

The Dalles Dam Fishway Status Report

6/13/2021

Inspection Period: 6/6-6/12

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: 60.3 °F
			Comments: Decreasing river flow and spill.		Weekly Ave. Secchi: 4.7

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	10.2
Entrance Differential	0	depth (≥ 8')	Weekly average	1.4
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.	11.5
Entrance weir E3	0	depth (≥ 8')	Week ave.	12.1
Collection channel velocity	0	1.5 - 4 fps	3.46 fps 6/11/21	Range MU20 1.79- MU7 4.1 fps
Transportation channel velocity	0	1.5 - 4 fps	2.56 fps 6/11/2021	
North channel velocity	0	1.5 - 4 fps	3.06 fps, 6/11/2021	
South channel velocity	0	1.5 - 4 fps	2.69 fps 6/13/21	
West entrance differential	0	1.0' - 2.0'	Old SCADA	Week ave. 1.5
Entrance weir W1	0	depth (≥ 8')		Week ave. 12.0
Entrance weir W2	0	depth (≥ 8')		Week ave. 12.0
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. 10.8
Entrance weir S2	0	depth (≥ 8')		Week ave. 9.1

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 18	Gates over MU1/1-2-3, MU8/1-3, MU18-2 open	
Turbine trashrack drawdown	0	<1.5', biwklly	6/9/21, all gatewells fishcheck	
Spill volume/pattern	0	1 to 8	Spilling 8 gates.	
Turbine Unit Priority	0	per FPP		
Gatewells	0	Weekly	MU 21 gatewell, One smolt? mortality. Mini jacks and smolts in gatewells, 6/9/2021	

OTHER ISSUES:

Current Unit Outages

MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades

T10 (MU19 and 20) OOS 10/27/22 acetylene levels

MU 7 OOS 6/2, Removed 6 sturgeon and 7 catfish back to river tail water 6/3/21

Maintenance

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

PUD intake rake returned to service with temporary power. Exploring permanent options.

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

Fishway automation replacement on hold from lack of staff. East exit, east and south entrances complete. West and north operating with old system.

Calibrations 6/9/21, east entrance weir E3 fixed itself. All gates in criteria >8'.

Predators

Heron numbers increasing (up to 8) inside east fishladder despite frequent ladder walks and USDA hazing. Shad morts seen atop weirs.

USDA hazing cormorants feeding at east fishway exit and entrance.

Reduced gull numbers with aggressive USDA boat hazing below spillway in SW4. High pelican foraging numbers in SW3-4. Shad running.

No opportunity for Green laser use for piscivorous bird hazing testing.

Pikeminnow dam angling ongoing. Removing native pikeminnow, yet **All invasive bass/walleye by-catch continue to be RELEASED per ODFW requirement.**

Camera monitoring within fishway for possible avian predators. Images indicate herons during daylight period and cormorants in daylight and at night?

Research/Construction/Contractors

Fish counters started Apr1. No issues.

AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. PDT meetings in progress.

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

Ice Trash sluiceway opened 24/7. MU1/1-2-3, MU 8/1-2, MU18/2. Moved open gates on 6 back to unit 8 when returned to service.

