

The Dalles Dam Fishway Status Report

07/21/19

Inspection Period: July 14 - July 20, 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: Comments: High shad numbers passing.	Temperature: Secchi:
			21	65.4 °F 4.2 feet
NORTH FISHWAY				
Exit differential	0	≤ 0.5'		
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.3' ± 0.1'		1.3' shad passage criteria changed to 1.1' on 7/19
Entrance differential	0	1.0' - 2.0'	1.3	
Entrance weir N1	0	depth (≥ 8')	9.7	
Entrance weir N2	0	Closed		
PUD Intake differential	1	≤ 0.5'		
EAST FISHWAY				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay		
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	1	1.3' ± 0.1'		return to 1.1' shad passage criteria starting 7/16
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'		
Entrance weir E1	0	No criteria		E1 effectively closed
Entrance weir E2	0	depth (≥ 8')		
Entrance weir E3	0	depth (≥ 8')		
Collection channel velocity	0	1.5 - 4 fps		2.33 fps on 7/17; range 1.76 fps at MU5, to 3.19 fps at MU1, FU1, FU2
Transportation channel velocity	0	1.5 - 4 fps		2.37 fps on 7/17.
North channel velocity	0	1.5 - 4 fps		2.64 fps on 7/17.
South channel velocity	0	1.5 - 4 fps		3.79 fps on 7/17.
West entrance differential	0	1.0' - 2.0'		
Entrance weir W1	0	depth (≥ 8')		
Entrance weir W2	0	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	0	1.0' - 2.0'		
Entrance weir S1	0	depth (≥ 8')		
Entrance weir S2	0	depth (≥ 8')		
JUVENILE PASSAGE				
Sluiceway operation	0	Units 1, 8, 18;		Unit 16 in place of 18, unit 16 not running short periods of time
Turbine trashrack drawdown	0	<1.5', biwkly		Gatewell inspection 7/15/19. Live shad in most wells, live smolts in 10,16,18,22 wells.
Spill volume/pattern	0	None		
Turbine Unit Priority	6	per FPP		
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Operation:

East & North fish ladders in full operation.
Sluiceway open with 6 gates total. Units 1, 8 and 18
Spillway open with summer juvenile passage (40% river).
Spill below 100 kcfs= increase passage north.

Outages

MU5 FOOS through 1700 8/29/2019 for T3 GSU transformer replacement
MU6 OOS 0830 11/19/2018 - 1700 8/29/2019 for T3 GSU transformer replacement
T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels

Maintenance:

Calibration check 7/15: East entrance tailwater/channel still experiencing tech. issues ; south entrance tailwater and gate E1 slightly out of criteria.
Collection channel dewatering pumps 5 and 6 rehab work remains. To be completed prior to Dec for dewatering.
Fishway automation parts purchase ongoing. Labor for assembly and install FY20.
Engineering evaluation of east fishway diffuser valve status/rehab to resume.
Spillway assessment (MRER) in progress. Higher priority gates 1-9 for rehab.

