

The Dalles Dam Fishway Status Report

4/13/21

Inspection Period: 04/04-04/10

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: 17	Temperature: 47.5 °F
			Comments: Fishways in criteria	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 differential	0	1.0' - 2.0'	9.7
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'	
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'	1.5
Entrance weir E1	0	No criteria	
Entrance weir E2	0	depth (≥ 8')	11.3
Entrance weir E3	0	depth (≥ 8')	11.4
Collection channel velocity	0	1.5 - 4 fps	
Transportation channel velocity	0	1.5 - 4 fps	
North channel velocity	0	1.5 - 4 fps	
South channel velocity	0	1.5 - 4 fps	
West entrance differential	0	1.0' - 2.0'	1.4
Entrance weir W1	0	depth (≥ 8')	9.3
Entrance weir W2	0	depth (≥ 8')	9.3
Entrance weir W3	0	No criteria	
South entrance differential	0	1.0' - 2.0'	1.4
Entrance weir S1	0	depth (≥ 8')	9.3
Entrance weir S2	0	depth (≥ 8')	9.3

JUVENILE PASSAGE

Sluiceway operation	14	Units 1, 18	Gates 1-2-3 opened at 1 and 18 to compensate for mechanical delay in opening gates MU8
Turbine trashrack drawdown	0	<1.5', biwkly	Debris load minimal due to low flow levels in river.
Spill volume/pattern	0	1 to 8	OFF
Turbine Unit Priority	0	per FPP	Operating according to FPP
Gatewells	0	Weekly	4/1/21 No mortality visible, debris low and differential within criteria.

OTHER ISSUES:

Current Unit Outages

T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels

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

MU12 OOS 4/12/2021 – 4/15/2021 for Annual

FU2, MU5 & MU6 FOOS through 4/15/2021 due to a ground fault on FSJ2

Maintenance

PUD intake rake return to service with temporary power.

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 on old system.

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

Calibrations 3/31/21 indicate significant deviations at south entrance gates with new automation. Working on corrections.

Fish unit relay problems persist. One fish unit in operation at a time. AWS in service to for complete water supply.

Engineering analysis completed on sluice gate chains. Will resume operation via crane as needed.

Predators

The nesting osprey have returned. Very few Bald Eagle observations.

Green laser use for piscivorous bird hazing testing continues. Recent influx of nesting cormorants on towers becoming less affected by laser hazing.

Pikeminnow dam angling resumes next May. **All invasive bass/walleye by-catch release to continue per state requirement for past 5 years. Still no retention plans.**

Processing PIT scans from previous 2 months.

Research/Construction/Contractors

4 Peaks fish count resumed 4/1.

PSMFC smolt monitoring resumes 4/6. PSMFC precautionarily will monitor trap through night to prevent/decrease fry mortality as #'s have increased in past few years

AWS intake trashrack -site visit 03/31 investigate solution for debris plugging issue. Passive debris shield preferred.

