

The Dalles Dam Fishway Status Report

11/12/23

Inspection Period 11/05-11/11, 2023

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections: 14		Temperature: 56.2
			Comments: Testing Bird Gard audio deterrent.		Weekly Ave. Secchi: 5.0+
NORTH FISHWAY					
Exit differential	0	≤ 0.5'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Entrance weir N1	0	depth (≥ 8')	Average for the week	1.4	
Entrance Differential	0	1.0' - 2.0'	Average for the week	1.4	
N2		Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay			
Weir 158-159 differential	0	1.1' ± 0.1'			
Count station differential	0	≤ 0.3'			
153 Weir crest depth	0	1' ± 0.1'	1.2' per FPP.		
Junction pool weir JP6	0	> 7.0'	Weekly average	10.8	
East entrance differential	0	1.0' - 2.0'	Weekly average	1.4	
Entrance weir E1	0	No criteria	Weekly average	1.8	
Entrance weir E2	0	depth (≥ 8')	Weekly average	11.0	
Entrance weir E3	0	depth (≥ 8')	Weekly average	11.0	
Collection channel velocity	0	1.5 - 4 fps	1.13fps west 10/18/23		
Transportation channel velocity	0	1.5 - 4 fps	East 3.84fps 10/18/23		
North channel velocity	0	1.5 - 4 fps	3.51 fps 10/26/23		
South entrance	0	1.5 - 4 fps	3.39 fps 10/27/23		
West entrance differential	0	1.0' - 2.0'	Weekly average	1.3	
Entrance weir W1	0	depth (≥ 8')	Weekly average	9.5	
Entrance weir W2	0	depth (≥ 8')	Weekly average	9.5	
Entrance weir W3	0	No criteria	Weekly average	-2.2	
South entrance differential	0	1.0' - 2.0'	Weekly average	1.3	
Entrance weir S1	0	depth (≥ 8')	Weekly average	8.8	
Entrance weir S2	0	depth (≥ 8')	Weekly average	8.8	
JUVENILE BYPASS					
Sluiceway operation	0	Units 2, 8, 18	2-8-18 gates open.		
Turbine trashrack drawdown	0	<1.5', biwklly	11/3/23 all in criteria		
Spill volume/pattern	0	1 to 22	Spill closed		
Turbine Unit Priority	0	per FPP			
Gatewells	0	Weekly	11/3/23, No fish or mortality.		

Current Outages

TO4 OOS 10/30/2023 0800 – 11/22/2023 1700, BUSHING REPAIR/REPLACE
MU4 OOS 04/17/2023 0630 – 1/18/2024 1700, BREAKER REPAIR/REPLACEMENT
MU15-20 OOS 10/10/2023 0600 - 11/19/2023 1700, SYNCHRONOUS COND CONTROLS UPGRADE
MU19 & MU20 FOOS 10/07/2018 1205 – 10/31/2025 1700 T10 ACETYLENE

Maintenance

Planning spill gates 9 and 10 cable and gearbox swap. Possible this fall/winter.
Spillway assessment; Spillgates 1- 9 rehab 2034. Spillway crane replace first priority. Reviewing gate operation frequency.
Starting contractor lamprey entrance weir mods and trap above water line work. In house 156 157 exit orifice cut this winter.
Winter work plans; select wier motor/brake replace, 158/9 weir reseal, swap south weir gearboxes

Predators

Northern Pikeminnow Management Program concluded with 2421 fish removed from project
Bird Gard sound system being tested at peninsula and east entrance. Appears effective on cormorants and feeding gulls.
Trial of Tori lines installed at south and west entrances ongoing.
140-250~ WEGU/CAGU gulls on project, mergansers present and 70 some cormorant no longer foraging at east entrances.
Foxpro distress caller appears effective at dispersing gulls feeding when employed daily in PH2 and navlock. On/off testing continues.

