

The Dalles Dam Fishway Status Report

Date: 02/23/2014
 Inspection Period: 02/16/2014-02/22/2014

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
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Fishways are inspected once daily during the winter plus one SCADA inspection when East ladder operational

The Dalles Dam	Inspections	Criteria Limit	Total Number of Inspections:	13	Temperature:	37.1 F
	Out of Criteria		Comments		Secchi:	3.2 feet

North fishladder dewatered Feb 4 for annual maintenance - planned RTS 02/27/14

EAST FISHWAY

Exit differential	0	≤ 0.5'				
Removable weirs 154-157	1	Per forebay	Auto adjusts 1' increments.			
Weir 158-159 differential	1	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
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	1.4	Daily differentials & weir depths, see AVGS tab.	
Entrance weir E1	0	No criteria	Average	closed	Manually adjusted.	
Entrance weir E2	0	depth (≥ 8')	Average	10.2		
Entrance weir E3	closed	depth (≥ 8')	Average	10.2		
Collection channel velocity		1.5 - 4 fps				
Transportation channel velocity		1.5 - 4 fps				
North channel velocity		1.5 - 4 fps				
South channel velocity		1.5 - 4 fps				
West entrance differential	0	1.0' - 2.0'	Average	1.3		
Entrance weir W1	7	depth (≥ 8')	Average	6.9	Shallow due to 1 fish unit operation through half the week	
Entrance weir W2	0	depth (≥ 8')	Average	8.5		
Entrance weir W3	closed	No criteria	Average	closed		
South entrance differential	9	1.0' - 2.0'	Average	0.8	Criteria difficulty under 1 fish unit operation	
Entrance weir S1	0	depth (≥ 8')	Average	8.1		
Entrance weir S2	7	depth (≥ 8')	Average	3.7	Closed for 1 fish unit operation through half the week	

JUVENILE PASSAGE

End gate closed. Two sluiceways open to forebay.

Unit priority starts Mar1.

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Few eagles foraging/roosting at Westtick park.
See avian zones map and distribution details.

Operations:

North fishway dewatered.
East fishway in service with 1 fish unit.
Sluiceway closed through Feb 28.

Current Outages:

Transformer 8 (MU15 & MU16) de-rated to single unit full load ops.
Fish unit F1 out postponed to Feb 24-26 for as built documentation/future upgrade planning. One fish unit operation.
Station Service 02 out Jan21 to Feb27 '14 for Digital Governor Upgrade
Main Unit 4 out Jan21 to Feb27 '14 for overhaul.

Maintenance:

East fishway work completed; west diffuser grating attachment, exit weir 159 rehab, count station window brush repair, exit deck drains/leak repair, and all routine preventative maintenance on entrance weirs, exit weirs and count station equipment. Working on east count bathroom rehab. Plans underway to build new weir to replace 158 or 159 next year pending funding, east fishway dewatering pump repairs and modify east entrance dewatering bulkheads for better fit.
North fishway maintenance; working on vegetation removal from fishladder walls, assess fishladder rock wall integrity and preventative maintenance of count station and entrance weirs. Entrance dewatering below tailwater postponed. ROV inspection of north entrance grating completed. Items on list pending fish funds; Upgrade east exit weirs 154-157, stabilize north ladder rocks, remove collection channel diffusers. Items fish related but not fish funded; spillway evaluation to prioritize upgrades, one which is spillgate 10/11 wire rope replacement. Both on Critical Infrastructure list and Unfunded Requirement list

Studies:

PIT - North out for dewatering. East functioning. PSMFC investigating possible sluiceway antenna options. Awaiting BPA comment.
EFL - Plan for 10' dia. pipe through dam, under roadway and into AWS conduit under east fishladder. Construction start winter '15.
Onsite management inquiring possible introduction into fishlock approach channel directly into junction pool from side.
PUD - FERC license modification request submitted for additional north turbine, known as 'freedom' turbine.
Lamprey - No further fishladder mods planned for this winter.

Research/Contractors:

University of Idaho maintaining antennas.
Dive removal of remaining pier nose USGS antennas leftover from '90s occurred Feb20-21. Five of 16 removed. To resume Feb 24-25.
USGS successfully removing peirnose plates without going outside handrail. JSAT pipe removal planned for next winter.
Removal last set of 3 derelict Vertical Barrier Screens (VBS) from MU 12 gatewell slot scheduled week of Aug11. Pending CRFM funding.
Approval letters forwarded for; ODFW forebay pikeminnow survey, PSMFC fish sampling at PUD, Univ Idaho adult radiotelemetry.

