

The Dalles Dam Fishway Status Report

5/2/2021

Inspection Period: 04/25-5/1

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: 16		Temperature: 53.4 °F
			Comments: AWS operating well.		Weekly Ave. Secchi: 4.9

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'	Weekly average	10.0
Entrance weir N1	0	depth (≥ 8')	Weekly average	1.4
Entrance weir N2	0	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' ± 0.1'		
Junction pool weir JP6	0	> 7.0'		
East entrance differential	0	1.0' - 2.0'	1 fish unit operation	Week ave. 1.5
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')		Week ave. 11.1
Entrance weir E3	0	depth (≥ 8')		Week ave. 11.1
Collection channel velocity	0	1.5 - 4 fps	2.07 fps 4/30	Range MU20 1.39- MU16 2.48fps
Transportation channel velocity	0	1.5 - 4 fps	2.65 fps 4/30/2021	
North channel velocity	0	1.5 - 4 fps	2.44 fps, 5/1/2021	
South channel velocity	0	1.5 - 4 fps	3.82 fps 4/30/21	
West entrance differential	0	1.0' - 2.0'	Old SCADA	Week ave. 1.5
Entrance weir W1	0	depth (≥ 8')		Week ave. 8.4
Entrance weir W2	0	depth (≥ 8')		Week ave. 8.4
Entrance weir W3	0	No criteria	Closed	
South entrance differential	0	1.0' - 2.0'		Week ave. 1.2
Entrance weir S1	0	depth (≥ 8')	1 fish unit operation	Week ave. 10.1
Entrance weir S2	0	depth (≥ 8')	1 fish unit operation	Week ave. 10.1

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 18	Gates over MU1/1-2-3, MU8/1-3, MU18-2 open	
Turbine trashrack drawdown	0	<1.5', biwkly	4/15/21, all gatewells within drawdown criteria.	
Spill volume/pattern	0	1 to 8	Spilling 8 gates.	
Turbine Unit Priority	0	per FPP		
Gatewells	0	Weekly	No mortality. Decreasing #s of salmon fry, increasing smolts in gatewells, 4/28/2021	

OTHER ISSUES:

Current Unit Outages

FU2 OOS through 4/27/21

T10 (MU19 and 20) OOS 10/27/22 acetylene levels

MU22 out 3/1/2021 – 5/20/2021 for Top Plate Cover Upgrades

Maintenance

PUD intake rake returned to service. Temporary power supply repair completed. Exploring permanent options.

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

Fishway automation replacement on hold. East exit, east and south entrances complete. West and north operating old system.

Calibrations 4/29/21 show entrance east gates E3 and S2 recording gates lower than actual opening. All in criteria >8'. Working on fix with TDE.

AWS backup system in operation with a single fish unit through next week. No intake debris accumulation or differential.

Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair

Predators

Gull numbers increasing with aggressive foraging below spillway in SW3 and 4. Cormorants nesting on BPA towers.

No opportunity for Green laser use for piscivorous bird hazing testing. Laser no longer effective moving cormorants off of BPA towers at dusk.

Pikeminnow dam angling resumes in May. **All invasive bass/walleye by-catch release to continue per state requirement for past 5 years.**

Processing tag data recovered. Avian predator investigation continues with purchase of game cams for east fishways.

Research/Construction/Contractors

Fish counters started Apr1. No issues.

AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. Team site visit Mar31.