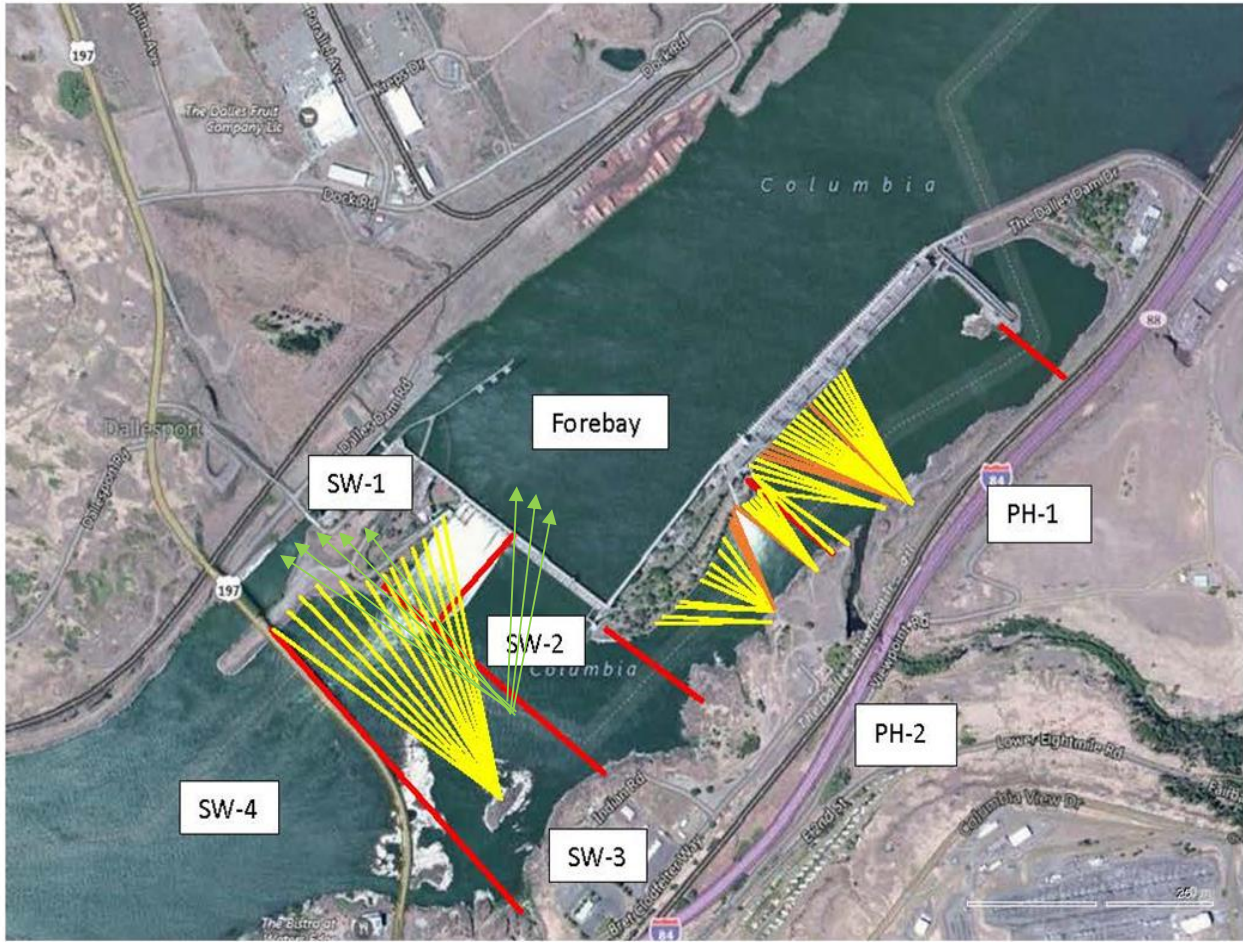
East and north fishladders in full operation per Fish Passage Plan.

New automation installed at east exit, east entrance and south entrance working well with minor adjustments.

