

The Dalles Dam Fishway Status Report

03/01/20

Inspection Period: 2/23-2/29, 2020

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:		Temperature:	41.0 °F
			Comments:		Weekly Average Secchi:	2.9

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'		
Entrance weir N1	0	depth (≥ 8')		
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	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	0	1.1' ± 0.1'		
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'		
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')		
Entrance weir E3	0	depth (≥ 8')		
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'		
Entrance weir W1	0	depth (≥ 8')		
Entrance weir W2	0	depth (≥ 8')		
Entrance weir W3	0	1.0' - 2.0'		
South entrance differential	0	1.0' - 2.0'		
Entrance weir S1	0	depth (≥ 8')		
Entrance weir S2	0	depth (≥ 8')		

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 8, 18		
Turbine trashrack drawdown	0	<1.5', biwklly		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP		
Gatewells	0			

OTHER ISSUES:

Fishway Operations

North fish ladder return to service 2/27

East fish ladder return to service 1/30

Spillway closed

Sluiceway opened with 4 open sluiceways 3/1

Unit Outages

T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels

MU1 and MU2 restricted to 160 MW combined through 5/28/2020

MU13 OOS 9/23/2019 - 7/22/2020 for Hydraulic Oil System Repairs

MU12 OOS 12/2/2019 - 3/5/2020 T6 GSU Replacement & Annual

MU11 OOS 12/2/2019 - 3/5/2020 T6 GSU Replacement & O/H

MU8 OOS 1/21/2020 - 3/19/2020 for Overhaul.

Maintenance

Calibration check, 2/12/20, all but S2 east ladder entrance weirs in calibration.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Awaiting new pump motors for installation.

East fishway automation replacement installation starting. Brackets for sensors installed at east entrance. PLC box assembly starting in March.

North fishway lower diffuser valves inspected. Status to be included in overall diffuser valve plan.

North ladder count station malfunctioning diffuser valve removed and repaired. New valve purchased for install next year. Old valve will serve as spare.

North ladder vegetation removal done for this year. About 30% complete. All low hanging vegetation removed.

North ladder PUD intake trashrack ROV inspection Feb 26. Trashrack intact and no debris.

North ladder exit debris boom repaired with new improved seal for oil sheen barrier. Installed Feb 27.

Spillway assessment (MRER); No funding for FY20. Spillgate 9 fish priority included.

Predators

Green laser use for piscivorous bird hazing testing on hold until all safety concerns are addressed. Refer to Avian zones tab.

USDA hazing resumes 4/15/20. Preseason planning meeting complete.

No sea lion observations this week.

Research/Construction/Contractors

Four Peaks fish counting concluded October 31. Preparing count stations

AWS backup - Commissioning completed. Ready for operation if needed.

