

The Dalles Dam Fishway Status Report

11/16/19

Inspection Period: 11/10-11/16, 2019

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:	50.1 °F
			Comments:	Soft constraint on FB 159.5'		
			Secchi:	5.0 feet		
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'	Average for week =	1.25		
Entrance weir N1	0	depth (≥ 8')	Average for week =	9.1		
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 156 malfunctioning; able to reset breaker and resume operation			
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	Average for week =	9.7		
East entrance differential	0	1.0' - 2.0'	Average for week =	1.44		
Entrance weir E1	0	No criteria	Opened and adjusted to maintain differential			
Entrance weir E2	0	depth (≥ 8')	Average for week =	11.00		
Entrance weir E3	0	depth (≥ 8')	Average for week =	11.00		
Collection channel velocity	0	1.5 - 4 fps	2.76 fps Average	Range:	1.62 fps SS - 3.44 fps MU12 11/15/19	
Transportation channel velocity	0	1.5 - 4 fps	2.45 fps 11/15			
North channel velocity	0	1.5 - 4 fps	2.74 fps 11/15			
South channel velocity	0	1.5 - 4 fps	3.75 fps 11/15			
West entrance differential	0	1.0' - 2.0'	Average for week =	1.5		
Entrance weir W1	0	depth (≥ 8')	Average for week =	0.0	Closed 9/12 due to slack cable	
Entrance weir W2	0	depth (≥ 8')	Average for week =	9.5		
Entrance weir W3	0	1.0' - 2.0'	Average for week =	9.5	Opened 9/12 in place of W1.	
South entrance differential	0	1.0' - 2.0'	Average for week =	1.5		
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	7	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', biweekly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Gatewells						

OTHER ISSUES:

Operations

East & North fish ladders in full operation
Spillway closed

Outages

T10 (MU19 & 20) Forced OOS through 10/28/2021 for acetylene levels
T5 (MU9 & MU10) OOS 11/25/2019 for T5 GSU Replacement
MU9 OOS 9/3/19 - 11/25/19 overhaul
MU10 OOS 9/3/2019 - 11/25/2019 for Annual
MU2 Forced OOS to 1/2/20 for Hydraulic Repair
MU13 OOS 9/23/2019 - 7/22/2020 for Hydraulic Repairs
East fishladder dewatering 12/2/19

Maintenance

Calibration check 11/11/19, west entrance tailwater slightly outside of criteria.
South entrance dewater pump electrical upgrade for increased reliability for this winter dewatering.
Collection channel dewatering pumps 5 and 6 work continues. New pump motor ordered.
Fishway automation replacement planning continues. Labor starting for assembly and sensor install.
Engineering evaluation of east fishway diffuser valve status/rehab to resume.
Preparing for dewater south entrance auxiliary water conduit to repair failed diffuser valves.
Preparing for improved 3 expansion joint repairs on east fishladder.
Preparing for count station concrete crack injection.
Spillway assessment (MRER); No funding for FY20. Importance of spillgate 9 fish priority included.
Weir 157 secured out of ladder. Manual operation through remainder of the passage season. Forebay soft constraint 159.5' through November.
West entrance weir W1 closed due to cable problems. Repair during winter outage. Weir W3 operated in its place providing two weirs at >8' depth

