

The Dalles Dam Fishway Status Report

9/27/2020

Inspection Period: 9/20-9/26

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: 66.4 °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')	9.4
Entrance weir N2	0	Closed	
PUD Intake differential	6	≤ 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 = 9.9
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	3.04 fps, 9/23/2020 Range: 3.74 fps MU 1 to 2.48 fps MU-2
Transportation channel velocity	0	1.5 - 4 fps	2.4 fps, 9/22/2020
North channel velocity	0	1.5 - 4 fps	2.39 fps, 9/22/2020
South channel velocity	0	1.5 - 4 fps	3.6 fps, 9/22/2020
West entrance differential	0	1.0' - 2.0'	Average for week = 1.5
Entrance weir W1	0	depth (≥ 8')	Average for week = 10.0
Entrance weir W2	0	depth (≥ 8')	Average for week = 10.0
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', biwkly	9/23/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill closed 9/1/2020.
Turbine Unit Priority	4	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	9/23/2020 fish check, some adult shad mortality. No salmon seen.

OTHER ISSUES:

Unit Outages

- Line 1, MU1,2, FU1&2 limited to 188MVA for T1 replacement; 1/28/2021
- T3 MU5, MU6 FU1 & FU2 limited to 188MVA through 1/28/2020 for FUBB bus temperature testing
- T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels
- MU8 OOS 0630 1/21/2020 - 1700 10/1/2020 for Overhaul
- T7 OOS 0001 6/22/2020 - 1700 10/1/2020 T7 GSU Replacement & Gnd. Switch Repairs
- MU22 FOOS through 1700 11/19/2020 due to excessive vibration.
- MU21 OOS 8/3/2020 - 11/19/2020 for Annual & Headcover Upgrade
- One unit rolling outage 0630 9/8/2020 - 1700 9/22/2020 for SEL Relay Upgrades

Maintenance

PUD intake rake out of service due to power track damage. Exploring repair options. Expecting budget challenge. Raking with mobile crane as needed. Calibration check on 9/22, S1 and Weir 158 out of calibration, but maintaining criteria. Potential accuracy problems north forebay staff gage due to damage. Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab resume in Oct. East fishway automation new panels installed at east, west, south and north entrances. Running conduit to panels and installing sensor brackets. Spillway assessment (MRER); No FY20 funding. 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 on hold. Potential safety concerns being addressed. Cormorants foraging forebay near east ladder exit and entrance. Several herons foraging east fishladder. Pikeminnow dam angling 1 NPM this week-980 NPM YTD. **All invasive bass/walleye by-catch release continues per states gamefish requirements.**

