

The Dalles Dam Fishway Status Report

06/21/2020

Inspection Period: 6/14-6/20

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: 21		Temperature: 59.7 °F
			Comments: Increasing spill volume and GULL #.		Weekly Average Secchi: 4.2

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'	1.3
Entrance weir N1	0	depth (≥ 8')	10.0
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	1.3' ± 0.1'	below lower limit
Junction pool weir JP6	0	> 7.0'	Average for week = 15.5
East entrance differential	0	1.0' - 2.0'	Average for week = 1.4
Entrance weir E1	0	No criteria	Average for week = 4.0
Entrance weir E2	0	depth (≥ 8')	Average for week = 12.5
Entrance weir E3	0	depth (≥ 8')	Average for week = 12.5
Collection channel velocity	0	1.5 - 4 fps	2.81 fps, 6/19/2020 Range: 3.07 fps MU - 21. 2.46 fps MU-8
Transportation channel velocity	0	1.5 - 4 fps	1.8 fps, 5/30/2020
North channel velocity	0	1.5 - 4 fps	2.11 fps, 6/19/2020
South channel velocity	0	1.5 - 4 fps	32.61 fps, 6/19/2020
West entrance differential	0	1.0' - 2.0'	Average for week = 1.6
Entrance weir W1	0	depth (≥ 8')	Average for week = 10.5
Entrance weir W2	0	depth (≥ 8')	Average for week = 10.5
Entrance weir W3	0	No criteria	
South entrance differential	0	1.0' - 2.0'	Average for week = 1.3
Entrance weir S1	0	depth (≥ 8')	Average for week = 8.1
Entrance weir S2	0	depth (≥ 8')	Average for week = 8.1

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 7, 18	MU8 OOS, MU7 running per FPP.
Turbine trashrack drawdown	0	<1.5', biwkly	6/20/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill 40% of total flow.
Turbine Unit Priority	21	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	6/20/2020 No mortality, MU-18-1 with mini-jacks and others with shad, sub/yearling salmon.

OTHER ISSUES:

Fishway Operations

North and east fish ladders in full operation

Spillway open 40% for juvenile passage with Fish Passage Plan pattern

Sluiceway opened with open sluiceways 1-1,1-2,1-3,4-1,4-2,7-2,7-3,18-2. Couple day with 2 extra gates open due to miscommunication.

Unit Outages

T10 (MU19 & 20) forced out of service through 10/28/2021 due to acetylene levels

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

MU8 out of service through 7/10/2020 for Overhaul

F1 forced out of service through 6/29/20. AWS in operation for replacement flow.

Maintenance

Calibration check; East slightly off, Maintenance notified.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work in progress.

East fishway automation replacement underway. PLC box assembly completed. Starting installation at entrance locations.

Spillway assessment (MRER); No FY20 funding. Spillgate 9 trunnion pin included.

Onsite maintenance staffing back to full with COVID restrictions. Trying to catch up from COVID delay.

Fish unit F1 replacing seal to stop leakage in pit. AWS in operation with slow buildup of debris on intake trashrack requiring twice weekly shutdowns.

Predators

USDA hazing ongoing. Gulls and Pelicans foraging below spillway. Gulls inside lines are hazed by USDA. Numerous pelicans parasitic feeding in PH1.

Green laser use for piscivorous bird hazing testing on hold. Potential safety concerns being addressed.

Research/Construction/Contractors

Four Peaks fish counting ongoing.

AWS backup - In operation due to F1 forced outage. Periodic nightly shutdown for trashrack differential needed. Investigating rake need. Alarm system planning underway.

PITAGS north and east fishladder data collection at count stations continues. Some interference problems on east antennas. PITAGS troubleshooting.