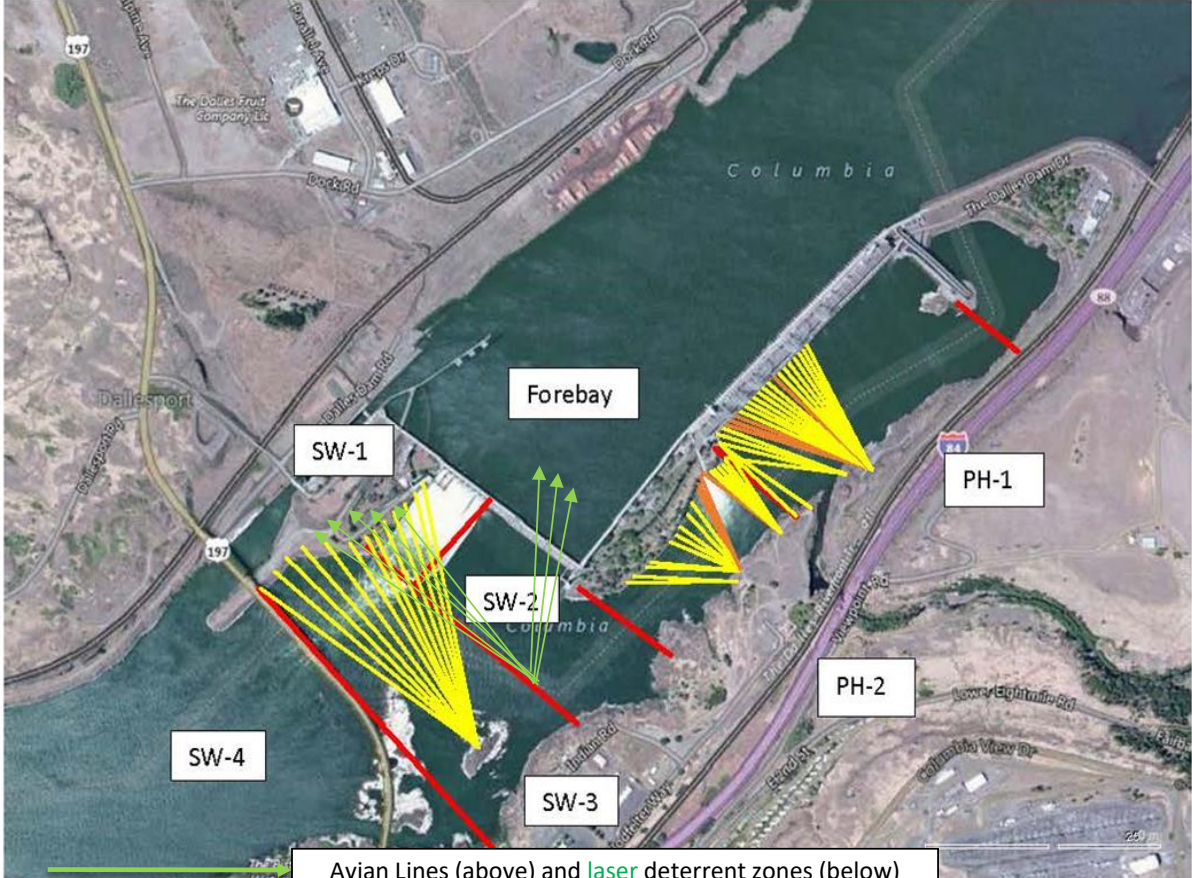
PITAGS north and east fishladder data collection at count stations continues.

Dam angling 2019 total 2228 pikeminnow, 98 smallmouth bass and 6 walleye caught. **Bass/Walleye released due to state classification of game species.**

Fish unit breaker replace.- Work near complete. Addressing smoking bolt issues with T3 bus tie. Operating on T1.

Fish unit rehab - Phase 1A. Planning operation scenario with AWS backup water supply during construction. No funding.

