

The Dalles Dam Fishway Status Report

11/03/19

Inspection Period: 10/27-11/02, 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:	54.4 °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 =	1.28		
Entrance weir N1	0	depth (≥ 8')	Average for week =	9.3		
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 157 experiencing mechanical brake failure, able to maintain criteria manually.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
153 Weir crest depth	0	1.1' ± 0.1'	occasionally exceeds 1.2			
Junction pool weir JP6	0	0.0	Average for week =	10.4		
East entrance differential	0	1.0' - 2.0'	Average for week =	1.56		
Entrance weir E1	0	No criteria	Opened and adjusted to maintain differential			
Entrance weir E2	0	depth (≥ 8')	Average for week =	11.01		
Entrance weir E3	0	depth (≥ 8')	Average for week =	11.01		
Collection channel velocity	0	1.5 - 4 fps	2.74 fps Average	Range:	1.56 fps SS - 3.91 fps MU21 10/25/19	
Transportation channel velocity	0	1.5 - 4 fps	2.42 fps 10/25			
North channel velocity	0	1.5 - 4 fps	2.79 fps 10/25			
South channel velocity	0	1.5 - 4 fps	3.42 fps 10/25			
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 =	9.8		
Entrance weir W3	0	1.0' - 2.0'	Average for week =	9.8	Opened 9/12 in place of W1. W3 now experiencing slack cable.	
South entrance differential	0	1.0' - 2.0'	Average for week =	1.5		
Entrance weir S1	0	depth (≥ 8')	Average for week =	8.4		
Entrance weir S2	0	depth (≥ 8')	Average for week =	8.4		
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', biwkly	Drawdown inspection gatewells 10/21, no morts			
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				

OTHER ISSUES:

Operations

East & North fish ladders in full operation.
Ice Trash sluiceway open with 6 gates
Spillway closed

Current Outages

T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels
T5 9/3/2019 - 11/25/2019 for T5 GSU Replacement & MU9 O/H
MU10 OOS 9/3/2019 - 11/25/2019 for Annual
MU1 and MU2 restricted to 160 MW combined through 5/28/2020
MU13 OOS 9/23/2019 - 7/22/2020 for Hydraulic Oil System Repairs

Maintenance

Calibration check.
Collection channel dewatering pumps 5 and 6 rehab ongoing. New pump motor ordered. Completion prior to Dec for dewatering.
Fishway automation replacement planning continues. Labor starting for assembly and sensor install.
Engineering evaluation of east fishway diffuser valve status/rehab to resume.
Planning in progress to dewater south entrance auxiliary water conduit to repair failed diffuser valves.
Planning in progress for improved expansion joint repair on east fishladder.
Work starting on concrete crack injection for leakage in east count station.
Spillway assessment (MRER); Funding uncertain 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 E3 operated in its place providing two weirs at >8' depth

