

The Dalles Dam Fishway Status Report

8/15/21

Inspection Period: 8/08-8/14

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: 73.1 °F
			Comments: HOT & SMOKEY		Weekly Ave. Secchi: 6.0

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	1.0' - 2.0'	Weekly average 10.2
Entrance Differential	0	depth (≥ 8')	Weekly average 1.3
Entrance weir N2	0	Closed	
PUD Intake differential	8	≤ 0.5'	Weeds clogging intakes

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'	Week ave. 1.5
Entrance weir E1	0	No criteria	
Entrance weir E2	0	depth (≥ 8')	Week ave. 10.3
Entrance weir E3	0	depth (≥ 8')	Week ave. 11.4
Collection channel velocity	0	1.5 - 4 fps	2.94 fps 8/13/21
Transportation channel velocity	0	1.5 - 4 fps	2.39 fps 8/13/21
North channel velocity	0	1.5 - 4 fps	3.25 fps 8/13/21
South channel velocity	0	1.5 - 4 fps	3.39 fps 8/13/21
West entrance differential	0	1.0' - 2.0'	Old SCADA Week ave. 1.5
Entrance weir W1	0	depth (≥ 8')	Week ave. 9.4
Entrance weir W2	0	depth (≥ 8')	Week ave. 9.4
Entrance weir W3	0	No criteria	Closed
South entrance differential	0	1.0' - 2.0'	Week ave. 1.5
Entrance weir S1	0	depth (≥ 8')	Week ave. 8.5
Entrance weir S2	0	depth (≥ 8')	Week ave. 8.4

JUVENILE PASSAGE

Sluiceway operation	0	Units 1,8, 18	Gates over MU1/1-2-3,MU8/1-3,MU18-2 open
Turbine trashrack drawdown	0	<1.5', biwkly	8/15/21, all gatewells in criteria.
Spill volume/pattern	0	1 to 8	Spilling 8, reduced to 2 gates at times.
Turbine Unit Priority	0	per FPP	
Gatewells	0	Weekly	1 adult shad mortality 8/15/2021

OTHER ISSUES:

Current Unit Outages

MU3 & MU4 OOS 0630 7/19/2021 – 1700 7/29/2021 for Annual & T2 Doble Testing
MU7 OOS 0600 6/1/2021 – 1700 8/5/2021 Overhaul
MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades
MU19 OOS 6/27/2021 0630 – 10/27/2022 1700 for Top Plate Cover Upgrade
T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels
MU20 & MU21 OOS 0630 7/12/2021 – 1700 8/19/2021 for crane rail replacement
MU22 OOS 0630 7/12/2021 – 1700 9/2/2021 for crane rail replacement

Maintenance

Contractor working on fish unit bus overheating problem

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

PUD intake rake returned to service with temporary power. Exploring permanent options.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Waiting for available maintenance staffing.

Fishway automation replacement on hold from lack of staff. East exit, east and south entrances complete. West and north operating with old system.

Oil boom protecting east exit became unattached. Temporarily secured. Plans to remove and possible redesign.

Calibration of all fishway moving gates 8/12/21. All in criteria with only minor deviations in calibrations.

ROV inspection of fishway diffuser grating completed first week of Aug. No problems found. Last winter repair at east entrance holding firm.

Predators

Hérons reduced presence in east fishladder with new netting, frequent ladder walks and USDA hazing.

Some juvenile shad moving downstream attracting gulls and adult shad fallback keeping pelicans.

Game camera Images at east ladder exit indicate cormorants fishing in daylight and at night?

Research/Construction/Contractors

Fish counters started Apr1. No issues.

AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. PDT meetings in progress.

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.

Northern Pikeminnow Management Program w/20npm for the week, 1369 YTD

PSMFC concluded juvenile sampleing

USDA concluded Picivorous bird hazing

Fishway Operations

AWS backup system in operation this week with a single fish unit while contractor corrected overheating bus issues

