

# The Dalles Dam Fishway Status Report

Date: 03/23/2014  
 Inspection Period: 03/16/2014-03/22/2014

## THE DALLES DAM



**US Army Corps  
 of Engineers**  
 Portland District

The Dalles Project-Fisheries  
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 The Dalles, OR 97058-9998  
 Phone: 541-506-3800

*Fishways are inspected twice daily plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:		21	Temperature:	44.0 F
			Comments		Secchi:	2.0 feet	
<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'					
Entrance weir N1	0	depth (≥ 8')					
Entrance weir N2	0	Closed					
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 156 off be 0.1'	
Weir 158-159 differential	0	1.0' ± 0.1'					
Count station differential	0	≤ 0.3'	0.4'				
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	1.7	Manually adjusted.		
Entrance weir E2	0	depth (≥ 8')	Average	11.4			
Entrance weir E3	0	depth (≥ 8')	Average	11.4			
Collection channel velocity	0	1.5 - 4 fps	Average	2.5			
Transportation channel velocity	0	1.5 - 4 fps	Average	3.3			
North channel velocity	0	1.5 - 4 fps	Average	1.9			
South channel velocity	0	1.5 - 4 fps	Average	3.5			
West entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir W1	0	depth (≥ 8')	Average	9.8			
Entrance weir W2	0	depth (≥ 8')	Average	9.8			
Entrance weir W3	closed	No criteria	Average	closed			
South entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir S1	0	depth (≥ 8')	Average	11.0			
Entrance weir S2	0	depth (≥ 8')	Average	10.9			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	0	units 1,18	4 gates open. 6 gates will be open Apr1 over units 1 and 18				
Turbine trashrack drawdown	0	<1.5', wkly					
Spill volume	off						
Spill Pattern	off						
Turbine Unit Priority	0	per FPP	West to east block priority starts Apr1				
Turbine 1% Efficiency	0	per FPP					

**OTHER ISSUES:**

**Birds/Sea lions:**

Bird observation data collected once daily. Primarily cormorants observed upstream of the bridge.  
See avian zones map and distribution details.

Bird observation data collection will change Apr1. RNT website will no longer be used. Data will be directly input into status report map.  
Data will be collected Apr1-Sept30. Zone PH1 and PH2 will be combined. Zone SW 5 will not be used. Data collection from twice to once daily. Foraging and resting gulls and cormorants will be counted. Further changes may apply through the FPOM avian task group.

**Operations:**

East fish ladder, north fish ladder, and I/T Sluiceway are in service in accordance with Fish Passage Plan (FPP).

**Current Outages:**

Transformer 8 (MU15 & MU16) de-rated to single unit full load ops through Sept 2017.  
Main Unit 4 out of service Jan21 to Mar20 for over haul.

**Maintenance:**

East fishway count station bathroom freeze damage repair in progress for Apr1 fish counters start.  
East exit forebay deck expansion joint leakage repair completed. No fish observed at east count station during the work..  
Work to start on new weir to replace 158/159 as staff becomes available. Likely change design from 3 to 2 leafs. Skin plate to be added for lamprey.  
Work to start rebuilding failed collection channel dewatering pump in preparation for next winter dewatering.  
Long term repair plan items; Upgrade east exit weirs 154-157, stabilize north ladder rocks, remove collection channel unneeded diffusers, replace all entrance weir wheels with plastic composite wheels and repair/modify all east fishway dewatering pumps.  
Items fish related but not fish funded; spillway evaluation to prioritize upgrades, spillway crane rehab and spillgate 10/11 wire rope replacement.  
All spillway items on Critical Infrastructure list and Unfunded Requirement list

