

The Dalles Dam Fishway Status Report

3/14/2021

Inspection Period: 03/7-03/13

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: 14	Temperature: 42.0 °F
			Comments: New Automation troubleshooting.	Weekly Ave. Secchi: 4.6

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'	9.5
Entrance weir N1	0	depth (≥ 8')	1.3
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	

EAST FISHWAY

Exit differential	0	≤ 0.5'	Adjusting automation, operating manually in daytime.
Removable weirs 154-157	0	Per forebay	Forebay sensor repaired 2/4/21. Adjusting automation
Weir 158-159 differential	0	1.1' ± 0.1'	Adjusting automation
Count station differential	0	≤ 0.3'	Adjusting automation
153 Weir crest depth	0	1.0' ± 0.1'	Adjusting automation
Junction pool weir JP6	0	> 7.0'	
East entrance differential	0	1.0' - 2.0'	1 fish unit operation Week ave. 1.6
Entrance weir E1	0	No criteria	
Entrance weir E2	0	depth (≥ 8')	Adjust automation Week ave. 13.0
Entrance weir E3	0	depth (≥ 8')	Adjust automation Week ave. 13.1
Collection channel velocity	0	1.5 - 4 fps	3.06 fps Range MU5 3.91- MU21 2.46fps
Transportation channel velocity	0	1.5 - 4 fps	Peel lost.
North channel velocity	0	1.5 - 4 fps	2.64 fps, 3/6/2021
South channel velocity	0	1.5 - 4 fps	2.92fps 3/6/21
West entrance differential	0	1.0' - 2.0'	Adjust automation Week ave. 1.6
Entrance weir W1	0	depth (≥ 8')	Adjust automation Week ave. 10.3
Entrance weir W2	0	depth (≥ 8')	Adjust automation Week ave. 10.3
Entrance weir W3	0	No criteria	Closed
South entrance differential	4	1.0' - 2.0'	Week ave. 1.0
Entrance weir S1	0	depth (≥ 8')	1 fish unit operation Week ave. 9.1
Entrance weir S2	0	depth (≥ 8')	1 fish unit operation

JUVENILE PASSAGE

Sluiceway operation	0	Units 3, 17	Gates over 3-17 open
Turbine trashrack drawdown	0	<1.5', biwkly	
Spill volume/pattern	0	1 to 8	OFF
Turbine Unit Priority	0	per FPP	MU 3 and MU 17 given priority.
Gatewells	0	Weekly	

OTHER ISSUES:

Current Unit Outages

T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels

MU22 OOS 0630 3/1/2021 – 1700 5/20/2021 for Top Plate Cover Upgrades

Mutiple unit and line outages (~1/2 hour) for black start testing and severon upgrades next 2 weeks.

Maintenance

PUD intake rake out of service due to power track damage. Exploring repair options. Temporary repair in progress.

Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work to resume FY21.

Fishway automation replacement (SCADA) ongoing. East exit, east and south entrances complete. West operating old system.

Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair

Calibrations indicate significant deviations at east and south entrance gates with new automation. Working on corrections.

Predators

High gull numbers for this time of year. Cormorants 30 to 40 per day mostly loafing in SW3, not on BPA towers. Very few bald eagles left.

Green laser use for piscivorous bird hazing testing continues. Effective moving cormorants out of SW3 during low light.

Purchasing owl predator "scare crow" for forebay tower cormorants. May use at other locations if effective.

Pikeminnow dam angling resumes next May. **Five years of invasive bass/walleye by-catch release to continue per state requirement.**

Scanned PIT tags with ground scanners in SW3 and on Brown's island heron colony. Processing tag data recovered. Investigation potential Heron impact.

Research/Construction/Contractors

AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. Site visit planned for Mar31.

PITAGS north and east fishladder data collection at north count stations continues. North antenna annual maintenance this month during dewatering.

Fish unit rehab - Phase 1A on hold. Planning operation with AWS backup water supply during construction.