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

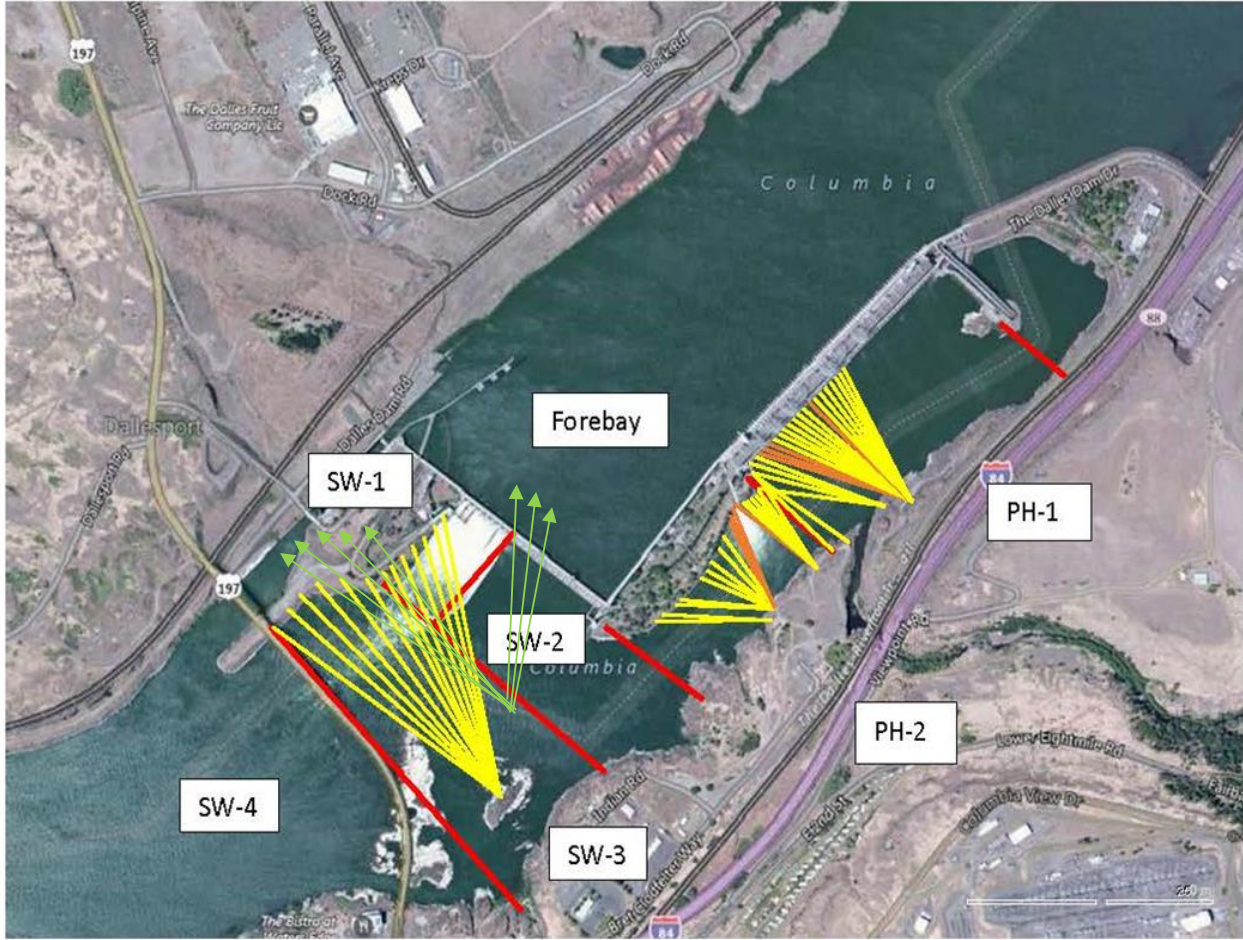
East and north fish ladders in full operation per Fish Passage Plan.

New automation installed at east exit, east entrance and south entrance working well with minor adjustments.