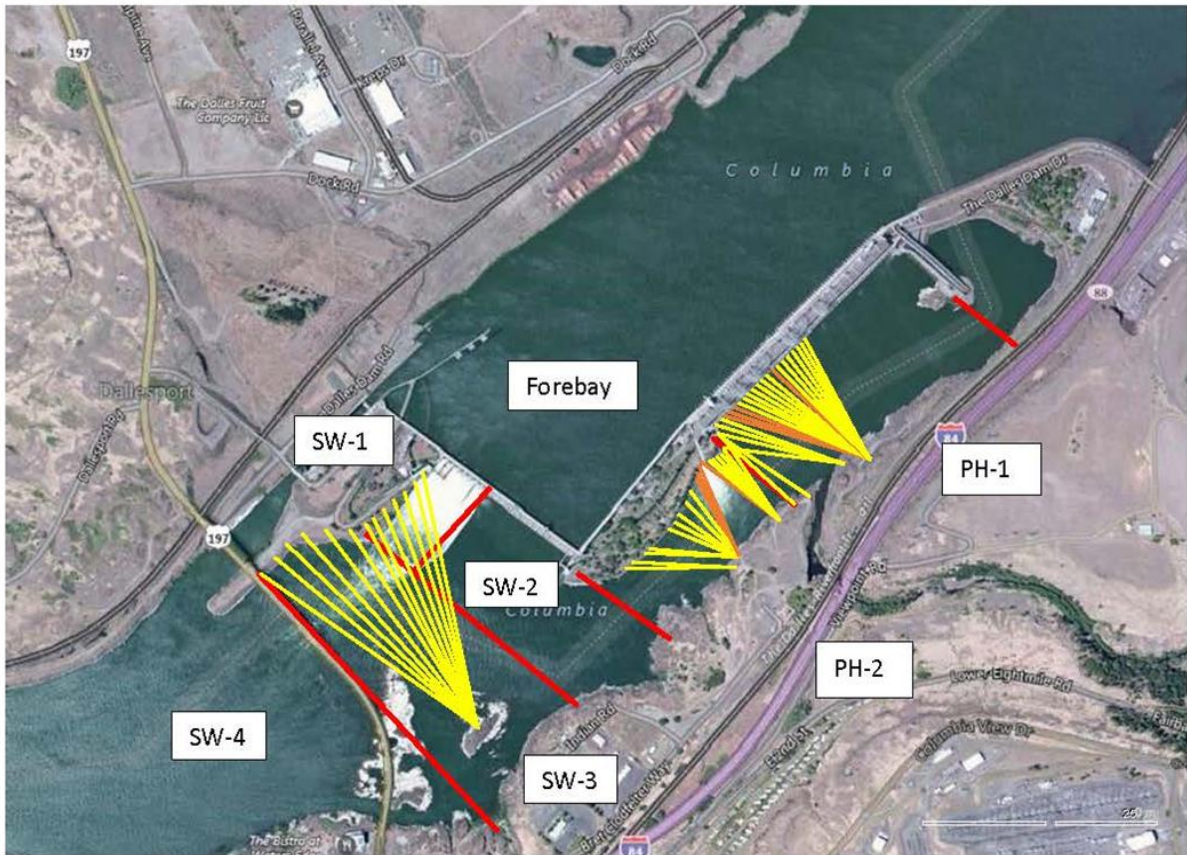
Research/Construction/Contractors

PSMFC concluded juvenile sampling at PUD 7/31
Four Peaks fish counting ongoing through 10/31.
CRITFC lamprey trapping concluded 9/3 . 526 total lamrey captures YTD
PITAGS north and east fishladder data collection at count stations continues.
Fish unit breaker replacement installed and in operation. Calculation issue needed for completion.
Fish unit rehab - Phase 1A. Planning operation scenario with AWS backup water supply during construction. Effort underway to finish report this year.
Increasing masses of invasive aquatic weeds accumulating at count station pickets. Zebra mussel samples collected 8/31.

Fishway Operations

North and east fish ladders in full operation.

