (≥ 8')	Average	8.8		
Entrance weir S2	0	depth (≥ 8')	Average	8.8		
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	units 1,8,18				
Turbine trashrack drawdown	0	<1.5', wkly	Range:	0.2' to 0.5'		
Spill volume	1	40%, 24hr	OOO at 42.3% am due to ROV of turbine trashracks 8/5. 24 hr. spill average 39.9%.			
Spill Pattern	0	per FPP				
Turbine Unit Priority	1	per FPP	Out of criteria due to ROV rolling outages of turbine trashracks.			
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 predatory 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:**

Main Unit 15, 16, and T8 returned to service 0725. T8 forced out of service again at 1510 and then returned to service 7/29 am in accordance with HDC's test plan. Multilevel testing is ongoing and will probably continue for a couple more weeks minimum.

T-8 derated to 55MW until 8/12 midmorning for gas monitoring.

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, and Cavitation.

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

Gatewell drawdown completed on 8/4/13. All values were within the 1.5' criteria

Calibration completed on 8/10/13. All values within criteria with the exception of East entrance OOC by 0.1'.

Channel elevation which was out of criteria by 0.1'. TDE notified

**Maintenance:**

Remote Operated Vehicle (ROV) / Sonar inspection of turbine intakes 1, 4-7, 9-12, 19-22, Fish Unit 1 and 2 completed 8/5-6 to determine possible debris buildup at the bottom of the intakes. All were exceptionally clean of debris with exception of FU1 slot 1 which had ~10' rock buildup from adjacent topography. Does not impede turbine operation thus no removal planned.

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

East exit backup power supply investigation underway.

Fishway grating attachment parts being purchased for resecure west entrance grating.

West entrance weirs lift beam and weir wheel replacement planned for Aug-Sept. Still operational.

Fish Units 1, 2 and Main Unit 1 out of service at 0638-1115 on Aug 6 for scheduled trash rack and grating inspections.

**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. All other work completed.

**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.

**Research/Contractors:**

The Inland Avian Predation Work Group (IAPWG) meeting August 21st Westrick Center.

Yakama Nation has completed this years adult lamprey brood collection 8/5.

Nez Perce Fisheries staff plan to collect lamprey 8/13, and two more trips, 8/12-13/2013 and 8/19-20/2013.

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; effort hours - 20.5, total NPM - 54, NPM  $\geq$  230 mm - 53, sturgeon - 2, game fish - 5.

University of Idaho adult RT new antennas both fish ladders completed and operating.

Normandeau continues fish counting 16 hrs/day through Oct.

USDA completed hazing contract 7/30.