Spillway gates 3-8 open at 40% river flow

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

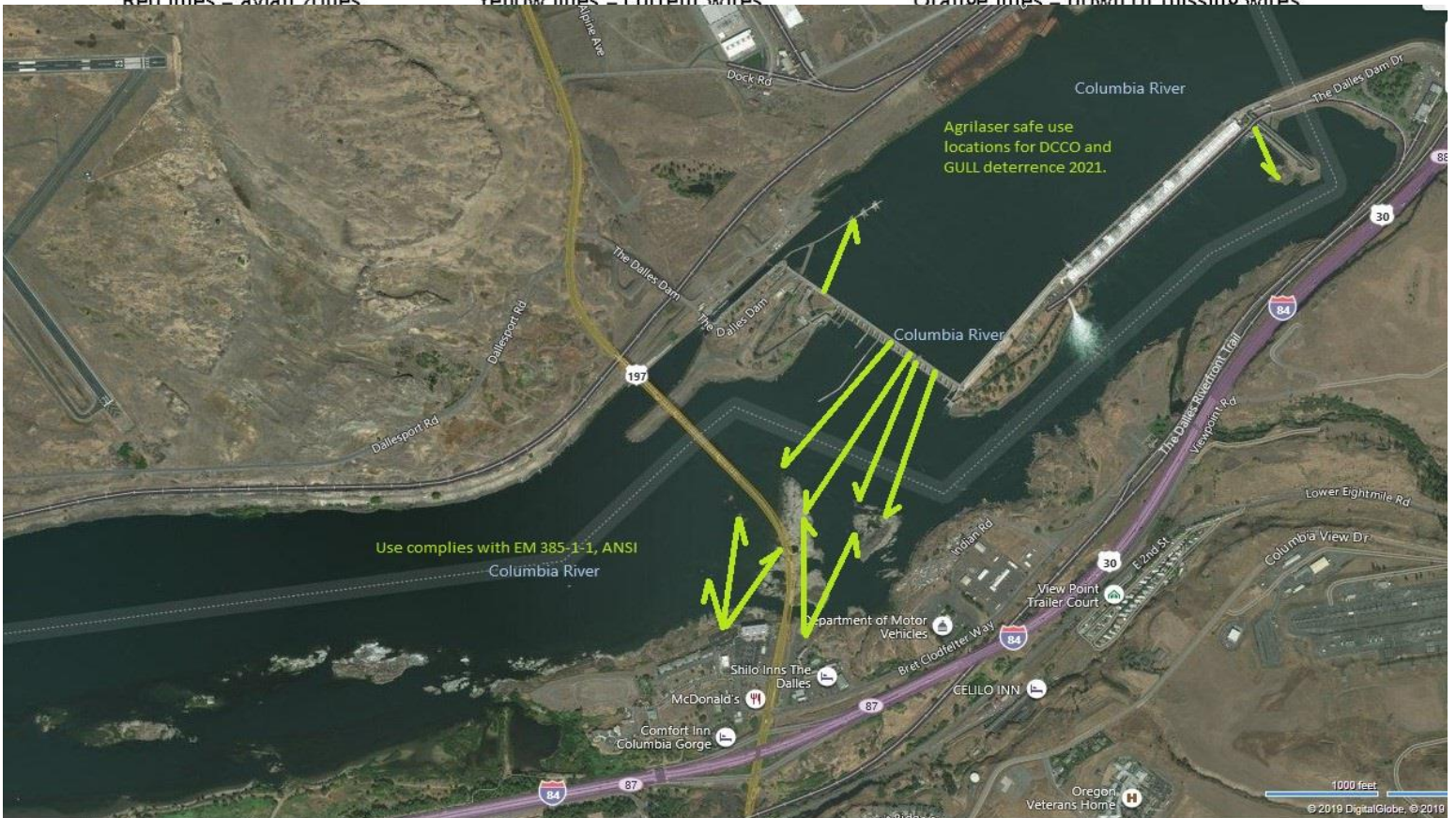
New Avian Lines and laser deterrent zones