Research/Construction/Contractors

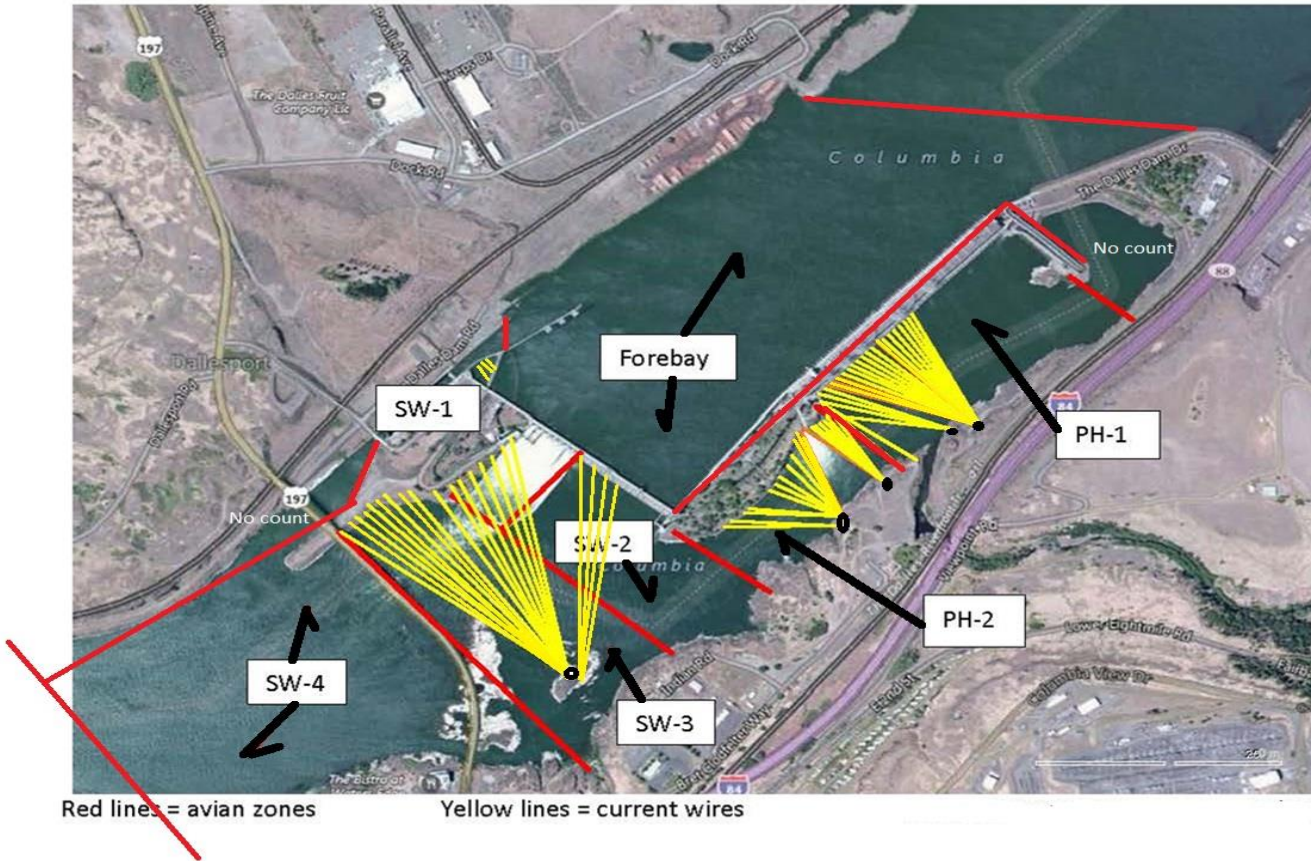
USGS temperature link- [November](#)
4 Peaks fish count ending 10/31
Supporting lamprey improvements PDT. Two of 4 exit weir modified with lamprey orifice, other 2 this winter.
Planning for install of junction pool lamprey trap and entrance weir modifications via contractor this winter.
zebra/quagga mussel samples collected on 10/22/2023, no mussels on substrate. No veligers detected in August samples.
PTAGIS fishladder data collection at count stations continues

Operations

Sluice gates 2-1, 2-2, 2-3, 8-1, 8-3, 18-2 in operation
Fish unit flow reduced from 5kcf to 4 kcf rest of season due to grating damage repair.

