

The Dalles Dam Fishway Status Report

07/28/19

Inspection Period: July 21 - July 27, 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: Reduced shad numbers passing.	21	Temperature: Secchi:	°F 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'	1.3			
Entrance weir N1	0	depth (≥ 8')	9.7			
Entrance weir N2	0	Closed				
PUD Intake differential	1	≤ 0.5'	26-Jul			Raked intakes 7/26 to restore differential. Aquatic weeds accumulating.
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	0	1.1' ± 0.1'				
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	2.26 fps on 7/23; range 1.79 fps at MU5, to 2.53 fps at MU2,7,6, FU2			
Transportation channel velocity	0	1.5 - 4 fps	2.38 fps on 7/23.			
North channel velocity	0	1.5 - 4 fps	2.17 fps on 7/23.			
South channel velocity	0	1.5 - 4 fps	3.36 fps on 7/23.			
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				
Turbine trashrack drawdown	0	<1.5', biwkly	Gatewell inspection 7/25/19. Live shad some wells, live chinook yearlings in MU21-1.			
Spill volume/pattern	0	None				
Turbine Unit Priority	0	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 8/29/2019 for T3 GSU transformer replacement
MU6 OOS through 8/29/2019 for T3 GSU transformer replacement
T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels
SSO2 OOS through 8/15/2019 for O/H.
MU15 & MU16 OOS through 8/8/2019 for Annuals.
Line 4 (MU9 -MU12) OOS through 7/31/2019 for Arc Flash Mitigation - Gnd. Switch Upgrades.

Maintenance

Calibration check 7/22: West entrance tailwater/channel still experiencing issues but not 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.