Spillway open at 40% river flow

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

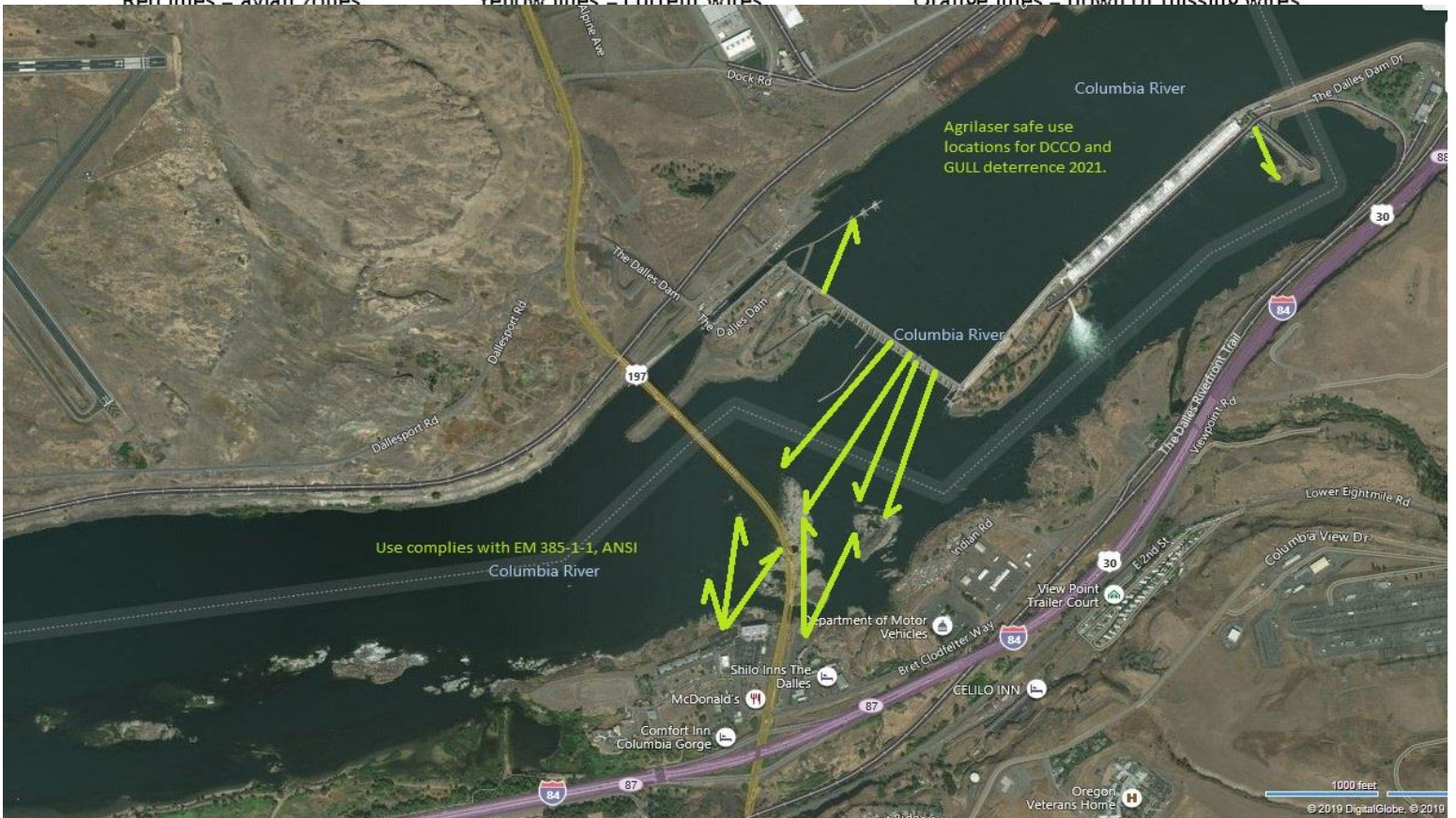
New Avian Lines and laser deterrent zones