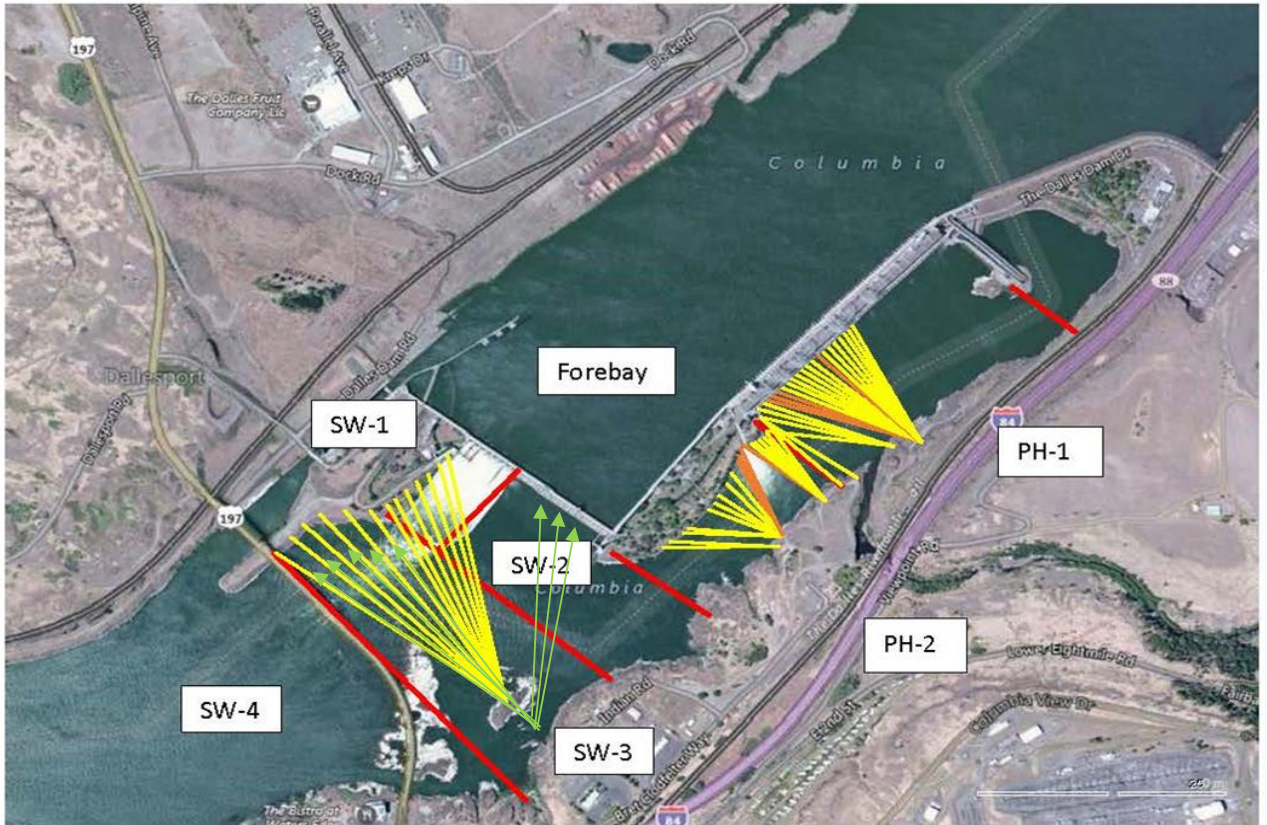
Predators

Green laser used to haze piscivorous birds for effectiveness testing. USDA hazing resumes 4/15/20.
Cormorant and gull numbers fluctuating daily, with expected fall numbers.
Sea Lions not observed from dam year to date.

Research/Construction/Contractors

Four Peaks fish counting concluded October 31. Cleaning count stations
AWS backup - Follow on contract in progress. Return to service delayed due to parts delivery. Commissioning scheduled third week Feb.
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.**
Fish unit breaker replace.- Planning third season work Dec1-end Jan. Commissioning first week of Feb.
Fish unit rehab - Phase 1A. Planning operation scenario during construction. No funding.

