

The Dalles Dam Fishway Status Report

10/18/2020

Inspection Period: 10/11-10/17

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
Phone: 541-506-3800

The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections: 21	Temperature: 63.3 °F
			Comments: fishways functional	Weekly Average 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'	1.3
Entrance weir N1	0	depth (≥ 8')	9.1
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	Damage to north FB index makes data unreliable.

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'	
Junction pool weir JP6	0	> 7.0'	Average for week = 9.4
East entrance differential	0	1.0' - 2.0'	Average for week = 1.5
Entrance weir E1	0	No criteria	Average for week = No criteria
Entrance weir E2	0	depth (≥ 8')	Average for week = 11.5
Entrance weir E3	0	depth (≥ 8')	Average for week = 11.5
Collection channel velocity	0	1.5 - 4 fps	2.94 fps, 10/10/2020 Range: 3.58 fps MU 8 to 2.34 fps MU-7
Transportation channel velocity	0	1.5 - 4 fps	2.26 fps, 10/10/2020
North channel velocity	0	1.5 - 4 fps	2.69 fps, 10/10/2020
South channel velocity	0	1.5 - 4 fps	3.05 fps, 10/10/2020
West entrance differential	0	1.0' - 2.0'	Average for week = 1.5
Entrance weir W1	0	depth (≥ 8')	Average for week = 9.8
Entrance weir W2	0	depth (≥ 8')	Average for week = 9.8
Entrance weir W3	0	No criteria	
South entrance differential	0	1.0' - 2.0'	Average for week = 1.4
Entrance weir S1	0	depth (≥ 8')	Average for week = 8.5
Entrance weir S2	0	depth (≥ 8')	Average for week = 8.5

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 7, 18	MU8 OOS
Turbine trashrack drawdown	0	<1.5', biwklly	10/10/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill closed 9/1/2020.
Turbine Unit Priority	0	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	10/10/2020 fish check, some adult shad MU-21-1 mortality. No salmon seen.

OTHER ISSUES:

Unit Outages

- Line 1, MU1,2, FU1&2 limited to 188MVA until T1 replacement through 2/28/2021
- T10 (MU19 & 20) FOOS through 10/28/2021/11/2020
- MU8 OOS 0630 1/21/2020 - 1700 11/5/2020 for Overhaul
- MU22 FOOS through 1700 11/19/2020 due to excessive vibration.
- MU21 OOS 8/3/2020 - 12/17/2020 for Annual & Headcover Upgrade
- TO-1 OOS 0630 10/5/2020 - 1700 10/15/2020 for Doble Testing
- GDACS failover testing daily 0800 10/13/2020 - 1500 10/14/2020
- T6 OOS 1300 10/13/2020 - 1700 10/20/2020 for T6 GSU install re-work
- MU9 & MU10 limited to 75MW & +/- 15 MVAR each due to T5 Temperature Rise through 10/22/2020

Maintenance

PUD intake rake out of service due to power track damage. Exploring repair options with limited budget. Raking with mobile crane as needed. Calibration check on 10/13, all in criteria.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work to resume FY21.

East fishway automation PLC panels installed. All sensor brackets installed. Conduit install in progress. East entrance near complete for operation testing.

Spillway assessment (MRER); Spillgate 9 trunnion pin included.

Predators

USDA hazing concluded 7/31. Refer to avian graph tab for bird numbers.

Green laser use for piscivorous bird hazing testing restarted. Potential safety concerns, training and documentation addressed.

Cormorants foraging forebay near east ladder exit and entrance. Several herons foraging east fishladder.

Invasive aquatic weeds subsiding at count station pickets. Zebra mussel samples collected 8/31.

Pikeminnow dam angling concluded w/980 removed. **All invasive bass/walleye by-catch release continues per states gamefish requirements.**

Research/Construction/Contractors

PSMFC concluded juvenile sampling at PUD 7/31

Four Peaks fish counting ongoing through 10/31.