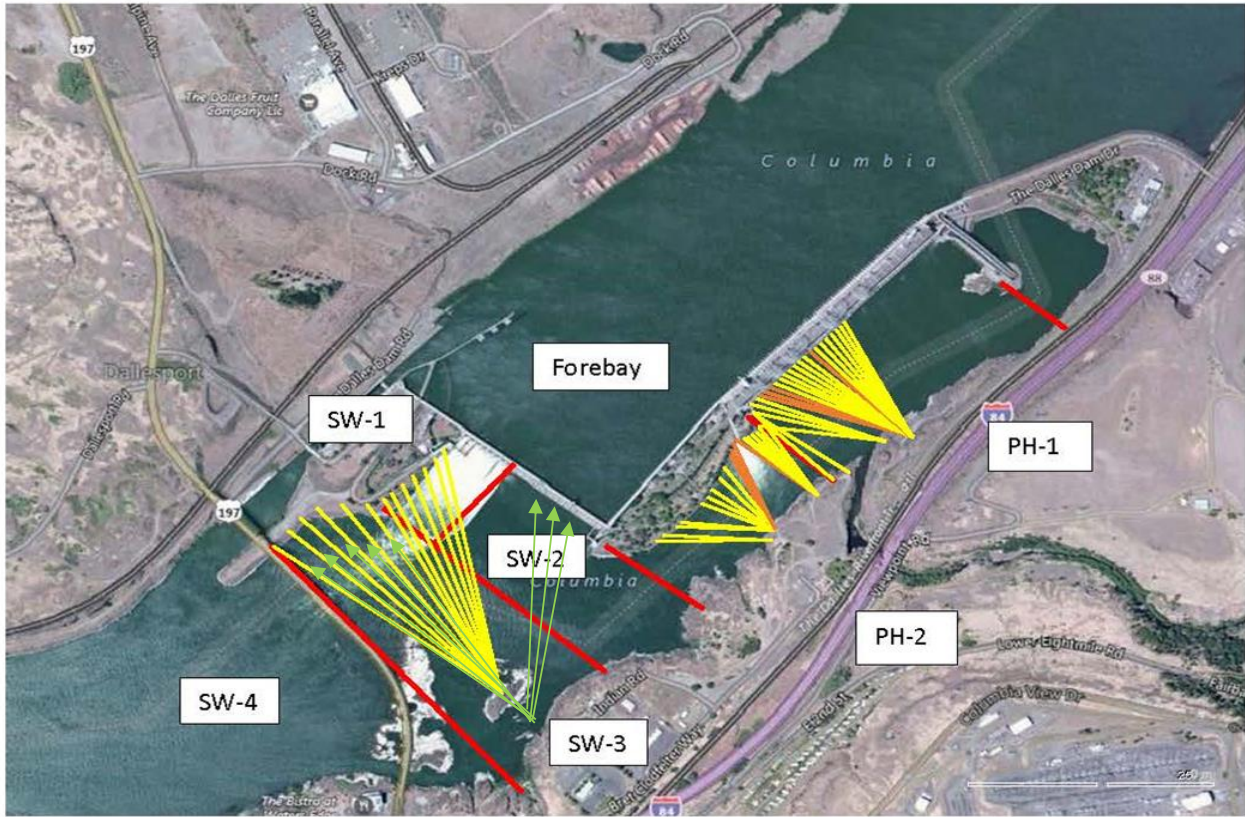
Predators

USDA hazing from shore through end of July.
Continue collecting dip and tip count evidence of Pelicans targeting shad. Numbers of pelicans high, gull counts low normal.
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-147/week & 2094 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 - 355 YTD
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: Bryan Hert acting for Mike Colesar acting for Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