**Studies:**

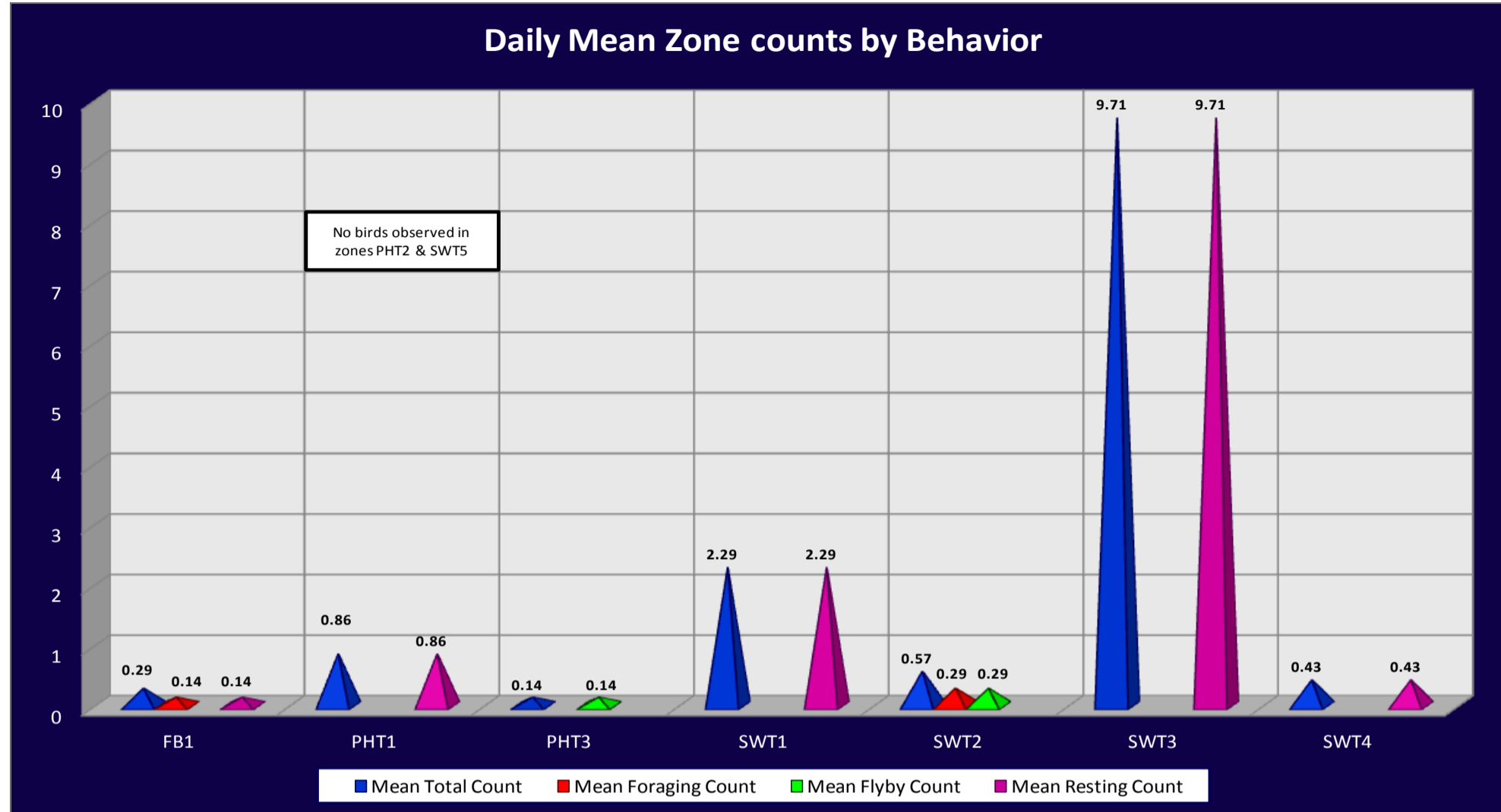
**PIT** - PSMFC monitoring antennas. PSMFC also investigating possible sluiceway antenna options. Status unknown.  
**EFL** - Plan for 10' dia. pipe through dam, under roadway and into AWS conduit west side junction pool. Moving on to Plans and Specs.  
**PUD** - FERC license modification request submitted for additional north turbine. No new development.  
**Lamprey** - No further fishladder mods planned for this winter. Planning for tribal lamprey collection from count stations.