CRITFC lamprey trapping concluded 9/3

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

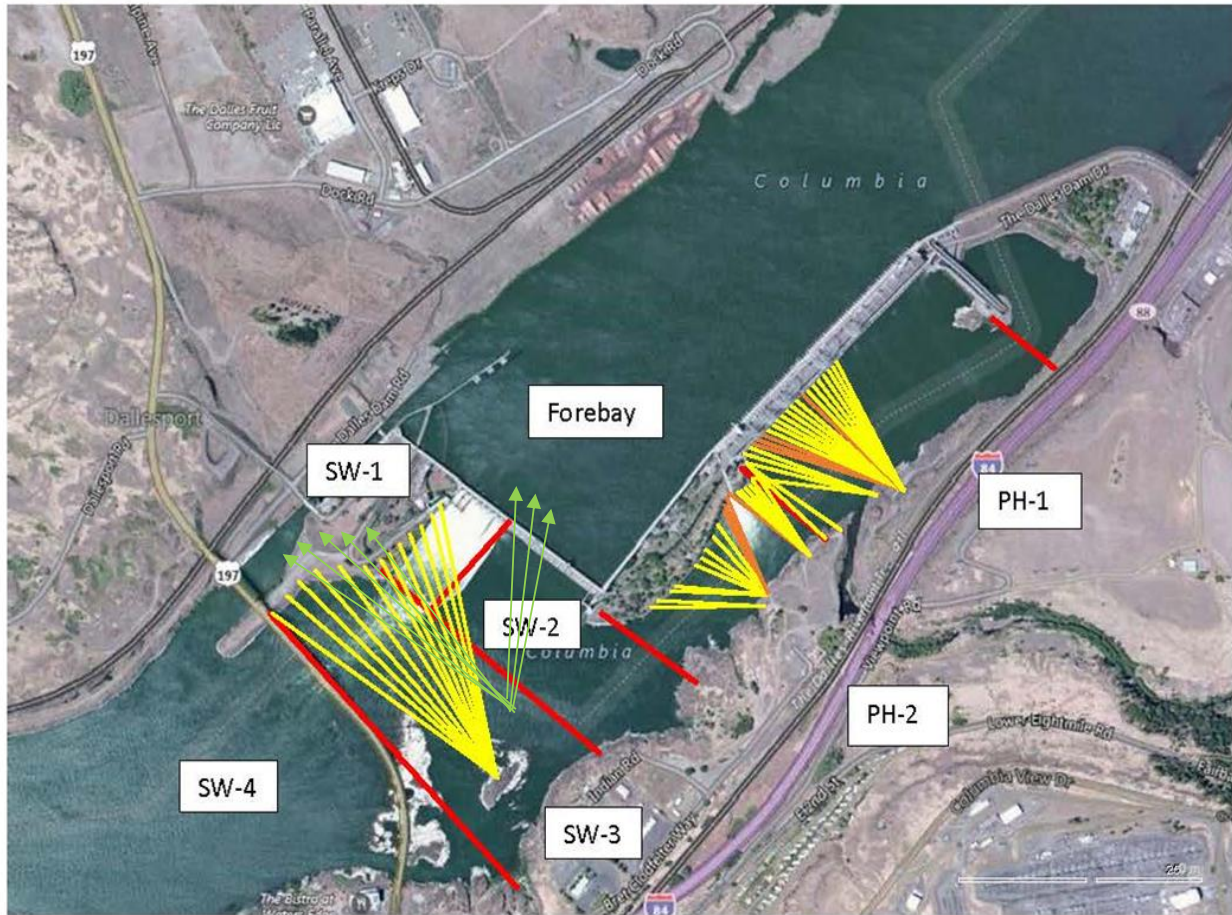
Fish unit rehab - Phase 1A. On hold.

Fishway Operations

North and east fish ladders in full operation.