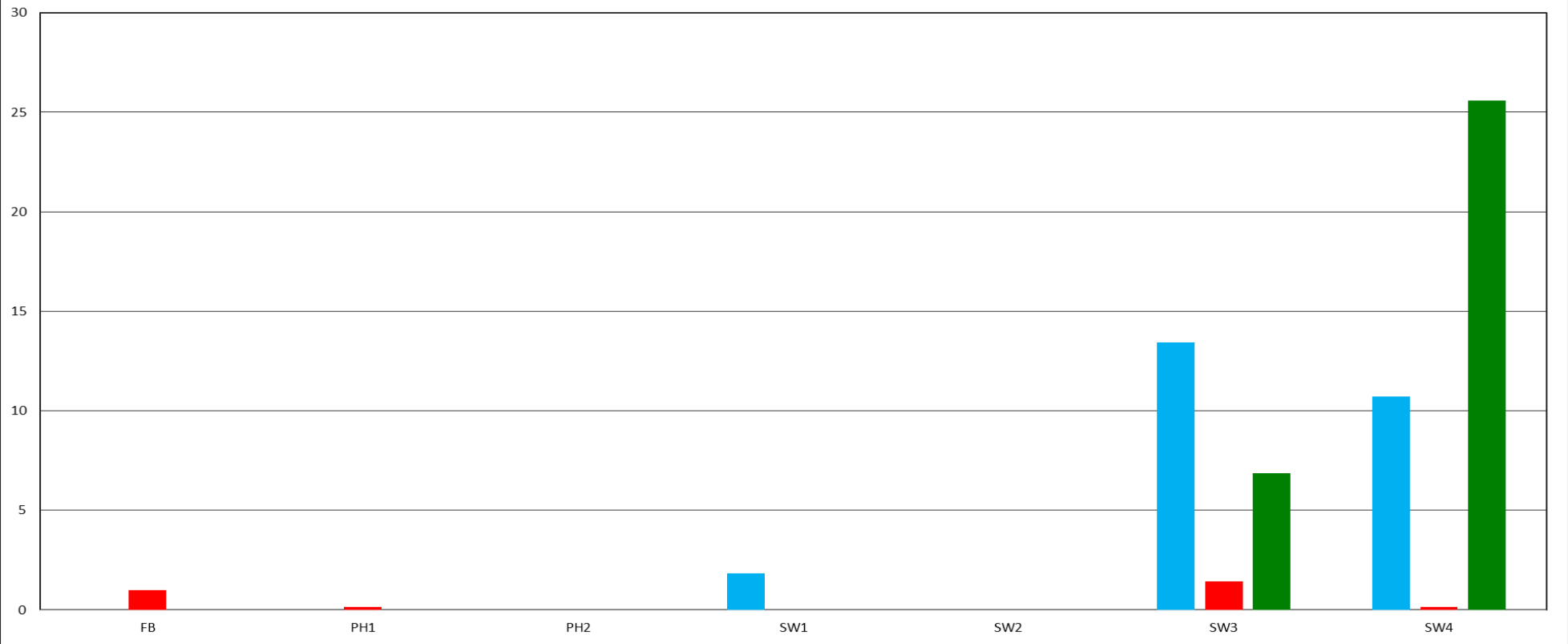
Yellow lines = current wires

Orange lines = down or missing wires

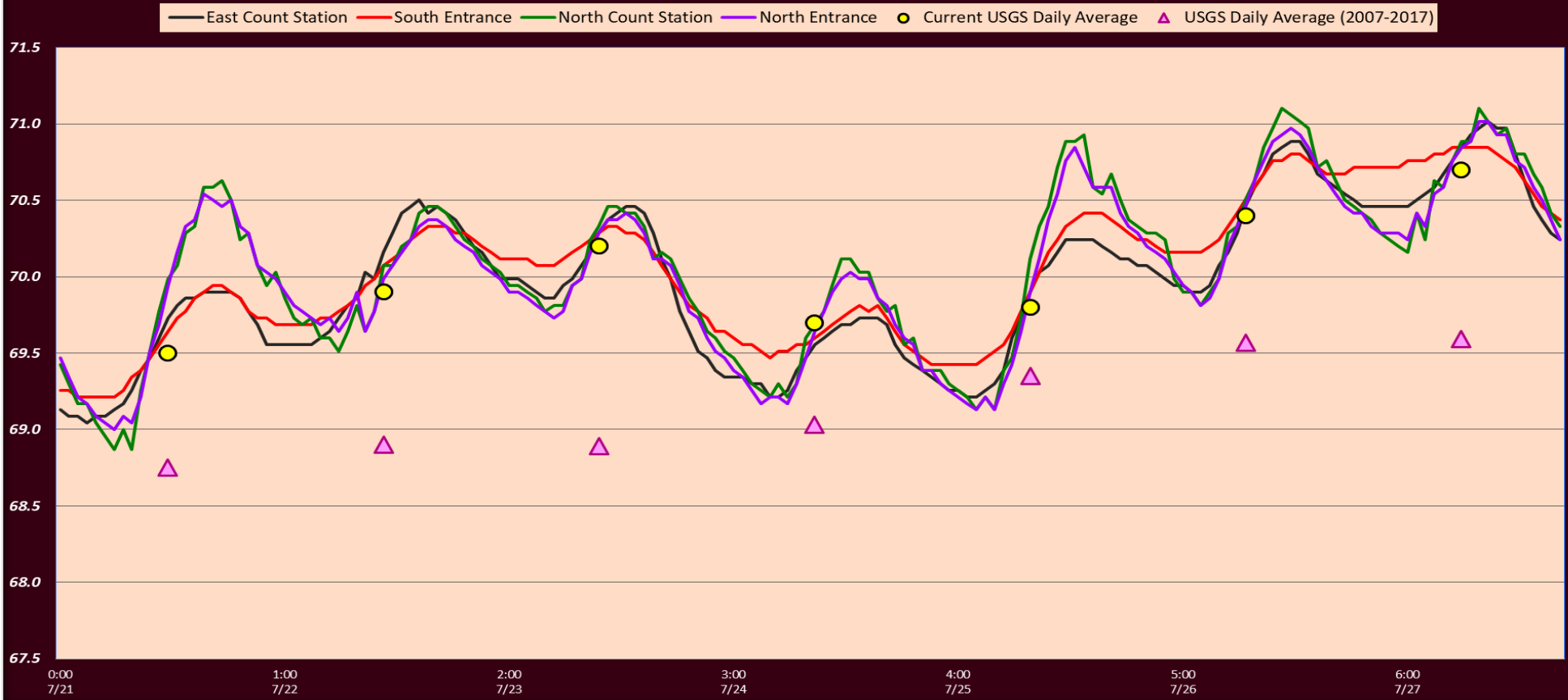
→ Additional avian lines installed 9/2018