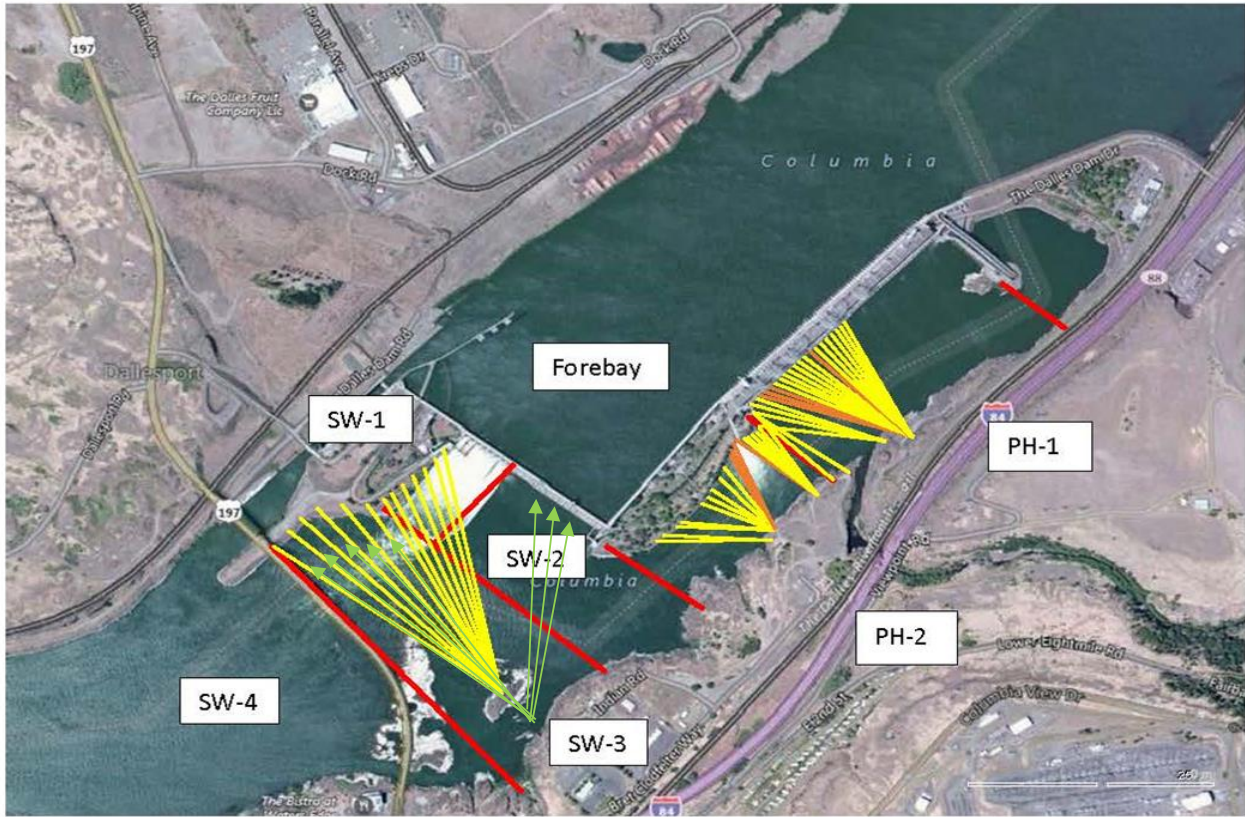
Predators;

USDA hazing from shore through end of July.
Evidence that Pelicans are targeting shad and dissuading gull foraging.
Sea Lions not observed from dam year to date.

Research/Construction/Contractors:

Fish counting contractors (Four Peaks) on site and counting.
For fish count data refer to: [FPC FISH COUNTS](#)
AWS backup - Team compiling list for follow on contract items and spare parts.
Transformer replacement - T3 ongoing. Testing after august completion. Date to be determined
PSMFC weekly PUD sampling continues. 26 juvenile bass and zero salmonids sampled.
PITAGS north and east fishladder data collection at count stations continues.
Pikeminnow dam angling-72 Smallmouth, 3 Walleye & 1830 Pikeminnow YTD. **Bass/Walleye catch and release continues.**
ODFW monthly fishway inspections ongoing.
Lamprey minor mods - Planning for potential LPS in junction pool. Awaiting planning meetings.
Univ of Idaho lamprey radiotelemetry - Second season of lamprey passage night flow started 6/4. 7 of 18 completed.
Lamprey trapping - New hoist system working well. Low catch rates continue. Tribal tour 7/24 showing hoist system.
Fish unit breaker replace.- Fish units returned to service. Substantial cleanup likely next winter. Awaiting schedule from contractor.
Fish unit rehab - Ongoing for phase 1A.

Approved by: Mike Colesar acting for Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