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

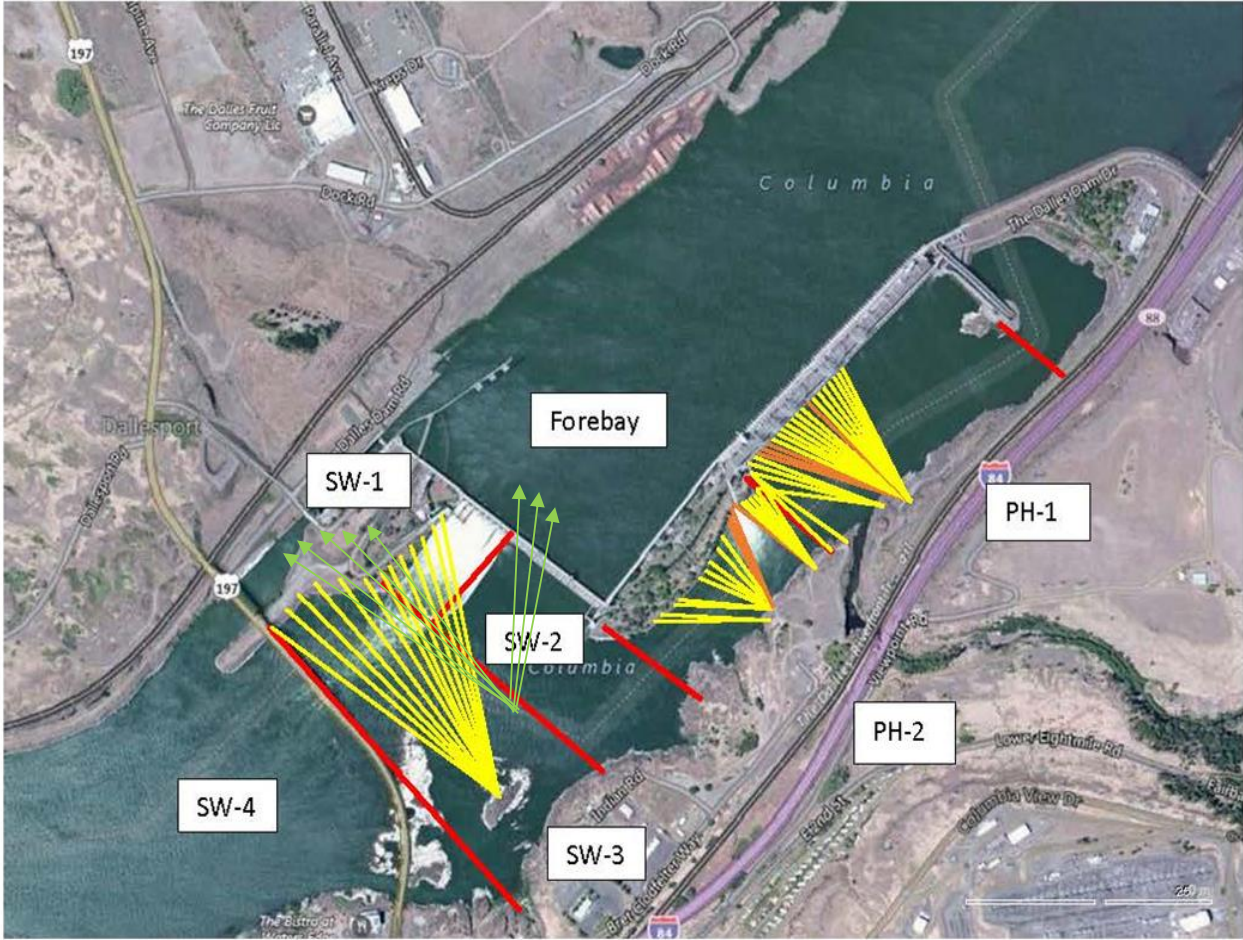
East and north fishladders in full operation per Fish Passage Plan.

Ice Trash sluiceway in operation w/ sluice 6 gates open-all MU1 & 18. Finalizing engineer analysis for chain operated gates before opening MU8 gates.