**Research/Contractors:**

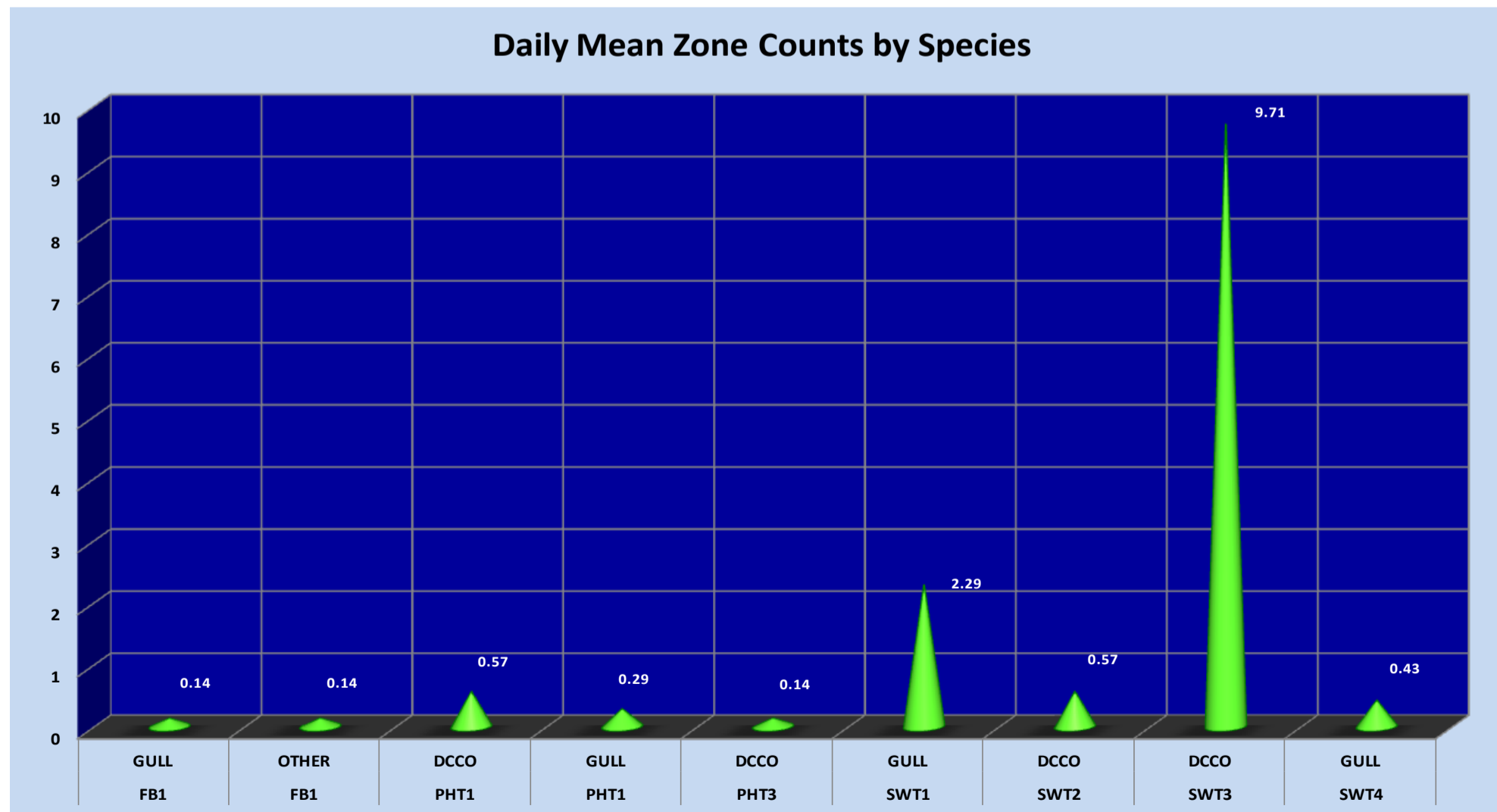
University of Idaho maintaining antennas. Plans for solar panel installation for east forebay deck antenna for next season.  
Removal last set of 3 derelict Vertical Barrier Screens (VBS) from MU 12 gatewell slot scheduled week of Aug11. Pending CRFM funding.  
Research approval letters forwarded for; ODFW forbay pikeminnow survey, PSMFC fish sampling at PUD, University Idaho adult radiotelemetry for adult salmonids and Lamprey, USGS total dissolved gas monitoring, Yakama Nation for adult lamprey collection and PSMFC monitoring and maintaining thin walled PIT tag antennas and computer equipment.  
Normandeau fish counters computer training, project specific training and fish identification training have been scheduled.

