

The Dalles Dam Fishway Status Report

10/5/2020

Inspection Period: 9/27-10/03

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: 65.4 °F
			Comments: fishways functional	Weekly Average Secchi: 5.4

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')	9.0
Entrance weir N2	0	Closed	
PUD Intake differential	5	≤ 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 = 9.1
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	2.53 fps, 9/28/2020
North channel velocity	0	1.5 - 4 fps	2.56 fps, 9/28/2020
South channel velocity	0	1.5 - 4 fps	3.48 fps, 9/28/2020
West entrance differential	0	1.0' - 2.0'	Average for week = 1.5
Entrance weir W1	0	depth (≥ 8')	Average for week = 9.9
Entrance weir W2	0	depth (≥ 8')	Average for week = 9.9
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 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	1	per FPP	All available MUs running; OOC due to forced outages
Gatewells	0	Weekly	9/28/2020 fish check, some adult shad MU-22-2 mortality. No salmon seen.

OTHER ISSUES:

Unit Outages

- Line 1, MU1,2, FU1&2 limited to 188MVA for T1 replacement; 1/28/2021
- 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
- TO-1 OOS 0630 10/5/2020 - 1700 10/15/2020 for Doble Testing
- T5 OOS 0630 10/5/2020 - 1200 10/13/2020 for T5 GSU install re-work

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 9/28, all in criteria. Damage to north FB staff gage giving potential accuracy problems. Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. On hold due to budget constraints. Resume in Oct. East fishway automation replacement no progress. PLC box assembly completed. Installation of east entrance planned completion in Sept. 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. Fishway inspectors continuing ladder walks. 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 . 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.

Fishway Operations

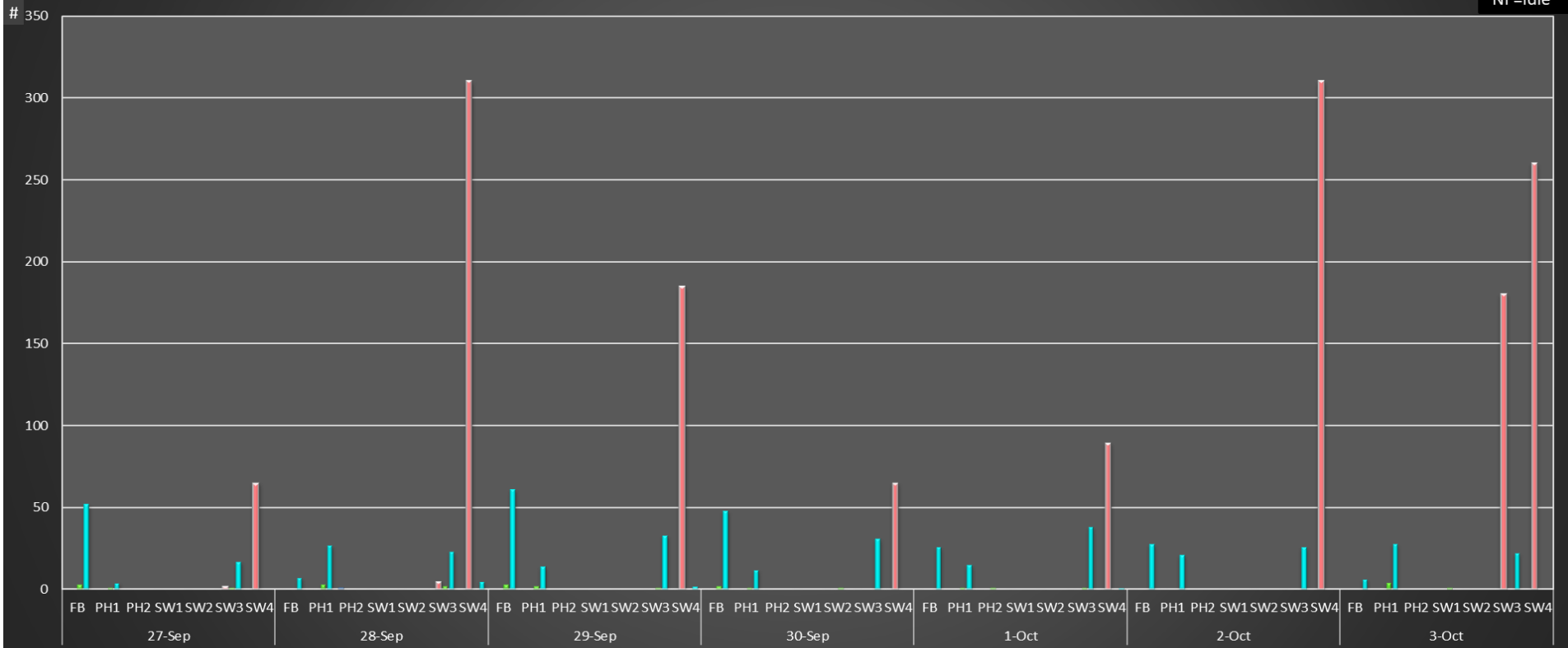
North and east fish ladders in full operation.