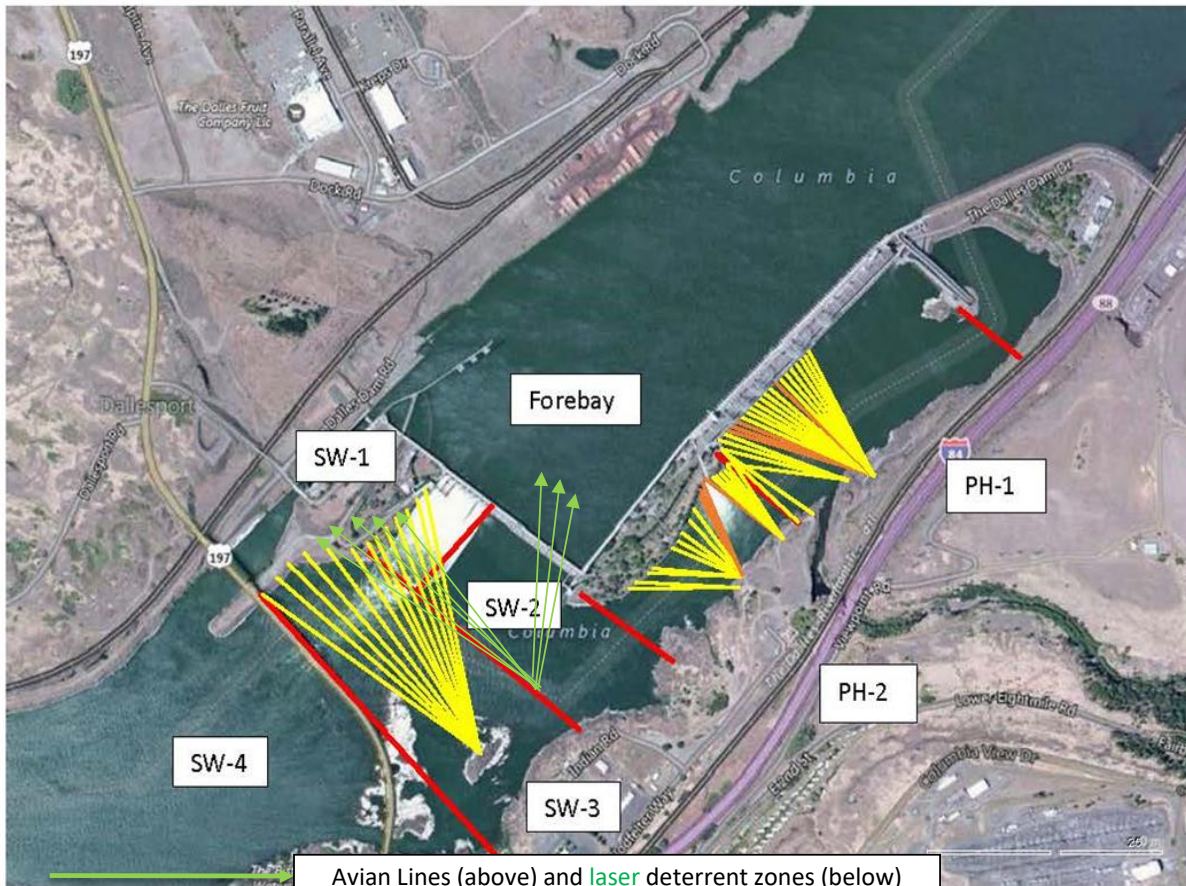
Pikeminnow dam angling 122 NPM this week/190 NPM year to date. **All invasive bass/walleye by-catch release continues.**

Fish unit breaker replacement completed. Contractor back on site mid June for finishing touches. No fish unit outage required.

Fish unit rehab - Phase 1A. Planning operation scenario with AWS backup water supply during construction. Effort underway to finish report this year.

Tow sampling for zebra mussels not completed due to unavailable sample containers. Substrate in east and north fishways examined 6/20, no mussels.

