

The Dalles Dam Fishway Status Report

3/7/2021

Inspection Period: 02/28-03/6

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: 39.7 °F
			Comments: New Automation troubleshooting.	Weekly Ave. Secchi: 4.4

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'	9.5
Entrance weir N1	0	depth (≥ 8')	1.3
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	

EAST FISHWAY

Exit differential	0	≤ 0.5'	Adjusting automation, operating manually in daytime.
Removable weirs 154-157	0	Per forebay	Forebay sensor repaired 2/4/21. Adjusting automation
Weir 158-159 differential	0	1.1' ± 0.1'	Adjusting automation
Count station differential	0	≤ 0.3'	Adjusting automation
153 Weir crest depth	0	1.0' ± 0.1'	Adjusting automation
Junction pool weir JP6	0	> 7.0'	
East entrance differential	1	1.0' - 2.0'	1 fish unit operation Week ave. 1.4
Entrance weir E1	0	No criteria	
Entrance weir E2	0	depth (≥ 8')	Adjust automation Week ave. 11.6
Entrance weir E3	0	depth (≥ 8')	Adjust automation Week ave. 11.8
Collection channel velocity	0	1.5 - 4 fps	3.06 fps Range MU5 3.91- MU21 2.46fps
Transportation channel velocity	0	1.5 - 4 fps	Peel lost.
North channel velocity	0	1.5 - 4 fps	2.64 fps, 3/6/2021
South channel velocity	0	1.5 - 4 fps	2.92fps 3/6/21
West entrance differential	0	1.0' - 2.0'	Adjust automation Week ave. 1.6
Entrance weir W1	0	depth (≥ 8')	Adjust automation Week ave. 9.8
Entrance weir W2	0	depth (≥ 8')	Adjust automation Week ave. 9.8
Entrance weir W3	0	No criteria	Closed
South entrance differential	1	1.0' - 2.0'	Week ave. 1.0
Entrance weir S1	RTS 03/2	depth (≥ 8')	1 fish unit operation Week ave. 8.0
Entrance weir S2	0	depth (≥ 8')	1 fish unit operation

JUVENILE PASSAGE

Sluicgate operation	0	Units 3, 17	Gates over 3-17 open
Turbine trashrack drawdown	0	<1.5', biwkly	
Spill volume/pattern	0	1 to 8	OFF
Turbine Unit Priority	0	per FPP	MU 3 and MU 17 given priority.
Gatewells	0	Weekly	Some Adult shad mortality MU 4-3 and 8-2. 3/5/2021

OTHER ISSUES:

Current Unit Outages

FU1 out through 3/2/21 overhaul and over heat alarm

MU18 out through 3/11/21 turbine bearing annunciation

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 out of service due to power track damage. Exploring repair options. Temporary repair planned for 2021 season.

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

Fishway automation replacement (SCADA) continues. East exit, east and south entrances complete. West operating old system. Troubleshooting as needed.

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

Calibrations indicate significant deviations at east and south entrance gates with new automation. Working on corrections.

Fish unit F1 thrust bearing overheat alarm Mar 1. Maintenance corrected sensor. F1 returned 0645 Mar2.

Predators

Moderate gull numbers. Cormorants 30 to 40 per day mostly loafing in SW3, not on BPA towers. Very few bald eagles left.

Green laser use for piscivorous bird hazing testing continues. Effective moving cormorants out of SW3 during low light.

Investigating owl predator "scare crow" for forebay tower cormorants.

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

Planning PIT tags with ground scanners in SW3 and on Brown's island. Processing tag data recovered. Investigation of possible predators continues.

Research/Construction/Contractors

AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. Kickoff meeting completed.

PITAGS north and east fishladder data collection at north count stations continues. North antenna annual maintenance this month during dewatering.