Predators

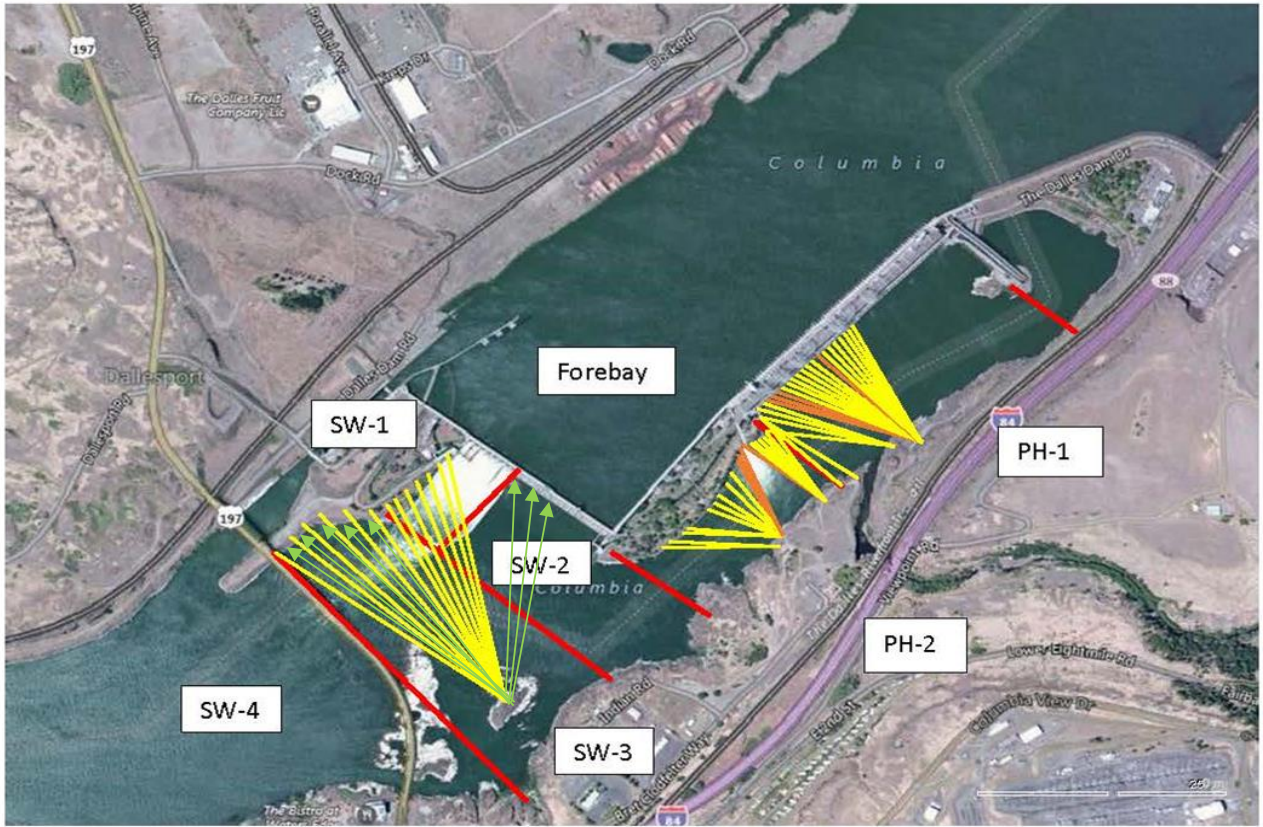
Green laser in use to haze piscivorous birds for effectiveness testing. USDA hazing resumes 4/15/20.
Cormorant and gull numbers fluctuating daily, with expected fall numbers.
Sea Lions not observed from dam year to date.

Research/Construction/Contractors

HDC removed temperature string from forebay, data analysis underway
Four Peaks fish counting done for season October 31.
For fish count data refer to: [FPC FISH COUNTS](#)
AWS backup - Follow on contract items and spare parts in progress. Commissioning last week of Jan. AWS will be operational Feb1.
PSMFC weekly PUD sampling done for season. To resume next April.
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 caught were released.**
ODFW monthly fishway inspections completed for season.
Lamprey minor mods - No work planned at this time.
U of I - Second season of lamprey passage night flow testing completed. Awaiting report.
Lamprey trapping at east count station - Concluded 9/13 with 603 lamprey translocated.
Fish unit breaker replace.- Planning third season work Dec1-Mid Jan. Multiple measures taken to avoid last years unacceptable schedule slip.
Fish unit rehab - Ongoing for phase 1A. Planning operation scenario during construction.