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



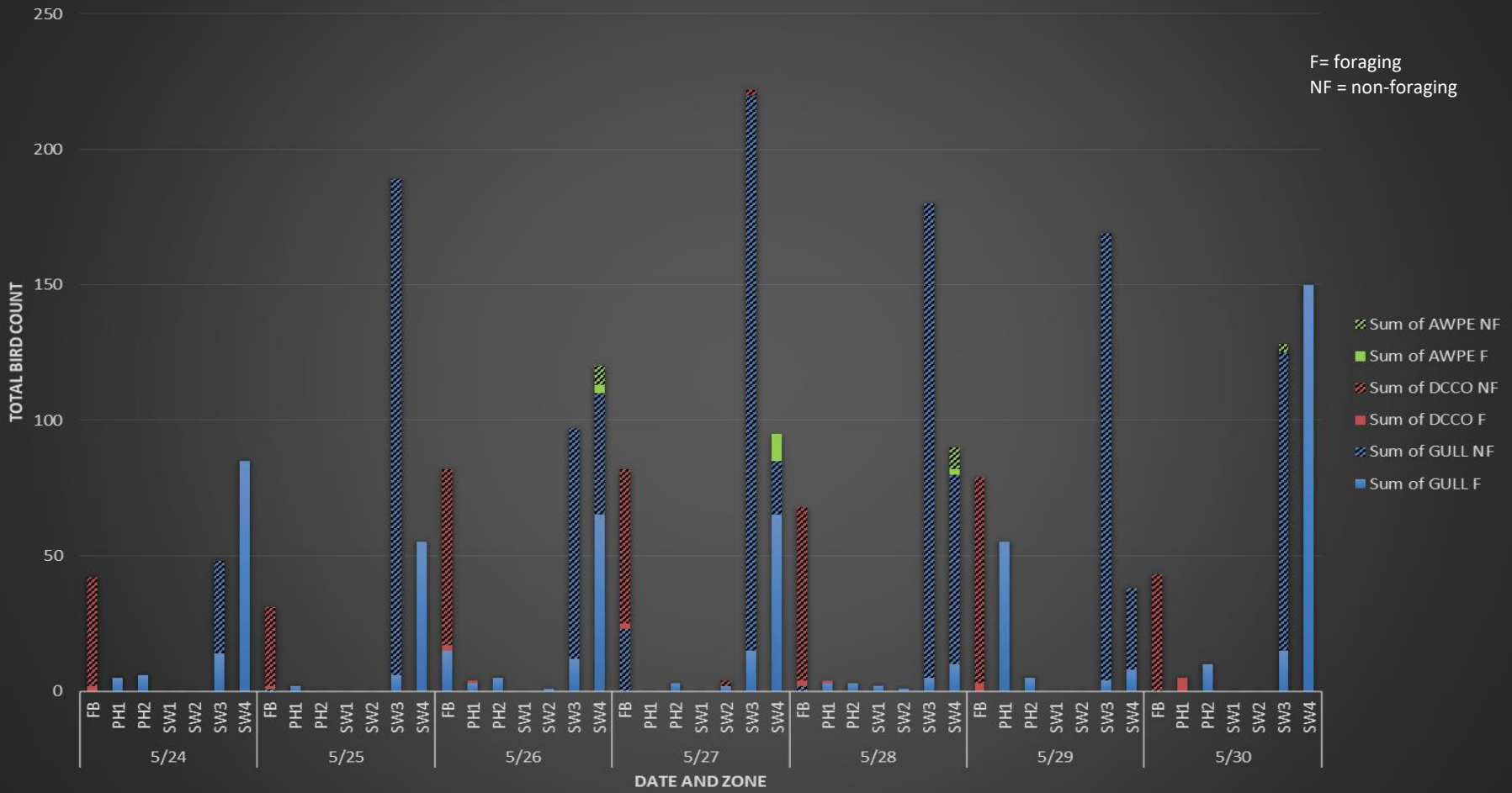
Red lines = avian zones

Avian Lines (above) and laser deterrent zones (below)

Yellow lines = current wires

Orange lines = down or missing wires

Gull, Cormorant, and Pelican Activity by Zone



Adult Fish Ladders-River Temperatures

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



	Secchi:		°F	USGS link
6/14	3.5	Sun	58.8	
6/15	4.0	Mon	59.2	
6/16	4.0	Tue	59.3	
6/17	4.0	Wed	59.5	
6/18	4.0	Thurs	59.9	
6/19	5.0	Fri	60.4	
6/20	5.0	Sat	60.5	
	4.2	AVG	59.7	

**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
6/14			1.5	4.0	12.5	12.5	14.6	1.5	10.6	10.6	0.4	1.3	8.1	8.1
	1.3	10.0	1.5	4.0	12.5	12.5	14.6	1.4	10.6	10.6	0.5	1.3	8.0	8.0
	1.3	9.9	1.5	4.0	12.5	12.5	14.8	1.5	10.5	10.5	0.5	1.3	8.2	8.2
6/15			1.4	4.0	12.5	12.5	15.9	1.6	10.5	10.5	1.5	1.4	8.1	8.1
	1.3	9.9	1.4	4.0	12.5	12.5	15.9	1.6	10.4	10.4	1.4	1.4	8.1	8.1
	1.3	10.0	1.5	3.9	12.4	12.4	15.8	1.6	10.6	10.6	1.4	1.4	8.1	8.1
6/16			1.5	4.0	12.5	12.5	14.9	1.6	10.5	10.5	0.7	1.2	8.2	8.2
	1.3	9.9	1.4	4.0	12.5	12.5	15.1	1.5	10.5	10.5	0.7	1.2	8.1	8.1
	1.3	9.9	1.5	4.0	12.5	12.5	15.1	1.5	10.4	10.4	0.8	1.3	8.1	8.1
6/17			1.4	4.1	12.6	12.6	15.3	1.6	10.5	10.5	0.9	1.3	8.2	8.2
	1.3	9.9	1.5	3.9	12.4	12.4	15.5	1.6	10.5	10.5	1.1	1.3	8.0	8.0
	1.3	10.1	1.5	3.9	12.4	12.4	15.7	1.6	10.4	10.4	1.3	1.3	8.1	8.1
6/18			1.3	4.2	12.8	12.6	15.5	1.4	10.6	10.6	1.6	1.3	8.3	8.3
	1.1	10.2	1.5	4.1	12.6	12.5	16.0	1.6	10.6	10.6	1.5	1.4	8.1	8.1
	1.3	10.0	1.4	4.0	12.5	12.5	15.9	1.6	10.5	10.5	1.3	1.4	8.2	8.2
6/19			1.5	4.0	12.5	12.6	16.4	1.6	10.5	10.5	1.9	1.4	8.1	8.2
	1.3	10.0	1.5	4.0	12.4	12.5	16.4	1.7	10.4	10.4	1.8	1.4	8.1	8.2
	1.3	9.9	1.4	4.0	12.4	12.4	16.4	1.6	10.4	10.4	3.0	1.4	8.0	8.1
6/20			1.3	5.1	12.6	12.6	15.7	1.5	10.5	10.5	3.1	1.3	8.1	8.2
	1.3	10.0	1.4	3.6	12.4	12.6	16.4	1.6	10.5	10.5	3.0	1.4	8.1	8.1
	1.2	10.0	1.4	3.6	12.6	12.6	16.3	1.5	10.6	10.6	3.0	1.3	8.2	8.2
AVG:	1.3	10.0	1.4	4.0	12.5	12.5	15.5	1.6	10.5	10.5	1.2	1.3	8.1	8.1

Fishways are inspected once daily plus one SCADA inspection.