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

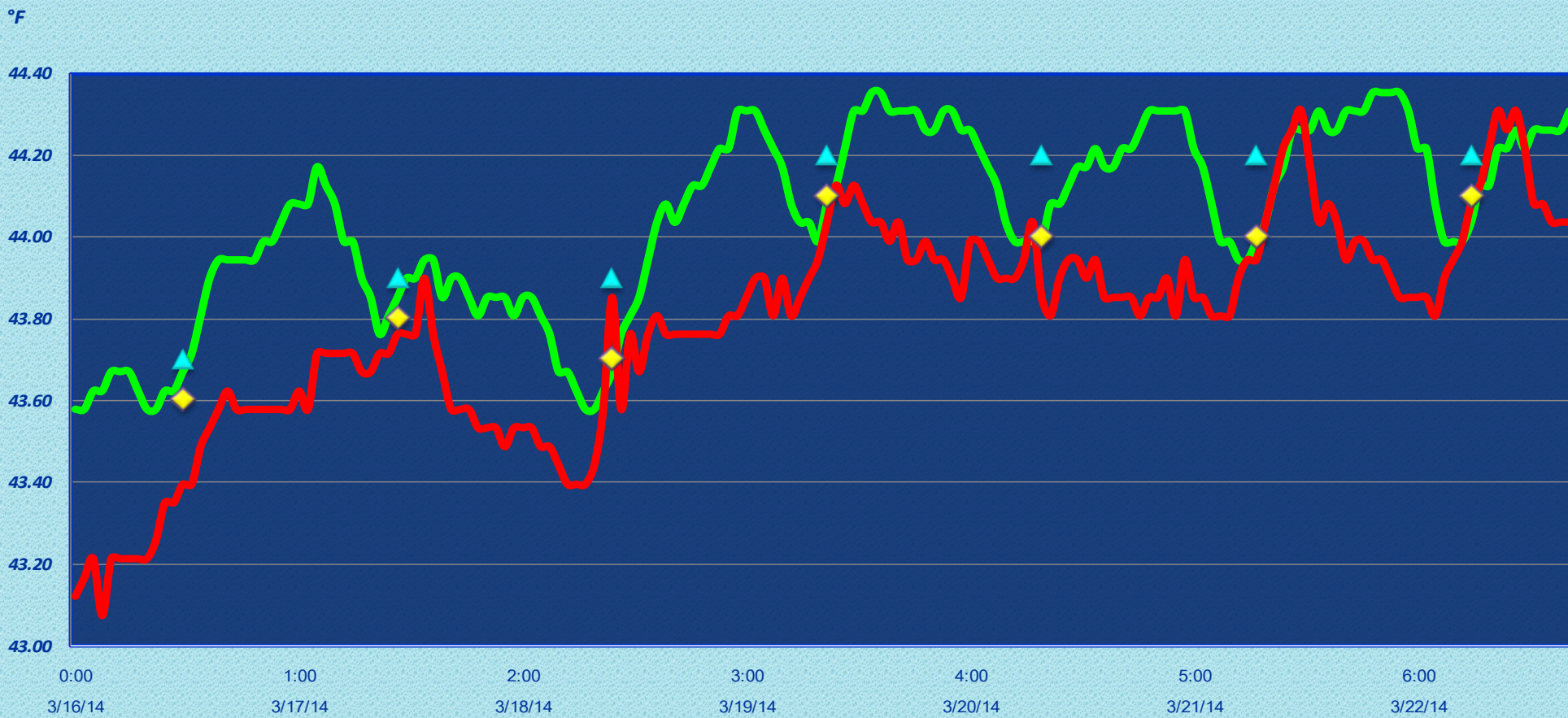




COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; Gull- Gull (all species)