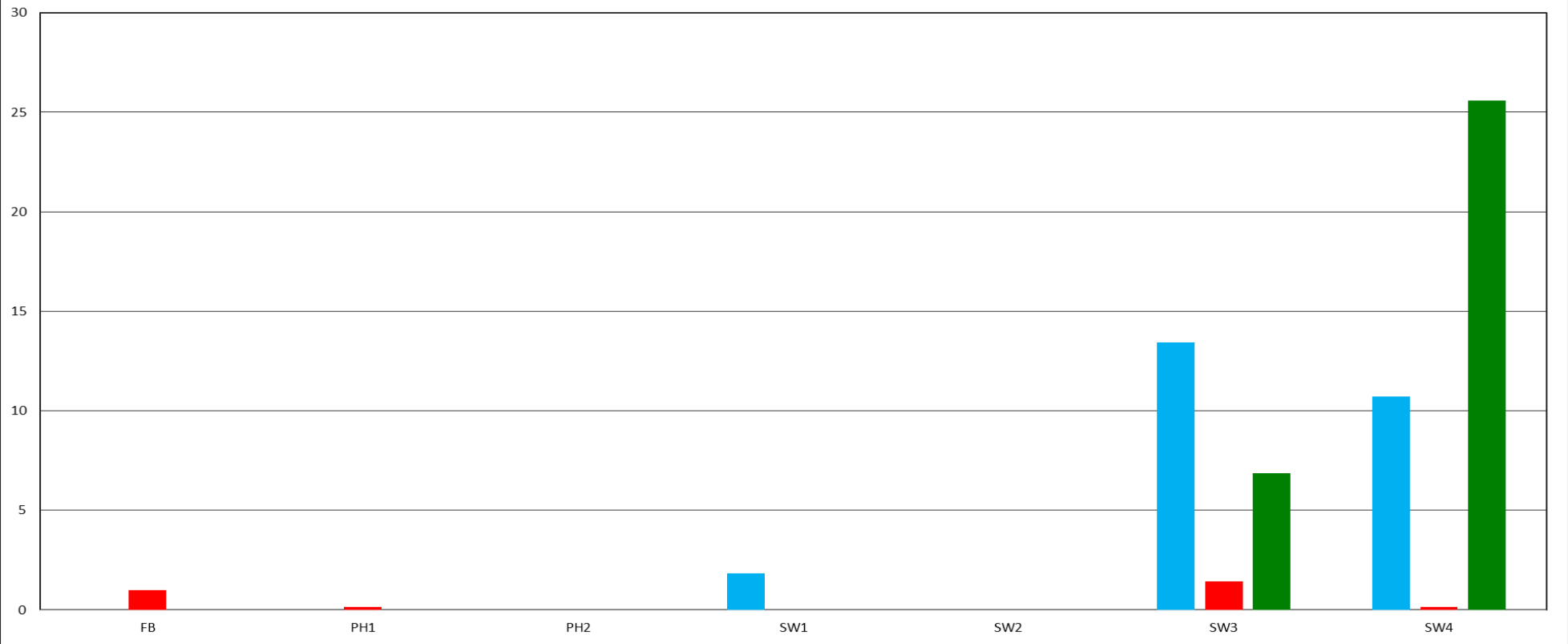
Yellow lines = current wires

Orange lines = down or missing wires

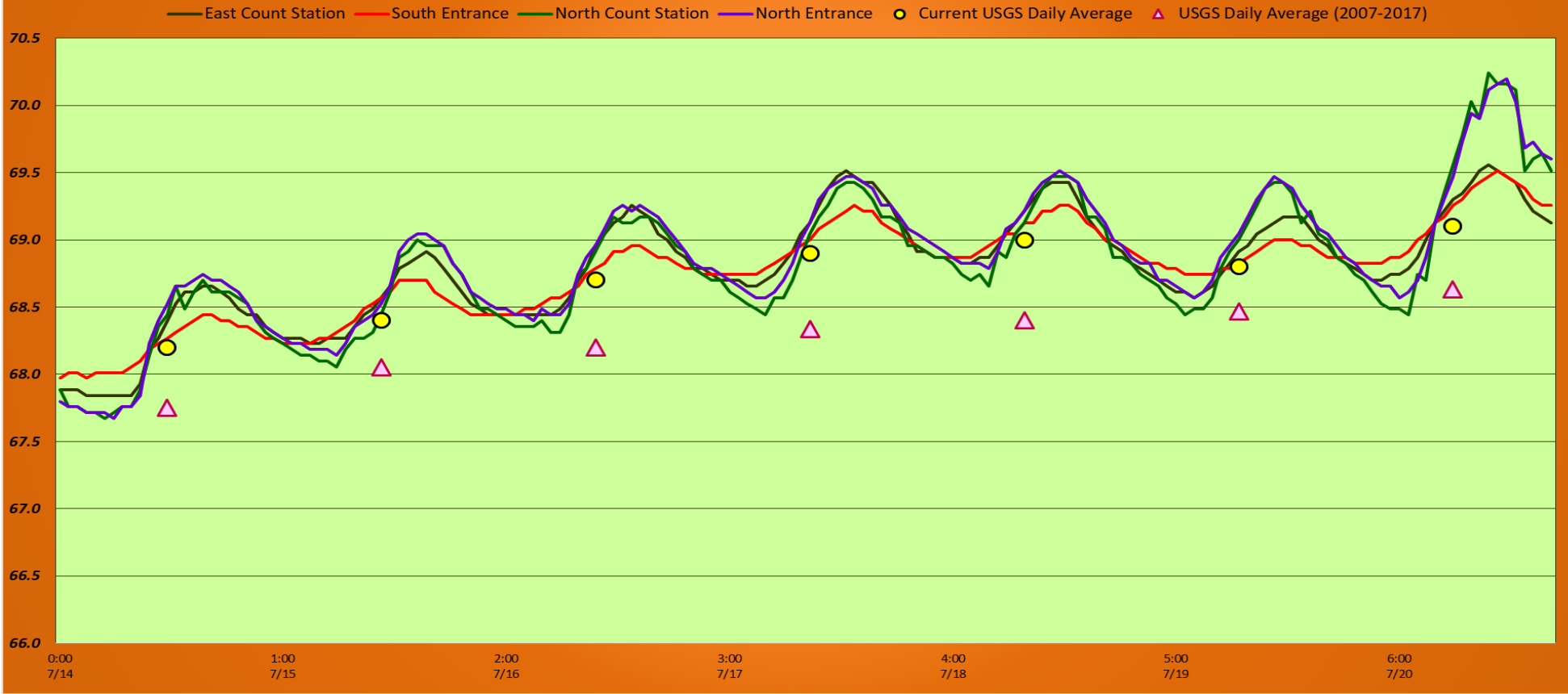
→ Additional avian lines installed 9/2018

