

The Dalles Dam Fishway Status Report

9/26/21

Inspection Period:9/20-9/25/2021

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: 18		Temperature: 67.3 °F	
			Comments: East ladder passing most fish.		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 weir N1	0	1.0' - 2.0'	Weekly average	9.7
Entrance Differential	0	depth (≥ 8')	Weekly average	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'	Week ave.	1.5
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')	Week ave.	11.7
Entrance weir E3	0	depth (≥ 8')	Week ave.	11.6
Collection channel velocity	0	1.5 - 4 fps	2.69 fps 9/22/21 fps, fastest 3.31 MU1-2, slowest 1.87 MU5	
Transportation channel velocity	0	1.5 - 4 fps	2.65 fps 9/22/21	
North channel velocity	0	1.5 - 4 fps	2.89 fps 9/22/21	
South channel velocity	0	1.5 - 4 fps	3.91 fps 9/21/21	
West entrance differential	0	1.0' - 2.0'	Old SCADA	Week ave. 1.5
Entrance weir W1	0	depth (≥ 8')		Week ave. 10.2
Entrance weir W2	0	depth (≥ 8')		Week ave. 10.2
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. 8.7
Entrance weir S2	0	depth (≥ 8')		Week ave. 9.4

JUVENILE PASSAGE

Sluicgate operation	0	Units 1,8, 18	Gates over MU1/1-2-3, moved to MU4, MU8/1-3,MU18-2 open	
Turbine trashrack drawdown	0	<1.5', biwkly	9/12/21, all gatewells in criteria.	
Spill volume/pattern	0	1 to 8	Spill closed 9/1/21	
Turbine Unit Priority	14	per FPP	Mus 1-3 OOS due to crane rail replacement work.	
Gatewells	0	Weekly	No fish present. One adult shad mortality 9/22/2021.	

OTHER ISSUES:

Current Unit Outages

- L4 OOS 0400 - 0430 9/20/2021 for De-energized ZMT-6 Switching
- MU11 & MU12 OOS 0400 – 1700 9/20/2021 for IR Window Install
- L4 OOS 1630 - 1700 9/20/2021 for De-energized ZMT-6 Switching
- MU1 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- MU2 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- MU3 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels
- MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades
- MU15 OOS 0630 8/2/2021 – 1700 10/7/2021 for Overhaul, Top Plate, Strainer, & T8 Doble Testing
- MU16 OOS 0001 8/2/2021 – 1700 9/30/2021 for Annual, Strainer, & T8 Doble Testing
- MU19 OOS 0630 6/27/2021 – 1700 10/27/2022 for Top Plate Cover Upgrade
- MU21 OOS 0630 7/12/2021 – 1200 9/20/2021 for Crane Rail Replacement
- MU22 OOS 0630 7/12/2021 – 1200 9/20/2021 for Crane Rail Replacement
- SS02 FOSS 1919 9/8/2021 – RTS unknown for Governor Oil Leak
- MU17 & MU18 OOS 0400 – 1700 9/23/2021 for IR Window Install

Maintenance

Fish unit bus overheating problem resolved. Both fish units operating on single line.

Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair PUD intake rake in service with temporary power. Transferring rake operation and maintenance to N Wasco PUD in progress.

5 of 6 east fishway collection channel dewatering pumps installed. Repair and install planned.

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

North fish differential sending invalid signal to SCADA at intermittent times. Should be upgraded this winter.

Calibrations: All openings in criteria. Upgrade to new software improving performance. East entrance and south entrance gates E-3 and S-2 out of calibration.

Permanent oil boom removed from east exit for repairs. Possible redesign before install.

Predators

Cormorants successfully foraging at fishway entrances, gulls present with little foraging, Merganser and GB Heron sightings a regular

Research/Construction/Contractors

4 Peaks fish counting continues

AWS intake trashrack- No funding FY22.

Investigating MOP operation at fishways.

Fish Accords Lamprey Passage plan for The Dalles ongoing at 30% DDR. Looking at feasibility of Lamprey Passage Structure at junction pool, with holding tank.

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

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

Northern Pikeminnow Management Program season concluded w/1382 native pikeminnow removed YTD

PUD removing debris from location where a new juvenile sampling facility will be constructed prior to upcoming fish season 2021/2022

USDA concluded Piscivorous bird hazing

Crane rail replacement underway on intake deck units 1-4. Sluiceways unit 1 moved to unit 4 open.