Approved by: Ron Twiner, Operation Project Manager, The Dalles Dam

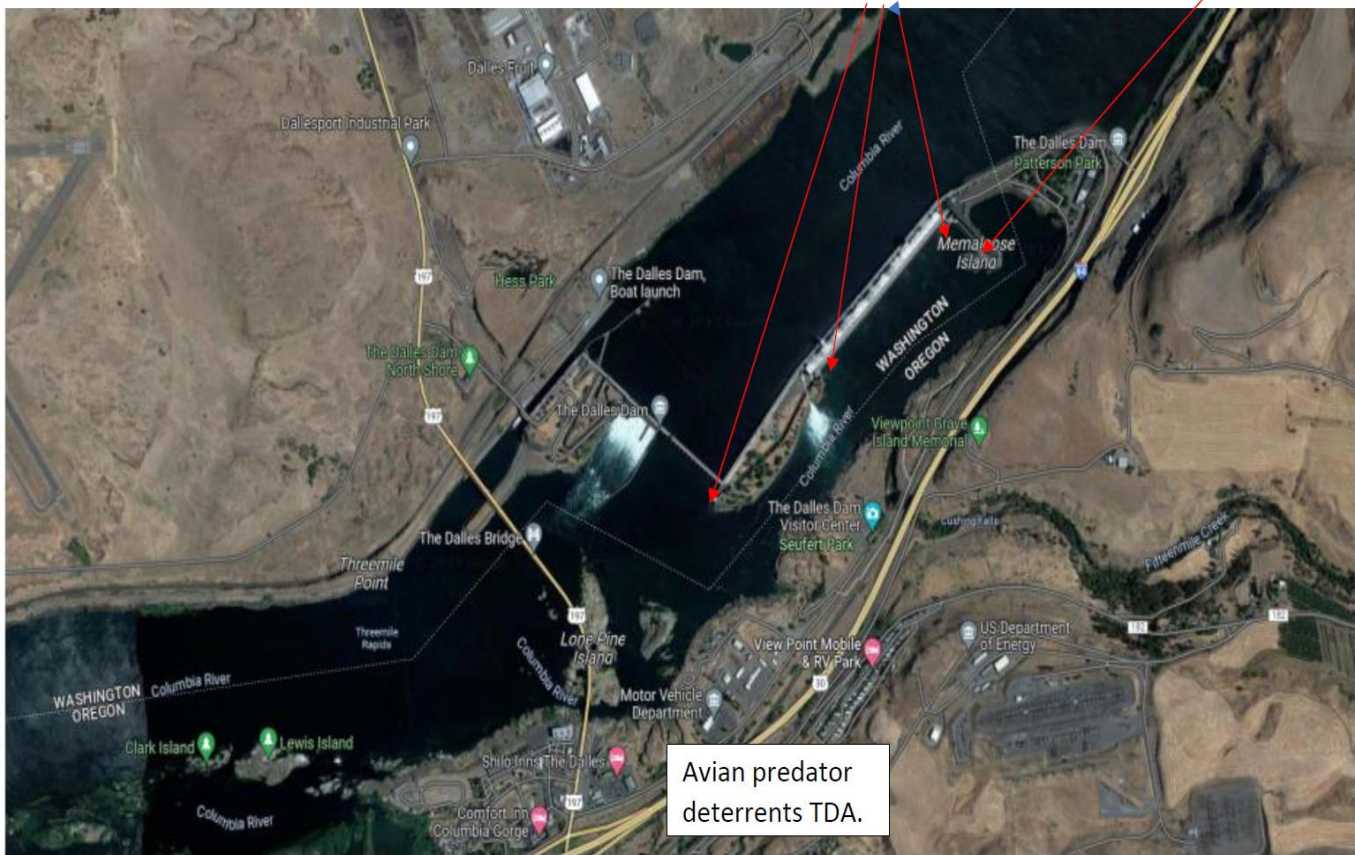
Bird Count Zones, Avian Lines and Deterrent Sites