Red lines = avian zones

Yellow lines = current wires

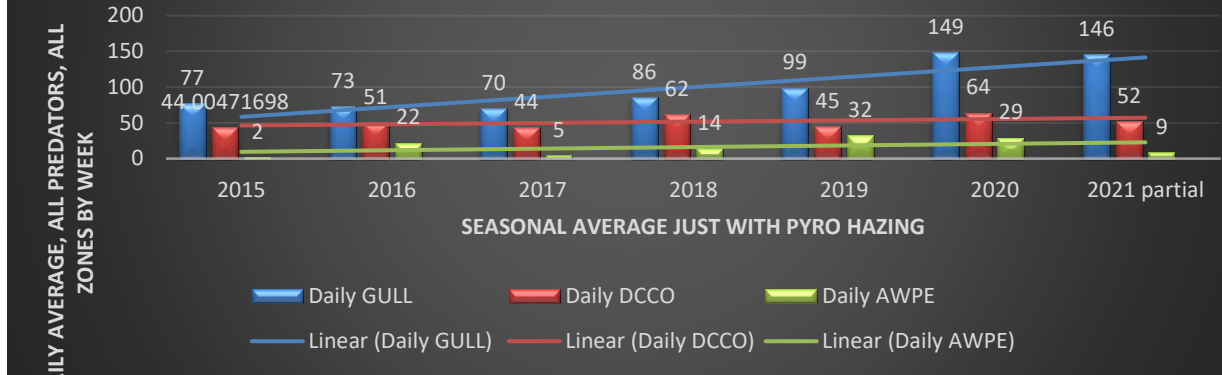
Orange lines = down or missing wires



Use complies with EM 385-1-1, ANSI

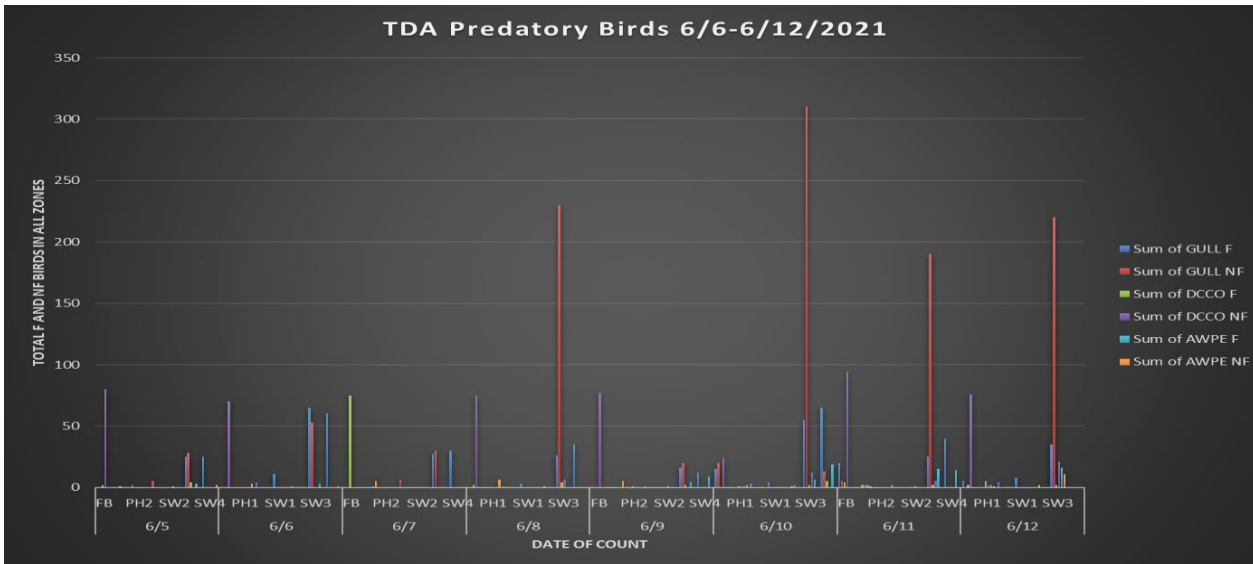
Agrilaser safe use locations for DCCO and GULL deterrence 2021.

TDA Daily Average number of Predatory Birds, During Peak of Juvenile Salmon Passage 4/1 to 7/31



Substantial gull increase in past 6 years. AWPE on track to be much high this year.

	GULL F	GULL NF	Total GULL
Daily mean count	70	141	211



Adult Fish Ladders-River Temperatures

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



Secchi:		%F
5.0	Sun	60.6
5.0	Mon	60.6
5.0	Tue	60.4
5.0	Wed	60.2
4.0	Thurs	60.1
4.0	Fri	60.1
5.0	Sat	60.4
4.7	AVG	60.3

USGS May

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
6/6	1.4	10.1	1.5	8.8	11.1	11.6	16.6	1.7	12.5	12.5	2.0	1.6	12.0	9.3
	1.4	10.2	1.5	8.9	11.1	11.5	16.6	1.7	12.5	12.5	3.6	1.5	11.9	9.1
6/7	1.4	10.1	1.6	7.7	10.8	11.4	15.3	1.6	12.5	12.5	3.5	1.6	11.8	8.8
	1.4	10.1	1.5	7.7	11.0	11.9	15.8	1.6	12.5	12.5	3.4	1.4	11.9	8.9
6/8	1.4	10.2	1.3	8.3	11.8	13.1	14.6	1.4	12.6	12.6	3.6	1.5	11.4	8.2
	1.4	10.2	1.4	9.0	12.0	13.2	14.8	1.5	12.4	12.4	3.5	1.5	11.3	8.0
6/9								1.3						
	1.3	10.2	1.6	8.8	10.8	12.1	13.7	1.4	12.5	12.5	3.4	1.6	11.2	7.9
6/10	1.4	10.2	1.7	9.7	11.3	11.6	13.4	1.4	12.5	12.5	1.0	1.4	10.0	9.7
	1.2	10.2	1.6	9.2	11.6	12.0	12.7	1.5	11.0	11.0	0.9	1.5	9.9	9.5
6/11								1.5						
	1.4	10.1	1.5	11.6	12.0	12.4	12.9	1.5	11.0	10.9	1.0	1.5	9.9	9.5
6/12	1.4	11.1	1.5	11.4	12.0	12.4	12.9	1.5	11.1	11.1	0.9	1.5	9.9	9.5
								1.5						
6/12	1.3	10.2	1.4	11.6	12.4	12.8	13.3	1.5	11.0	11.0	1.5	1.6	9.6	9.7
	1.3	10.3	1.3	11.7	12.5	12.9	13.4	1.6	10.9	10.9	1.2	1.5	9.7	9.7
AVG:	1.4	10.2	1.5	9.5	11.5	12.1	14.3	1.5	12.0	12.0	2.1	1.5	10.8	9.1

Fishways are inspected twice daily. Overnight trend monitored via Old SCADA.



Gatewell 18-1 significant numbers of smolts loitering on 6/9/2021. No morts.