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

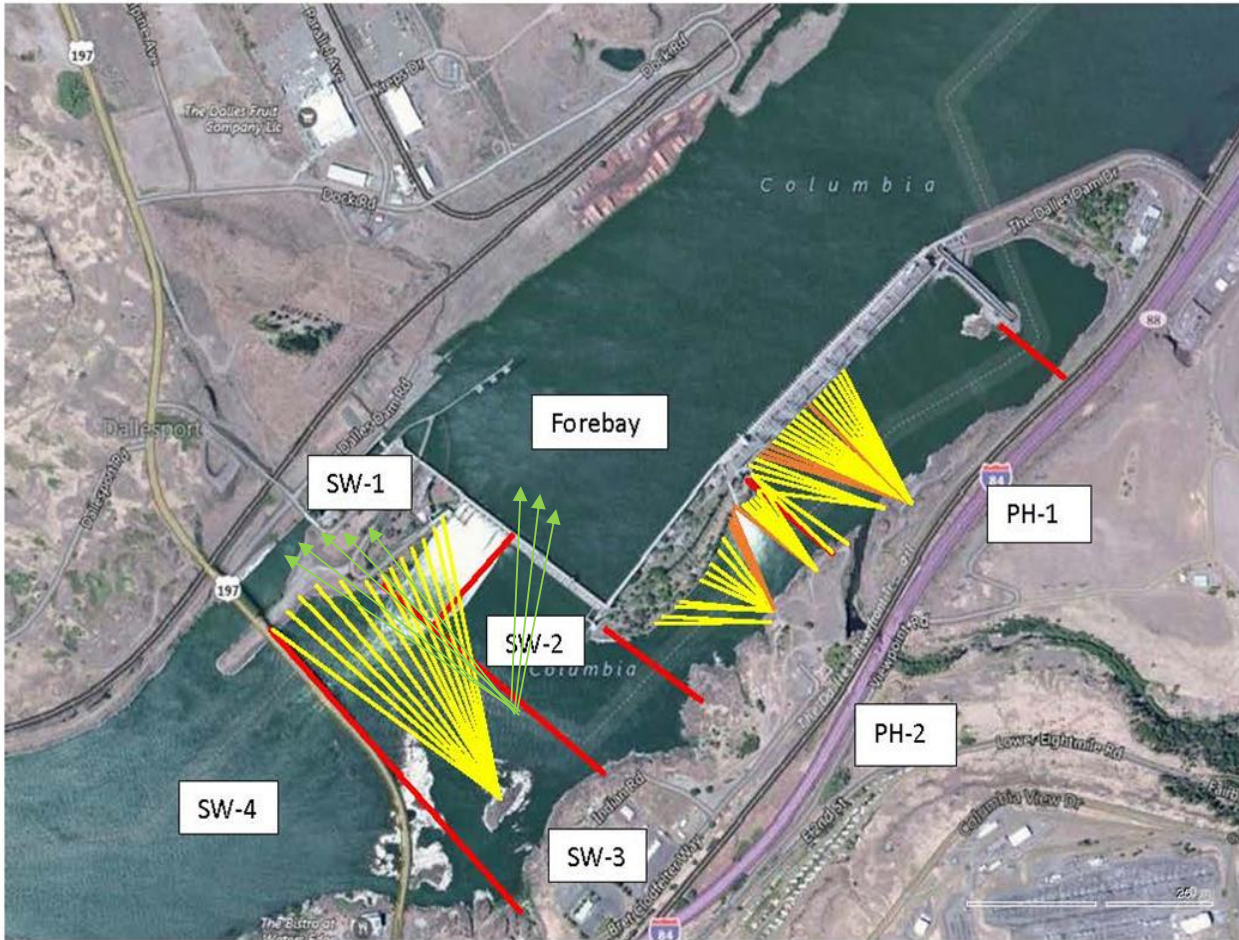
Fishway Operations

Ice Trash sluiceway opened March 1 at noon. Late due to 12 hours opening previous week. Chain gates 3/2-3 and 17/1-2 open. Unit priority on MU3 and 17.