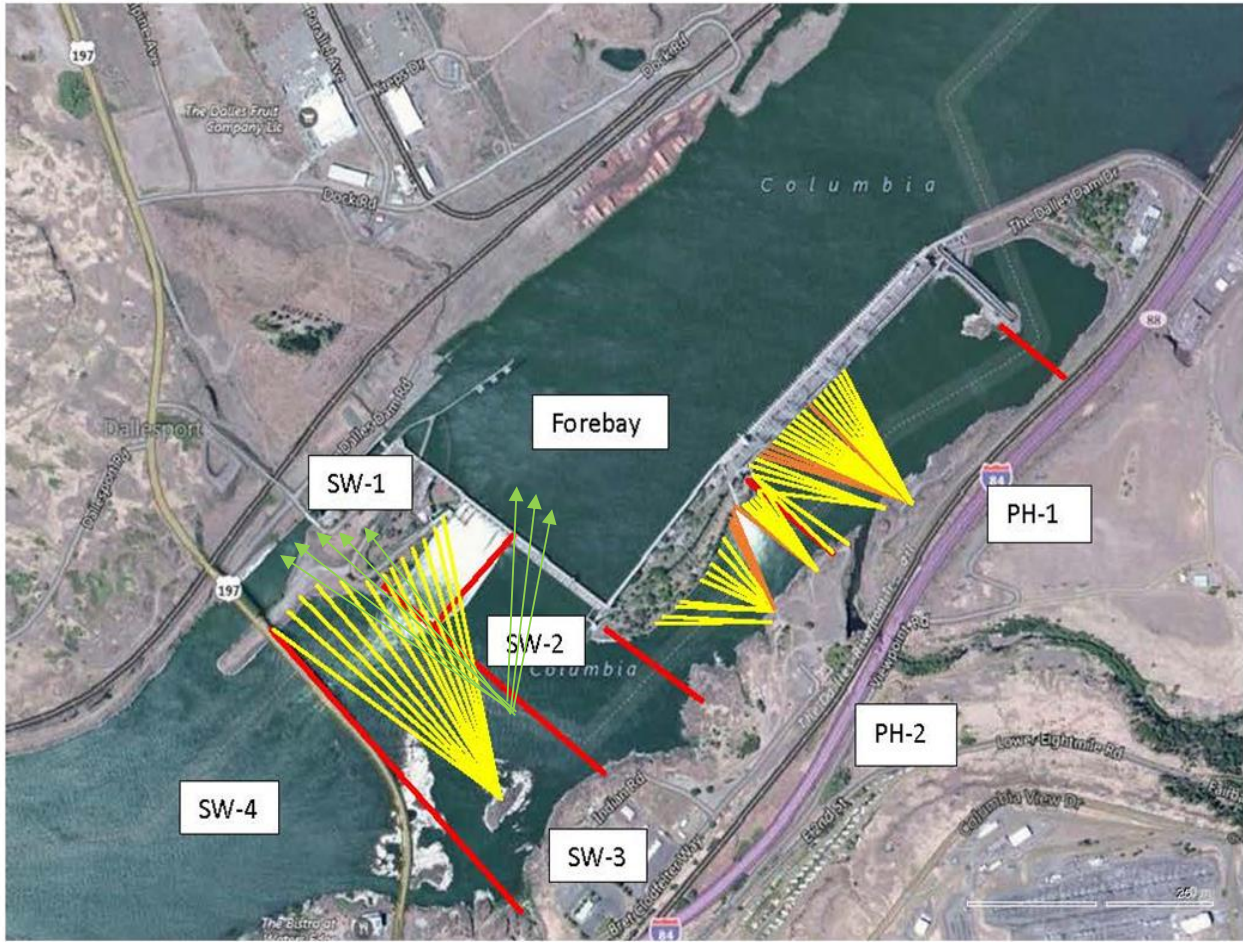
Fishway Operations

Ice Trash sluiceway opened 24/7. MU4/1-2-3, MU 8/1-2, MU18/2 Sluice openings move to 4 due to concrete-crane rail removal