Approved by: Mike Colesar
Operation Project Manager The Dalles Dam

In



Red lines = avian zones

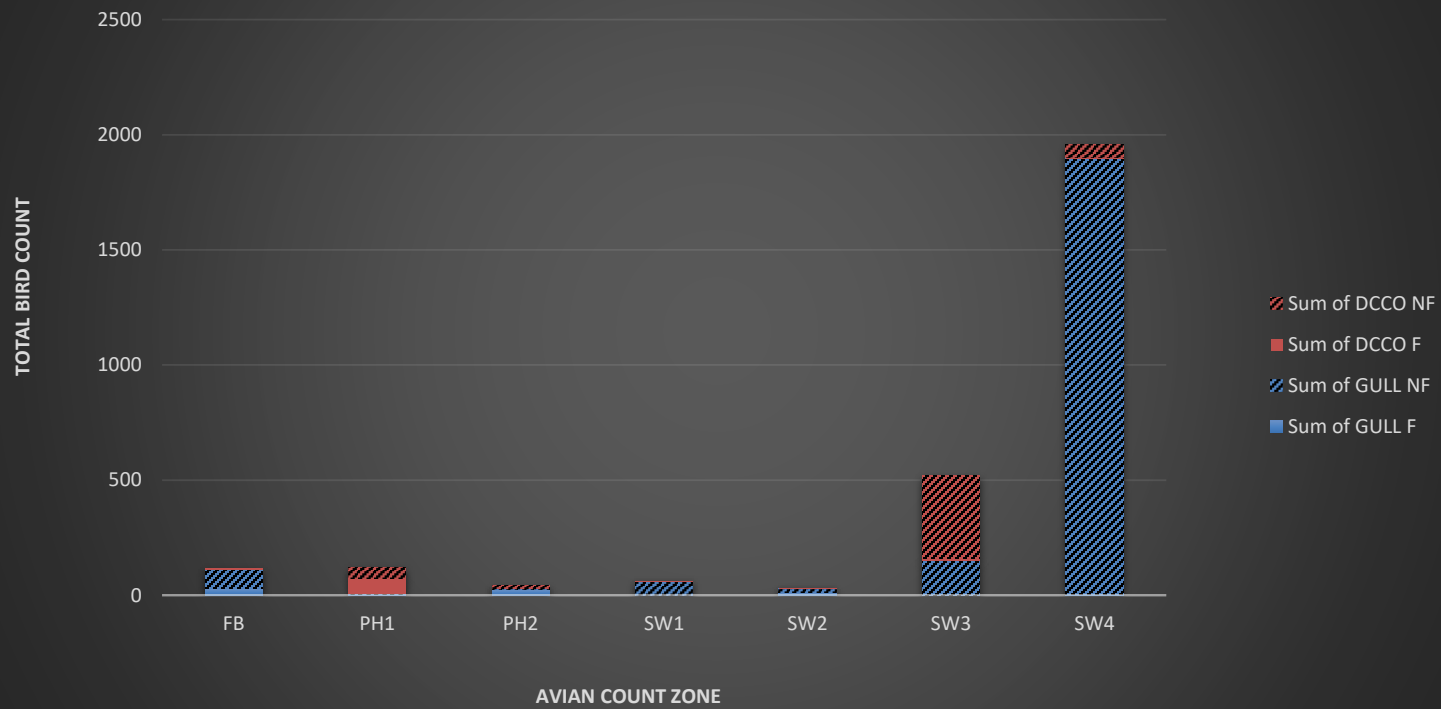
Yellow lines = current wires

Orange lines = down or missing wires

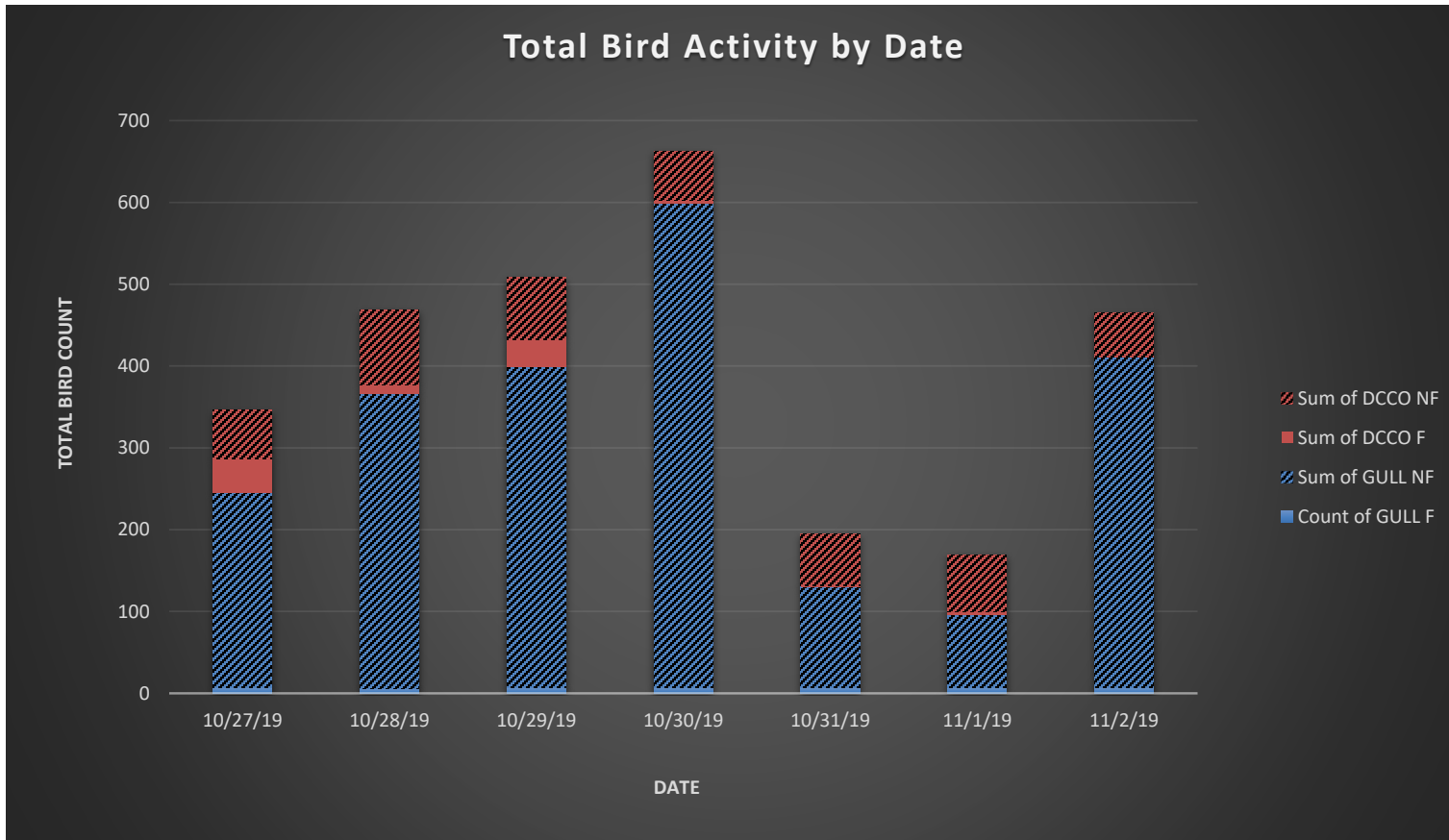


Additional avian lines installed 9/2018

Total Bird Activity by Zone 10/27 - 11/2



Most birds observed in SW4, mostly non-foraging gulls.



Stable numbers of double-crested cormorants (DCCO) observed daily. Gull numbers fluctuate.

The Dalles Dam 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
10/27	5.0	Sun 56.2
10/28	5.0	Mon 55.7
10/29	5.0	Tue 54.9
10/30	5.0	Wed 54.0
10/31	5.0	Thurs 53.5
11/1	5.0	Fri 53.2
11/2	5.0	Sat 53.1
	5.0	AVG 54.4

Oct_Temps

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
10/27			1.8		11.0	11.0	9.8	1.7		9.6	9.5	1.6	8.3	8.2
	1.25	9.27	1.6		10.9	10.9	9.8	1.5		9.8	9.7	1.5	8.4	8.3
	1.2	9.4	1.5		10.9	11.0	9.4	1.4		9.5	9.6	1.4	8.3	8.4
10/28			1.4		11.4	11.4	11.2	1.7		10.1	10.0	1.6	8.4	8.4
	1.3	9.4	1.6		10.9	10.9	11.7	1.6		10.4	10.4	1.6	8.4	8.5