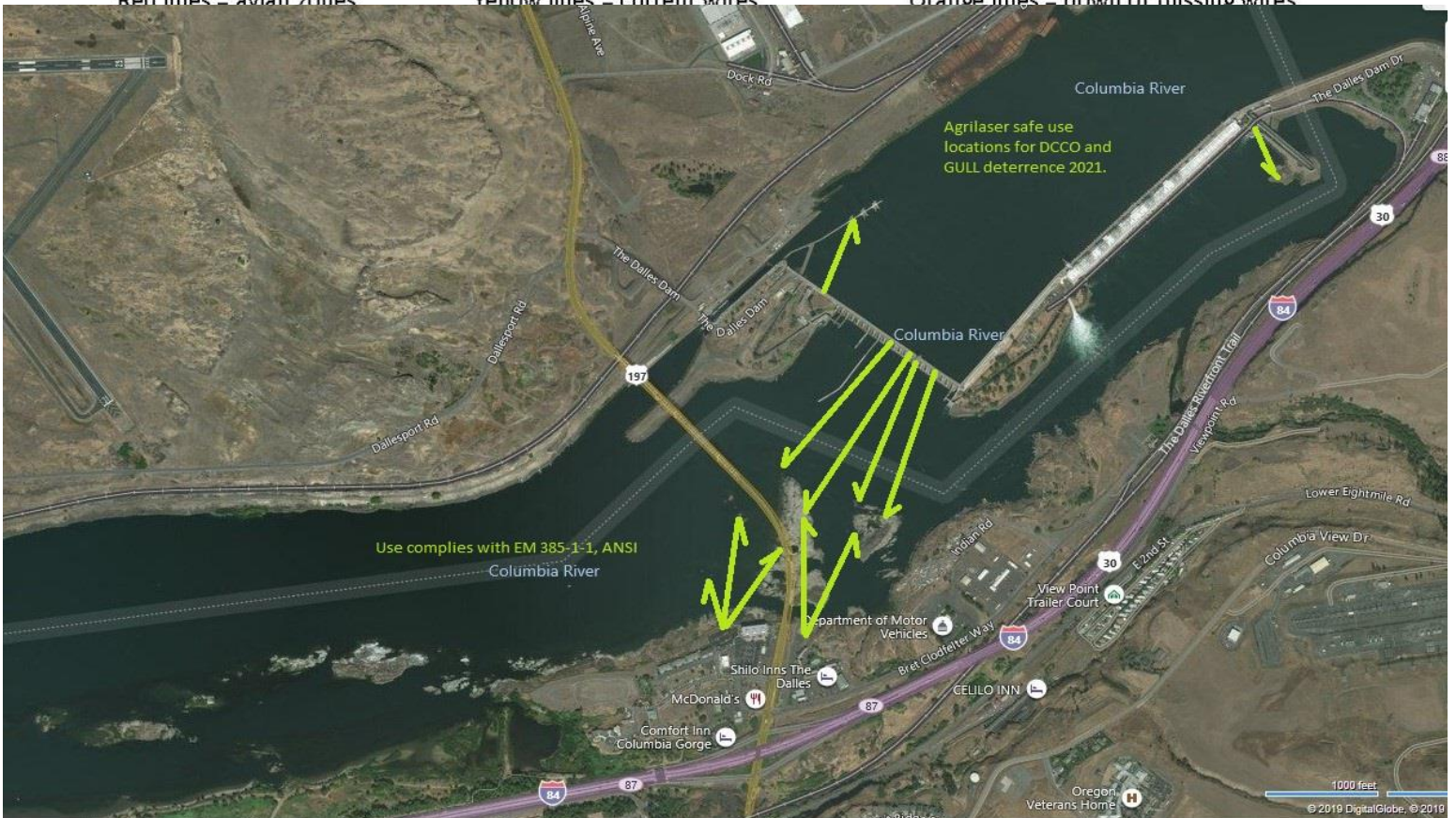
Ran east AWS briefly to supplement FU flow Mar1 due to F1 forced outage due to heat sensor issue.