Daily Average Birds Foraging by Zone

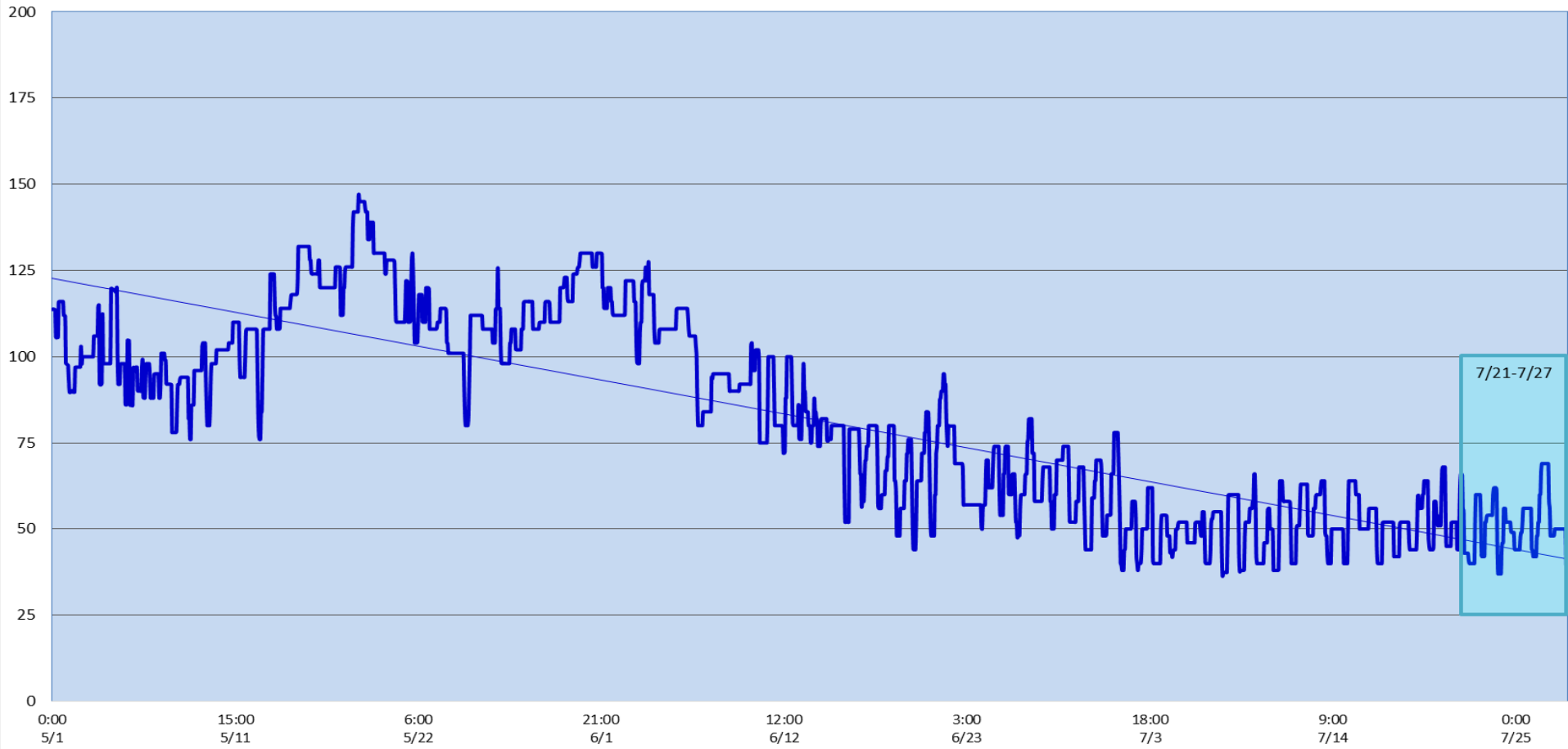
■ Sum of Average gulls ■ Sum of average dcco ■ Sum of average AMWP