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



Red lines = avian zones

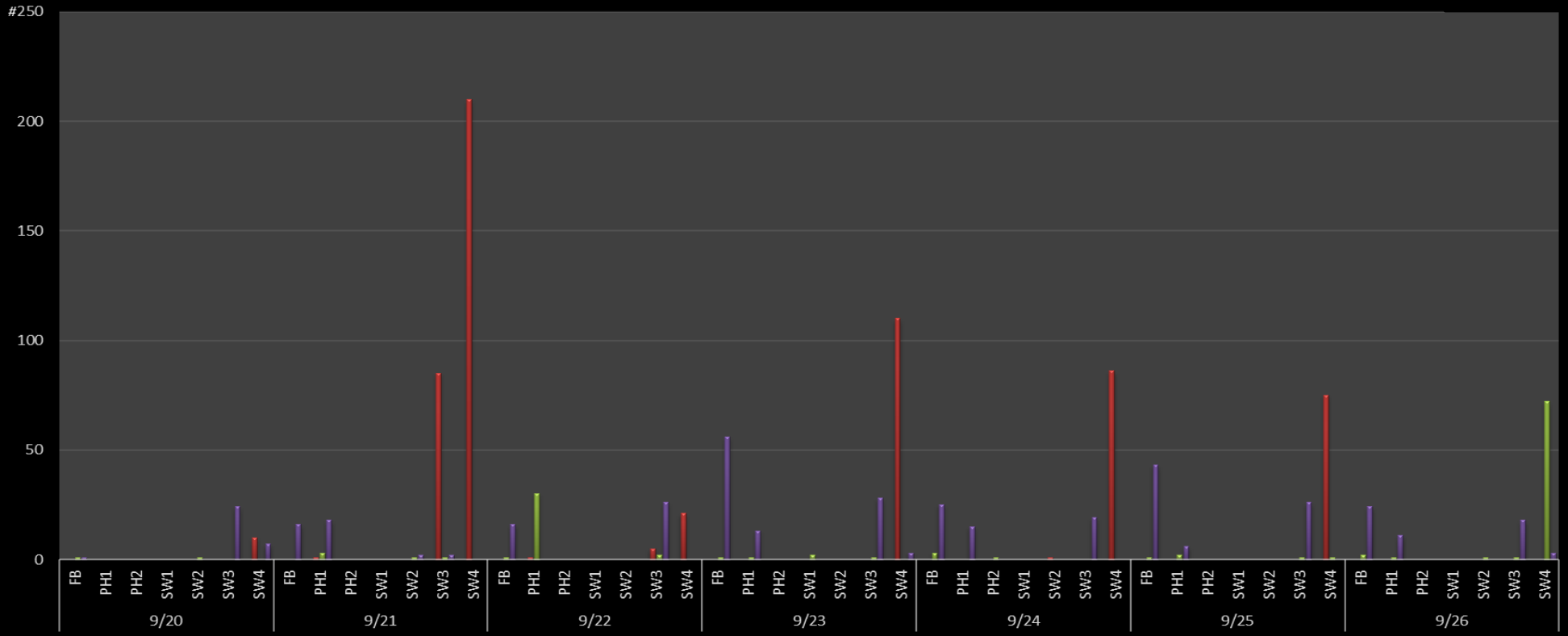
Yellow lines = current wires

Orange lines = down or missing wires

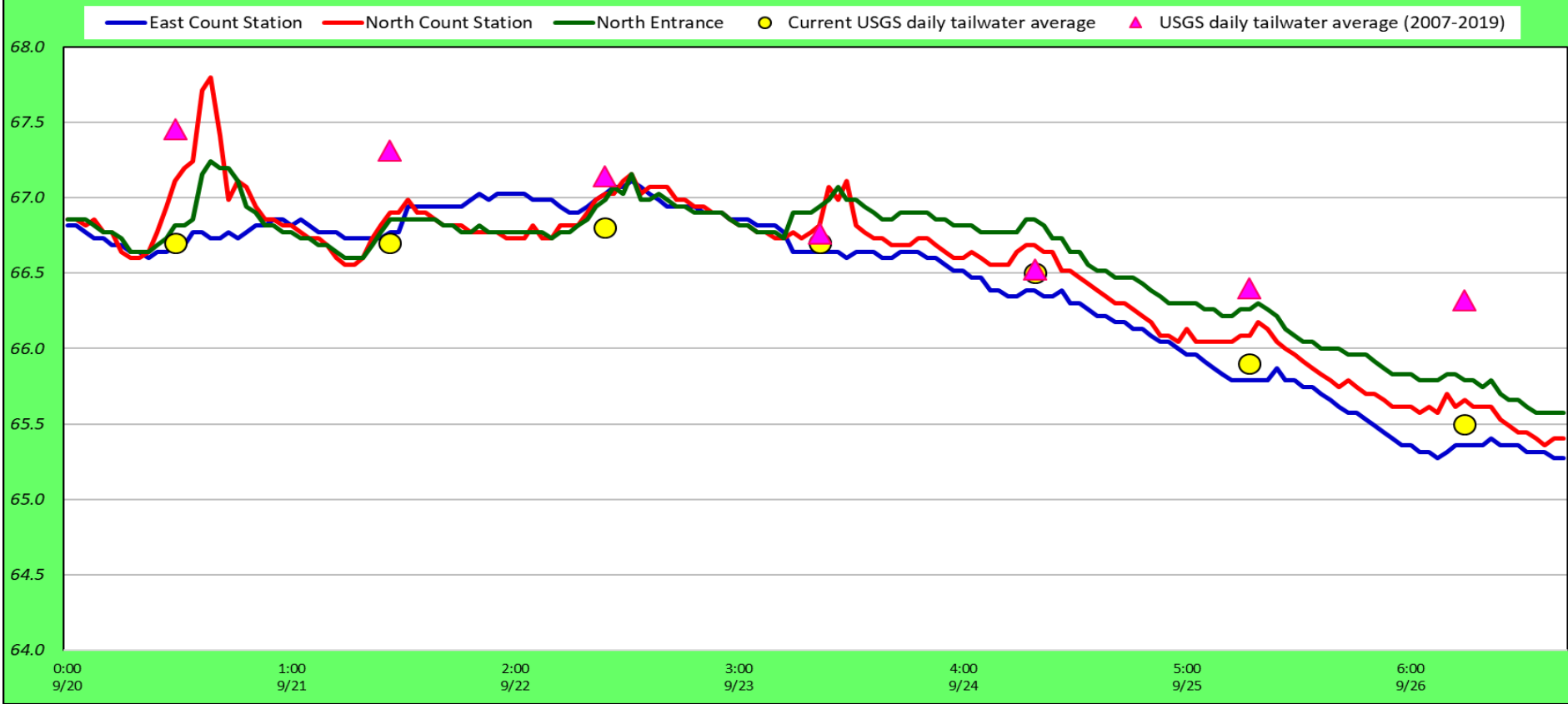
Gull and Cormorant Activity

F=Forage
NF=Idle

■ Sum of GULL F
 ■ Sum of GULL NF
 ■ Sum of DCCO F
 ■ Sum of DCCO NF



Adult Fish Ladder-River Temperatures



Secchi:		°F
9/20	Sun	66.7
9/21	Mon	66.7
9/22	Tue	66.8
9/23	Wed	66.7
9/24	Thurs	66.5
9/25	Fri	65.9
9/26	Sat	65.5
	AVG	66.4

USGS September

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

SCADA INSPECTION

out of criteria

Date:	North Ladder		East Entrance					East Ladder				South Entrance		
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
	9/20			1.5	8.5	11.6	11.6	9.8	1.2	10.7	10.7	-3.2	1.2	8.6
	1.2	9.4	1.5	8.5	11.6	11.4	9.8	1.5	9.9	9.9	-3.6	1.4	9.1	9.0
	1.2	9.4	1.5	8.5	11.5	11.5	10.0	1.5	10.1	10.1	-3.5	1.4	8.6	8.6
9/21			1.4	8.6	11.6	11.6	10.4	1.6	10.0	10.0	-3.2	1.4	8.5	8.6
	1.8	8.8	1.3	8.6	11.5	11.6	10.4	1.5	9.9	9.9	-3.4	1.4	8.6	8.5
	1.2	9.4	1.4	7.5	11.4	11.6	9.4	1.4	10.0	10.0	-3.8	1.4	8.4	8.5