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

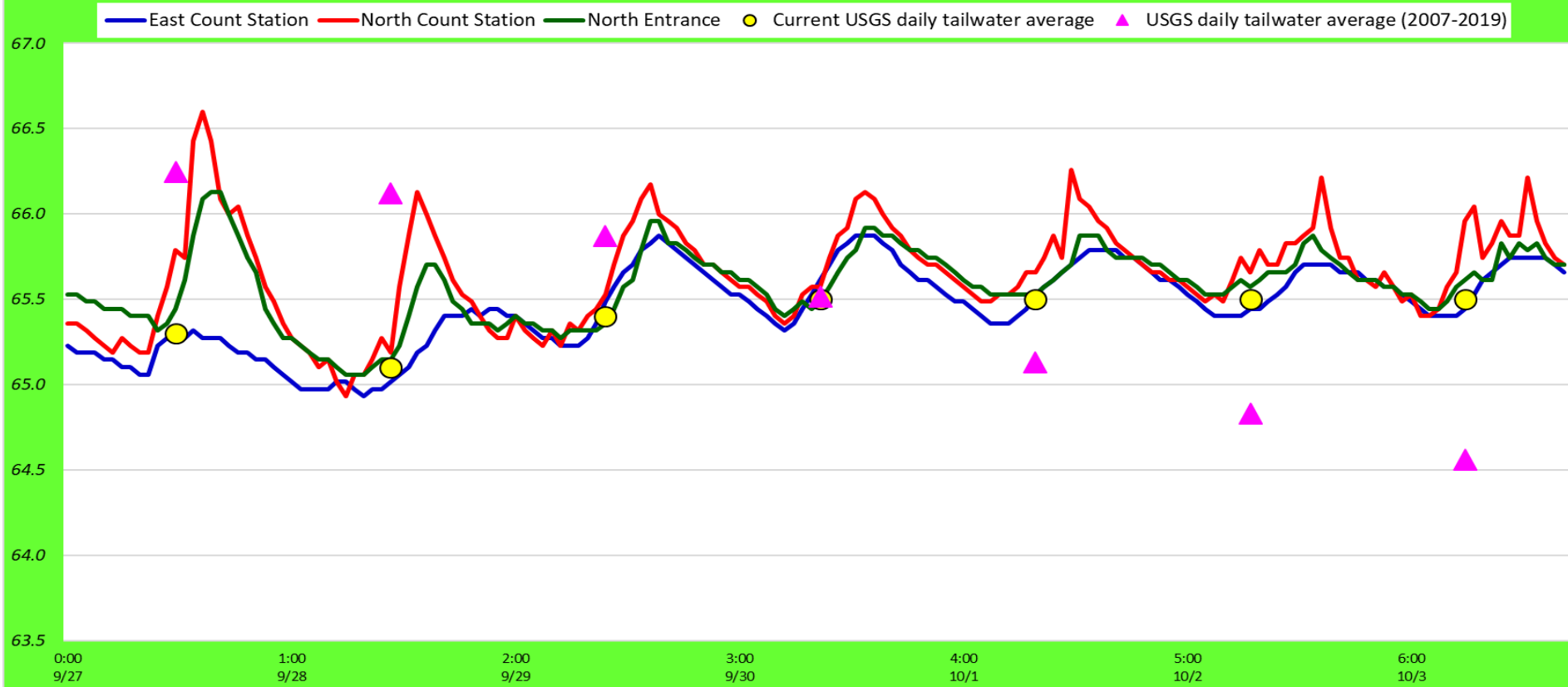
Gull and Cormorant Activity

▾ Sum of GULL F
 ▬ Sum of GULL NF
 ▬ Sum of DCCO F
 ▬ Sum of DCCO NF

F=Forage
NF=Idle



Adult Fish Ladders-River Temperatures



Secchi:		°F
9/27	Sun	65.3
9/28	Mon	65.1
9/29	Tue	65.4
9/30	Wed	65.5
10/1	Thurs	65.5
10/2	Fri	65.5
10/3	Sat	65.5
	AVG	65.4

USGS September
USGS October

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
	9/27	1.2	9.5	1.3	7.4	11.3	11.3	8.1	1.3	10.0	10.0	-4.9	1.4	8.4
	1.2	9.7	1.4	4.0	11.5	11.5	8.5	1.3	10.1	10.1	-4.6	1.3	8.5	8.5
			1.4	4.0	11.5	11.5	8.5	1.5	10.0	10.0	-4.7	1.4	8.5	8.5
9/28			1.5	4.1	11.6	11.6	9.0	1.4	10.1	10.1	-4.2	1.4	8.6	8.5
	1.1	9.3	1.4	2.9	11.5	11.6	8.7	1.4	10.0	10.0	-4.6	1.4	8.6	8.6
	1.3	9.0	1.6	3.0	11.5	11.5	9.3	1.5	10.0	10.0	-4.3	1.4	8.6	8.5
9/29			1.3	4.6	11.5	11.5	8.4	1.3	10.1	10.1	-4.8	1.4	8.5	8.5
	1.3	8.9	1.3	4.4	11.5	11.5	8.6	1.7	9.0	9.0	-4.7	1.5	8.4	8.4
