

The Dalles Dam Fishway Status Report

11/29/2020

Inspection Period: 11/22 - 11/28

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: 47.6 °F
			Comments: fishways functional	Weekly Average Secchi: 6.0

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'	1.2
Entrance weir N1	0	depth (≥ 8')	9.2
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	TDM unable to remove significant floating weeds buildup. North FB index 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 = 9.3
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	2.94fps 11/26/2020 Range: Data unavailable
Transportation channel velocity	0	1.5 - 4 fps	2.51 fps, 11/26/2020
North channel velocity	0	1.5 - 4 fps	3.12 fps, 11/26/2020
South channel velocity	0	1.5 - 4 fps	4.24fps, 11/26/2020
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 = 1.5
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	0	Units 3, 7, 18	MU8 OOS and MU1-2 OOS
Turbine trashrack drawdown	0	<1.5', biwklly	11/26/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill closed 9/1/2020.
Turbine Unit Priority	21	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	11/26/2020 fish check, no fish mortality seen.

OTHER ISSUES:

Current Unit Outages

- Line 1, MU1, & MU2 OOS for T1 replacement MU2 Overhaul and MU1 Annual through 2/28/2021
- T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels
- SSO1 OOS for Overhaul and DC Governor oil Pump Install 0630 11/2/2020 - 1700 1/14/2021
- FU1 OOS 0001 12/1/2020 – 1700 1/21/2021 for Overhaul & TA Vault Demo
- FU2 OOS 0001 12/1/2020 – 1700 1/21/2021 for Annual & TA Vault Demo

Maintenance

East fish ladder dewatered to tail water 12/2, minimal fish handled, details available
PUD intake rake out of service due to power track damage. Exploring repair options. Attempting to rake with mobile crane.
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. Programming underway. Completion target end Jan.
Spillway assessment (MRER); Spillgate 9 trunnion pin included.
Calibration checks on fishway entrances and exits 11/26/20, all within criteria.

Predators

Very high gull numbers. Refer to avian graph tab for bird numbers.
Green laser use for piscivorous bird hazing testing continues. Effective tool for roosting birds during low light. Modified use locations due to complaint.
Cormorants foraging forebay near east ladder exit and entrance. One heron foraging east fishladder. Three hours video observation with no confirmed catch.
Invasive aquatic weeds significant at count station pickets and north exit.
Pikeminnow dam angling concluded w/980 removed. **All invasive bass/walleye by-catch release continues per states gamefish requirements.**