Red lines = avian zones

Yellow lines = current wires

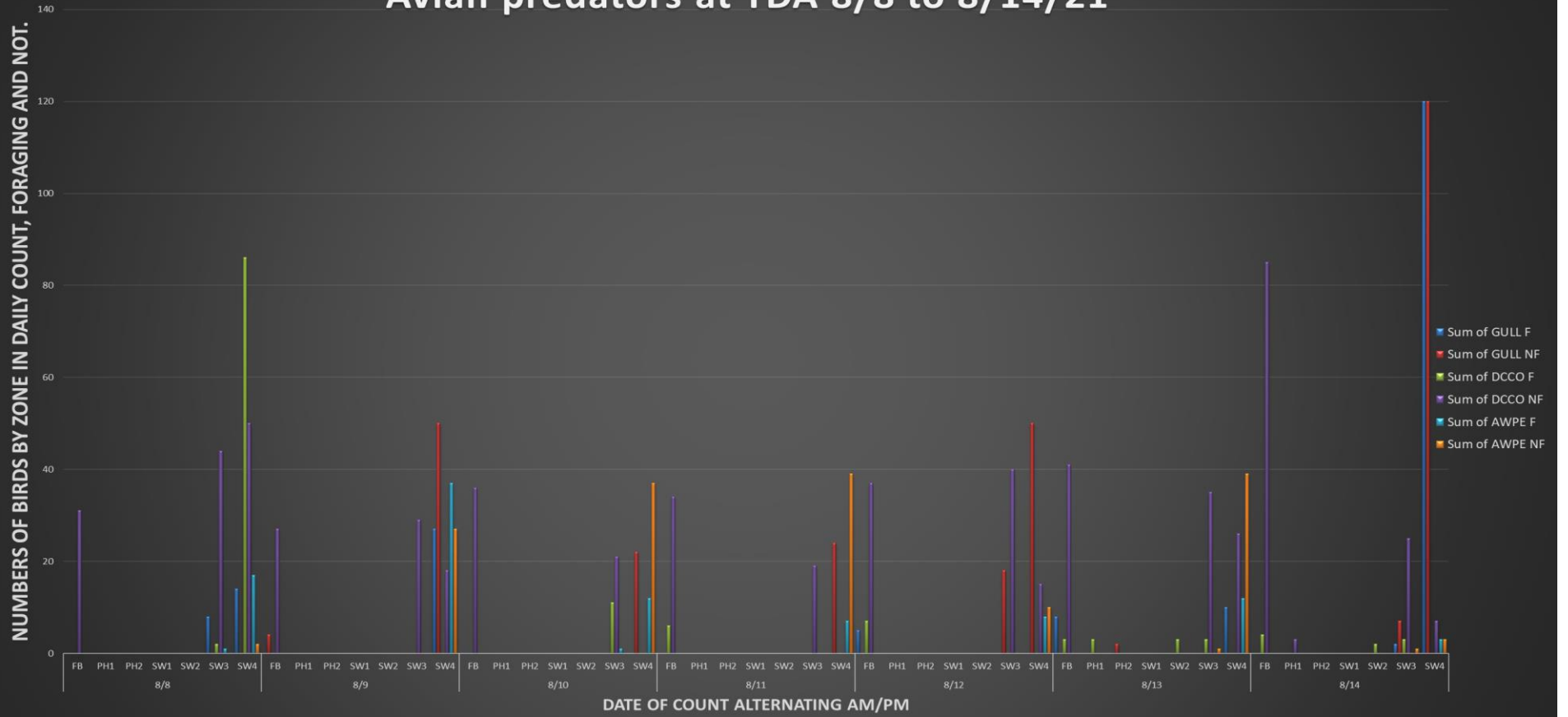
Orange lines = down or missing wires



Agrilaser safe use locations for DCCO and GULL deterrence 2021.