Approved by: Mike Colesar, Operation Project Manager, The Dalles Dam



Red lines = avian zones

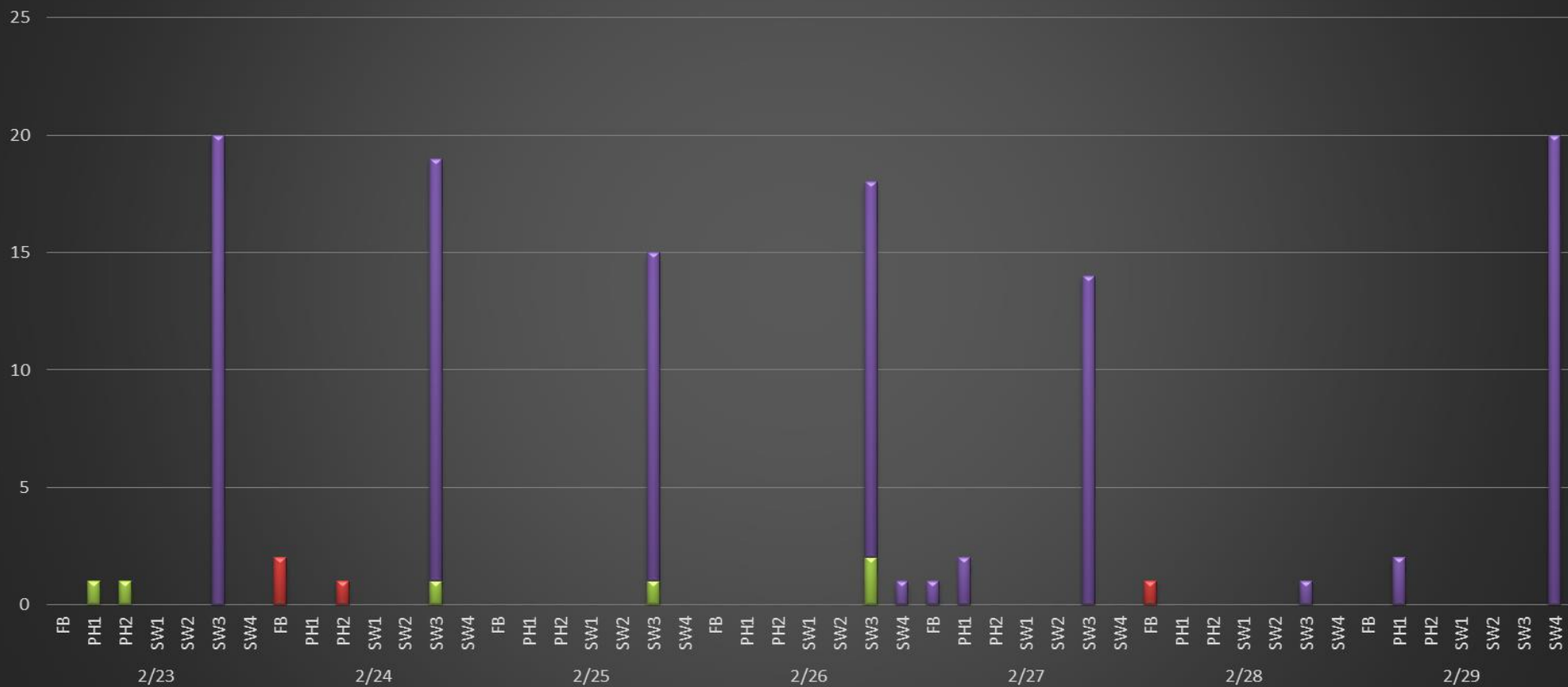
Yellow lines = current wires

Orange lines = down or missing wires



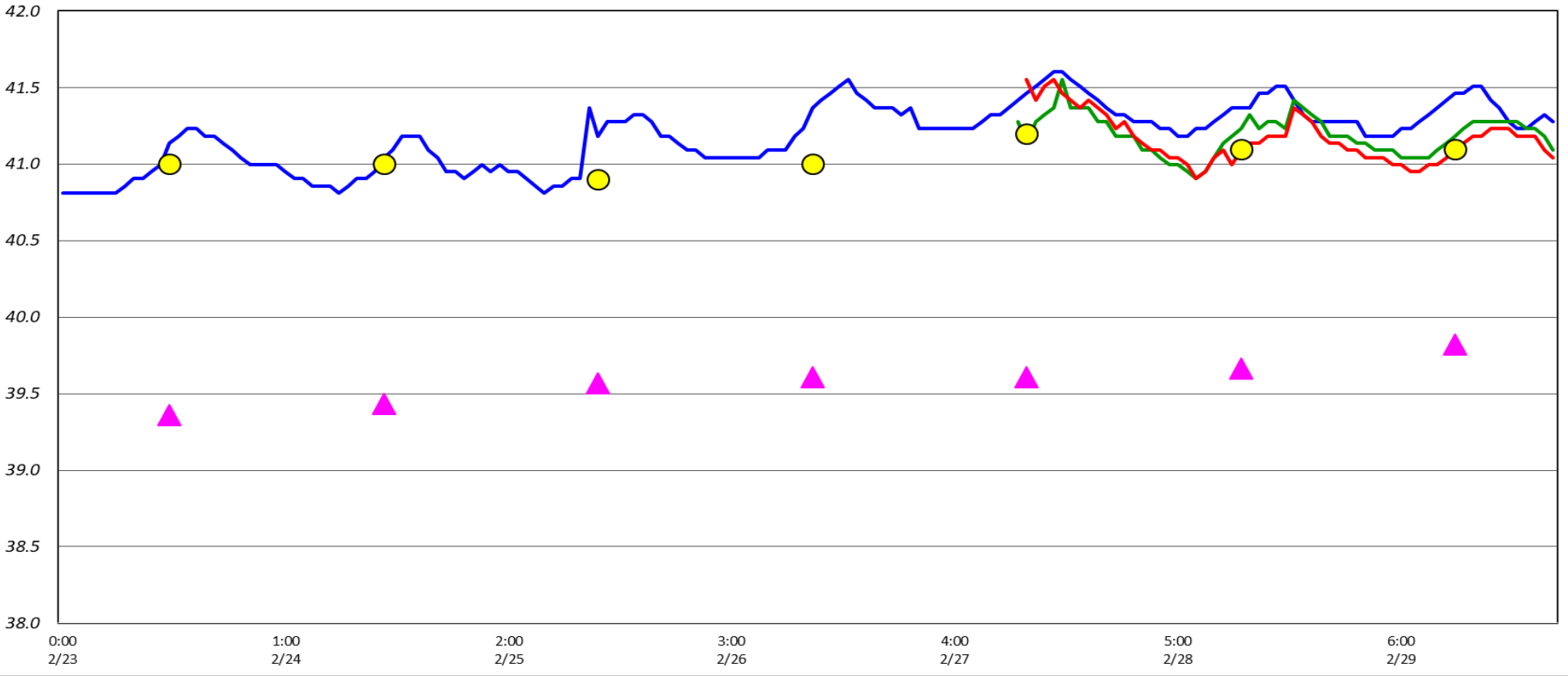
Gull and Cormorant activity by zone

▾ Sum of GULL F
 ▾ Sum of GULL NF
 ▾ Sum of DCCO F
 ▾ Sum of DCCO NF

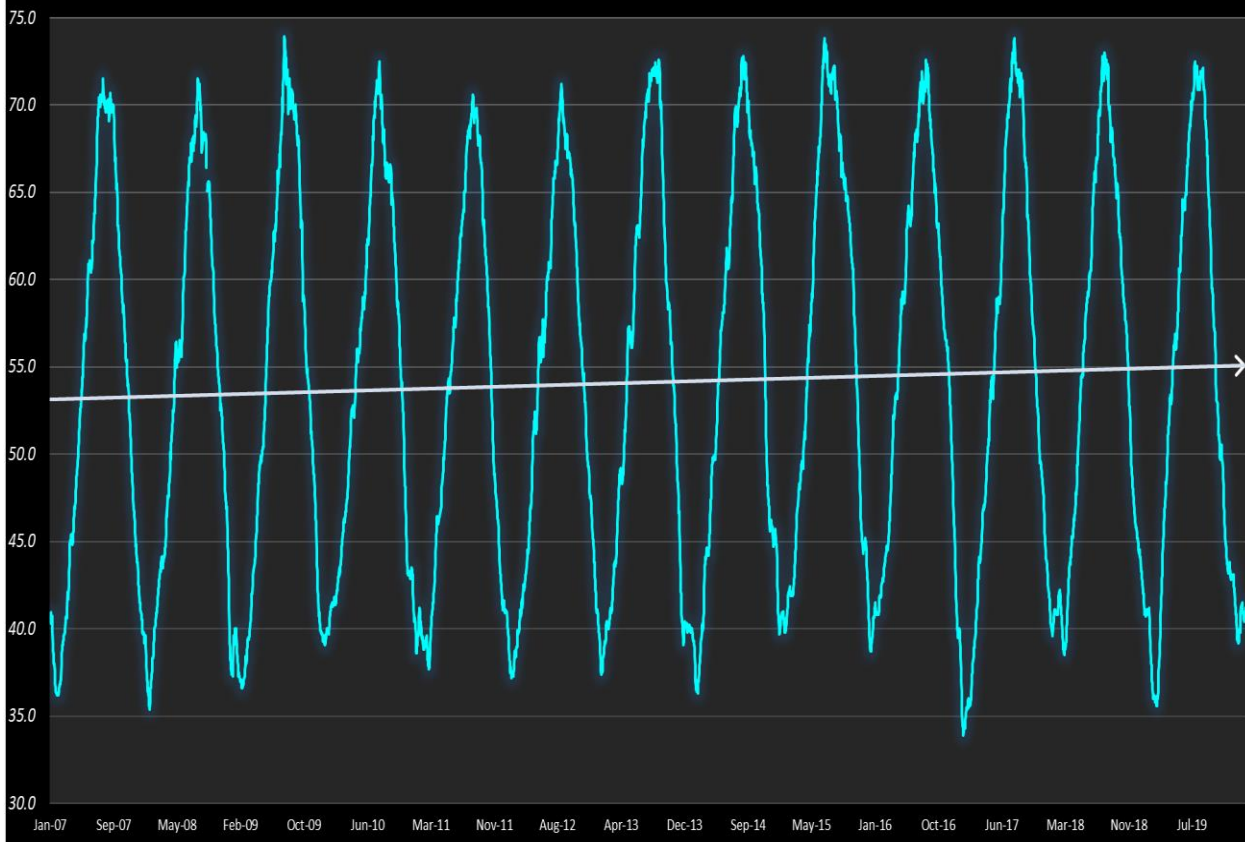


Fish Ladder/River Temperatures

— East Count Station — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2019)



USGS daily average river temperatures 2007-2020



	Secchi:		USGS: °F
2/23	2.5	Sun	41.0
2/24	2.7	Mon	41.0
2/25	2.5	Tue	40.9
2/26	3.0	Wed	41.0
