

The Dalles Dam Fishway Status Report

11/22/2020

Inspection Period: 11/15 - 11/21

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: 21		Temperature: 50.5 °F
			Comments: fishways functional		Weekly Average Secchi: 5.1

NORTH FISHWAY

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'	1.3
Entrance weir N1	0	depth (≥ 8')	9.6
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	Damage to north FB index makes data unreliable.

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	1.3' ± 0.1'	
Junction pool weir JP6	0	> 7.0'	Average for week = 11.3
East entrance differential	0	1.0' - 2.0'	Average for week = 1.4
Entrance weir E1	0	No criteria	Average for week = No criteria
Entrance weir E2	0	depth (≥ 8')	Average for week = 11.8
Entrance weir E3	0	depth (≥ 8')	Average for week = 11.8
Collection channel velocity	0	1.5 - 4 fps	3.04fps 11/11/2020 Range: 3.91 fps MU 21 to 2.15 fps MU-1
Transportation channel velocity	0	1.5 - 4 fps	2.38 fps, 11/22/2020
North channel velocity	0	1.5 - 4 fps	2.89 fps, 11/22/2020
South channel velocity	0	1.5 - 4 fps	3.37fps, 11/22/2020
West entrance differential	0	1.0' - 2.0'	Average for week = 1.5
Entrance weir W1	0	depth (≥ 8')	Average for week = 10.9
Entrance weir W2	0	depth (≥ 8')	Average for week = 10.9
Entrance weir W3	0	No criteria	
South entrance differential	0	1.0' - 2.0'	Average for week = 1.6
Entrance weir S1	0	depth (≥ 8')	Average for week = 8.5
Entrance weir S2	0	depth (≥ 8')	Average for week = 8.5

JUVENILE PASSAGE

Sluiceway operation	0	Units 3, 7, 18	MU8 OOS and MU1-2 OOS
Turbine trashrack drawdown	0	<1.5', biwklly	10/19/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill closed 9/1/2020.
Turbine Unit Priority	21	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	11/21/2020 fish check, no fish mortality seen.

OTHER ISSUES:

Unit Outages

Line 1, MU1,2 OOS 10/26/2020 - 2/28/21 for T1 replacement

T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels

M8 OOS through 11/24/20 overhaul

MU21 OOS through 12/3/2020 for Annual & Headcover Upgrade

MU9 & MU10 OOS through 11/24/2020 for T5 C phase Cooling Repairs, drain valve replacement & Doble Testing

SSO1 OOS through 1/14/21 for Overhaul and DC Governor oil Pump Install

Maintenance

PUD intake rake out of service due to power track damage. Exploring repair options. Attempting to rake with mobile crane.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work to resume FY21.

East fishway automation PLC panels installed. All sensor brackets installed. Programming underway. Completion target end Jan.

Spillway assessment (MRER); Spillgate 9 trunnion pin included.

Calibration checks on fishway entrances and exits 11/18/20, all within criteria.

Predators

Refer to avian graph tab for bird numbers.

Green laser use for piscivorous bird hazing testing continues. Effective tool for roosting birds during low light.

Cormorants foraging forebay near east ladder exit and entrance. 1 heron foraging east fishladder. 11/21, 3 hours video observation, no dip, no catch.

Invasive aquatic weeds significant at count station pickets and north exit.

Pikeminnow dam angling concluded w/980 removed. **All invasive bass/walleye by-catch release continues per states gamefish requirements.**

Research/Construction/Contractors

AWS intake trashrack - NWP investigating solution for debris plugging issue.

PITAGS north and east fishladder data collection at count stations continues.

Fish unit rehab - Phase 1A. Planning operation with AWS backup water supply during construction. On hold.