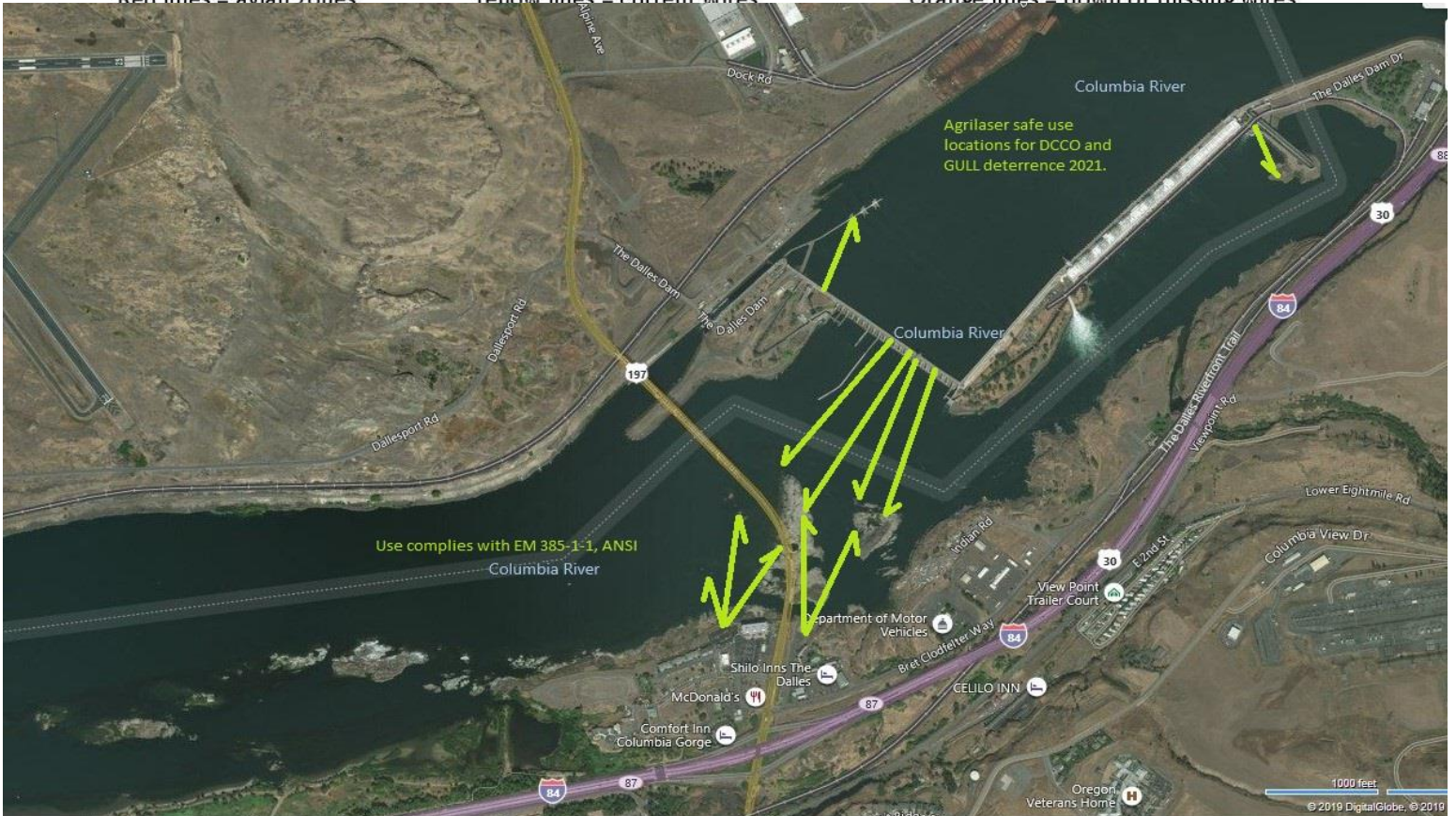
Spill opened Apr10 at 40% total river.

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

New Avian Lines and laser deterrent zones



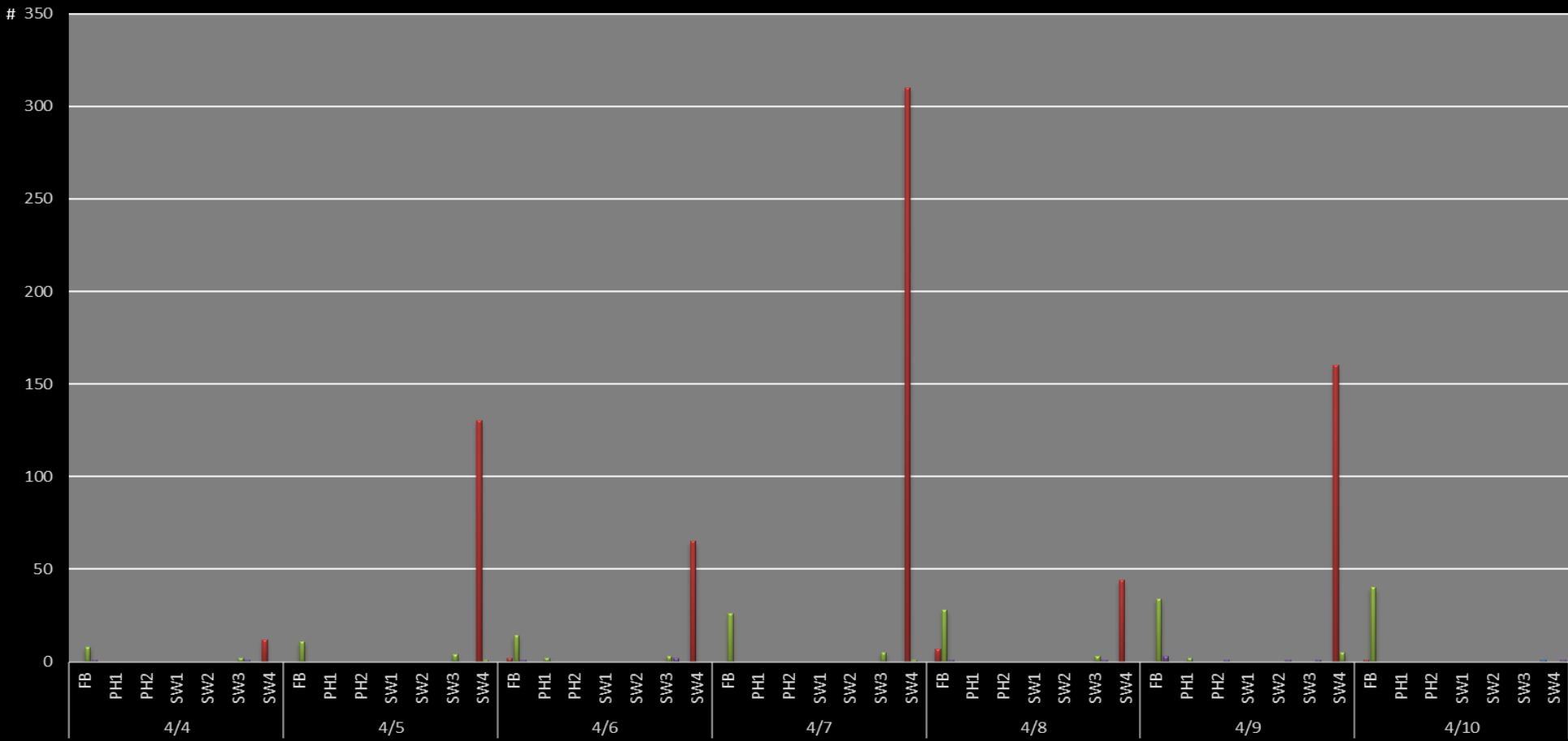
Red lines = avian zones Yellow lines = current wires Orange lines = down or missing wires



