

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:	50.3 °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 =	1.31		
Entrance weir N1	0	depth (≥ 8')	Average for week =	8.5		
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'	below 1.0			
Junction pool weir JP6	0	0.0	Average for week =	10.6		
East entrance differential	0	1.0' - 2.0'	Average for week =	1.45		
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 =	11.02		
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 =	9.9		
Entrance weir W3	0	1.0' - 2.0'	Average for week =	9.9	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 =	8.1		
Entrance weir S2	0	depth (≥ 8')	Average for week =	8.5		
JUVENILE PASSAGE						
Sluiceway operation	7	Units 1, 8, 18	line 6 down, gate 16-2 opened on 11/13 in place of 18-2 (several days OOC)			
Turbine trashrack drawdown	0	<1.5', biwkly	Drawdown inspection gatewells 11/10, 2 Juv. shad morts in 13-3.			
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Gatewells			few shad morts			

OTHER ISSUES:

Operations

East & North fish ladders in full operation

Spillway closed

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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

L6 OOS 0738 11/8/2019 - 1600 11/20/2019 for BPA Line 6 LCBII relay repair

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.

Planning underway to dewater south entrance auxiliary water conduit to repair failed diffuser valves.

Preparation for improved expansion joint repair on east fishladder.

Work starting on concrete crack injection for leakage in east count station.

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

HDC removed temperature string from forebay. No temperature stratification found.

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 caught were released.**

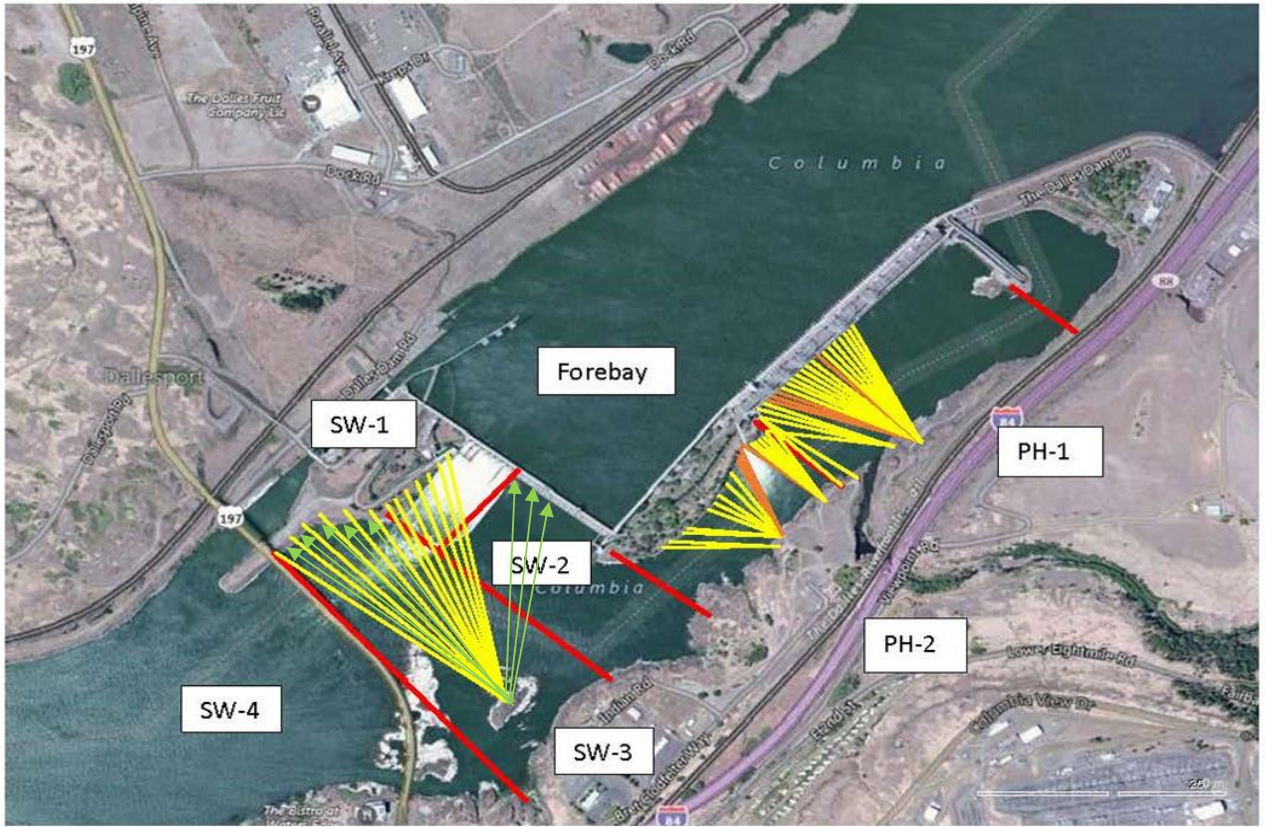
Fish unit breaker replace.- Planning third season work Dec1-Mid Jan. Return to service Feb1.