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

The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

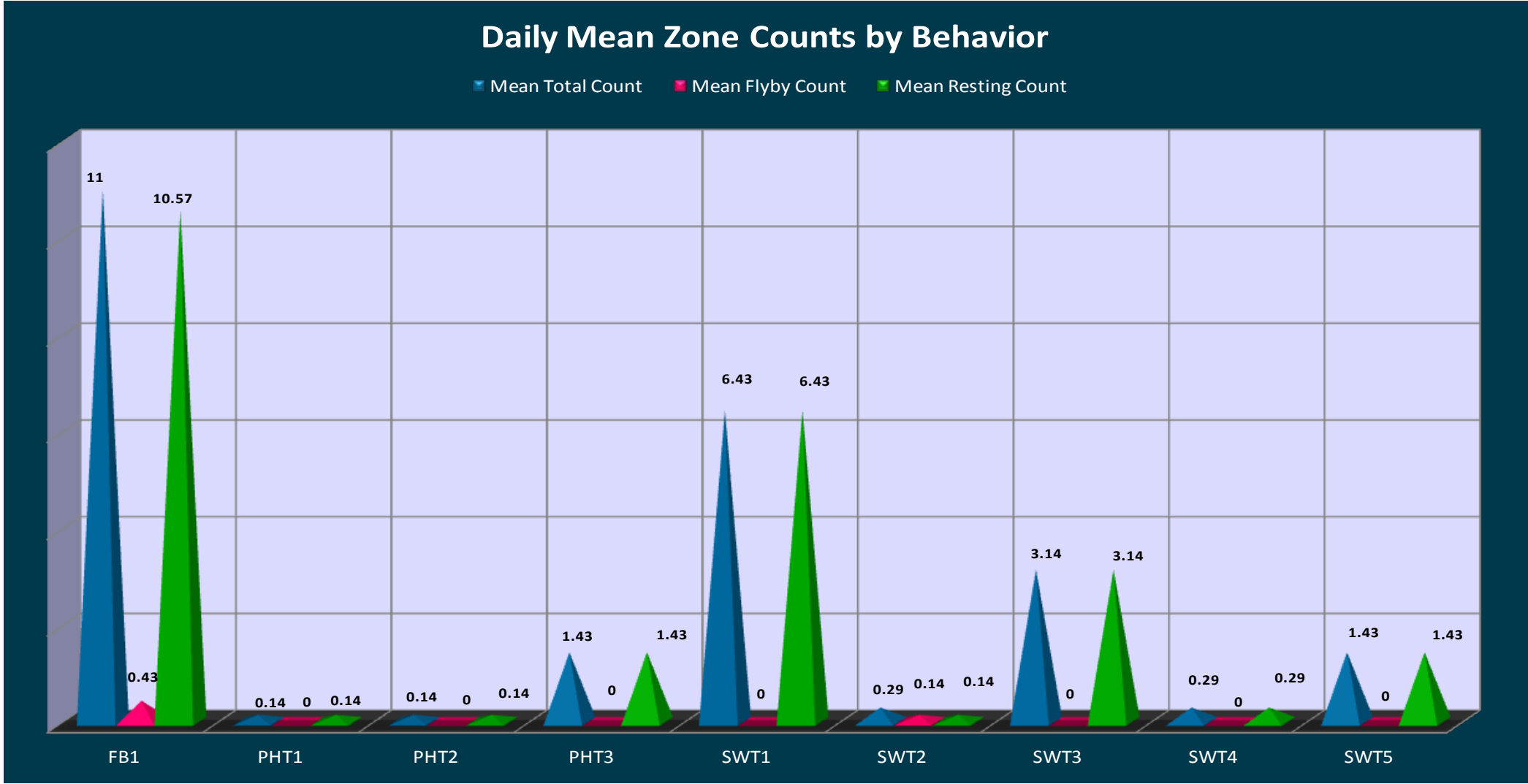
SW-T2

SW-T4

