

# The Dalles Dam Fishway Status Report

Date: 12/29/2013  
 Inspection Period: 12/22/13 to 12/28/2013

## 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.

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7	Temperature: 40.2 F
			Comments	Secchi: 5.5 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'	Average 1.3	
Entrance weir N1	0	depth (≥ 8')	Average 9.2	
Entrance weir N2		Closed	Bulkhead installed.	
PUD Intake differential	0	≤ 0.5'		
<b>EAST FISHWAY</b>				
East Fishladder dewatered for annual maintenance through Feb3				
Exit differential		≤ 0.5'		
Removable weirs 154-157		Per forebay		
Weir 158-159 differential		1.0' ± 0.1'		
Count station differential		≤ 0.3'		
Weir crest depth		1.0' ± 0.1'		
Junction pool weir JP6		depth (≥ 7')		
East entrance differential		1.0' - 2.0'		
Entrance weir E1		No criteria		
Entrance weir E2		depth (≥ 8')		
Entrance weir E3		depth (≥ 8')		
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		1.0' - 2.0'		
Entrance weir W1		depth (≥ 8')		
Entrance weir W2		depth (≥ 8')		
Entrance weir W3		No criteria		
South entrance differential		1.0' - 2.0'		
Entrance weir S1		depth (≥ 8')		
Entrance weir S2		depth (≥ 8')		
<b>JUVENILE PASSAGE</b>				
Sluiceway operation	0	units 1 & 18	End gate closed; sluiceways open for equalization	
Turbine trashrack drawdown		<1.5', wkly	No unit priority for winter	
Spill volume		40%, 24hr		
Spill Pattern		per FPP		
Turbine Unit Priority		per FPP		
Turbine 1% Efficiency		per FPP		

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

Bird observation data collected once daily. Foraging decreasing from fall numbers.

See avian zones map and distribution tabs.

**Operations:**

East fishway dewatered for maintenance. North fishway in full operation. Sluiceway closed for winter. No unit priority.

**Current Outages:**

East Fish Ladder OOS 0600 12/3/2013 to 2/3/2013 for /Annual Maintenance

F1 OOS 0600 12/2/2013 to 1700 2/3/2013 for Annual

F2 OOS 0600 12/2/2013 to 1700 2/3/2013 for O/H and Digital Governor

T8 (MU-15 and 16) forced OOS due to high gas levels 1141 12/21/2013, ETR unknown

**Maintenance:**

Fishway winter maintenance dewatering schedule changed due to lamprey plating installation delay in the lower section of the east ladder;

East fishway extended to Feb 3. North fishway dewatering Feb 4 through end of Feb.

Winter maintenance work; west entrance grating attachment upgrade completed, east exit weir 159 upgrades in progress, east exit deck leak repair in progress, west entrance wheel replacement in Jan, north entrance sill dive Jan 8 to remove gravel buildup.

North entrance sill dive for clearing debris planned for Jan9. Pre-meeting in Westrick 0800 same day.

Plans underway to build new wier to replace 158 or 159 next year.

**Studies:**

**PIT** - Temporary Thin Wall PIT tag antenna in operation. North antenna to be repositioned early Feb when dry. PSMFC investigating feasibility of PIT antenna installation on ice trash sluiceway channel. Project providing prints as needed.

**EFL** - Plan is for 10' dia. pipe through dam to AWS conduit under east fishladder. Dive plan meeting Dec19 for caisson installation. Start winter '15. Project recommending introducing water through fishlock channel into junction pool rather than pipe across fishway into AWS due to concern with diffuser valve leakage and possible loss of some of the 1400cfs. Velocity criteria exceedance would require regional negotiations.

**PUD** - Mod original FERC license underway for additional north turbine. No new developments.

**Lamprey** - Plating mods in 14 lower east ladder weir orifices delayed. Target completion Feb2. Objective is to improve passage conditions in high flow velocity areas of weir orifices by creating attachment substrate.

**Research/Contractors:**

University of Idaho moving into the overwintering steelhead portion of their study. Monitoring downstream migration of summer steelhead.

The study will continue into spring when they begin when they begin tagging next years fish.

Removal last set of 3 derelict Vertical Barrier Screens (VBS) in MU 12 gatewell slot as funding becomes available.

Plans underway for dive removal of remaining pier nose USGS antennas week of Feb17. JSAT antenna pipes on spillway and powerhouse postponed to next winter.