	1.3	9.5	1.7		11.0	10.9	10.6	1.5		10.3	10.2	1.4	8.6	8.6
10/29			1.6		10.9	10.8	10.8	1.7		9.4	9.4	1.6	8.3	8.2
	1.3	9.3	1.6		11.2	11.4	10.5	1.5		10.1	10.1	1.5	8.4	8.3
	1.3	9.4	1.6		11.3	11.2	11.0	1.5		10.1	10.1	1.6	8.2	8.2
10/30			1.5		11.0	11.0	11.1	1.6		10.2	10.2	1.6	8.5	8.5
	1.3	9.2	1.5		10.8	10.8	10.9	1.4		10.2	10.2	1.6	8.4	8.4
	1.4	9.3	1.6		10.9	10.9	10.0	1.5		9.4	9.4	1.4	8.6	8.6
10/31			1.5		11.0	11.0	10.3	1.6		9.5	9.5	1.5	8.4	8.4
	1.3	9.2	1.5		11.0	11.0	10.5	1.5		10.0	10.0	1.5	8.7	8.7
	1.3	9.2	1.4		11.0	11.0	9.7	1.4		9.5	9.5	1.4	8.5	8.5
11/1			1.5		11.0	11.0	9.8	1.5		9.5	9.5	1.5	8.6	8.4
	1.3	9.3	1.6		11.0	11.0	10.0	1.6		9.6	9.6	1.5	8.6	8.6
	1.3	9.2	1.8		11.1	11.1	9.7	1.4		9.5	9.5	1.4	8.5	8.5
11/2			1.5		11.0	11.0	10.7	1.7		9.5	9.6	1.6	8.1	8.3
	1.3	9.2	1.5		10.9	10.9	10.4	1.4		9.9	10.0	1.4	8.4	8.5
	1.3	9.3	1.5		11.0	11.0	10.5	1.5		9.8	9.8	1.5	8.4	8.5
AVG:	1.3	9.3	1.6		11.0	11.0	10.4	1.5		9.8	9.8	1.5	8.4	8.4

Fishways are inspected twice daily plus one SCADA inspection.