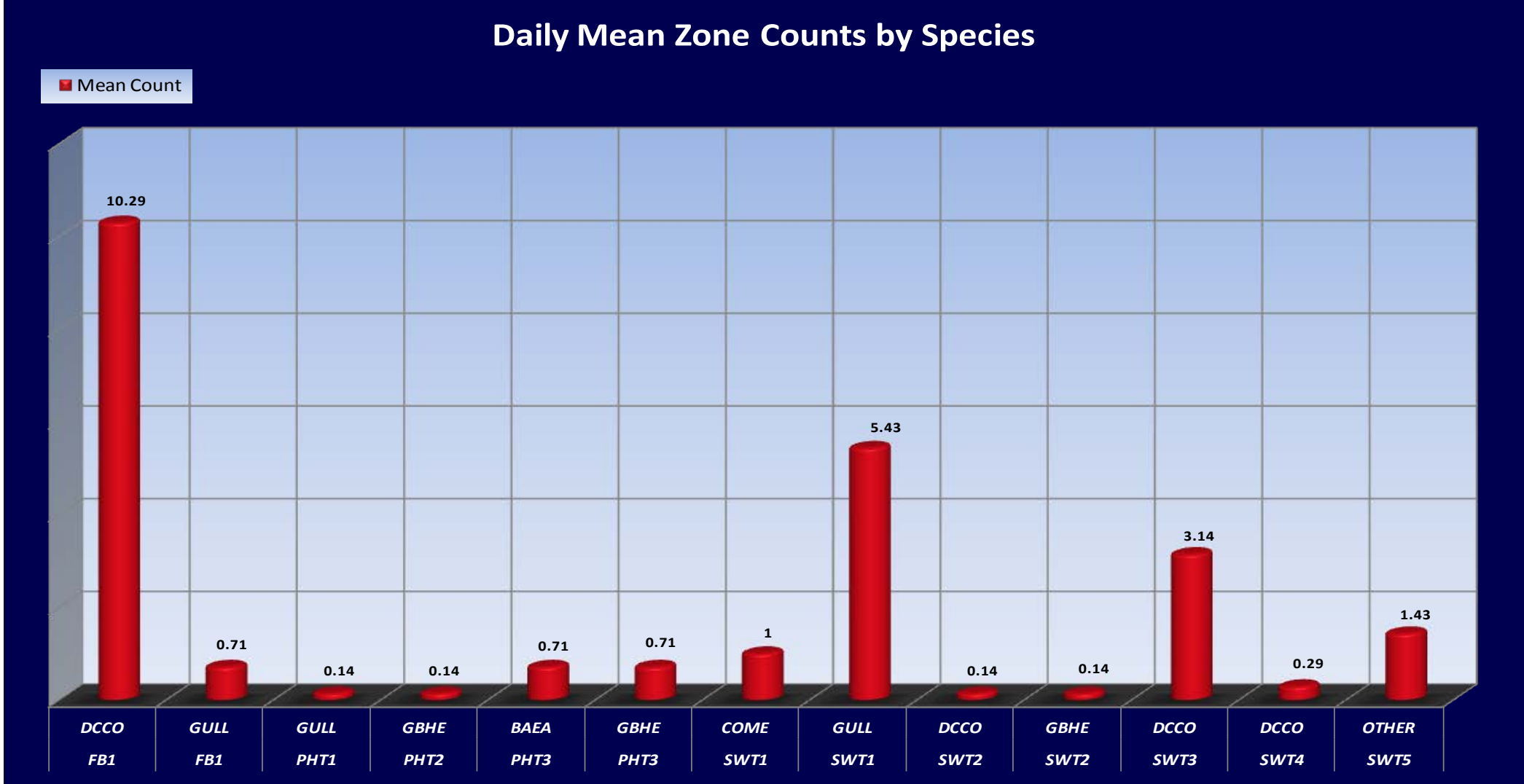
SW-T5

Oregon Shore

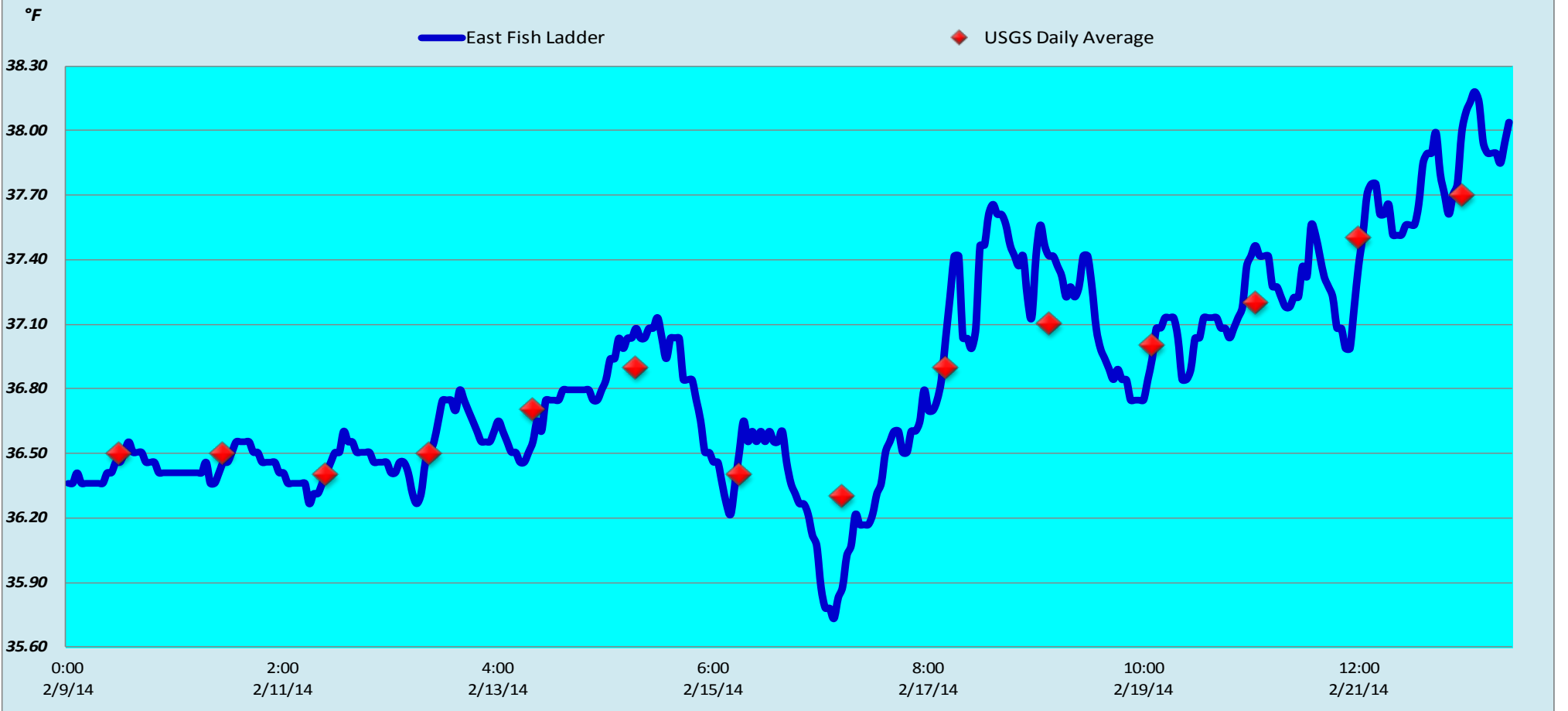




BAEA - Bald Eagle; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species)



The Dalles Dam Adult Fish Ladder River/Water Temperatures



Temp:			Secchi:	
36.3	SUN		5.5	
36.9	MON		3.0	
37.1	TUES			
37.0	WED		2.0	
37.2	THUR		3.5	
37.5	FRI		2.5	
37.7	SAT		2.5	
AVG: 37.1	AVG:		3.2	