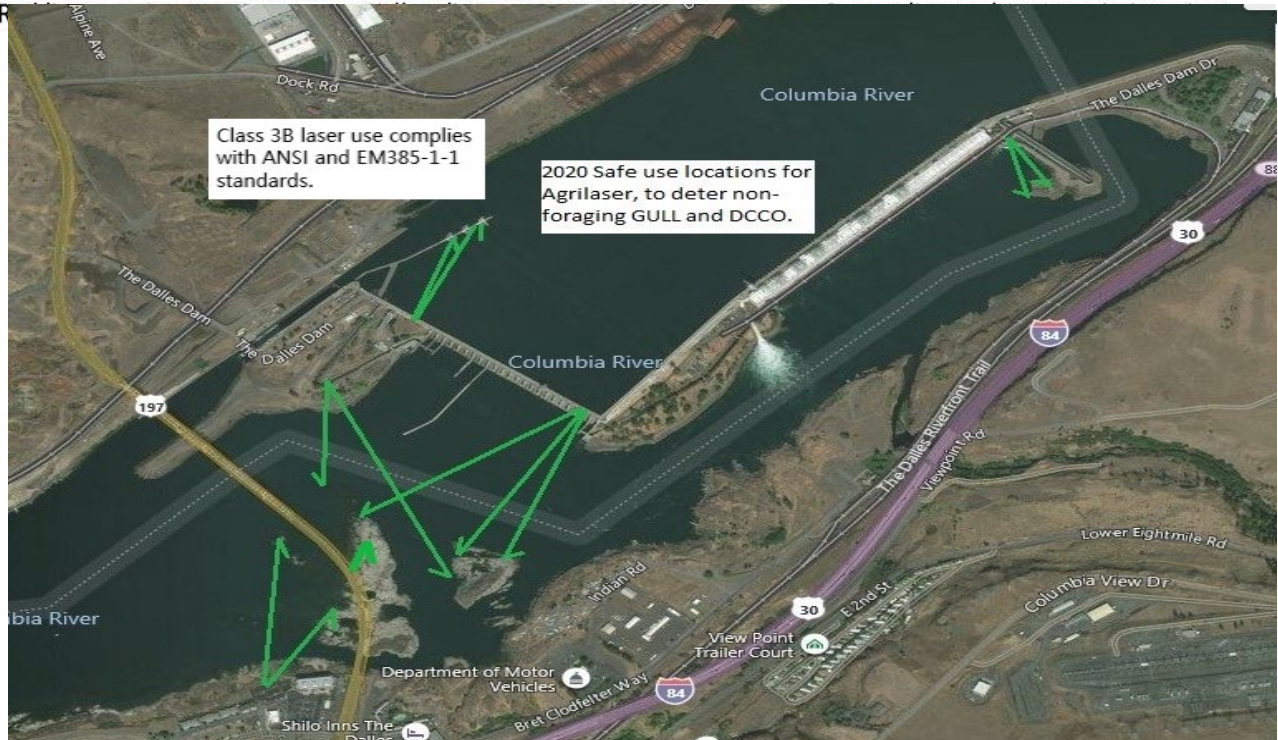
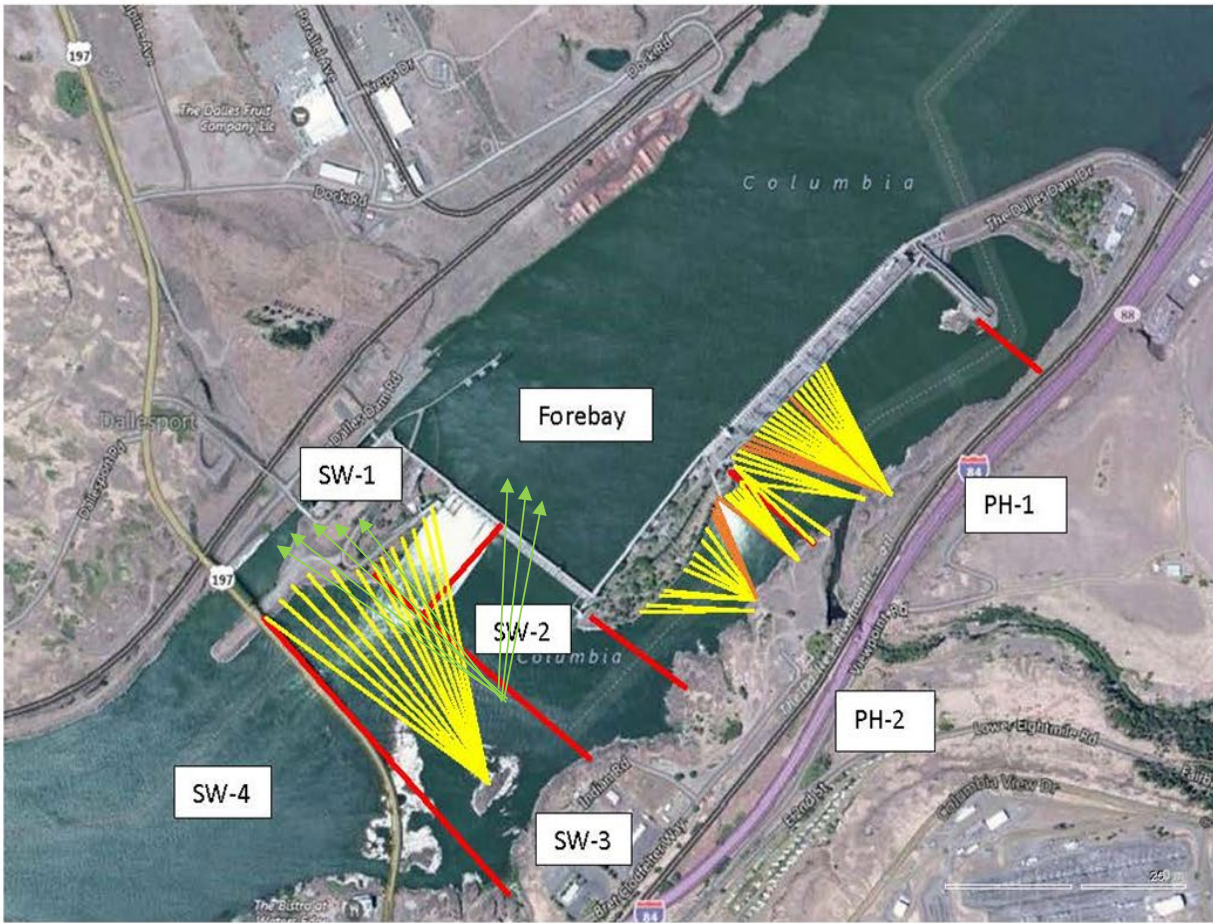
Plans underway to incorporate ODFW sturgeon tagging during upcoming fish ladder dewaterings