USFWS camera equipment for lamprey monitoring at both count stations to be removed.

Approved by;

Mike Colesar for 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

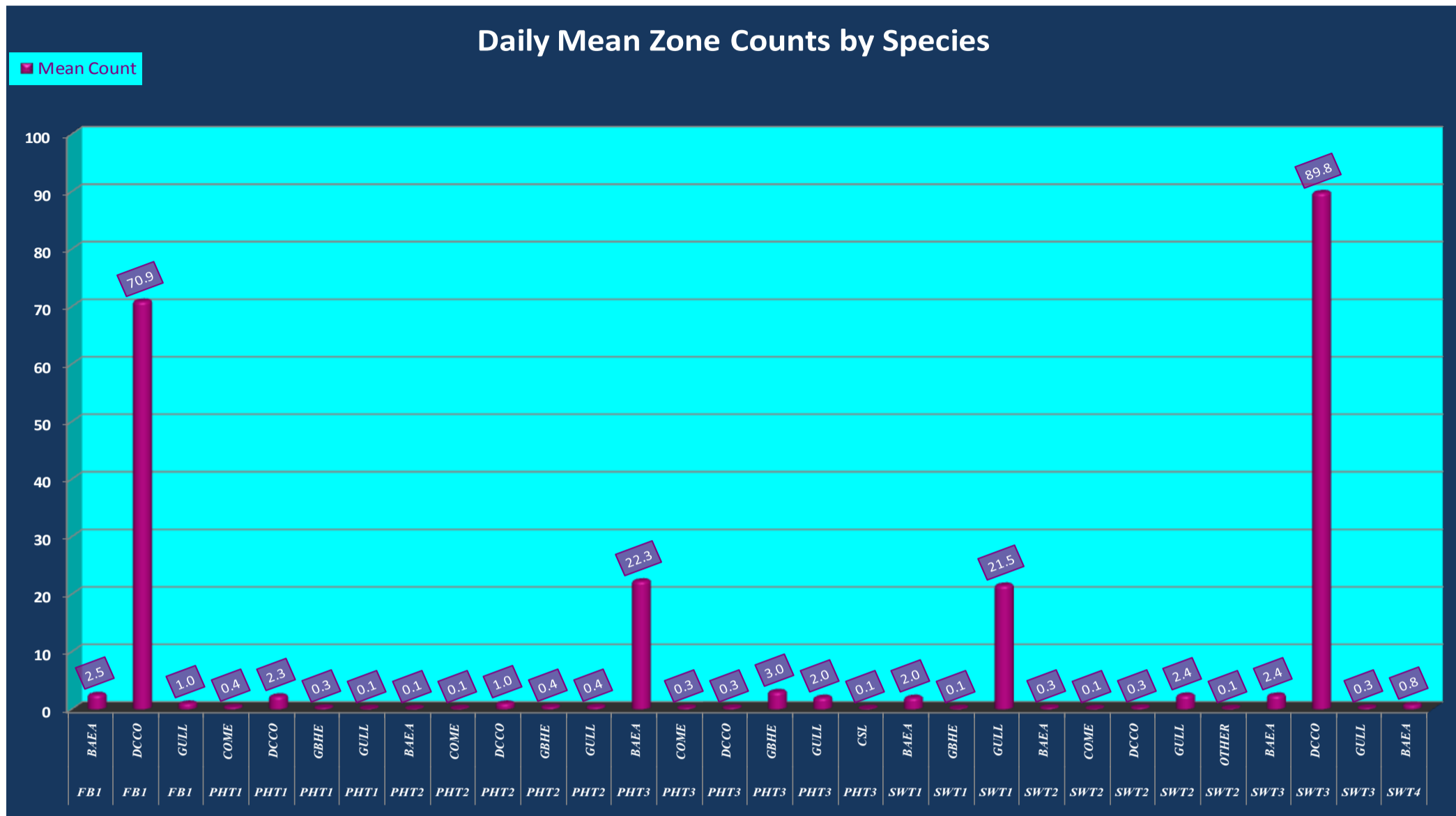
SW-T4

SW-T5

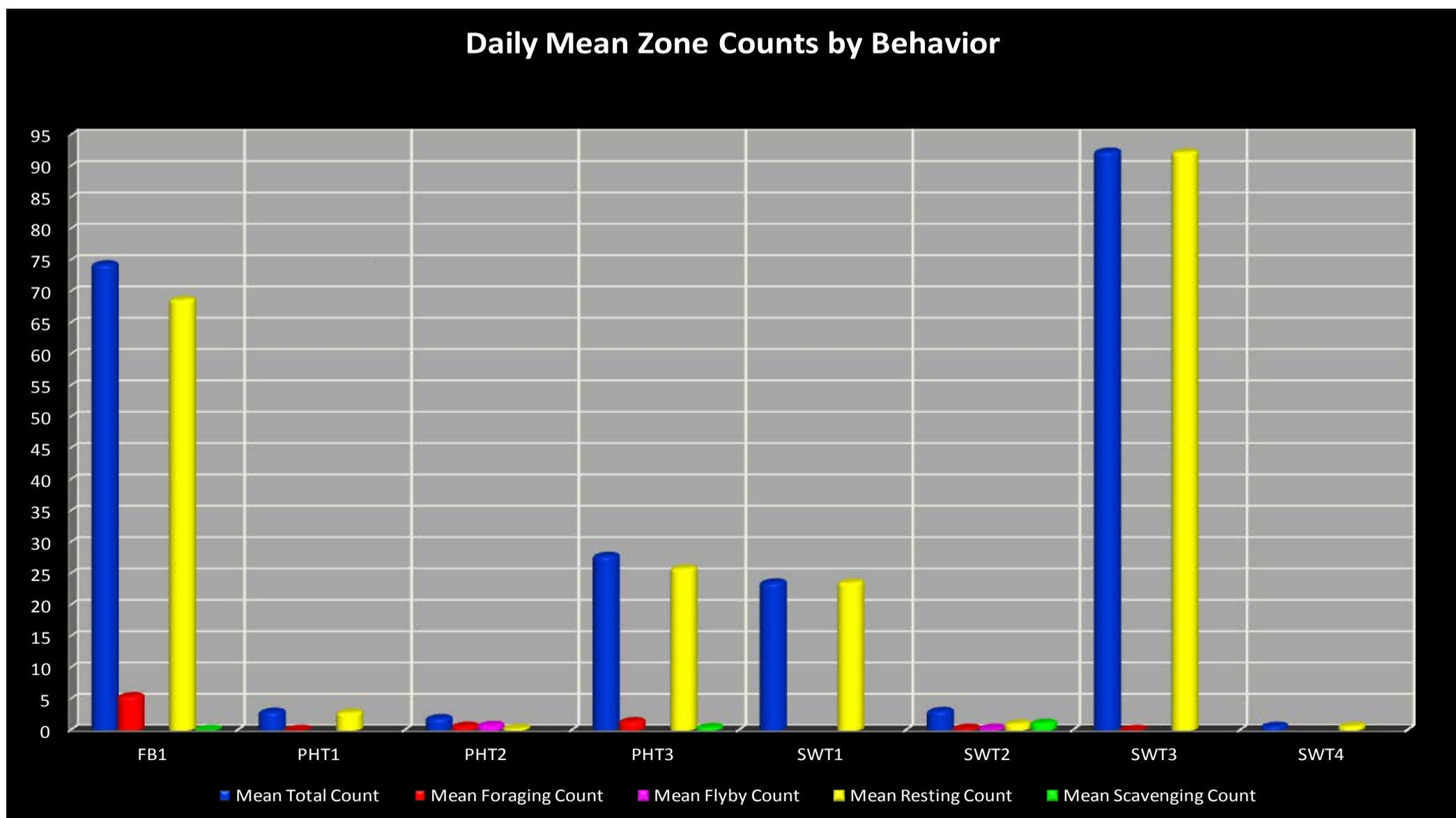
Oregon Shore

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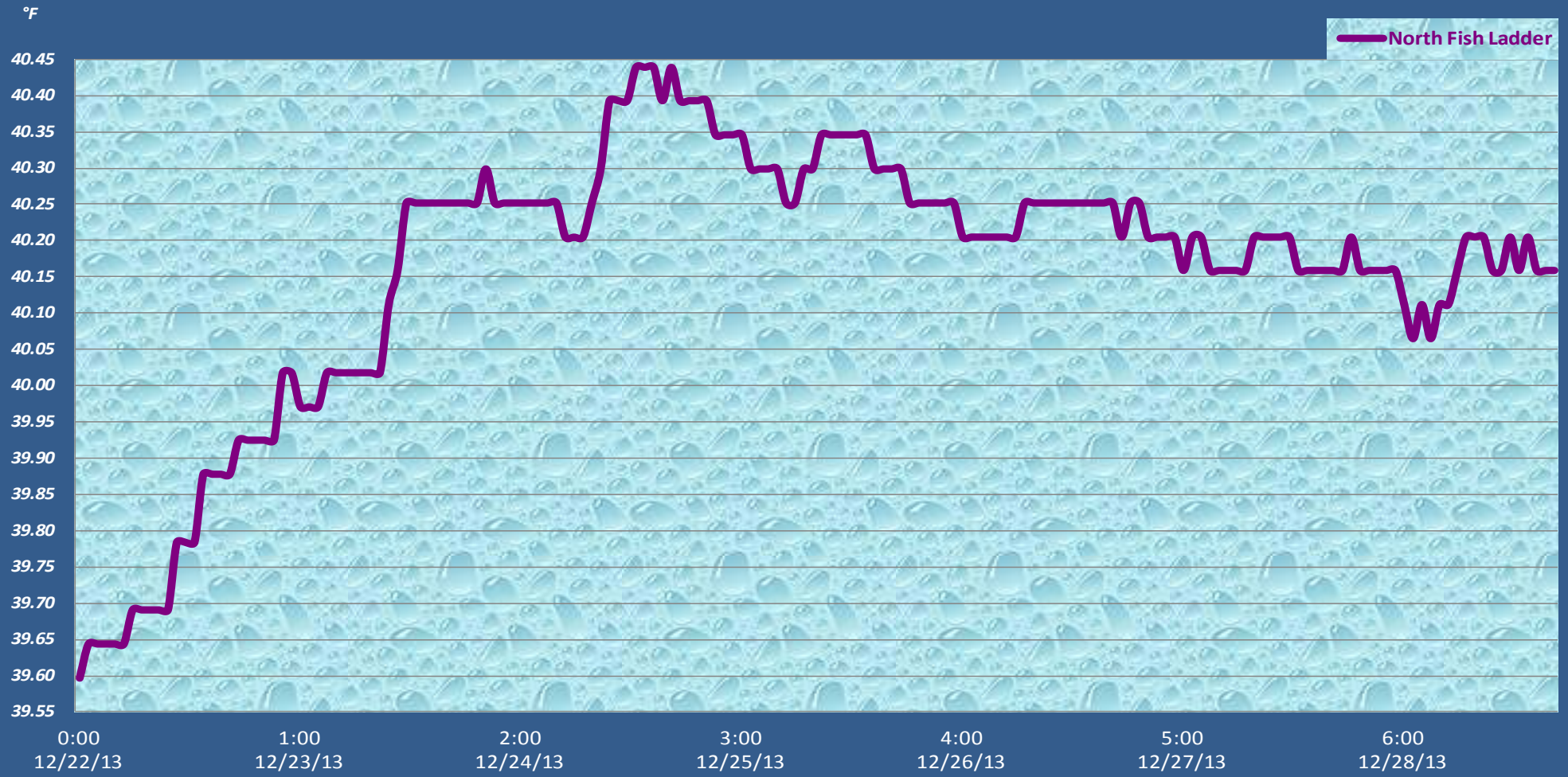


BAEA - Bald Eagle; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species)



■ Mean Total Count ■ Mean Foraging Count ■ Mean Flyby Count ■ Mean Resting Count ■ Mean Scavenging Count

# The Dalles Dam North Adult Fish Ladder River/Water Temperatures



Temp:		Secchi:	
	39.8	SUN	5.5
	40.2	MON	5.5
	40.4	TUES	5.5
	40.3	WED	5.5
	40.2	THUR	5.5
	40.1	FRI	5.5
	40.1	SAT	5.5
AVG:	40.2	AVG:	5.5

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		S2 Depth
22-Dec-13	1.3	9.2													
23-Dec-13	1.2	9.3													
24-Dec-13	1.3	9.1													
25-Dec-13	1.3	9.1													
26-Dec-13	1.4	9.2													
27-Dec-13	1.3	9.2													
28-Dec-13	1.4	9.1													
<b>AVG:</b>	<b>1.3</b>	<b>9.2</b>									closed				



AWS channel accessed for EFL backup water supply study. Approximately 6' depth clam shell buildup at one location. No major flow restriction concern, thus no plans for removal.