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

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

Fishway Operations

Ice Trash sluiceway opened 24/7. MU1/1-2-3, MU 8/1-3, MU18/2

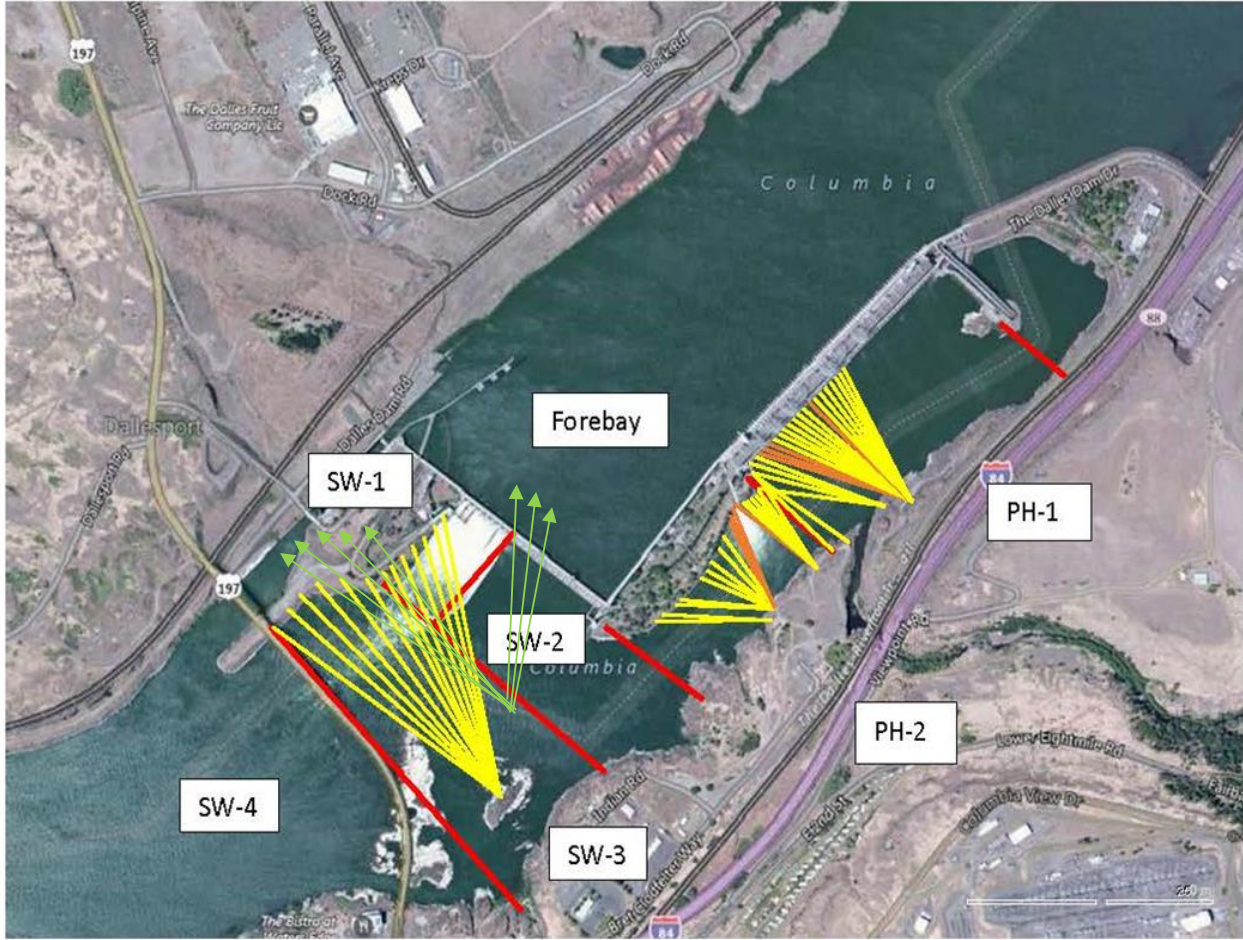
East and north fishladders in full operation per Fish Passage Plan.

New automation working well within criteria.