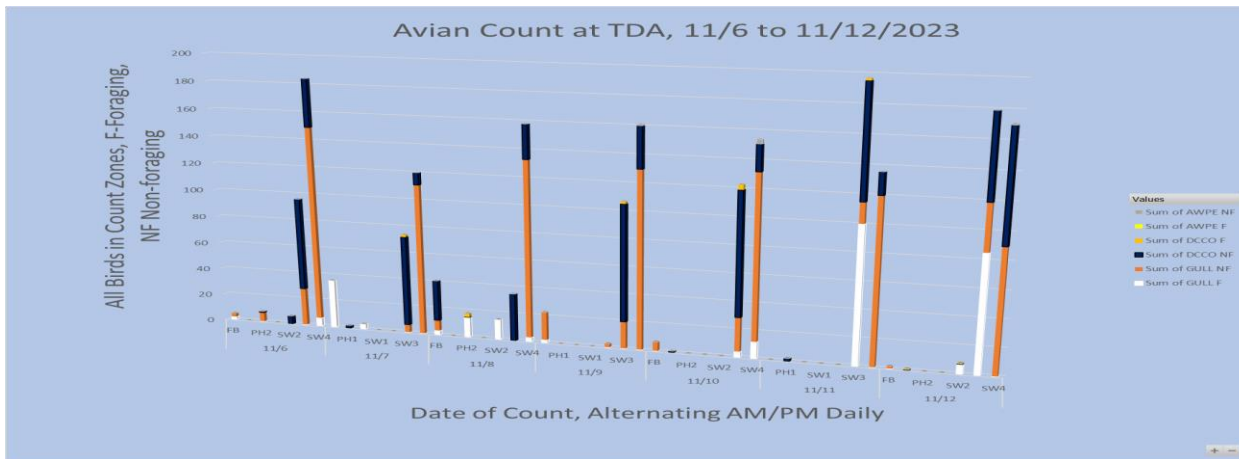


Avian predator tori lines and audio distress Bird Gard. 10/2023

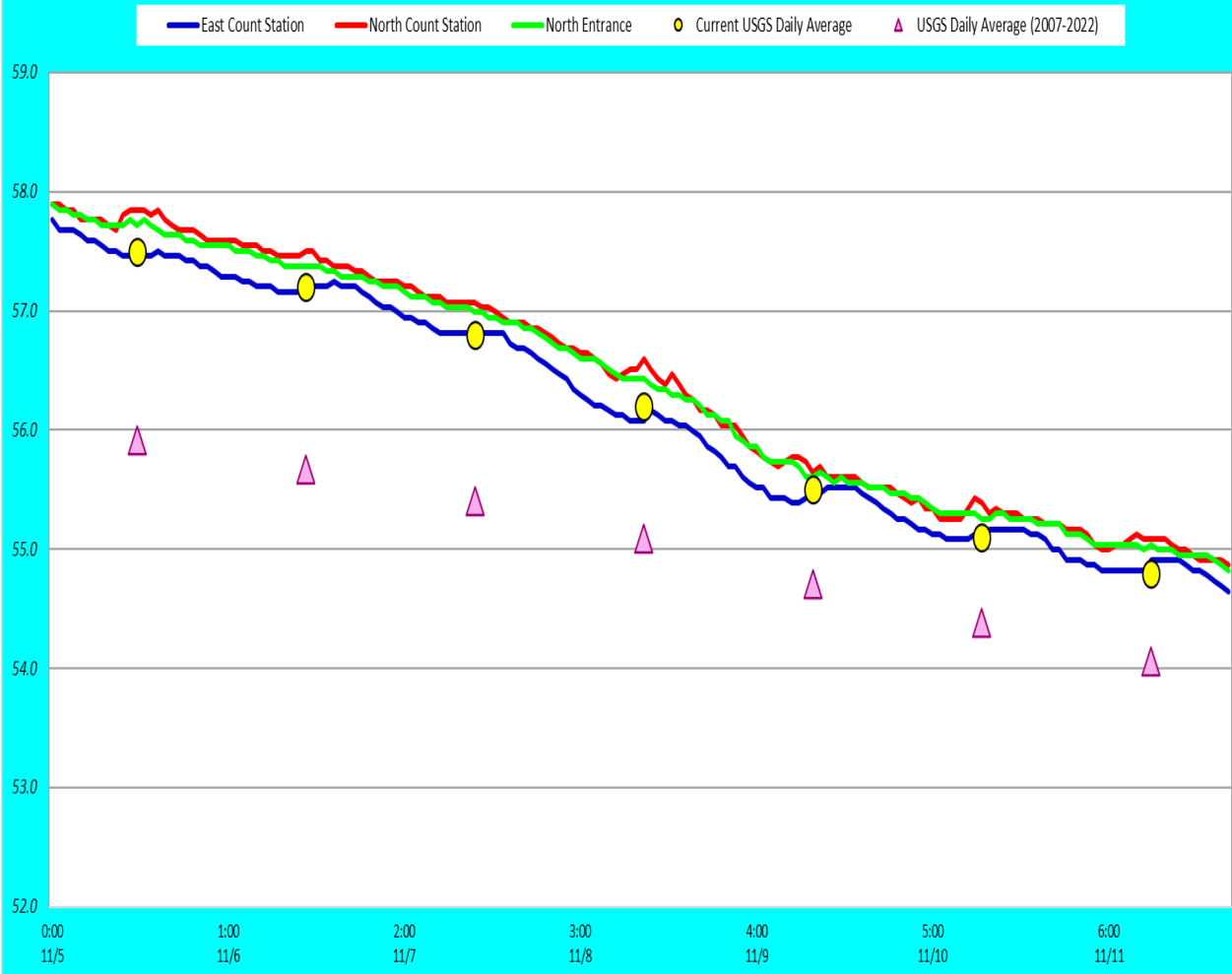
Tori lines at East Ladder entrances.