Fishway Operations

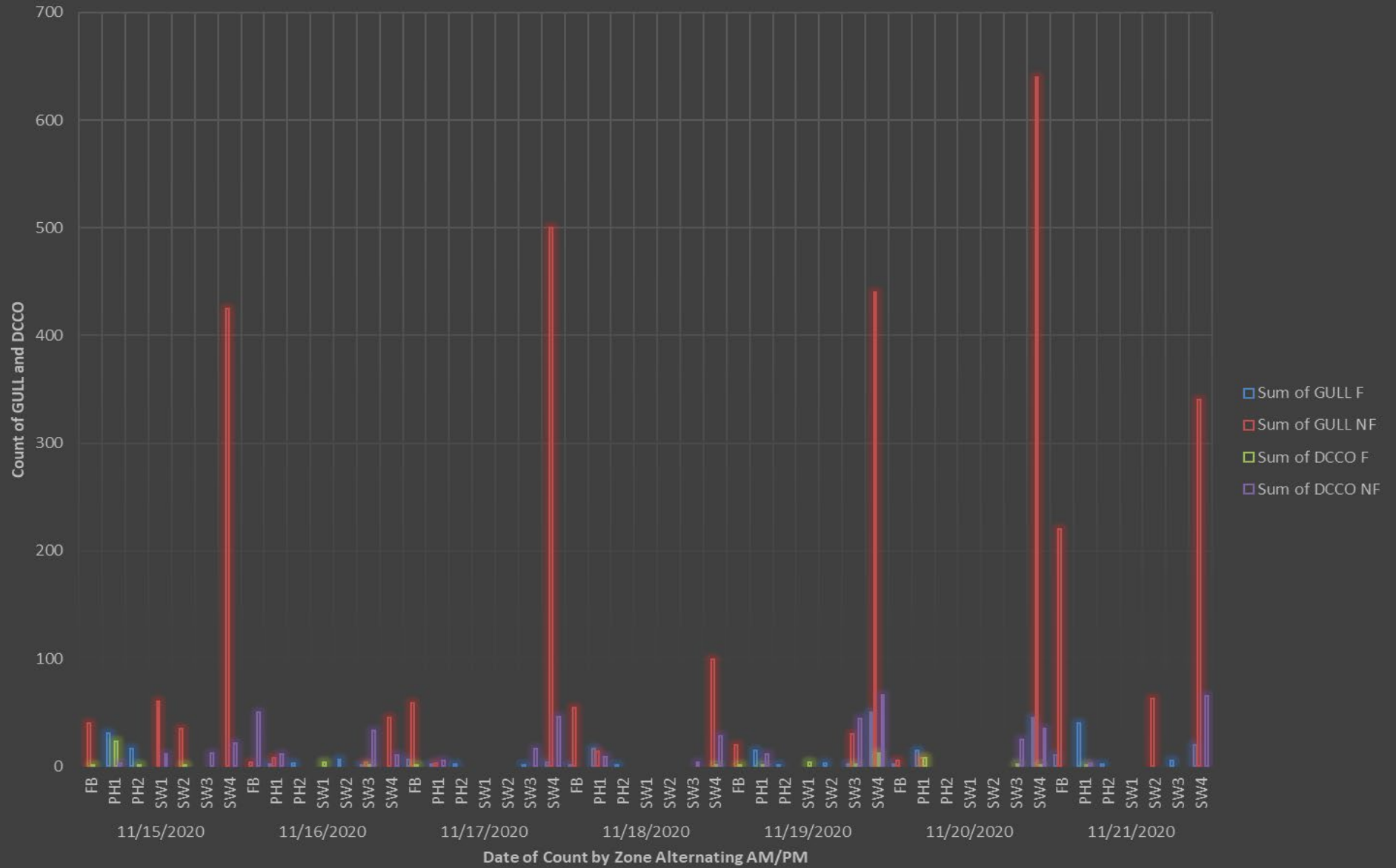
North and east fish ladders in full operation.