Spillway open at 40% river flow

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

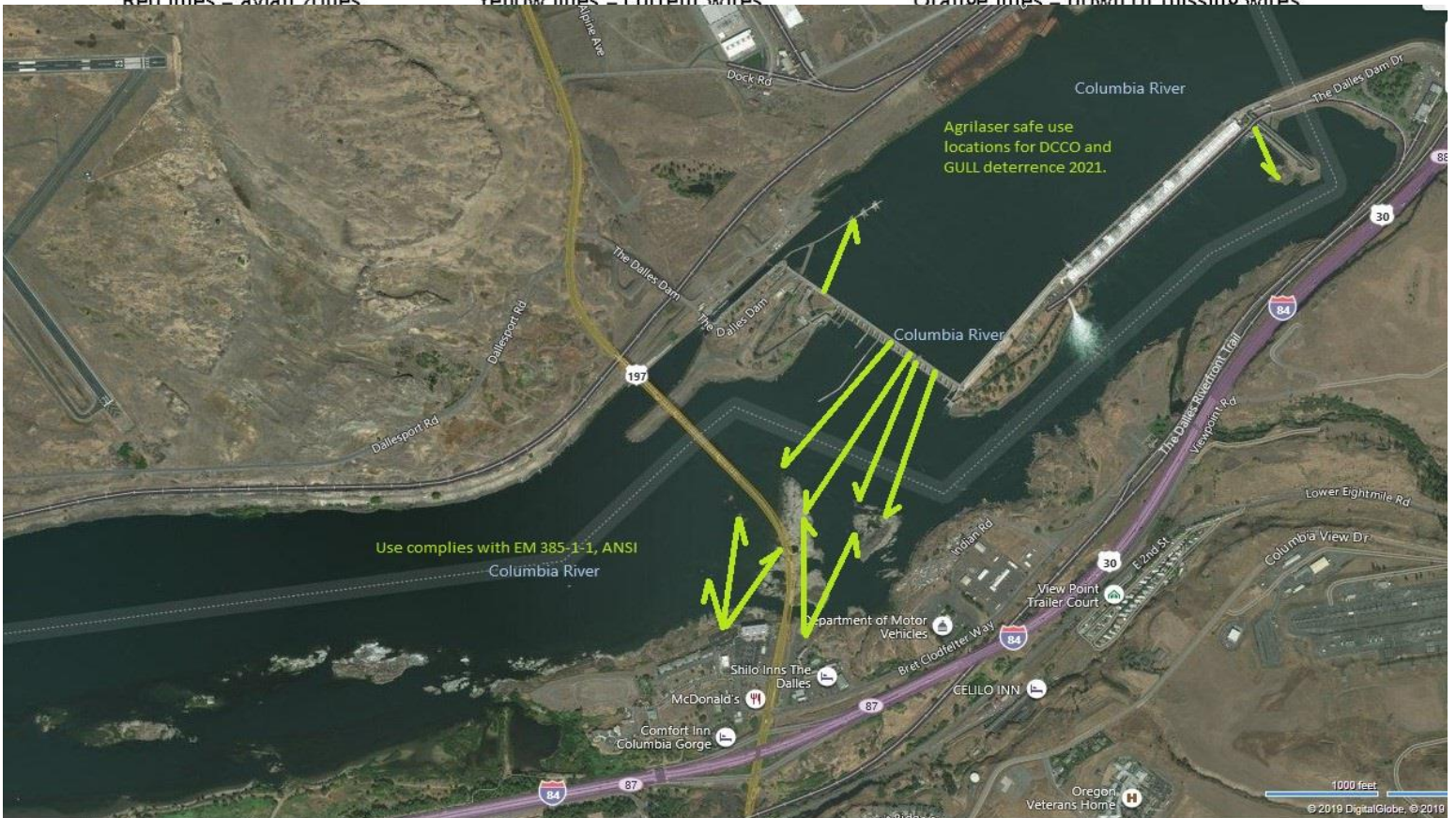
New Avian Lines and laser deterrent zones