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

New Avian Lines and laser deterrent zones



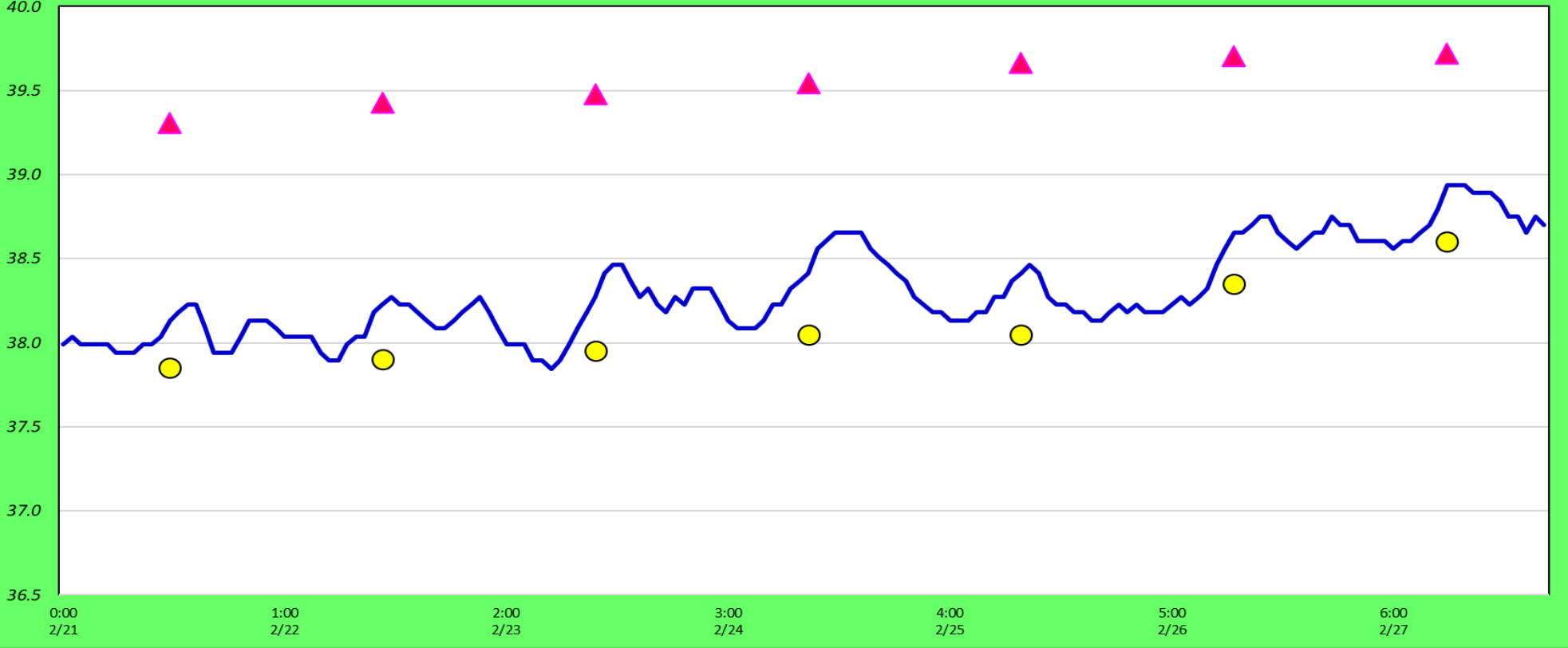
Red lines = avian zones Yellow lines = current wires Orange lines = down or missing wires



East Fish Ladder-River Temperatures

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

Inspe



Secchi:		°F
6.0	Sun	38.8
4.0	Mon	39.2
4.0	Tue	39.4
4.0	Wed	39.7
4.0	Thurs	40.0
4.0	Fri	40.2
5.0	Sat	40.6
4.4	AVG	39.7

USGS Feb

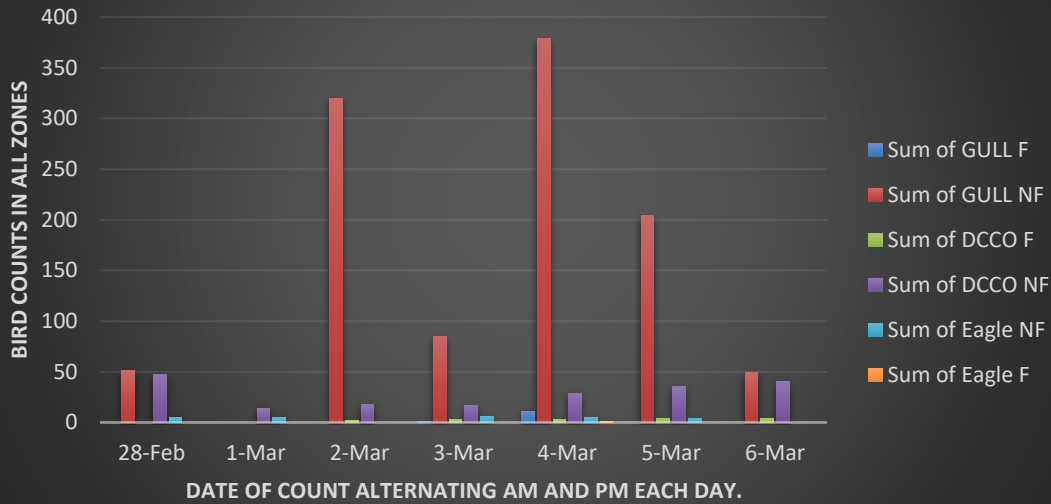
The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill

out of criteria

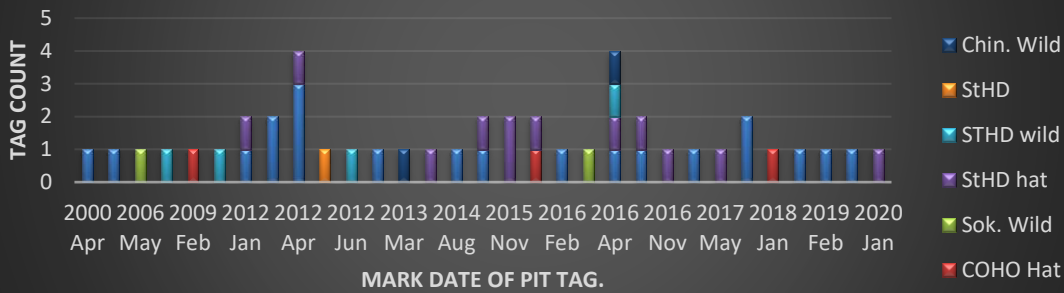
Date:	North Ladder		East Ladder											
	Differential	N1 Depth	East Entrance					West Entrance				South Entrance		
			Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
2/28	1.3	9.6	1.4		8.7	9.4	11.8	1.2	8.2	8.2	-1.6	1.0	8.9	1.6
3/1	1.3	9.6	1.2	-0.9	8.8	9.7	10.8	1.6	9.8	9.8	-1.8	1.0	8.7	1.3
	1.2	9.6	1.4	-1.4	12.2	12.9	10.3	1.6	9.9	9.9	-2.0	0.2	7.9	7.8
											0.0	0.0	0.0	0.0
3/2	1.3	9.4	1.6	7.6	10.2	10.4	10.2	1.8	9.7	9.7	-2.3	1.1	8.2	5.3
	1.1	9.7	1.5	7.9	10.3	10.6	10.6	1.6	9.8	9.8	-1.9	1.1	8.2	5.3
3/3	1.2	9.5	1.4	10.9	12.0	11.9	10.9	1.2	9.8	9.8	-1.2	1.4	8.4	8.3
	1.4	9.4	1.6	10.3	11.4	11.4	10.3	1.6	9.5	9.4	-2.0	1.0	9.1	9.0
3/4	1.3	9.4	1.3	11.1	12.4	12.4	11.1	1.7	9.5	9.5	-1.4	1.3	8.4	8.2
	1.3	9.5	1.2	11.5	12.8	12.8	11.5	1.7	9.9	9.9	-2.2	1.1	8.9	8.9
3/5	1.3	9.4	1.3	8.4	13.2	13.2	11.3	1.7	9.9	9.9	-1.0	1.2	8.3	8.3
	1.2	9.6	1.3	8.0	12.5	12.5	10.6	1.6	10.3	10.3	-1.9	1.1	8.6	8.7
3/6	1.2	9.5	1.5	4.3	13.3	13.3	10.8	1.7	10.3	10.3	-1.4	1.0	8.9	9.0
	1.3	9.5	1.7	4.4	13.1	13.0	10.9	1.6	10.3	10.3	-1.5	1.0	9.1	9.0
AVG:	1.3	9.5	1.4	6.8	11.6	11.8	10.8	1.6	9.8	9.8	-1.6	1.0	8.0	6.5

Fishways are inspected once daily.

Avian predators at the Dalles Project 2/28 - 3/6/2021



TDA PIT tag recoveries from Lewis island west of SW4 1/13/2021



PIT tags recovered from gull and pelican rock resting area west of dam frequently flooded.

PIT tag recoveries from TDA East ladder 180 bend and count area exit weirs





Look - a pin.