Daily Average Birds Foraging by Zone

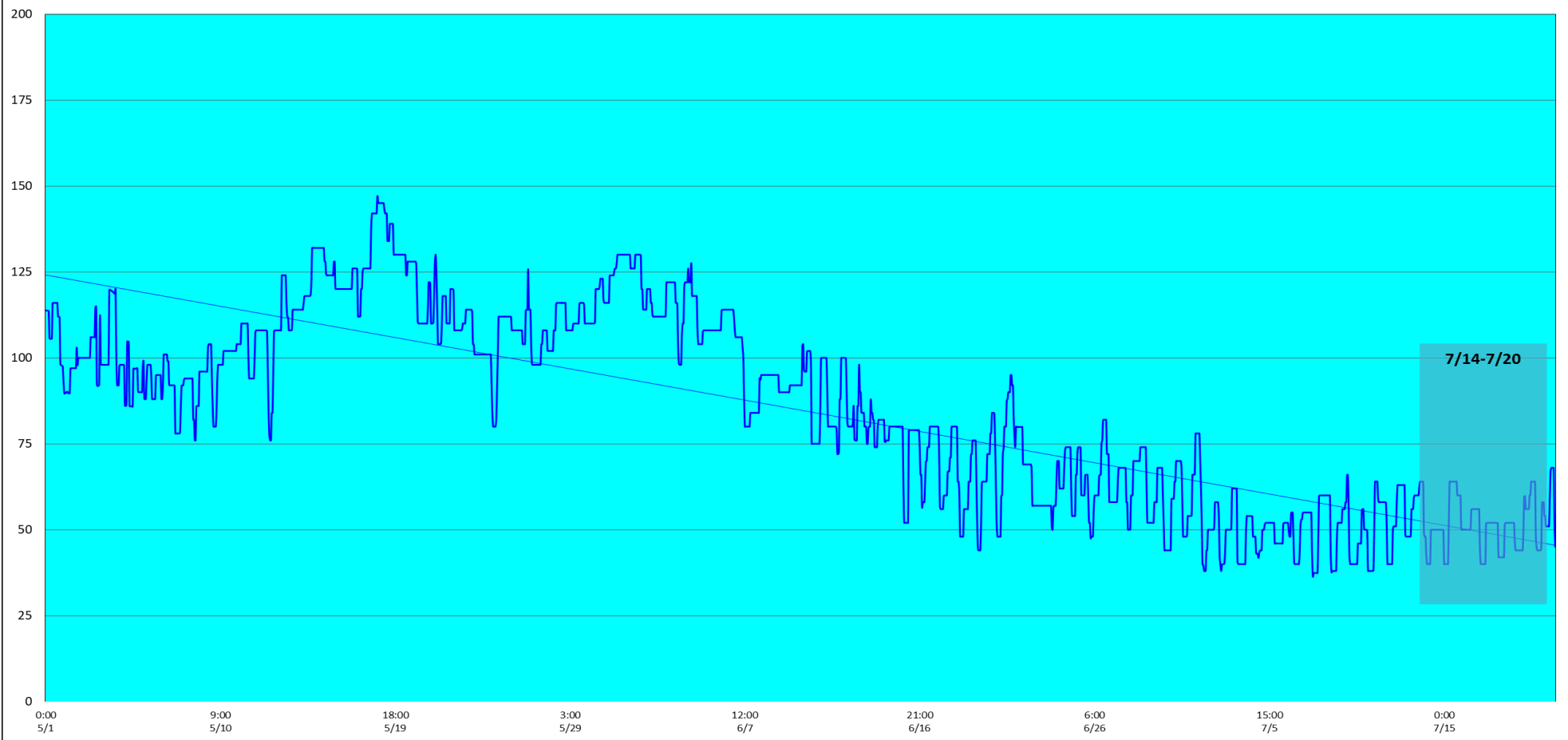
■ Sum of Average gulls ■ Sum of average dcco ■ Sum of average AMWP