2/27	3.0	Thurs	41.2
2/28	3.0	Fri	41.1
2/29	3.5	Sat	41.1
	2.9	AVG	41.0

Feb. Temps

The Dalles Dam Daily Readings and Averages for

Temperatures, Secchi, Entrances, and Spill

SCADA INSPECTION

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
2/23	OOS		1.4	0.6	12.1	12.1	10.9	1.4	12.1	12.1	2.0	1.4	8.1	8.1
			1.4	0.5	12.1	12.0	11.1	1.5	11.9	11.9	2.0	1.4	8.3	8.2
2/24			1.6	0.5	12.0	12.1	11.8	1.6	12.0	12.0	1.9	1.5	8.2	8.3
			1.6	1.6	12.1	12.1	11.0	1.5	12.1	12.1	2.0	1.3	8.2	8.3
2/25			1.7	1.5	11.9	12.0	12.4	1.7	11.9	11.9	2.0	1.6	8.2	8.2
			1.7	4.0	11.9	12.0	13.2	1.7	12.6	12.6	2.1	1.5	11.2	11.2
2/26			1.5	4.0	12.0	11.9	12.6	1.5	12.5	12.5	2.0	1.5	8.3	8.2
			1.4	4.0	12.0	11.9	12.4	1.5	12.5	12.5	2.0	1.4	8.1	8.2
2/27			1.4	4.0	12.1	12.1	12.6	1.5	12.5	12.5	2.1	1.5	8.2	8.2
			1.5	4.1	12.1	12.0	12.0	1.0	12.5	12.6	2.0	1.6	8.3	8.3
2/28			1.9	3.9	12.0	12.0	12.8	1.3	10.5	10.5	2.0	1.4	8.7	8.7
		1.4	10.9	1.4	7.1	12.0	12.0	12.4	1.3	11.4	11.4	2.1	1.4	8.8
2/29			1.4	7.1	12.1	12.2	12.6	1.5	10.9	10.9	1.0	1.5	8.8	8.7
		1.3	9.4	1.5	7.1	12.1	12.1	13.0	1.6	11.0	10.9	0.9	1.5	8.7
AVG:	1.4	10.2	1.5	3.6	12.0	12.0	12.2	1.5	11.886	11.886	1.9	1.5	8.6	8.6

Fishways are inspected once daily plus one SCADA inspection.



New rubber seal for oil barrier on north exit debris guard



North exit debris guard in place. Trash rack raking required.