Approved by: Mike Colesar
Operation Project Manager The Dalles Dam



Red lines = avian zones

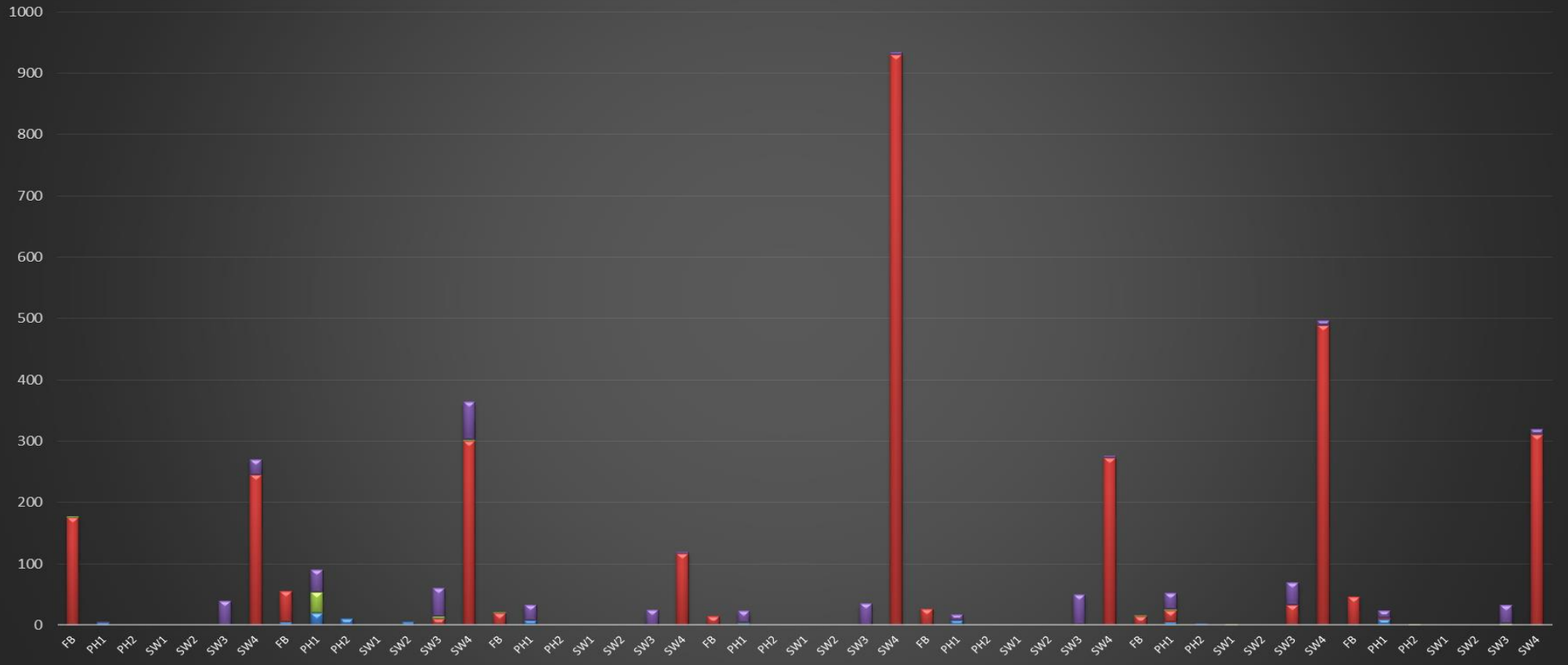
Yellow lines = current wires

Orange lines = down or missing wires



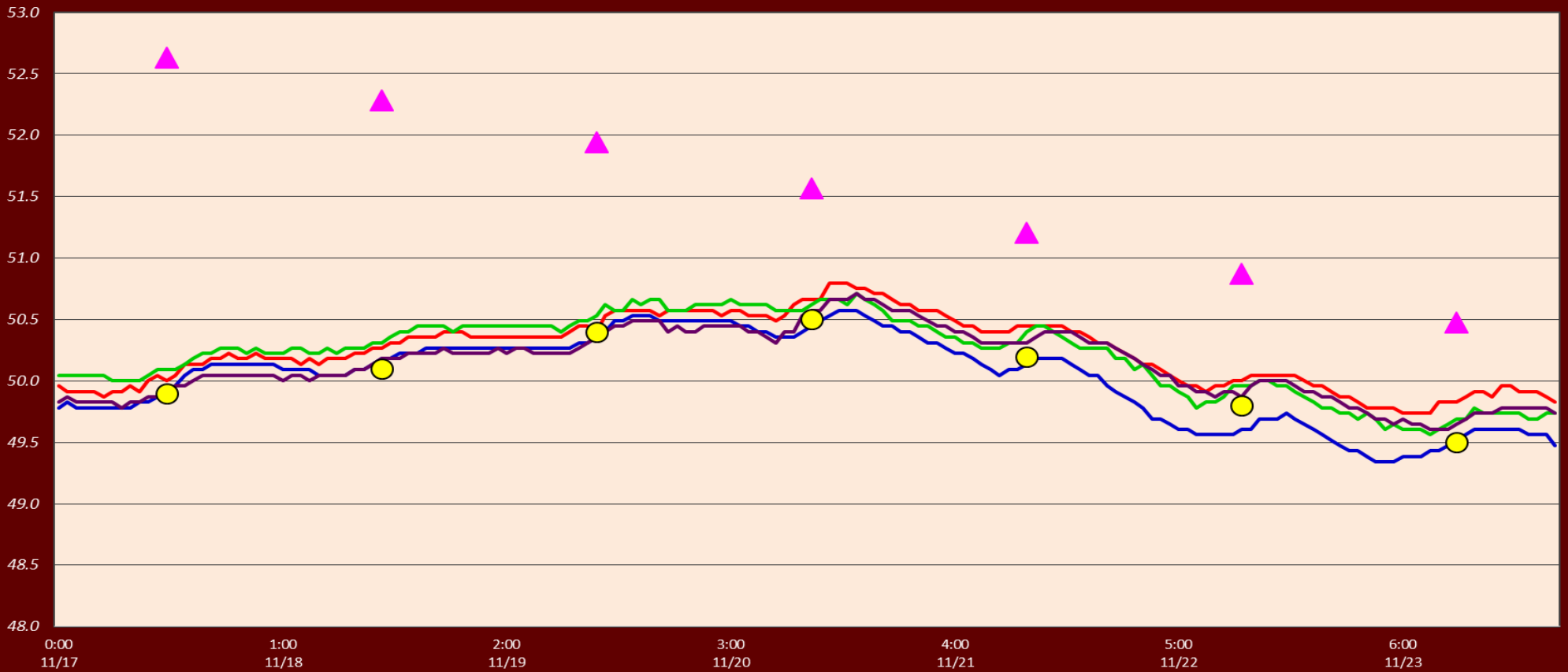
Additional avian lines installed 9/2018

■ GULL Forage ■ GULL Non Forage ■ DCCO Forage ■ DCCO Non Forage



Adult Fish Ladder(s)-River Temperatures

— East Count Station — South Entrance — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2017)



USGS:		
Secchi:		Temperatures
11/17	5.0	Sun 49.9
11/18	5.0	Mon 50.1
11/19	5.0	Tue 50.4
11/20	5.0	Wed 50.5
11/21	5.0	Thurs 50.2
11/22	5.0	Fri 49.8
11/23	5.0	Sat 49.5
	5.0	AVG 50.1

Nov Temps

The Dalles Dam Daily Readings and Averages for

Temperatures, Secchi, Entrances, and Spill

SCADA INSPECTION

out of criteria

Date:	North Ladder Entrance		East Ladder											
			East Entrance					West Entrance			South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
11/17			1.4	6.9	11.0	11.0	10.3	1.4		9.9	9.8	1.4	8.5	8.5
	1.24	9.28	1.5	6.9	11	11	10.1	1.5		9.7	9.5	1.5	8.5	8.4
	1.3	9.1	1.4	7.0	11.1	11.1	10.4	1.5		9.9	9.8	1.5	8.5	8.5