The Dalles Dam Fish Ladder/River Temperatures



Spill KCFS



	Secchi:		USGS: Temperatures
7/14	4.5	Sun	68.2
7/15	4.5	Mon	68.4
7/16	4.5	Tue	68.7
7/17	4.5	Wed	68.9
7/18	5.0	Thurs	69.0
7/19	5.0	Fri	68.8
7/20	5.0	Sat	69.1
	4.7	AVG	68.7

July

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

SCADA INSPECTION
Out of criteria
Lamprey passage modifications Data omitted

Date:	North Ladder Entrance		East Ladder											
			East Entrance- open					West Entrance			South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
7/14			1.5		13.4	13.4	10.6	1.5	8.3	8.3		1.5	8.5	8.5
	1.3	9.7	1.5		13.5	13.5	10.9	1.5	8.2	8.2		1.4	8.6	8.6
	1.3	9.9	1.4		13.6	13.6	11	1.5	8.3	8.6		1.4	8.6	8.6
7/15			1.4		13.5	13.5	10.8	1.4	8.5	8.5		1.4	8.5	8.5
	0.4	9.8	1.4		13.5	13.5	10.8	1.4	8.5	8.5		1.4	8.6	8.6
	1.3	9.8	1.6		13.5	13.5	12.1	1.6	8.3	8.3		1.6	8.4	8.4
7/16			1.4		13.7	13.7	11.3	1.5	8.5	8.5		1.5	8.5	8.5
	1.3	9.7	1.6		13.5	13.5	11.5	1.5	8.5	8.5		1.6	8.4	8.4
	1.4	9.3	1.5		13.5	13.5	11.6	1.5	8.5	8.5		1.6	8.5	8.5
7/17			0.7		13.5	13.5	10.6	0.8	9.9	9.9		0.05	12.2	12.2
	1.3	9.8	1.4		13.5	13.5	10.7	1.4	8.5	8.5		1.4	8.5	8.5
	1.3	9.7	1.5		13.2	13.3	11.2	1.5	8.6	8.6		1.5	8.5	8.5
7/18			1.6		13.3	13.3	10.3	1.4	8.5	8.5		1.4	8.5	8.5
	1.3	9.8	1.5		13.5	13.5	10.5	1.4	8.6	8.6		1.5	8.5	8.5
	1.4	9.5	1.4		13.6	13.6	11.3	1.4	8.3	8.3		1.5	8.4	8.4
7/19			1.5		13.6	13.6	10.4	1.5	8.2	8.2		1.4	8.5	8.5
	1.2	9.9	1.5		13.4	13.4	10.6	1.4	8.4	8.4		1.5	8.5	8.5
	1.4	9.7	1.5		13.5	13.5	11.2	1.4	8.4	8.4		1.6	8.4	8.4
7/20			1.5		13.4	13.6	11.2	1.4	8.3	8.3		1.5	8.5	8.5
	1.4	9.5	1.6		13.5	13.5	11.1	1.5	8.3	8.3		1.4	8.5	8.5
	1.3	9.6	1.6		13.5	13.5	11.3	1.5	8.4	8.4		1.5	8.5	8.5
AVG:	1.3	9.7	1.5		13.5	13.5	11.0	1.4	8.5	8.5		1.4	8.7	8.7

Fishways are inspected twice daily plus one SCADA inspection.



Photo from Friday 7/12 in SW4.

Dip and tip ratio stable, about 1 fish tipped every 5 minutes of dipping. All but one tip confirmed shad.