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

New Avian Lines and laser deterrent zones

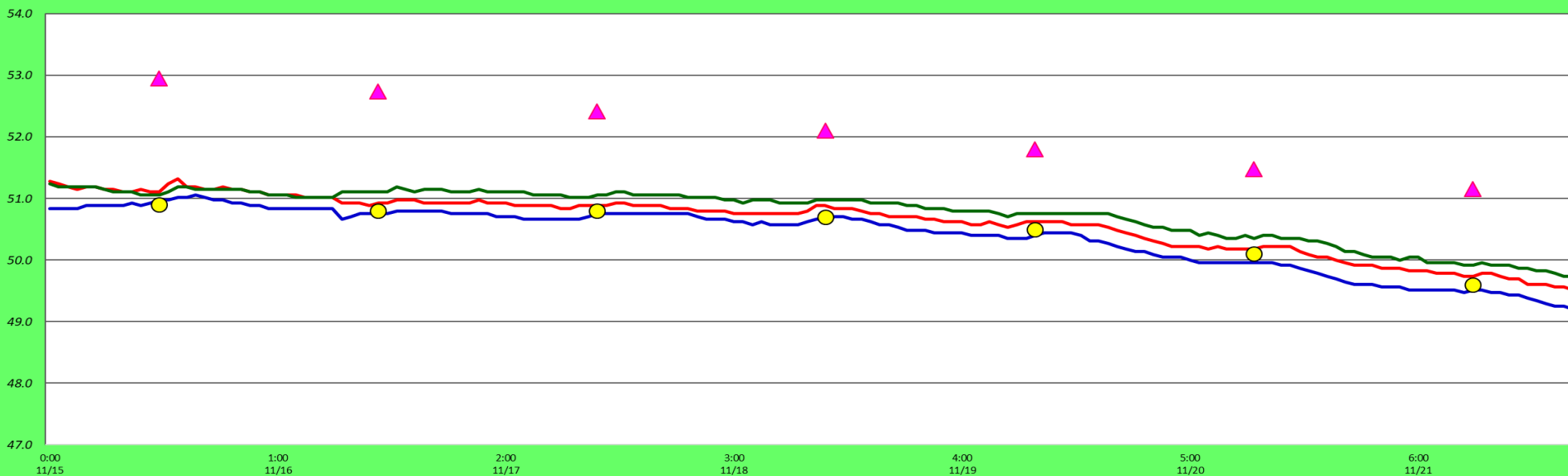


Bird Count by Date and Zone, The Dalles 11/15 to 11/21/2020



Adult Fish Ladders-River Temperatures

— East Count Station — North Count Station — North Entrance ● Current USGS daily tailwater average ▲ USGS daily tailwater average (2007-2019)



Secchi:		°F
11/15	Sun	50.9
11/16	Mon	50.8
11/17	Tue	50.8
11/18	Wed	50.7
11/19	Thurs	50.5
11/20	Fri	50.1
11/21	Sat	49.6
	AVG	50.5

USGS Nov

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

SCADA INSPECTION

out of criteria

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
11/15			1.7	6.9	12.0	12.0	11.1	1.4	11.2	11.2	11.2			
	1.3	9.3	1.8	6.9	11.8	11.8	11.4	1.5	10.9	10.9	10.9	1.6	8.6	8.6
	1.4	9.2	1.6	7.0	12.0	12.0	11.4	1.4	11.6	11.6	11.1	1.5	8.5	8.5
11/16			1.4	7.0	12.0	12.0	12.1	1.5	11.0	11.0	11.0	1.6	8.5	8.5
	1.5	9.3	1.5	7.1	12.0	12.0	11.5	1.5	11.2	11.2	11.2	1.5	8.6	8.6
	1.0	10.1	1.4	7.0	11.9	11.9	11.4	1.4	11.1	11.1	11.1	1.6	8.5	8.5
11/17			1.5	6.9	11.9	7.9	11.4	1.4	11.1	11.1	11.1	1.5	8.6	8.6
	1.3	9.5	1.4	6.9	11.9	11.9	11.0	1.3	10.9	10.9	10.9	1.6	8.6	8.6
	1.3	9.6	1.5	5.1	12.0	12.0	11.1	1.6	10.7	10.7	10.7	1.6	8.4	8.4
11/18			1.5	5.1	12.0	12.0	10.2	1.3	10.5	10.5	10.5	1.5	8.6	8.6
	1.2	9.5	1.5	5.6	12.1	12.1	10.7	1.4	10.5	10.5	10.5	1.5	8.6	8.6
	1.2	9.5	1.5	5.5	11.9	12.0	10.3	1.5	10.4	10.4	10.4	1.6	8.6	8.6
11/19			1.6	5.5	11.6	11.6	10.9	1.5	10.2	10.2	-2.3	1.6	8.5	8.5
			1.6	5.6	11.5	11.5	11.0	1.7	10.2	10.2	-2.3	1.6	8.5	8.5
	1.0	9.8	1.5	5.5	12.1	12.0	10.7	1.6	10.5	10.5	-2.2	1.7	8.4	8.4
11/20			1.5	7.0	12.0	12.0	12.1	1.5	11.0	11.0	-1.1	1.6	8.5	8.5
			1.4	7.1	12.0	12.0	11.5	1.5	11.2	11.2	-1.6	1.5	8.6	8.6
	1.4	9.6	1.4	10.1	12.1	12.1	13.4	1.5	11.4	11.4	0.1	1.6	8.5	8.5
11/21			1.2	8.5	8.6	12.1	11.0	1.3	11.3	11.3	11.3	1.4	8.5	8.5
	1.4	9.5	1.5	8.0	12.0	12.0	11.8	1.5	10.9	10.9	10.9	1.6	8.6	8.6
	1.2	9.8	1.6	7.5	12.0	12.0	12.2	1.6	10.8	10.8	10.8	1.6	8.5	8.4
AVG:	1.3	9.6	1.4	6.1	11.8	11.8	11.3	1.5	10.9	10.9	7.3	1.6	8.5	8.5

Fishways are inspected once daily plus one SCADA inspection.



Green spot laser deterrent in dim morning light. Cormorants and common mergansers leave resting rock in PH1 11/12/2020



Results