11/18			1.4	7.1	11.1	11.1	9.7	1.3		9.9	9.9	1.4	8.5	8.6
	1.20	9.2	1.3	7.0	11.1	11.0	10.0	1.4		9.7	9.7	1.5	8.5	8.4
	1.21	9.1	1.4	5.9	11.0	11.0	9.2	1.5		9.2	9.2	1.5	8.4	8.4
11/19			1.6	6.0	10.9	10.9	9.6	1.6		9.3	9.3	1.3	8.8	8.8
	1.3	9.1	1.6	6.0	11.0	11.0	9.6	1.6		9.3	9.3	1.4	8.5	8.5
	1.3	9.1	1.5	6.0	11.0	11.0	9.8	1.6		9.4	9.4	1.4	8.6	8.6
11/20			1.5	6.1	11.0	11.0	10.4	1.7		9.3	9.3	1.6	8.5	8.5
	1.3	9.1	1.5	6.0	10.9	10.9	10.5	1.5		10.0	10.0	1.5	8.5	8.5
	1.2	9.1	1.5	6.0	11.0	10.9	9.4	1.6		8.9	8.9	1.5	8.5	8.5
11/21			1.5	6.1	11.0	11.0	10.5	1.6	9.5	9.5	1.5	8.6	8.6	
	1.3	9.1	1.6	6.4	11.0	11.0	9.6	1.4	9.7	9.7	1.4	8.5	8.5	
	1.3	9.1	1.3	6.4	11.0	11.0	9.4	1.3	9.3	9.3	1.5	8.4	8.4	
11/22			1.4	6.3	11.1	11.1	9.9	1.5	9.3	9.3	1.4	8.5	8.5	
	1.3	9.1	1.6	6.6	11.0	11.0	9.8	1.6	9.3	9.3	1.5	8.5	8.5	
	1.3	9.0	1.4	6.5	10.9	11.0	9.0	1.4	9.2	9.4	1.5	8.4	8.5	
11/23			1.3	6.6	10.9	11.0	9.1	1.4	9.2	9.3	1.5	8.4	8.4	
	1.1	9.2	1.3	6.6	11.0	11.0	9.1	1.4	9.2	9.3	1.5	8.5	8.5	
	1.1	9.1	1.3	6.5	11.0	11.0	9.1	1.4	9.3	9.4	1.4	8.6	8.6	
AVG:	1.2	9.1	1.4	6.4	11.0	11.0	9.7	1.5		9.5	9.5	1.5	8.5	8.5

Fishways are inspected twice daily plus one SCADA inspection.