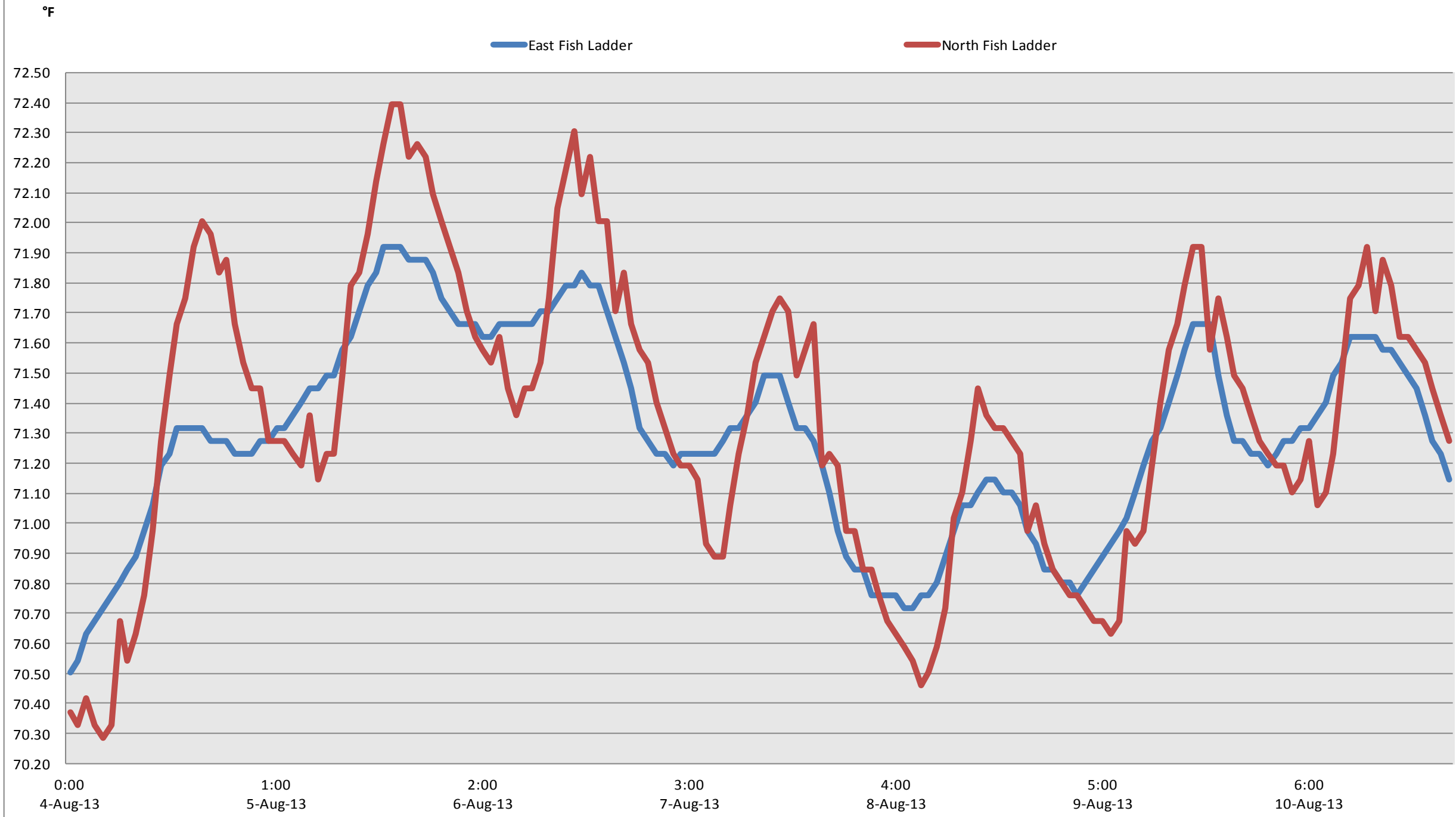
Derelict U of I " I beams" on pier noses to be removed this month by project maintenance. Planning underway for removal of remaining pier nose antennas.