## Adult Fish Ladder(s) River/Water Temperatures



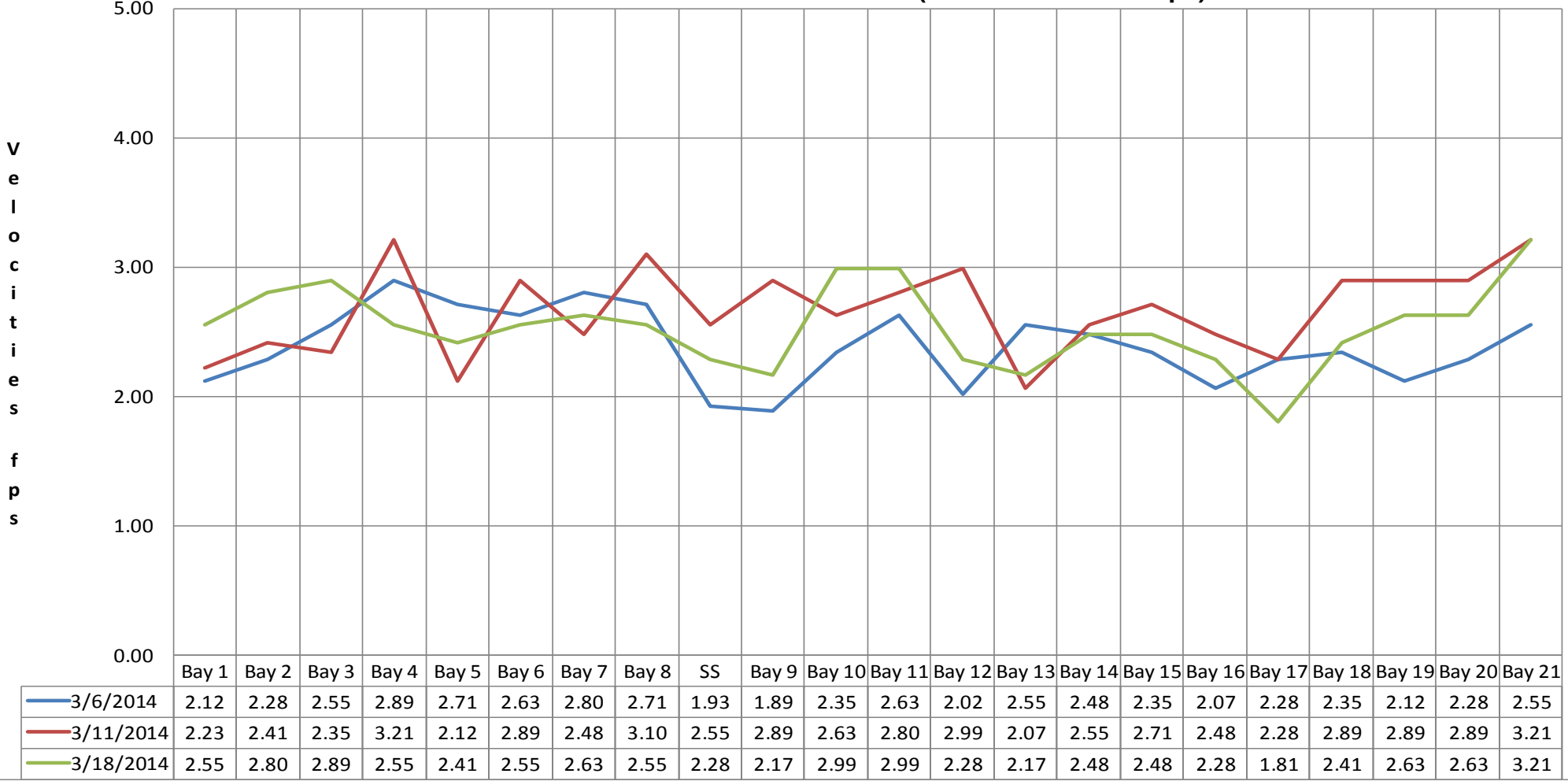
East Fish Ladder

North Fish Ladder

USGS Forebay daily average

USGS Tailwater daily average

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



<b>Temp:</b>		<b>Secchi:</b>
43.7	SUN	2.0
43.9	MON	2.0
43.9	TUES	2.0
44.2	WED	2.0
44.2	THUR	2.0
44.2	FRI	2.0
44.2	SAT	2.0
AVG: 44.0	AVG:	2.0

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

= out of criteria

Date:	North Fish Ladder		East Fish Ladder											Spill%	
	North Entrance		East Entrance					West Entrance				South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
3/16/14			1.3	2.8	12.9	13.0	10.9	1.1	8.7	8.7	c l o s e d  /  b u i k h e a d  i n s t a l l e	1.2	11.1	11.0	
	1.3	9.7	1.4	2.7	13.0	13.0	11.4	1.3	8.7	8.7		1.2	11.1	11.1	
	1.4	9.6	1.5	3.9	13.4	13.4	13.2	1.4	9.4	9.4		1.3	11.1	11.2	
3/17/14			1.6	4.0	13.3	13.4	13.3	1.5	9.5	9.4		1.5	11.2	11.1	
	1.4	9.5	1.2	3.1	12.0	12.0	12.9	1.5	9.4	9.4		1.4	11.2	11.2	
	1.4	9.6	1.5	2.3	11.1	11.0	12.2	1.5	9.2	9.1		1.4	11.1	11.1	