9/22			1.5	7.6	11.5	11.5	10.1	1.6	10.0	10.0	-3.3	1.4	8.5	9.0
	1.3	10.4	1.5	7.5	11.5	11.5	10.3	1.5	10.1	10.1	-3.3	1.5	8.5	8.4
	1.3	9.3	1.5	7.6	11.6	11.6	10.4	1.7	9.9	9.9	-3.3	1.5	8.6	8.5
9/23			1.5	7.5	11.5	11.5	9.7	1.5	10.0	10.0	-3.7	1.4	8.5	8.2
	1.2	9.4	1.5	7.5	11.6	11.5	10.3	1.5	10.1	10.1	-3.3	1.4	8.6	8.3
	1.2	9.3	1.5	7.4	11.5	11.5	10.2	1.6	10.0	10.0	-3.4	1.5	8.5	8.3
9/24			1.5	7.4	11.5	11.5	9.8	1.5	10.0	10.0	-3.6	1.3	8.6	8.4
	1.2	9.3	1.6	7.4	11.5	11.5	9.8	1.5	9.9	9.9	-3.5	1.5	8.5	8.5
	1.2	9.3	1.7	7.5	11.5	11.5	10.3	1.6	10.1	10.1	-3.1	1.4	8.6	8.6
9/25			1.5	7.6	11.5	11.5	10.4	1.6	10.1	10.1	-3.1	1.5	8.6	8.5
	1.2	9.5	1.6	7.6	11.5	11.5	10.4	1.6	10.1	10.1	-3.1	1.5	8.1	8.4
	1.3	9.4	1.4	7.7	11.6	11.6	10.1	1.7	10.1	10.1	-3.3	1.5	8.5	8.5
9/26			1.3	7.5	11.4	11.4	9.1	1.4	9.9	9.9	-4.1	1.5	8.4	8.4
	1.2	9.3	1.3	7.5	11.4	11.4	9.1	1.5	10.0	10.0	-4.3	1.4	8.5	8.5
	1.3	9.1	1.4	7.5	11.5	11.5	9.0	1.5	10.1	10.1	-4.3	1.3	8.5	8.5
AVG:	1.3	9.4	1.5	7.8	11.5	11.5	9.9	1.5	10.0	10.0	-3.5	1.4	8.5	8.5

Fishways are inspected once daily plus one SCADA inspection.



Bridge inspection at North Fishway.