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

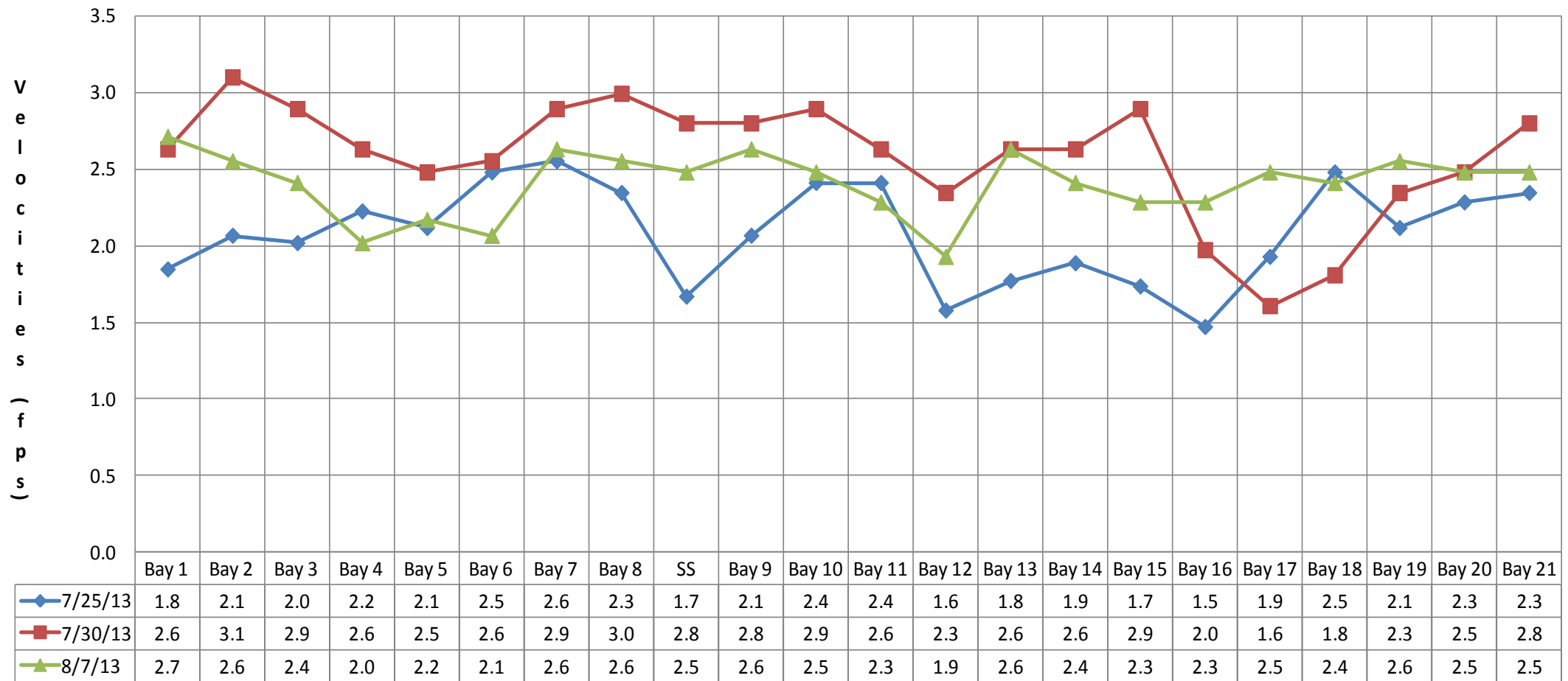
### DART The Dalles Adult Ladders Daily Usage with Spill Percent and Outflow