The Dalles Dam Fish Ladder(s) & River Temperatures



Spill KCFS



		USGS:
Secchi:		Temperatures
7/21	5.0	Sun 69.5
7/22	5.0	Mon 69.9
7/23	5+	Tue 70.2
7/24	5+	Wed 69.7
7/25	5+	Thurs 69.8
7/26	5+	Fri 70.4
7/27	5+	Sat 70.7
	5.0	AVG 70.0

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
7/21			1.5		13.5	13.6	11.2	1.5	8.3	8.3		1.5	8.6	8.6
	1.4	9.5	1.5		13.5	13.5	11.3	1.5	8.3	8.3		1.6	8.5	8.5
	1.4	9.6	1.4		13.4	13.5	10.8	1.5	8.2	8.2		1.6	8.4	8.4
7/22			1.4		13.6	13.5	10.5	1.3	8.2	8.2		1.5	8.5	8.5
	1.3	9.5	1.5		13.4	13.5	9.9	1.3	8.2	8.2		1.5	8.4	8.4
	1.3	9.5	1.5		13.4	13.4	10.6	1.4	8.3	8.4		1.5	8.4	8.4
7/23			0.7		13.5	13.5	10.5	0.7	9.9	9.9		0.7	11.5	11.5
	1.3	10.1	1.5		13.6	13.6	10.8	1.5	8.2	8.2		1.5	8.4	8.4
	1.4	9.5	1.7		13.4	13.4	11.7	1.4	8.3	8.3		1.5	8.6	8.6
7/24			0.7		13.5	13.5	11.1	0.6	10.3	10.3		0.6	11.8	11.8
	1.4	10.4	1.6		13.5	13.5	12	1.6	8.1	8.1		1.6	8.4	8.4
	1.4	9.6	1.6		13.4	13.3	12.6	1.7	8.3	8.3		1.6	8.5	8.5
7/25			1.5		13.5	13.5	12.3	1.6	8.3	8.3		1.6	8.4	8.4
	1.4	9.6	1.5		13.5	13.5	12.2	1.7	8.4	8.4		1.6	8.5	8.5
	1.4	9.6	1.6		13.5	13.5	10.8	1.6	8.4	8.4		1.5	8.5	8.5
7/26			1.5		13.5	13.5	12.1	1.6	8.2	8.2		1.7	8.3	8.3
	1.3	9.7	1.6		13.5	13.5	12.8	1.6	8.4	8.4		1.5	8.6	8.6
	1.4	9.6	1.5		13.4	13.4	13.8	1.5	9.2	9.2		1.6	8.5	8.5
7/27			1.4		13.5	13.5	12.5	1.4	9	9		1.5	8.5	8.5
	1.3	10.2	1.5		13.5	13.5	12.5	1.5	8.7	8.7		1.6	8.4	8.4
	1.3	9.8	1.6		13.5	13.5	12.3	1.4	8.8	8.8		1.6	8.5	8.5
AVG:	1.4	9.7	1.5		13.5	13.5	11.7	1.5	8.4	8.4		1.6	8.5	8.5

Fishways are inspected twice daily plus one SCADA inspection.



Photo from Tuesday 7/23 in SW4.

Dip and count very low, foraging success rate poor with some confirmed shad and other prey.