Red lines = avian zones

Yellow lines = current wires

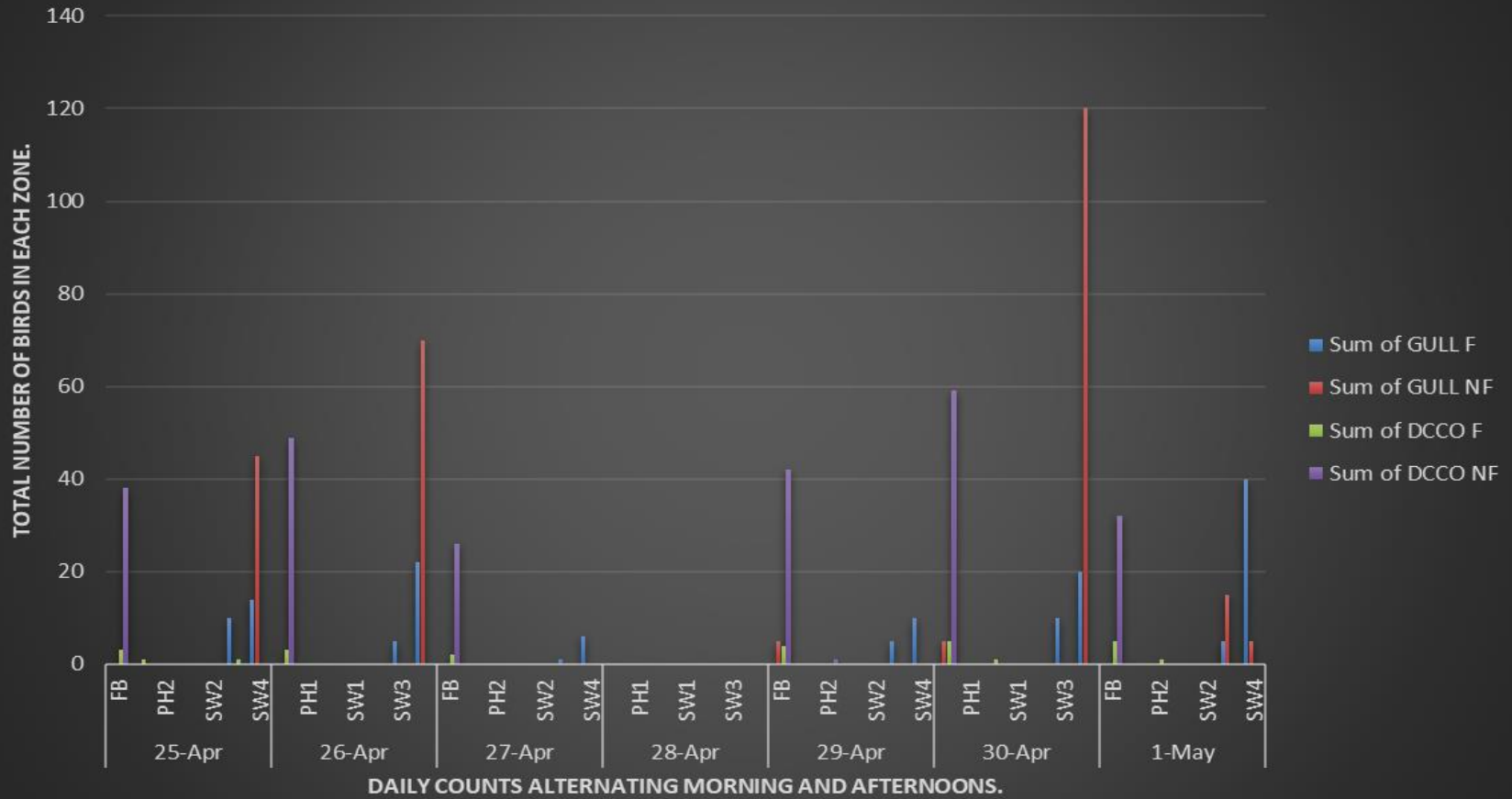
Orange lines = down or missing wires



Agrilaser safe use locations for DCCO and GULL deterrence 2021.