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

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

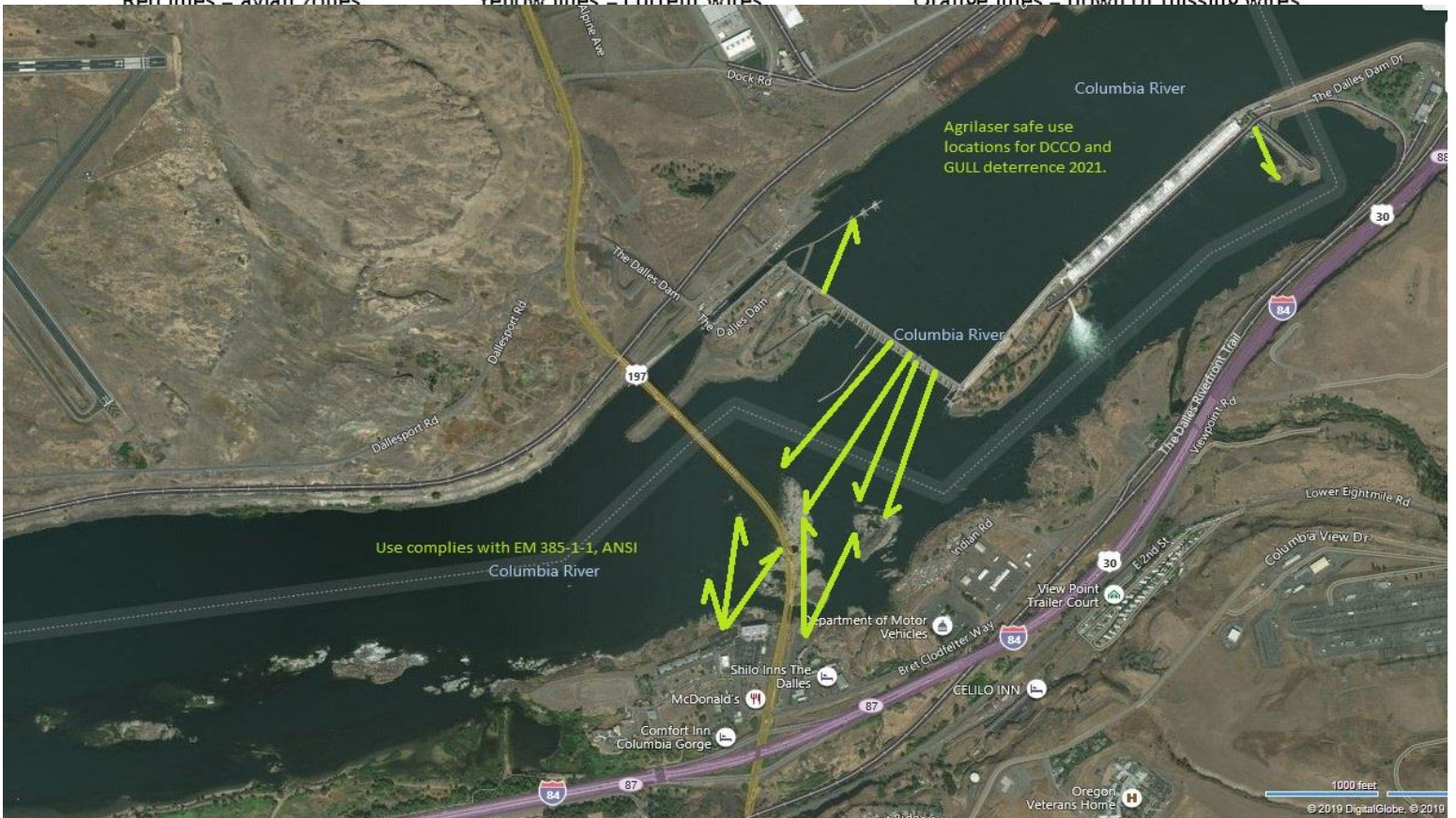
New Avian Lines and laser deterrent zones