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

Avian Lines and laser deterrent zones

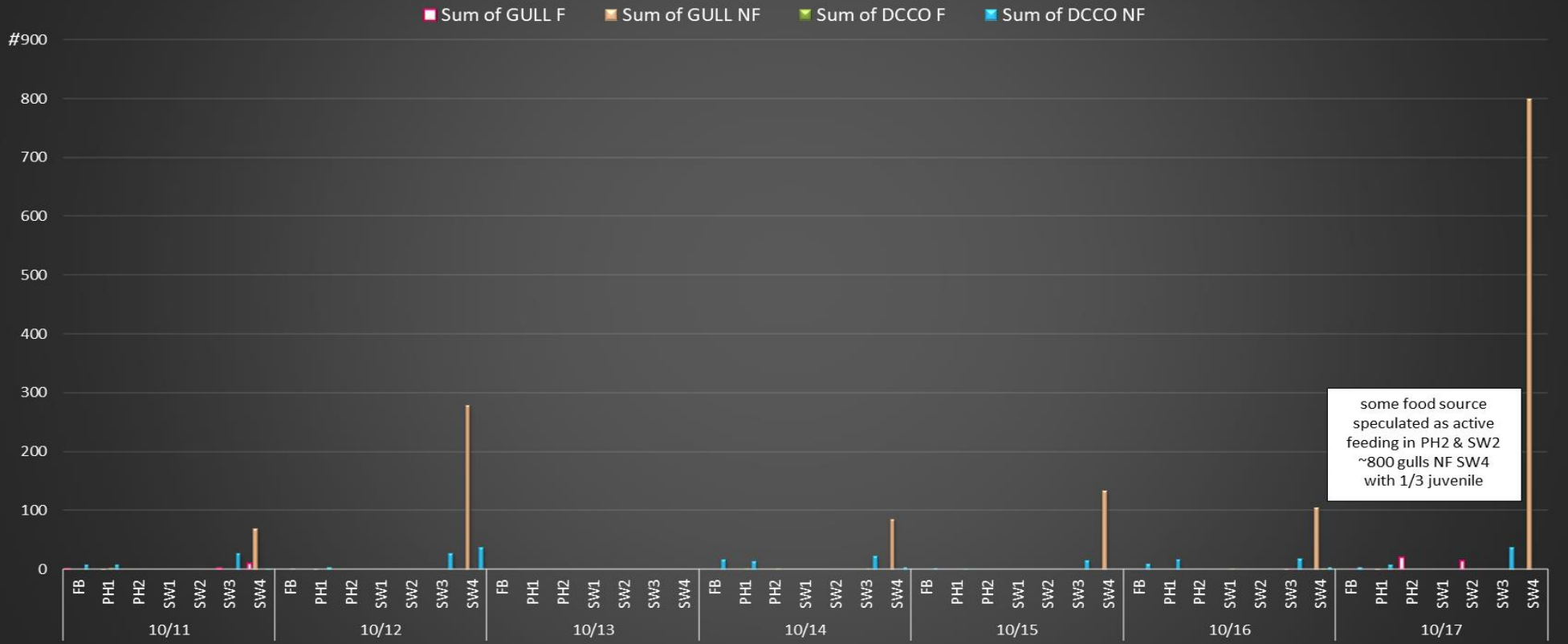


Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

Gull and Cormorant activity



some food source speculated as active feeding in PH2 & SW2
 ~800 gulls NF SW4 with 1/3 juvenile

Adult Fish Ladders-River Temperatures

— East Count Station — North Count Station — North Entrance ● Current USGS daily tailwater average ▲ USGS daily tailwater average (2007-2019)



Secchi:		°F	
10/11	5.0	Sun	64.5
10/12	6.0	Mon	63.9
10/13	6.0	Tue	63.5
10/14	5.0	Wed	63.1
10/15	5.0	Thurs	62.9
10/16	4.0	Fri	62.7
10/17	4.0	Sat	62.7
	5.0	AVG	63.3

USGS October

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
10/11			1.4	6.9	12.0	12.1	10.7	1.4	10.5	10.5	-2.8	1.5	8.7	8.6
	1.3	9.4	1.5	7.0	11.9	11.9	10.8	1.5	10.5	10.5	-2.7	1.5	8.4	8.5
	1.3	9.4	1.5	6.7	12.0	12.0	10.7	1.5	10.3	10.3	-2.7	1.5	8.5	8.5
10/12			1.6	6.5	12.0	12.1	10.6	1.6	10.1	10.1	-2.6	1.6	8.4	8.5
	1.3	9.3	1.4	8.6	12.1	12.0	10.7	1.5	10.2	10.2	-2.6	1.5	8.5	8.4
	1.4	9.3	1.5	8.3	12.0	11.9	10.6	1.5	10.1	10.1	-2.8	1.5	8.5	8.4
10/13			1.4	8.5	12.1	12.0	11.3	1.6	10.1	10.1	-2.2	1.5	8.6	8.5
	1.3	9.4	1.5	8.5	12.0	12.1	10.6	1.6	10.3	10.3	-2.7	1.4	8.6	8.5
	1.3	9.4	1.5	8.5	12.0	12.1	10.6	1.6	10.3	10.3	-2.7	1.4	8.6	8.5
10/14			1.4	8.4	12.0	12.0	10.1	1.4	10.2	10.2	-3.1	1.5	8.4	8.4
	1.2	9.3	1.5	6.5	11.5	11.5	9.2	1.6	9.8	9.8	-3.8	1.4	8.6	8.6
	1.2	9.4	1.3	6.5	11.5	11.5	8.7	1.4	9.8	9.8	-4.4	1.3	8.5	8.5
10/15			1.3	6.6	11.5	11.5	9.0	1.4	9.5	9.5	-4.3	1.5	8.5	8.5
	1.0	9.0	1.5	6.5	10.5	10.5	7.5	1.3	9.4	9.4	-5.4	1.3	8.5	8.5
	1.0	8.9	1.4	6.5	10.5	10.5	7.3	1.3	9.3	9.3	-5.7	1.5	8.4	8.4
10/16			1.6	6.6	10.5	10.5	6.8	1.3	9.4	9.4	-6.0	1.3	8.6	8.6
	1.2	8.6	1.5	6.6	10.5	10.5	7.9	1.4	9.4	9.4	-5.2	1.4	8.6	8.6
	1.4	8.6	1.8	6.6	10.5	10.5	8.9	1.5	9.3	9.3	-4.4	1.4	8.6	8.6
10/17			1.6	8.1	10.5	10.4	8.3	1.5	9.3	9.3	-4.8	1.4	8.1	8.5
	1.4	8.5	1.4	5.6	11.5	11.5	9.1	1.6	9.3	9.3	-4.2	1.5	8.5	8.5
	1.5	8.5	1.5	5.5	11.5	11.5	8.8	1.5	9.4	9.4	-4.3	1.5	8.5	8.5
AVG:	1.3	9.1	1.5	7.1	11.5	11.5	9.4	1.5	9.8	9.8	-3.8	1.4	8.5	8.5

Fishways are inspected once daily plus one SCADA inspection.