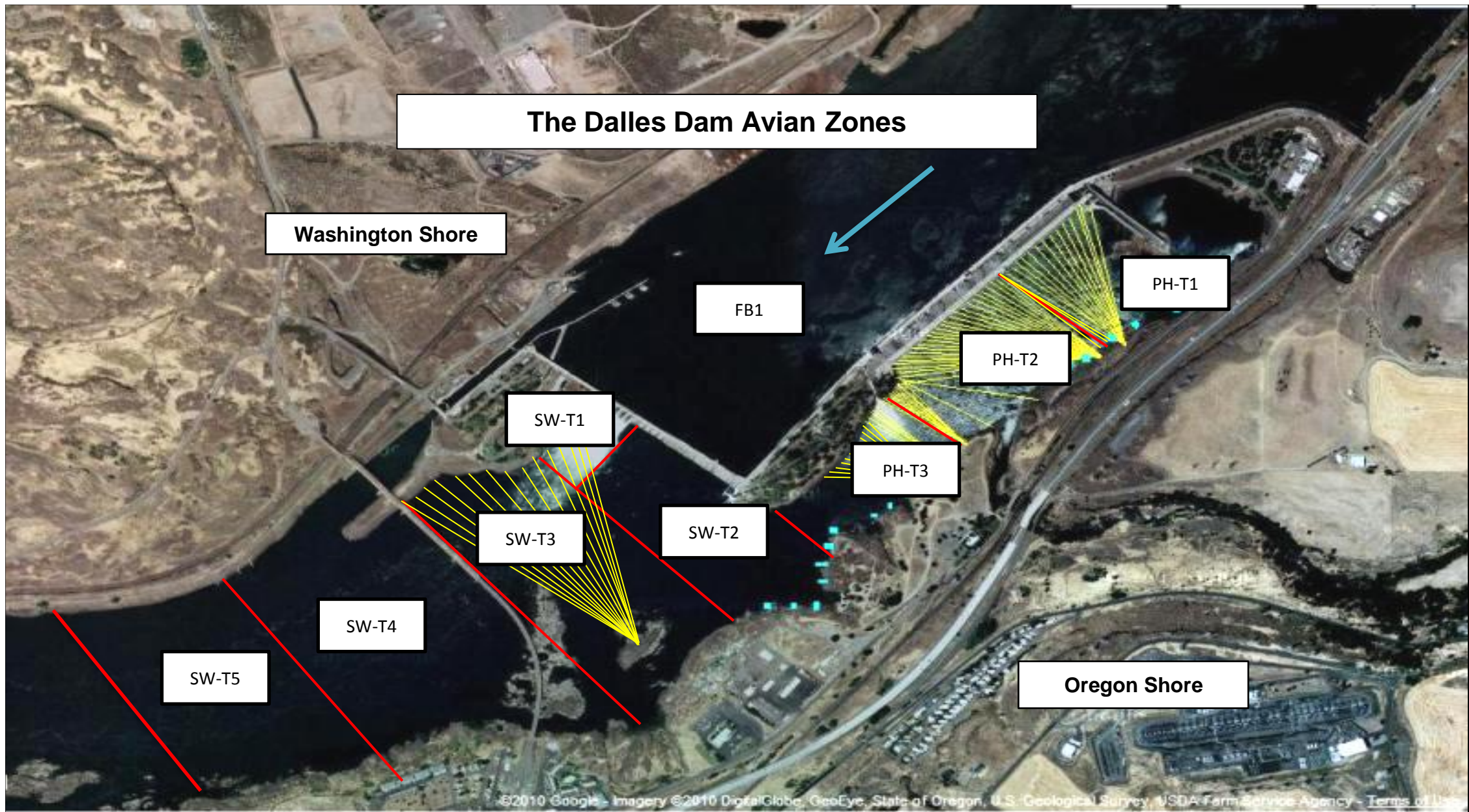
Date	Chinook				Jack Chinook				Steelhead				Steelhead Wild				Sockeye				Coho				Jack Coho				Lamprey				Spill Pct [Right]	Outflow (kcfs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder							
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#						
8/4/2013	70	281	30.1	121	78	80	22	22	67	1214	33	588	63	620	37	359	50	24	50	24	0	0	0	0	0	0	0	0	33	40	67	80	39.7	157.5
8/5/2013	77	346	22.6	101	85	76	15	13	72	1404	28	541	74	809	26	284	75	38	26	13	0	0	0	0	0	0	0	0	68	98	32	46	39.9	142.7
8/6/2013	65	347	34.8	185	69	68	31	31	61	1197	39	752	57	620	44	478	59	20	41	14	0	0	0	0	0	0	0	0	30	25	70	58	39.9	165.1
8/7/2013	71	528	28.8	214	91	161	9	16	71	1409	29	583	70	779	30	331	92	23	8	2	0	0	0	0	0	0	0	0	57	47	43	36	39.8	143.7
8/8/2013	59	553	41	385	77	122	23	37	62	1125	38	680	59	595	41	409	58	14	42	10	0	0	0	0	0	0	0	0	50	60	50	60	39.8	142.7
8/9/2013	73	661	27.2	247	81	128	20	31	71	1144	29	466	72	592	28	230	71	10	29	4	0	0	0	0	0	0	0	0	27	17	73	46	39.9	142.7
8/10/2013	64	798	36.1	451	75	174	25	58	66	1608	34	816	66	800	35	422	46	10	55	12	0	0	0	0	0	0	0	0	18	12	82	56	40.1	127.6
<b>Date</b>	<b>Chinook</b>				<b>Jack Chinook</b>				<b>Steelhead</b>				<b>Steelhead Wild</b>				<b>Sockeye</b>				<b>Coho</b>				<b>Jack Coho</b>				<b>Lamprey</b>				<b>Spill Pct</b>	
<b>YTD</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Left Ladder Pct</b>	<b>Right Ladder Pct</b>	<b>Spill Pct</b>					
	67.3	32.7	79.5	20.5	67.3	32.7	65.7	34.3	63.8	36.2	0	0	0	0	0	0	43.9	56.1	39.9															