Red lines = avian zones

Yellow lines = current wires

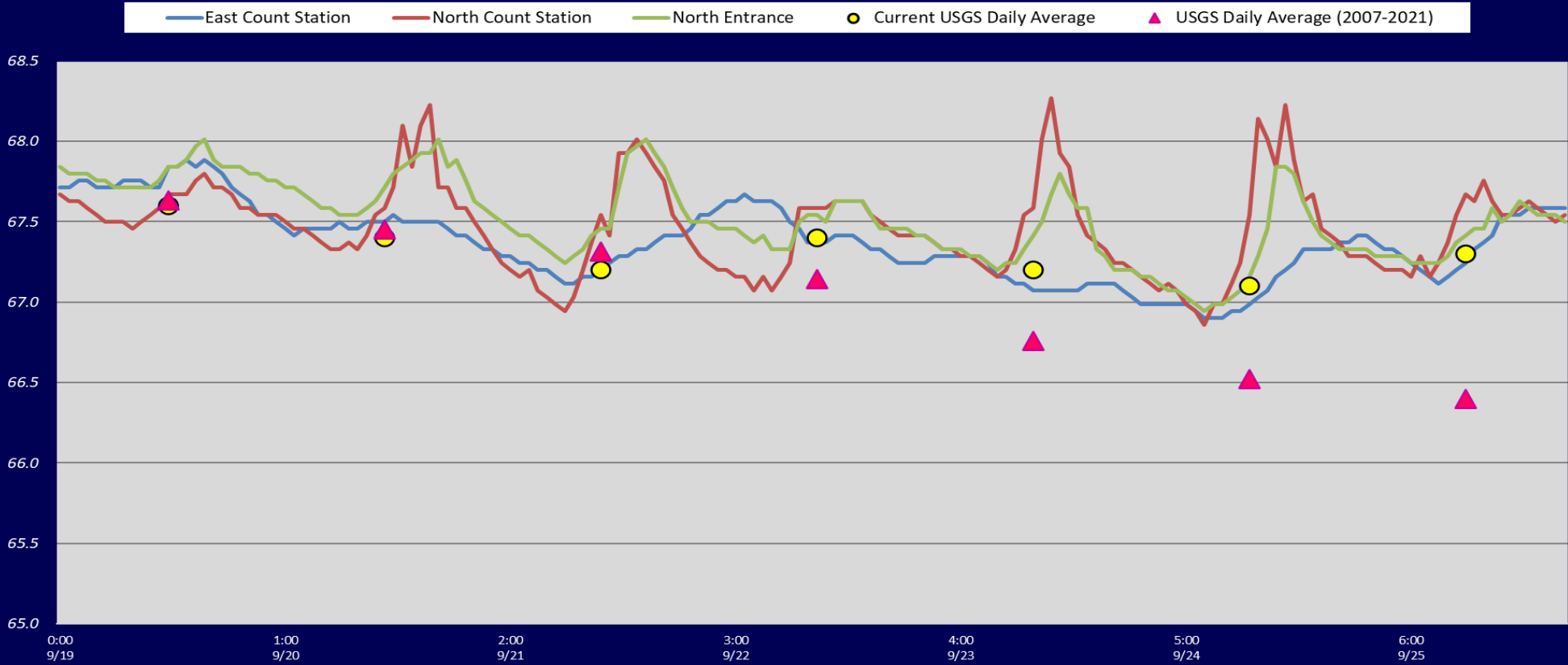
Orange lines = down or missing wires



Use complies with EM 385-1-1, ANSI

Agrilaser safe use locations for DCCO and GULL deterrence 2021.

Adult Fish Ladders-River Temperatures




Secchi:		USGS°F
5.0	Sun	67.6
5.0	Mon	67.4
5.0	Tue	67.2
5.0	Wed	67.4
6.0	Thurs	67.2
6.0	Fri	67.1
5.0	Sat	67.3
5.0	median	67.3

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
9/19	1.3	9.6	1.6	7.4	11.8	11.6	10.4	1.5	10.2	10.2	-2.3	1.5	8.5	8.8
	1.3	9.8	1.6	7.4	11.8	11.5	10.4	1.4	10.3	10.3	-2.3	1.6	8.5	9.0
9/20	1.3	9.6	1.5	7.9	12.3	12.1	10.9	1.4	10.4	10.4	-1.8	1.5	8.8	9.3
	1.3	9.7	1.6	7.7	12.0	11.8	10.6	1.5	10.2	10.2	-2.0	1.5	8.7	9.2
9/21	1.2	9.8	1.4	7.6	10.4	10.5	10.5	1.6	10.1	10.1	-2.4	1.4	8.7	9.7
	1.3	9.6	1.4	7.8	10.8	11.0	10.8	1.5	10.4	10.4	-2.2	1.6	8.6	9.1
9/22	1.2	9.8	1.6	7.2	11.8	11.7	10.2	1.5	10.4	10.4	-2.4	1.5	8.4	9.4
	1.3	9.7	1.4	7.7	12.3	12.2	10.7	1.5	10.3	10.3	-2.3	1.4	8.7	9.7
9/23	1.3	9.8	1.4	7.6	12.0	11.9	10.6	1.5	10.3	10.3	-2.2	1.4	8.7	9.7
	1.3	9.6	1.4	7.9	12.3	12.2	10.9	1.5	10.3	10.3	-1.8	1.3	9.2	10.2
9/24	1.2	9.6	1.6	7.1	11.5	11.6	10.1	1.5	10.3	10.3	-2.7	1.5	8.1	9.1
	1.3	9.6	1.5	7.2	11.6	11.7	10.2	1.4	9.3	9.3	-2.7	1.5	8.1	9.1
9/25	1.2	9.8	1.6	7.6	11.5	11.6	10.5	1.6	10.2	10.2	-2.2	1.5	9.3	9.3
	1.3	9.6	1.6	7.5	11.5	11.6	10.5	1.5	10.2	10.2	-2.3	1.4	9.3	9.4
AVG:	1.3	9.7	1.5	7.5	11.7	11.6	10.5	1.5	10.2	10.2	-2.3	1.5	8.7	9.4

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



Exposed buoyancy providing material

East exit oil boom removed and staged for repair