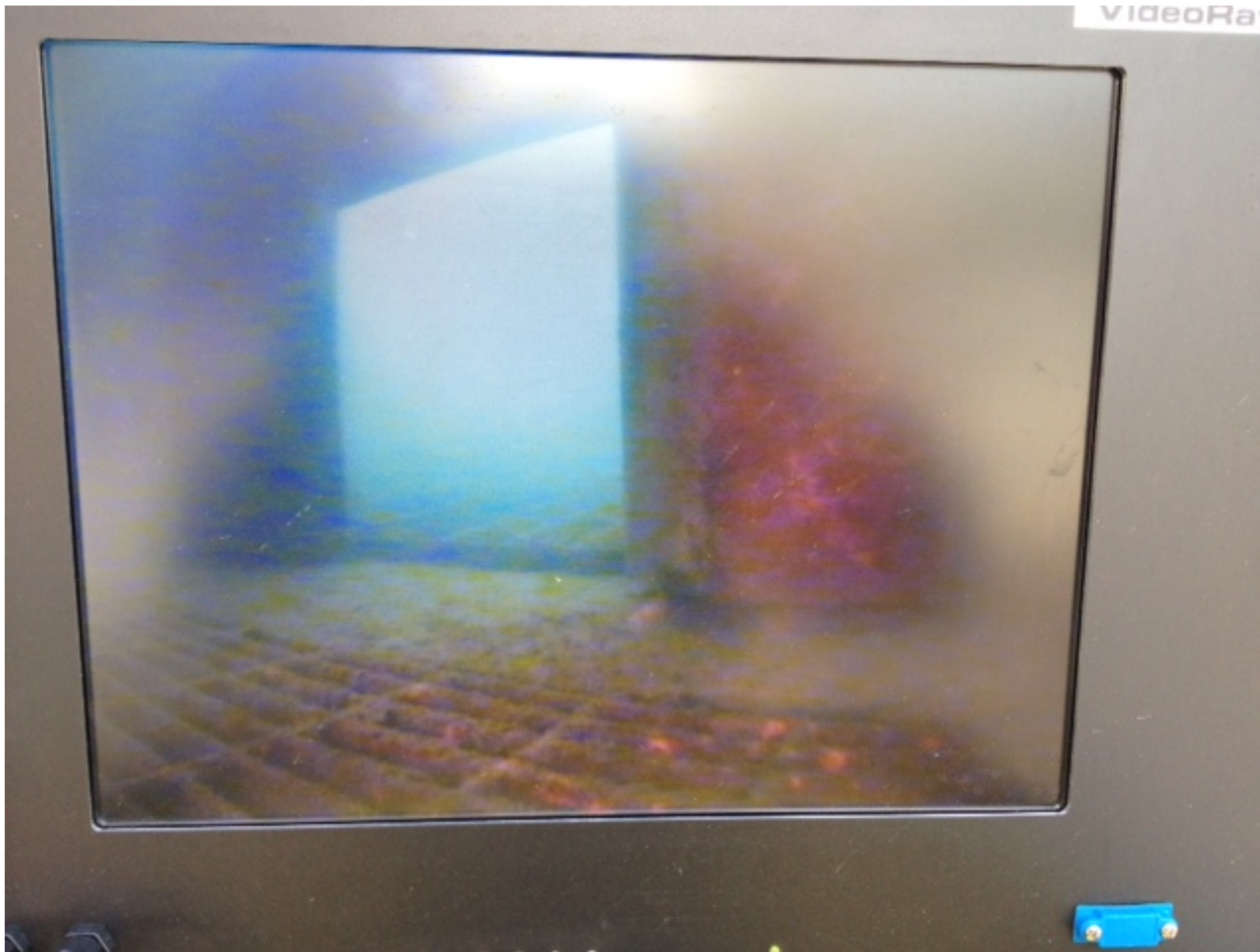
The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill

= out of criteria

Date:	North Fish Ladder DEWATERED	East Fish Ladder											S P I L L O N S E A L
		East Entrance					West Entrance			South Entrance			
		Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth	
16-Feb-14	AM SCADA inspection	1.3		8.3	8.3	9.1	1.0	5.2	8.3		0.5	8.3	0.0
		1.2		8.1	8.2	9.4	1.0	5.0	8.1		0.7	8.1	0.0
17-Feb-14	AM SCADA inspection	1.4		8.2	8.2	9.2	1.1	5.1	8.2		0.5	8.3	0.0
		1.2		8.2	8.1	9.8	1.1	5.1	8.2		0.8	8.1	0.0
18-Feb-14													
		1.5		8.2	8.2	10.0	1.4		8.2		1.1	8.0	0.0
19-Feb-14	AM SCADA inspection	1.6		8.1	8.2	9.6	1.3	5.0	8.1		1.0	8.1	0.0
		1.6		8.2	8.2	9.3	1.2	4.9	8.2		0.8	8.1	0.0
20-Feb-14	AM SCADA inspection	1.2		12.5	12.5	9.5	1.4	9.1	9.0		0.7	8.2	8.1
		1.4		12.5	12.6	9.5	1.5	8.9	9.0		0.9	8.1	8.1
21-Feb-14	AM SCADA inspection	1.6		12.5	12.5	8.0	1.3	9.0	9.0		0.9	8.2	8.1
		1.3		12.5	12.6	8.6	1.7	8.4	8.5		1.1	8.1	8.0
22-Feb-14	AM SCADA inspection	1.3		12.5	12.4	8.2	1.6	8.4	8.4		0.9	8.3	8.1
		1.3		12.5	12.6	9.4	1.7	8.9	9.0		1.0	8.0	8.1
AVG:										closed	0.8	8.1	3.7



New fish unit governor upgrades provide automation by CFS rather than by prior Megawatt.



Pic from ROV inspection of north fishway grating, showing weir orifices.