Fish unit rehab - Phase 1A. Planning operation scenario during construction. No funding.

Approved by: Mike Colesar

Operation Project Manager The Dalles Dam

In



Red lines = avian zones

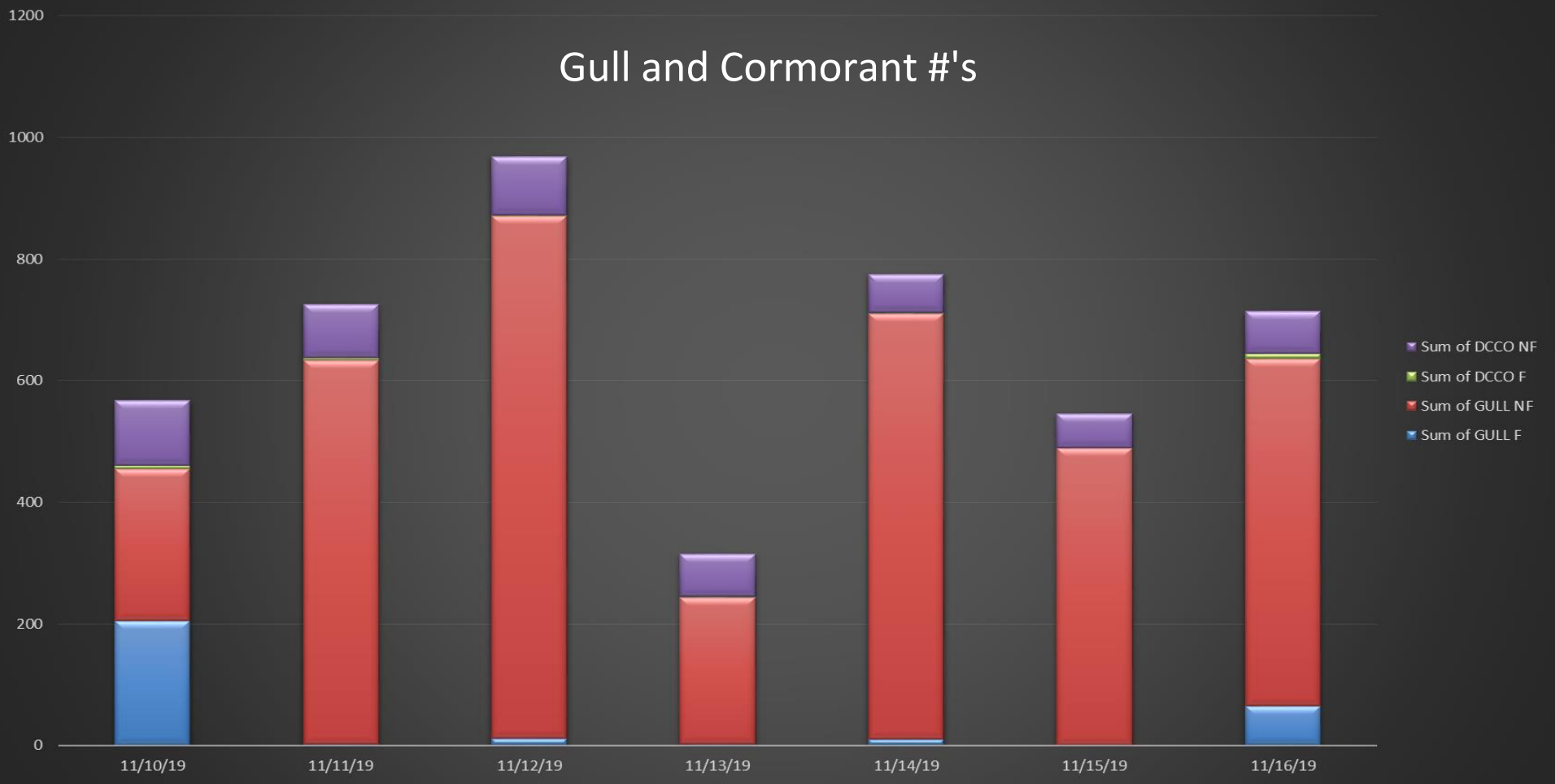
Yellow lines = current wires

Orange lines = down or missing wires

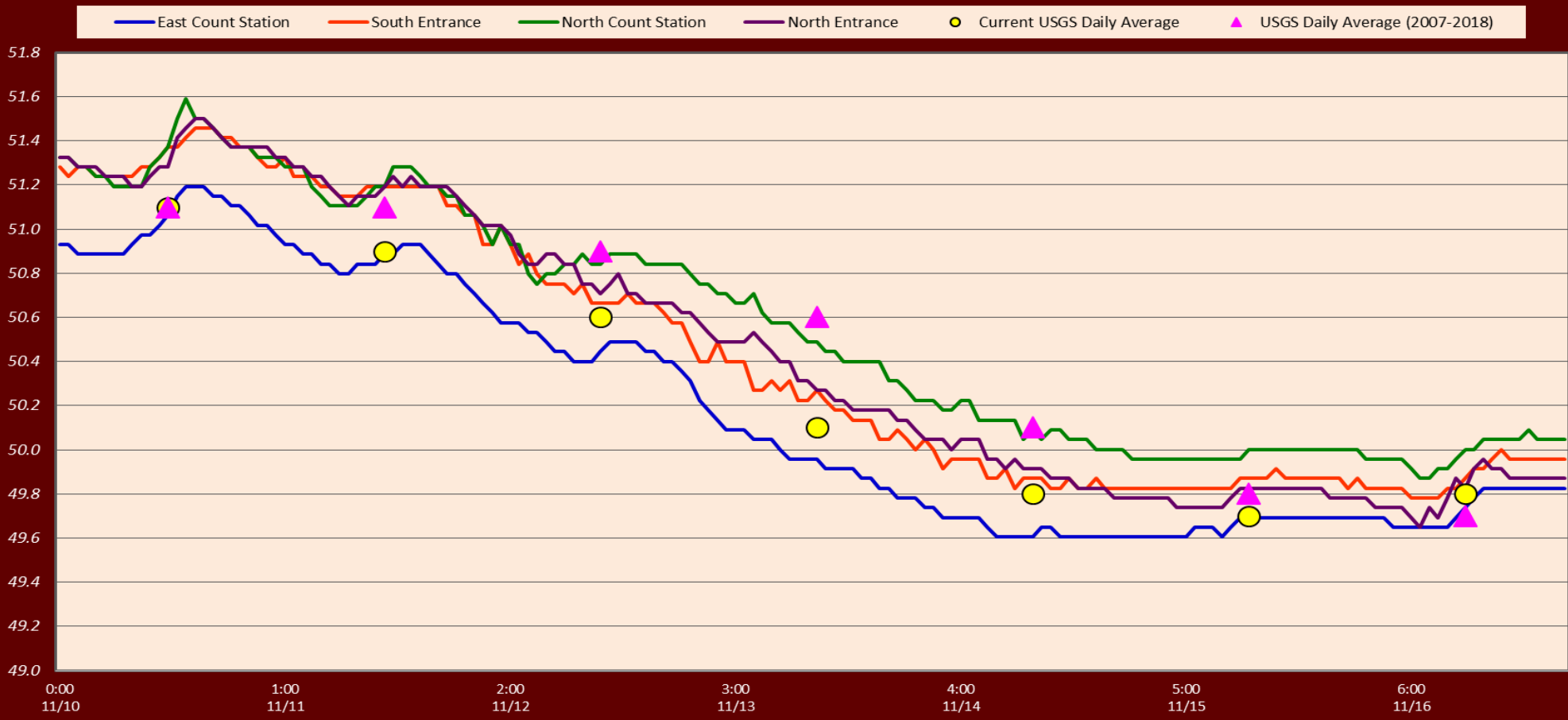


Additional avian lines installed 9/2018

Gull and Cormorant #'s

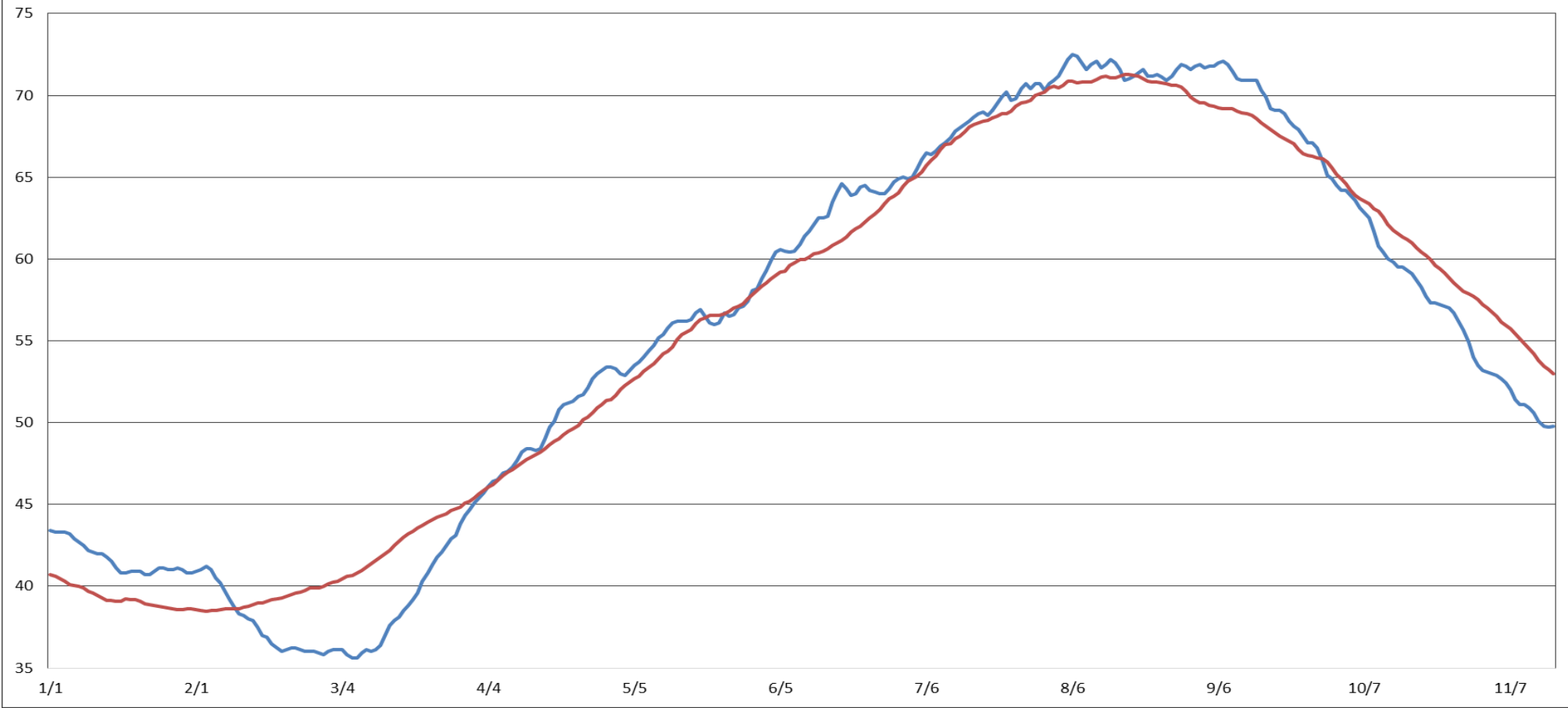


Adult Fish Ladder(s)-River Temperatures



USGS Tailwater Temperatures