# The Dalles Dam Adult Fish Ladder River/Water Temperatures

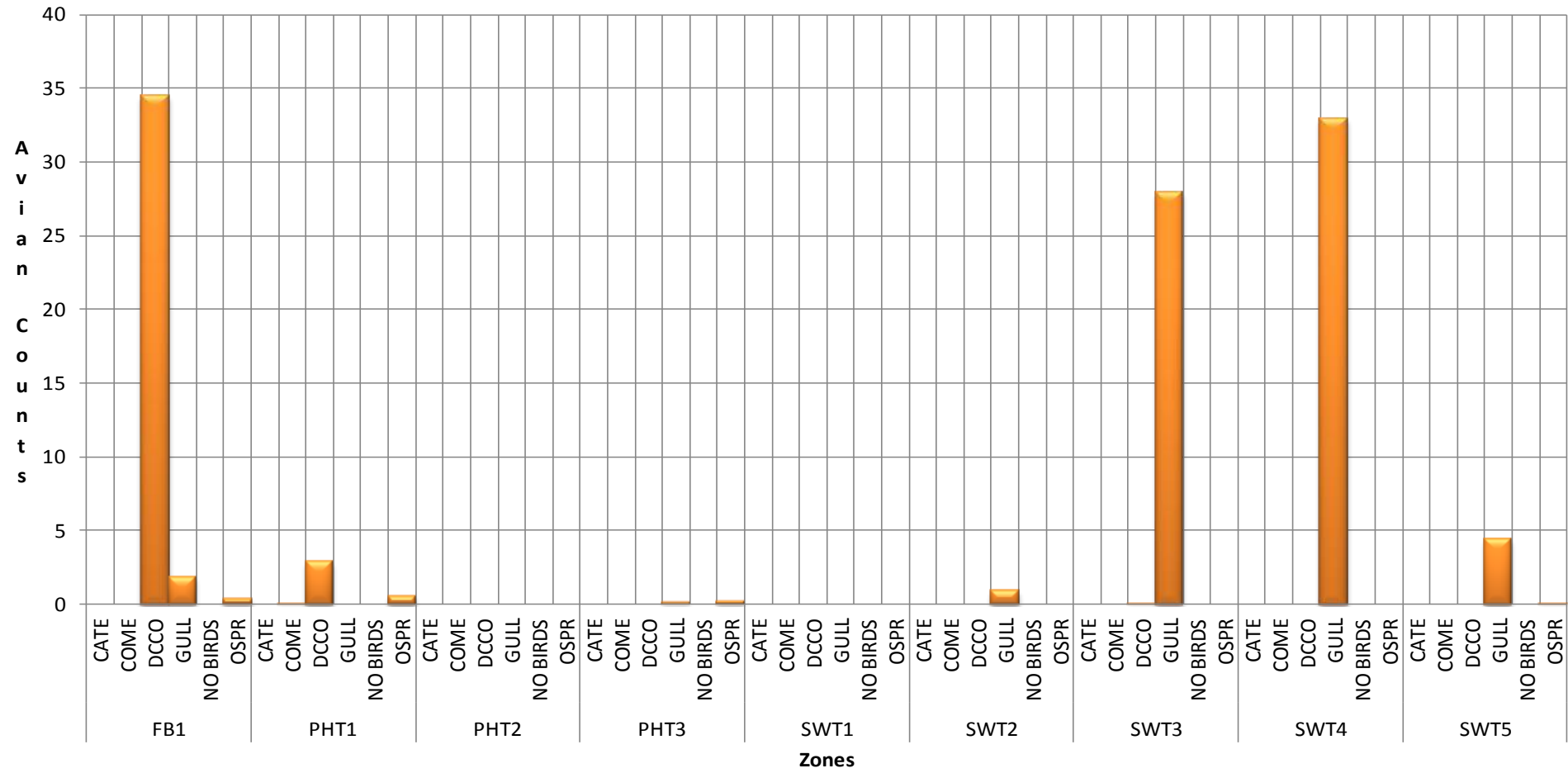


### The Dalles Dam Collection Channel Velocities (fps)



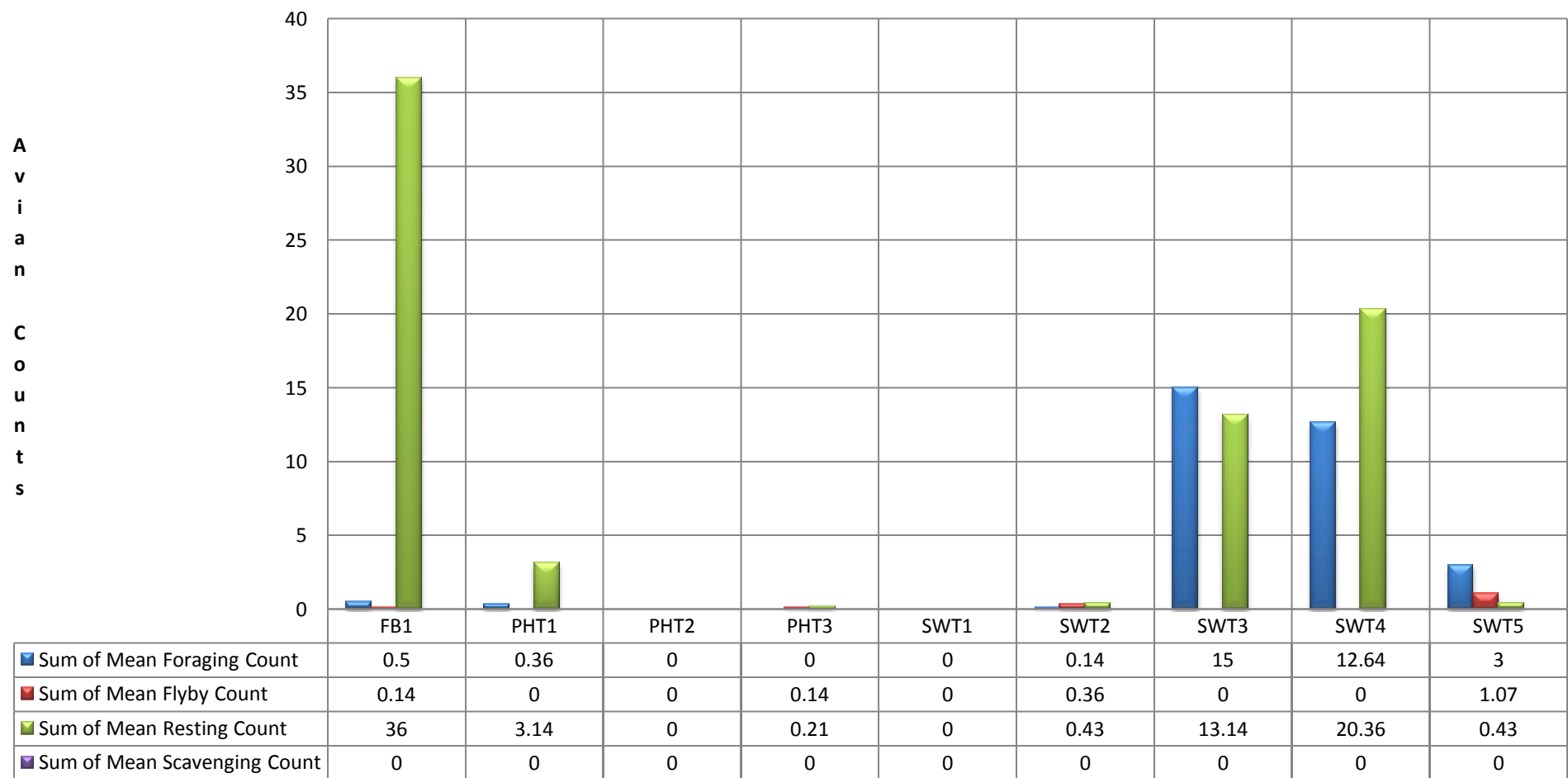


### Mean Avian Counts by Species



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

### Mean Avian Counts by Behavior



Temp:		Secchi:	
71.1	SUN	5.0	
71.8	MON	5.0	
71.8	TUES	5.0	
71.4	WED	5.0	
71.1	THUR	5.0	
71.3	FRI	5.0	
71.5	SAT	5.0	
AVG: 71.4	AVG:	5.0	