Bird Gard audio deterrent.





Adult Fish Ladders-River Temperatures

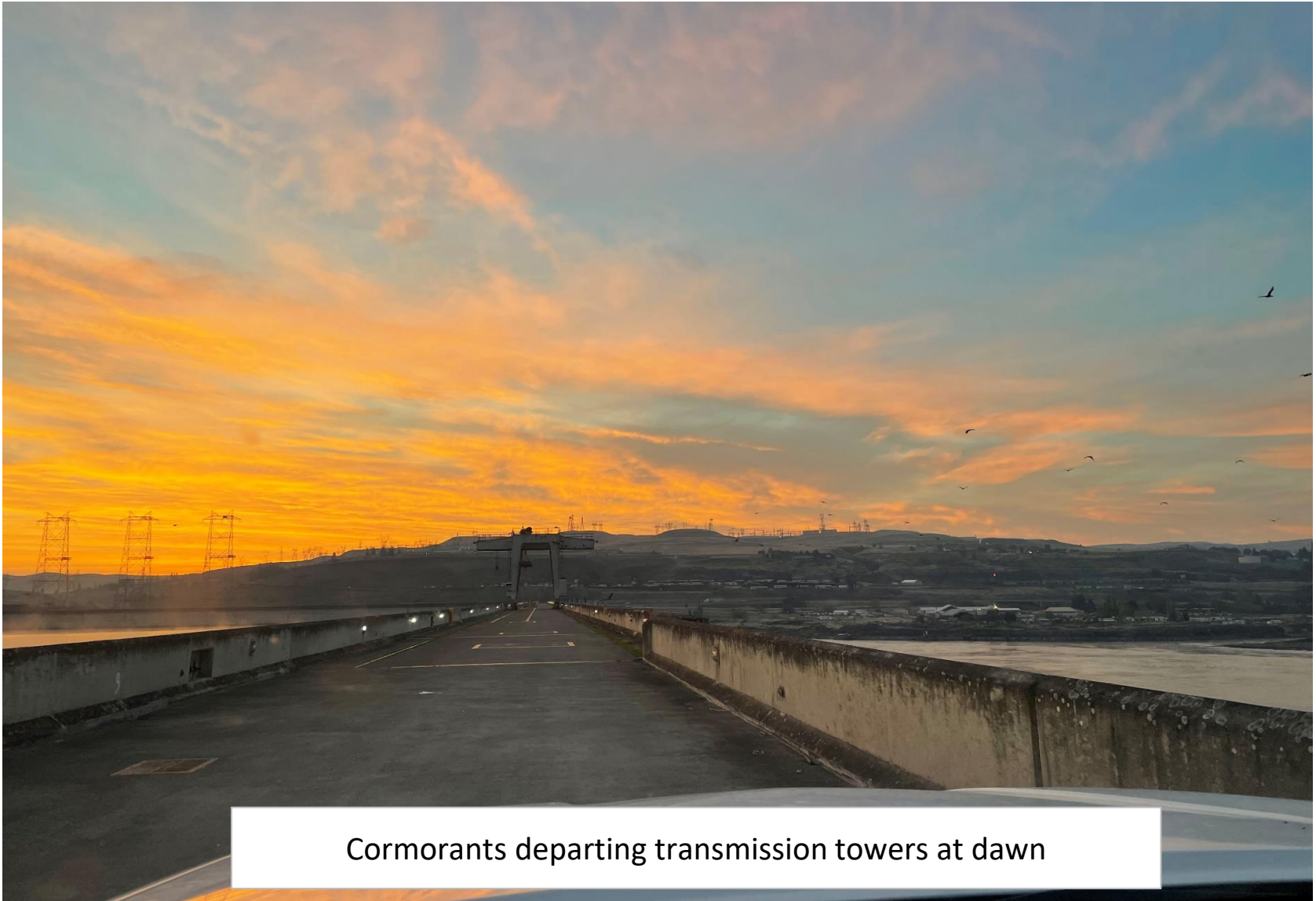


Secchi:		USGS
5.0	Sun	57.5
5.0	Mon	57.2
5.0	Tue	56.8
5.0	Wed	56.2
5.0	Thurs	55.5
5.0	Fri	55.1
5.0	Sat	54.8
5.0+	AVG	56.2

Reporting week data

Date:	North Ladder		East Ladder											
			East Entrance					West Entrance			South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
11/5	1.5	1.3	1.3	2.0	11.3	11.4	11.0	1.2	10.0	10.0	-2.0	1.2	9.0	9.0
	1.3	1.4	1.4	1.5	10.8	10.9	10.5	1.3	9.6	9.6	-2.3	1.4	8.6	8.6
11/6	1.3	1.4	1.4	1.3	10.9	10.9	10.3	1.3	9.3	9.3	-2.7	1.3	8.8	8.7
	1.4	1.7	1.7	0.6	10.8	10.9	9.6	1.4	8.8	8.8	-3.2	1.4	8.6	8.5
11/7	1.4	1.6	1.6	1.3	10.9	11.0	10.3	1.3	9.4	9.4	-2.5	1.4	8.6	8.5