— USGS 2019 — USGS 07-18



USGS:		
Secchi:		Temperatures
11/10	5.0	Sun 51.1
11/11	5.0	Mon 50.9
11/12	5.0	Tue 50.6
11/13	5.0	Wed 50.1
11/14	5.0	Thurs 49.8
11/15	5.0	Fri 49.7
11/16	5.0	Sat 49.8
	5.0	AVG 50.3

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
11/10			1.5	6.0	11.0	11.0	10.6	1.7		9.4	9.4	1.6	8.5	8.6
	1.3	9.1	1.6	5.9	11	10.9	10.8	1.6		9.9	9.9	1.5	8.5	8.5
	1.3	9.2	1.6	6.0	11.1	11.0	11.1	1.6		10.0	10.0	1.6	8.5	8.5
11/11			1.6	5.9	10.9	10.9	10.6	1.4		9.9	9.9	1.5	8.5	8.5
	1.33	9.2	1.6	6.5	11.0	11.0	11.1	1.6		10.0	10.0	1.5	8.6	8.6
	1.36	9.3	1.6	7.1	11.0	11.0	11.3	1.0		10.0	10.0	1.5	8.6	8.6
11/12			1.5	7.6	11.0	11.0	11.0	1.4		10.3	10.3	1.5	8.5	8.5
	1.3	8.2	1.4	7.4	11.0	11.0	10.6	1.4		10.3	10.3	1.6	8.4	8.4
	1.3	9.3	1.4	7.6	11.1	11.1	10.7	1.5		9.8	9.8	1.4	8.4	8.4
11/13			1.2	7.4	11.1	11.1	10.9	1.4		10.1	10.1	1.4	0.2	8.2
	1.4	9.1	1.5	7.4	11.0	11.0	10.5	1.6		9.8	9.8	1.6	8.3	8.3
	1.4	9.1	1.4	7.5	10.9	10.9	10.2	1.5		9.7	9.7	1.5	8.4	8.4
11/14			1.3	7.5	11.0	11.0	10.7	1.3		9.5	9.5	1.6	8.4	8.4
	1.3	9.1	1.4	7.5	11.0	11.0	10.2	1.4		9.8	9.8	1.6	8.5	8.5
	1.2	9.3	1.4	7.4	11.1	11.1	10.1	1.4		9.8	9.8	1.5	8.5	8.5
11/15			1.4	7.4	11.0	11.0	10.0	1.4	9.8	9.8	1.4	8.5	8.5	
	1.4	9.2	1.4	7.4	11.0	11.0	10.4	1.5	9.8	9.8	1.5	8.5	8.5	
	1.3	9.1	1.4	7.5	11.1	11.1	10.7	1.6	9.8	9.8	1.5	8.5	8.5	
11/16		0.0	1.4	7.6	11.0	11.1	10.7	1.5	9.9	9.9	1.5	8.6	8.6	
	1.3	9.3	1.4	7.6	10.9	11.1	10.5	1.4	9.9	9.9	1.5	8.5	8.5	
	1.3	9.3	1.4	7.1	11.0	11.1	10.6	1.5	9.8	9.8	1.5	8.6	8.6	
AVG:	1.3	8.5	1.4	11.0	11.0	10.6	1.5		9.9	9.9	1.5	8.1	8.5	

Fishways are inspected twice daily plus one SCADA inspection.