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

Out of Criteria

Date:	North Fish Ladder		East Fish Ladder					East Fish Ladder			South Entrance			KCFS % Spill	
	North Entrance		East Entrance					West Entrance							
	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
4-Aug-13	1.3	9.9	1.4	0.0	11.7	11.6	8.6	1.1	8.6	8.6		1.2	9.2	9.1	40.0
4-Aug-13	1.3	9.8	1.6	0.1	12.0	11.9	10.4	1.5	8.4	8.3		1.5	9.0	9.0	39.3
4-Aug-13			1.2	0.0	11.5	11.5	7.8	1.0	8.3	8.3		1.3	8.9	8.9	
5-Aug-13	1.2	10.0	1.4	0.1	11.5	11.5	8.8	1.3	8.2	8.2		1.5	8.5	8.5	42.3
5-Aug-13	1.3	9.9	1.7	0.0	11.5	11.4	10.0	1.4	8.3	8.4		1.6	8.6	8.6	39.5
5-Aug-13			1.4	0.0	12.0	12.0	8.9	1.3	8.2	8.2		1.4	9.0	8.9	
6-Aug-13															
6-Aug-13			1.5	3.1	12.1	12.1	10.2	1.4	8.4	8.5		1.6	8.6	8.5	40.5
6-Aug-13			1.6	-0.5	11.9	11.9	9.5	1.4	8.3	8.3		1.6	8.6	8.5	
7-Aug-13	1.3	9.6	1.3	1.1	12.0	12.1	9.0	1.4	8.5	8.5		1.6	8.4	8.4	38.4
7-Aug-13	1.4	9.7	1.4	1.0	12.9	12.9	10.5	1.4	8.6	8.6		1.5	8.9	9.1	39.8
7-Aug-13			1.5	0.8	11.8	11.9	9.4	1.4	8.4	8.5		1.7	8.4	8.4	
8-Aug-13	1.3	9.6	1.6	1.0	11.5	12.4	8.7	1.4	8.3	8.4		1.5	9.0	9.0	39.2
8-Aug-13	1.4	9.6	1.7	1.0	11.5	11.5	9.7	1.6	8.2	8.2		1.5	9.2	9.1	39.7
8-Aug-13			1.5	1.1	11.1	11.1	8.0	1.4	8.2	8.3		1.6	8.5	8.4	
9-Aug-13	1.4	9.5	1.6	0.9	10.9	11.0	8.8	1.5	8.4	8.3		1.5	9.0	9.0	40.7
9-Aug-13	1.4	9.6	1.6	1.0	12.0	12.1	9.9	1.5	8.4	8.4		1.5	9.1	9.0	39.7
9-Aug-13			1.5	1.0	11.6	11.5	8.5	1.4	8.3	8.4		1.5	9.0	8.9	
10-Aug-13	1.4	9.6	1.6	1.0	12.5	12.5	10.3	1.6	8.6	8.5		1.6	9.0	9.0	39.6
10-Aug-13	1.3	9.5	1.5	1.0	13.1	13.1	10.9	1.4	9.1	9.0		1.5	9.1	9.1	40.4
10-Aug-13			1.6	0.9	12.4	12.4	10.4	1.6	8.2	8.3		1.6	8.9	8.9	
<b>AVG:</b>	1.3	9.7	1.5	0.7	11.9	11.9	9.4	1.4	8.4	8.4	closed	1.5	8.8	8.8	39.9

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

Fish Units - East fishway down for entrance diffuser grating inspection via ROV, RTS ~1100

North fishway ROV inspection





ROV deployment for sonar scan of turbine intake trashracks