3/18/14			1.3	3.8	11.9	11.9	13.6	1.4	9.8	9.8		1.4	11.2	11.1	
	1.4	9.6	1.6	1.0	10.4	10.4	11.8	1.5	8.9	8.9		1.5	10.5	10.6	
	1.4	9.5	1.6	0.9	10.9	10.9	12.9	1.6	9.6	9.5		1.5	10.6	10.6	
3/19/14			1.6	1.0	11.0	11.1	13.2	1.8	9.5	9.4		1.8	10.4	10.4	
	1.4	9.6	1.5	0.9	10.4	10.4	12.5	1.5	9.7	9.7		1.6	10.7	10.7	
	1.5	9.5	1.5	1.0	11.6	11.5	13.5	1.6	10.1	10.0		1.5	10.6	10.5	
3/20/14			1.4	0.9	11.5	11.4	13.1	1.5	10.0	9.9	1.7	10.6	10.5		
	1.4	9.4	1.4	1.0	11.4	11.4	13.0	1.5	9.9	10.0	1.7	10.4	10.5		
	1.4	9.7	1.5	1.0	11.4	11.4	13.1	1.5	9.9	10.0	1.6	10.6	10.5		
3/21/14			1.4	1.0	11.6	11.6	14.2	1.6	10.0	10.0	1.7	10.5	10.6		
	1.4	9.5	1.5	1.0	10.5	10.5	14.0	1.5	10.5	10.5	1.5	11.5	11.5		
	1.5	9.5	1.6	0.9	10.4	10.4	13.5	1.5	10.5	10.5	1.5	11.5	11.5		
3/22/14			1.5	1.0	10.4	10.4	14.7	1.6	11.0	11.0	1.6	11.3	11.3		
	1.5	9.4	1.5	1.0	10.5	10.5	15.0	1.5	11.1	11.1	1.6	11.5	11.5		
	1.4	9.6	1.5	0.9	10.4	10.5	14.4	1.5	10.8	11.0	1.6	11.3	11.3		
<b>AVG:</b>	<b>1.4</b>	<b>9.6</b>	<b>1.5</b>	<b>1.7</b>	<b>11.4</b>	<b>11.4</b>	<b>13.2</b>	<b>1.5</b>	<b>9.8</b>	<b>9.8</b>		<b>1.5</b>	<b>11.0</b>	<b>10.9</b>	<b>#DIV/0!</b>