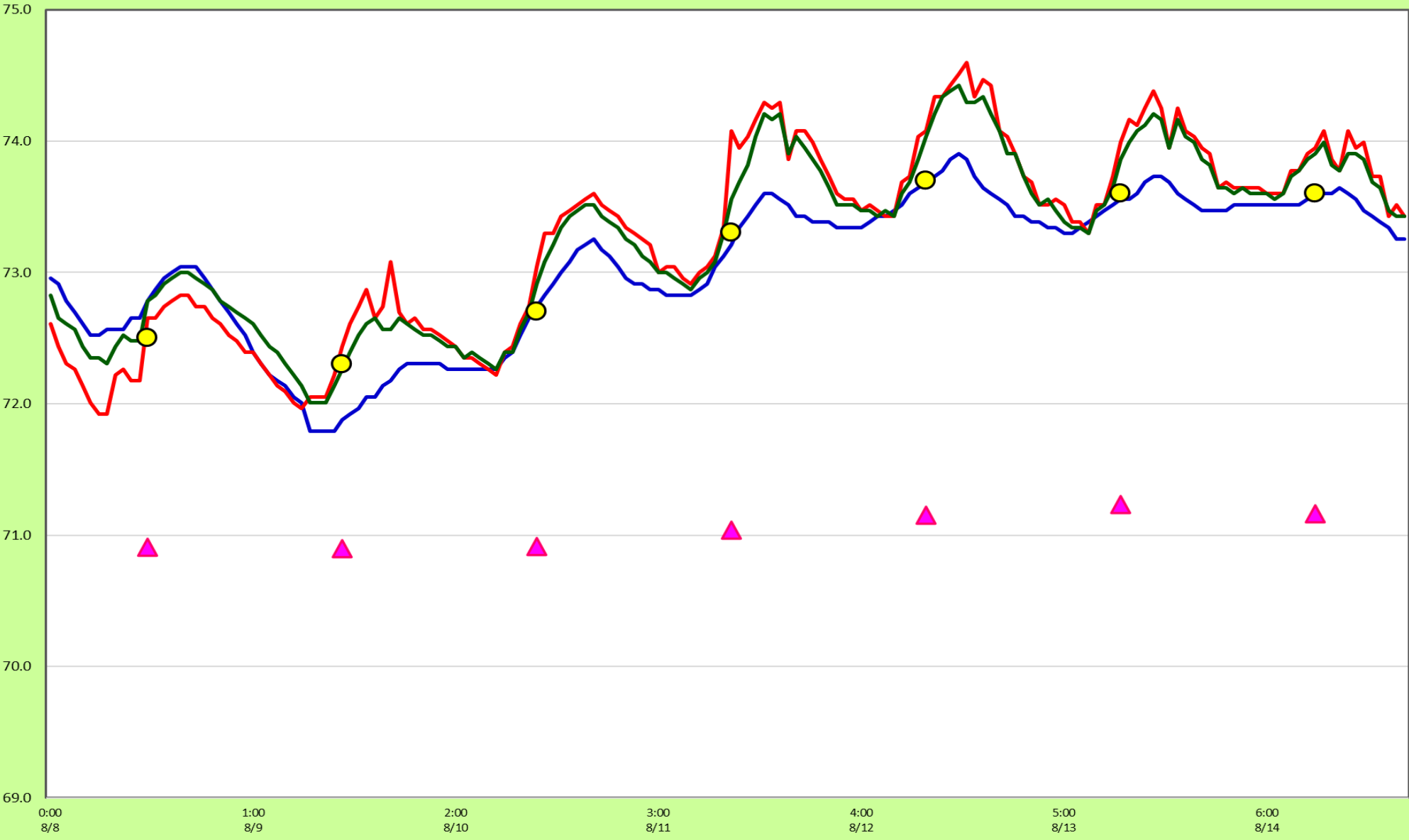
Use complies with EM 385-1-1, ANSI

Avian predators at TDA 8/8 to 8/14/21



Adult Fish Ladders-River Temperatures

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



Secchi:		°F
6.0	Sun	72.5
6.0	Mon	72.3
6.0	Tue	72.7
6.0	Wed	73.3
6.0	Thurs	73.7
6.0	Fri	73.6
6.0	Sat	73.6
6.0	AVG	73.1

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

E1 and W3 no criteria
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
8/8	1.3	9.9	1.6	7.7	10.3	11.7	9.7	1.5	10.0	10.0	-2.8	1.6	8.8	8.5
	1.2	9.5	1.6	7.8	10.4	11.8	9.8	1.4	10.1	10.1	-2.7	1.5	8.9	8.6
8/9	1.2	10.1	1.6	8.4	8.9	10.3	10.4	1.4	8.6	8.6	-2.2	1.4	7.9	7.9
	1.3	9.9	1.6	8.4	8.9	10.4	10.4	1.5	8.4	8.4	-2.3	1.4	7.9	7.9
8/10	1.3	9.9	1.5	8.8	9.3	10.7	10.8	1.4	8.5	8.5	-1.7	1.4	8.0	8.0
	1.4	9.9	1.4	8.9	9.4	10.8	10.9	1.4	8.6	8.6	-1.6	1.5	7.9	7.9
8/11	1.2	10.1	1.6	8.6	8.9	10.3	10.6	1.5	8.6	8.6	-2.1	1.5	7.5	7.5
	1.3	9.9	1.5	8.7	9.0	10.5	10.8	1.4	8.5	8.5	-1.9	1.6	7.7	7.7
8/12	1.3	9.9	1.6	8.8	8.5	10.3	10.7	1.5	8.4	8.4	-2.2	1.6	7.5	7.5
	1.4	9.9	1.3	10.0	12.1	12.6	12.0	1.6	10.1	10.1	-1.0	1.4	9.9	9.6
8/13	1.2	10.3	1.7	8.1	10.6	11.4	10.1	1.4	9.9	9.9	-2.5	1.5	8.9	8.5
	1.4	11.9	1.3	6.1	12.8	12.9	11.1	1.6	11.4	11.4	-1.8	1.4	9.6	9.5
8/14	1.3	11.0	1.6	5.7	12.0	12.3	10.7	1.6	10.1	10.1	-1.8	1.5	9.2	9.1
	1.4	10.0	1.4	6.9	12.8	13.1	11.9	1.6	10.3	10.3	-1.0	1.6	9.9	9.8
AVG:	1.3	10.2	1.5	8.1	10.3	11.4	10.7	1.5	9.4	9.4	-2.0	1.5	8.5	8.4

Fishways are inspected twice daily. Overnight trend monitored via Old SCADA operating at west entrance.