	1.3	8.9	1.4	3.6	11.6	11.6	9.0	1.5	9.7	9.7	-4.5	1.5	8.5	8.5
9/30			1.6	3.5	11.5	11.5	9.7	1.6	9.6	9.6	-3.9	1.6	8.6	8.6
	1.3	9.0	1.6	5.8	11.5	11.5	9.8	1.7	9.8	9.8	-3.8	1.5	8.6	8.6
	1.2	9.2	1.6	5.5	11.5	11.5	10.0	1.4	10.3	10.3	-3.7	1.5	8.5	8.5
10/1			1.3	5.5	11.5	11.5	8.5	1.2	10.4	10.4	-4.7	1.4	8.6	8.6
	1.3	9.0	1.3	3.0	11.5	11.5	8.4	1.5	9.6	9.6	-4.9	1.5	8.4	8.4
	2.3	7.8	1.6	3.0	11.5	11.5	8.8	1.5	9.7	9.7	-4.4	1.4	8.6	8.6
10/2			1.6	3.0	11.7	11.6	8.9	1.4	9.9	9.9	-4.1	1.4	8.9	8.8
	1.1	9.0	1.3	3.0	11.5	11.5	8.4	1.5	9.6	9.6	-4.9	1.5	8.4	8.4
	1.4	9.0	1.8	3.1	11.5	11.5	9.6	1.6	9.7	9.7	-3.6	1.5	8.5	8.5
10/3			1.9	3.5	11.4	11.5	9.6	1.5	9.7	9.7	-3.4	1.5	8.6	8.6
	1.3	9.2	1.9	3.0	11.5	11.5	10.2	1.7	9.8	9.8	-3.2	1.6	8.4	8.4
	1.4	9.1	2.0	3.0	11.5	11.5	11.0	1.8	9.8	9.8	-2.8	1.6	8.6	8.6
AVG:	1.3	9.0	1.5	4.1	11.5	11.5	9.1	1.5	9.9	9.9	-4.2	1.5	8.5	8.5

Fishways are inspected once daily plus one SCADA inspection.



PIT recovery efforts below dam 10/2/2020. No tags were found. Plenty of magnetic grit.