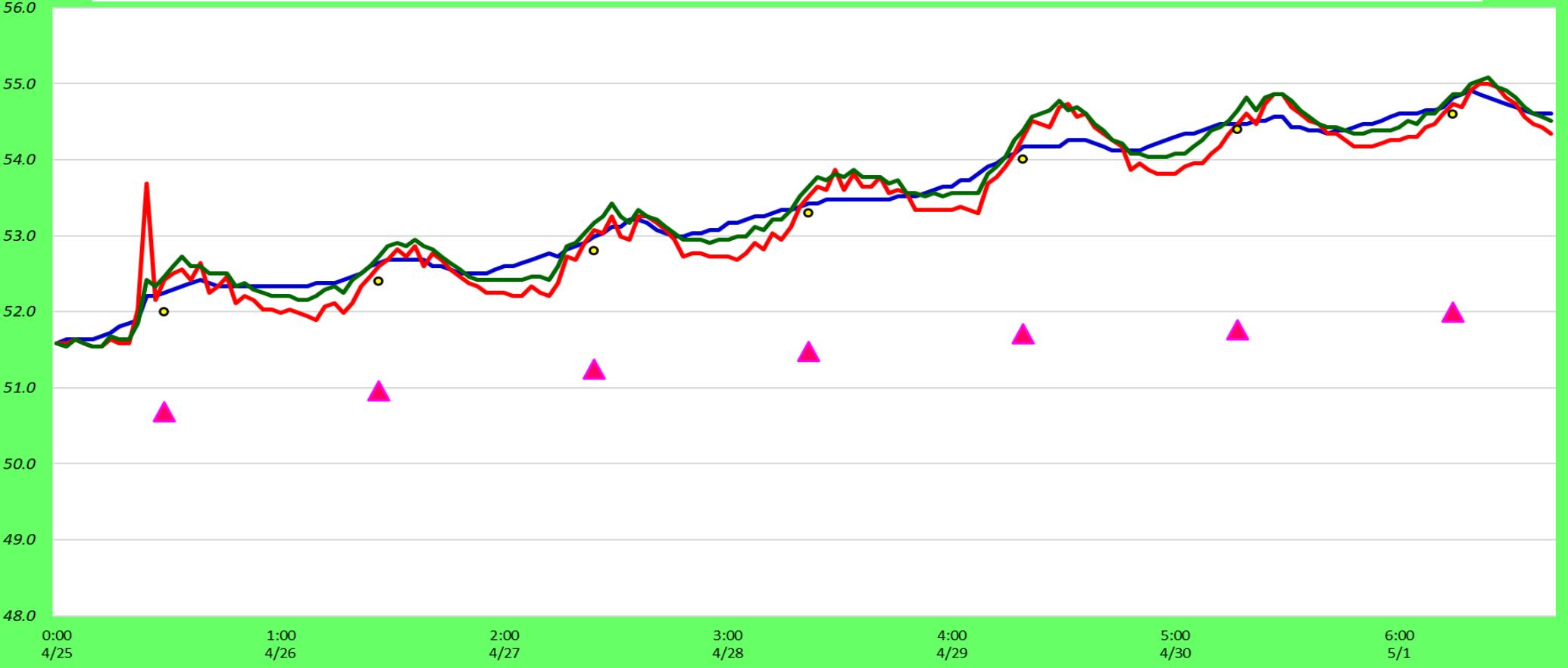
Use complies with EM 385-1-1, ANSI

Avian predators at TDA 4/25 to 5/1/2021



Adult Fish Ladders-River Temperatures

— East Count Station — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2020)



Secchi:		°F
5.0	Sun	52.0
4.0	Mon	52.4
5.0	Tue	52.8
5.0	Wed	53.3
5.0	Thurs	54.0
5.0	Fri	54.4
5.0	Sat	54.6
4.9	AVG	53.4

[Lower Columbia River Temperature Report for April 2021 \(crohms.org\)](http://crohms.org)

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

E1 and W3 do not have criteria opening.

*S2, E3 value 1.5' ~ more than actual.

out of criteria

Date:	North Ladder		East Ladder											
	Differential	N1 Depth	East Entrance					West Entrance				South Entrance		
			Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
4/25	1.4	9.9	1.4	8.2	11.2	11.2	12.3	1.5	8.3	8.3	-1.2	1.2	9.7	9.7
	1.4	9.9	1.5	8.2	11.1	11.1	12.3	1.5	8.4	8.4	-1.3	1.2	10.3	10.3
4/26	1.4	10.0	1.4	8.4	11.0	11.0	12.5	1.4	8.2	8.2	-1.3	1.2	9.7	9.6
	1.3	10.1	1.4	8.5	11.0	11.1	12.5	1.5	8.4	8.4	-1.1	1.1	10.1	10.1
4/27	1.4	9.9	1.4	8.5	10.9	10.9	12.5	1.5	8.4	8.4	-1.0	1.2	10.0	10.0
	1.4	10.0	1.5	8.5	10.9	11.0	12.6	1.5	8.4	8.3	-1.0	1.2	10.1	10.0
4/28	1.4	10.0	1.5	8.4	10.8	10.8	12.4	1.5	8.3	8.3	-1.0	1.1	10.1	10.1
	1.3	10.0	1.5	8.3	10.7	10.8	12.4	1.6	8.2	8.2	-1.2	1.2	10.2	10.2
4/29	1.3	9.9	1.7	7.7	10.2	10.2	11.7	1.4	8.4	8.4	-1.8	1.2	10.3	10.3
	1.3	10.0	1.5	8.3	10.7	10.8	12.4	1.7	8.3	8.3	-1.9	1.3	10.1	9.1
4/30	1.3	10.1	1.5	8.0	12.7	12.7	12.1	1.6	8.4	8.4	-1.4	1.2	10.0	10.3
	1.4	10.0	1.5	8.0	12.7	12.7	12.1	1.6	8.3	8.3	-1.5	1.2	10.1	10.4
5/1	1.3	10.0	1.6	7.7	10.4	10.4	11.8	1.5	8.4	8.4	-1.6	1.2	10.1	10.5
	1.3	10.2	1.6	8.3	11.0	11.0	12.4	1.5	8.6	8.6	-1.5	1.2	11.1	10.4
AVG:	1.4	10.0	1.5	8.2	11.1	11.1	12.3	1.5	8.4	8.4	-1.3	1.2	10.1	10.1

Fishways are inspected twice daily. Overnight trend monitored via Old SCADA.



Sunday morning sport fishing upstream of the east ladder exit. Owl decoy doesn't work on them. We often observe them well within 50' of exit.