	1.3	1.4	1.4	1.6	11.4	11.5	10.5	1.3	9.3	9.3	-2.7	1.4	8.4	8.3
11/8	1.3	1.5	1.5	1.5	11.1	11.2	10.4	1.3	9.5	9.6	-2.4	1.3	8.7	8.6
	1.4	1.6	1.6	1.3	11.0	11.1	10.4	1.3	9.4	9.4	-2.5	1.3	8.6	8.8
11/9	1.3	1.3	1.3	2.5	11.2	11.1	11.4	1.2	9.8	9.9	-1.6	1.3	9.2	9.4
	1.3	1.5	1.5	2.3	10.5	10.5	11.2	1.3	9.7	9.7	-1.8	1.3	9.2	9.2
11/10	1.4	1.2	1.2	2.3	11.1	11.1	11.3	1.2	9.6	9.7	-1.8	1.3	9.1	9.2
	1.3	1.3	1.3	2.6	10.9	10.9	11.6	1.3	9.6	9.7	-1.8	1.3	9.1	9.0
11/11	1.3	1.6	1.6	1.6	10.8	10.9	10.6	1.4	9.2	9.2	-2.3	1.4	8.6	8.5
	1.4	1.3	1.3	2.5	10.7	11.3	11.4	1.2	9.9	9.9	-1.6	1.2	9.2	9.1
AVG:	1.4	1.4	1.4	1.8	11.0	11.0	10.8	1.3	9.5	9.5	-2.2	1.3	8.8	8.8

Fishways inspected twice daily



Cormorants departing transmission towers at dawn



WSU plankton sampling in forebay