Gull & Cormorant Activity

■ Sum of GULL F
 ■ Sum of GULL NF
 ■ Sum of DCCO NF
 ■ Sum of DCCO F

F=Forage
 NF=Idle



Adult Fish Ladders-River Temperatures

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



Secchi:		°F
3/28	5.0	Sun 47.0
3/29	5.0	Mon 47.2
3/30	5.0	Tue 47.4
3/31	5.0	Wed 47.4
4/1	5.0	Thurs 47.6
4/2	5.0	Fri 47.8
4/3	5.0	Sat 48.1
	5.0	AVG 47.5

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
4/4	1.3	9.4	1.5	6.6	12.5	12.5	10.7	1.5	10.1	10.1	-2.9	1.4	10.3	10.3
	1.4	9.3	1.4	7.3	13.0	13.0	11.4	1.7	9.8	9.8	-2.4	1.3	10.9	10.9
4/5	1.2	9.8	1.6	7.7	12.5	12.6	11.8	1.7	10.0	10.0	-1.8	1.2	10.6	10.5
	1.3	9.8	1.5	6.9	12.7	12.7	12.0	1.7	10.0	10.0	-1.6	1.5	10.6	10.7
4/6	1.3	9.7	1.3	8.3	10.7	11.3	12.4	1.4	9.0	9.0	-1.2	1.4	9.3	9.2
	1.3	9.8	1.3	8.4	11.3	11.3	12.5	1.4	9.0	9.0	-1.2	1.3	9.4	9.4
4/7	1.2	9.9	1.6	7.1	10.4	10.7	11.2	1.3	9.0	9.0	-2.1	1.5	8.2	8.1
	1.1	9.9	1.6	6.5	10.4	10.8	10.6	1.3	8.9	8.9	-2.9	1.6	7.7	7.7
4/8	1.1	10.0	1.5	7.1	10.8	10.8	11.1	1.2	9.1	9.1	-2.1	1.6	8.1	8.1
	1.2	9.8	1.7	6.3	10.1	10.1	10.4	1.2	9.0	9.0	-2.9	1.5	8.3	8.2
4/9	1.3	9.7	1.3	7.9	11.3	11.3	12.0	1.3	9.1	9.1	-1.6	1.3	9.7	9.8
	1.3	9.8	1.3	7.9	11.3	11.3	11.9	1.4	8.9	8.9	-1.8	1.2	9.5	9.5
4/10	1.3	9.7	1.5	7.2	11.0	11.0	11.2	1.4	8.9	8.9	-2.1	1.2	9.1	9.1
	1.3	9.8	1.5	7.1	10.9	10.9	11.2	1.3	9.0	9.0	-2.1	1.4	8.7	8.7
AVG:	1.3	9.7	1.5	7.3	11.3	11.4	11.5	1.4	9.3	9.3	-2.0	1.4	9.3	9.3

Fishways are inspected twice daily.