Research/Construction/Contractors

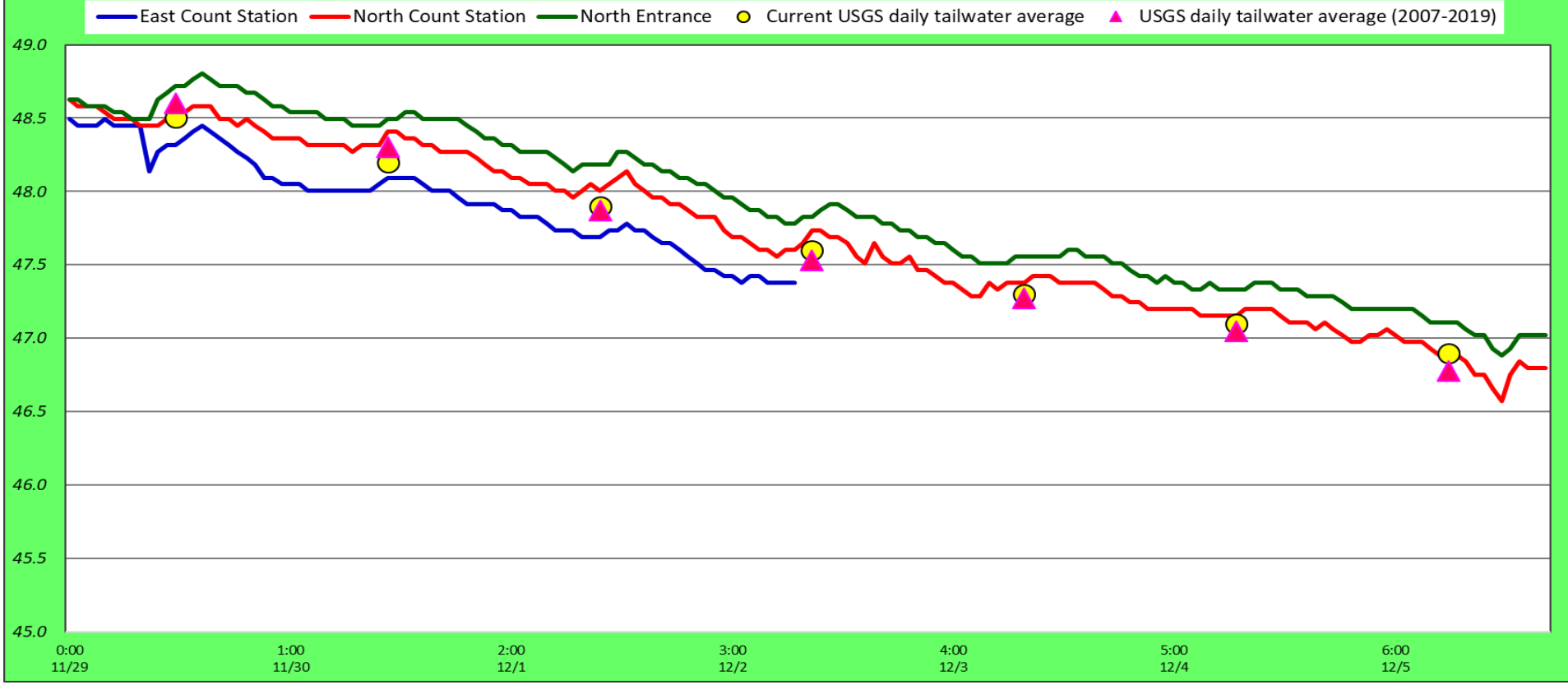
District Dive office to ROV east fishway diffuser grating, AWS and east exit trashracks for condition 12/28-29
AWS intake trashrack - NWP investigating solution for debris plugging issue.
PITAGS north and east fishladder data collection at count stations continues.
Fish unit rehab - Phase 1A. Planning operation with AWS backup water supply during construction on hold.
WDFW sturgeon tagging successful, more details to follow

Fishway Operations

North fish ladder in full operation-East ladder dewatered 12/2 -mostly shad, some sturgeon, coho, steelhead

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

Adult Fish Ladders-River Temperatures



Secchi:		°F	USGS Nov
6.0	Sun	48.5	USGS Dec
6.0	Mon	48.2	
6.0	Tue	47.9	
6.0	Wed	47.6	
6.0	Thurs	47.3	
6.0	Fri	47.1	
6.0	Sat	46.9	
6.0	AVG	47.6	

**The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill**

SCADA INSPECTION
out of criteria

Date:	North Ladder		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
11/29			1.3	5.1	11.5	11.5	8.7	1.5	10.0	10.0	-4.0	1.5	8.5	8.5
	1.1	9.3	1.4	4.9	11.5	11.5	9.5	1.5	9.8	9.8	-3.4	1.6	8.5	8.5
	1.1	9.3	1.4	3.6	11.5	11.5	8.7	1.5	9.7	9.7	-4.0	1.4	8.6	8.6
11/30			1.7	3.6	11.6	11.6	9.1	1.6	9.7	9.7	-3.5	1.4	8.3	8.3
	1.3	8.5	1.4	6.1	11.6	11.6	9.3	1.4	9.8	9.8	-3.4	1.6	8.4	8.4
	1.3	9.3	1.5	6.0	11.4	11.5	10.4	1.7	9.7	9.7	-2.7	1.6	8.5	8.5
12/1														
	1.2	9.5												
12/2														
	1.1	9.2												
12/3														
	1.3	9.1												
12/4														
	1.0	9.2												
12/5														
	1.3	9.2												
AVG:	1.2	9.2	1.5	4.9	11.5	11.5	9.3	1.5	9.8	9.8	-3.5	1.5	8.5	8.5

East Ladder dewatered

Fishways are inspected once daily plus one SCADA inspection.