ODFW monthly inspections start Mar17

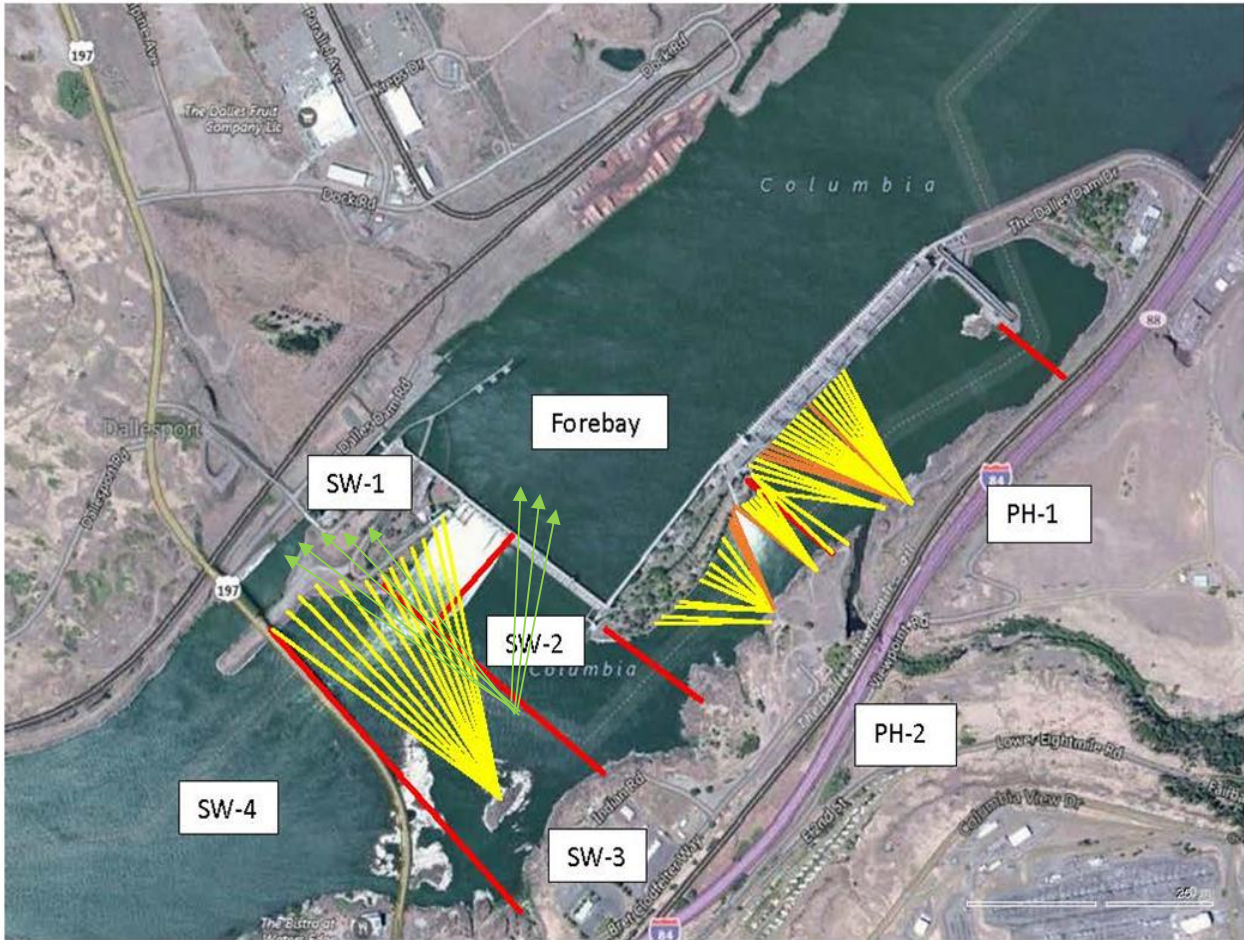
Fishway Operations

Both adult fishways in full operation per Fish Passage Plan

Ice Trash sluiceway in operation-Chain gates 3/2-3 and 17/1-2 open. Unit priority on MU3 and 17.

Approved by: Ron Twiner, Operation Project Manager, The Dalles Dam

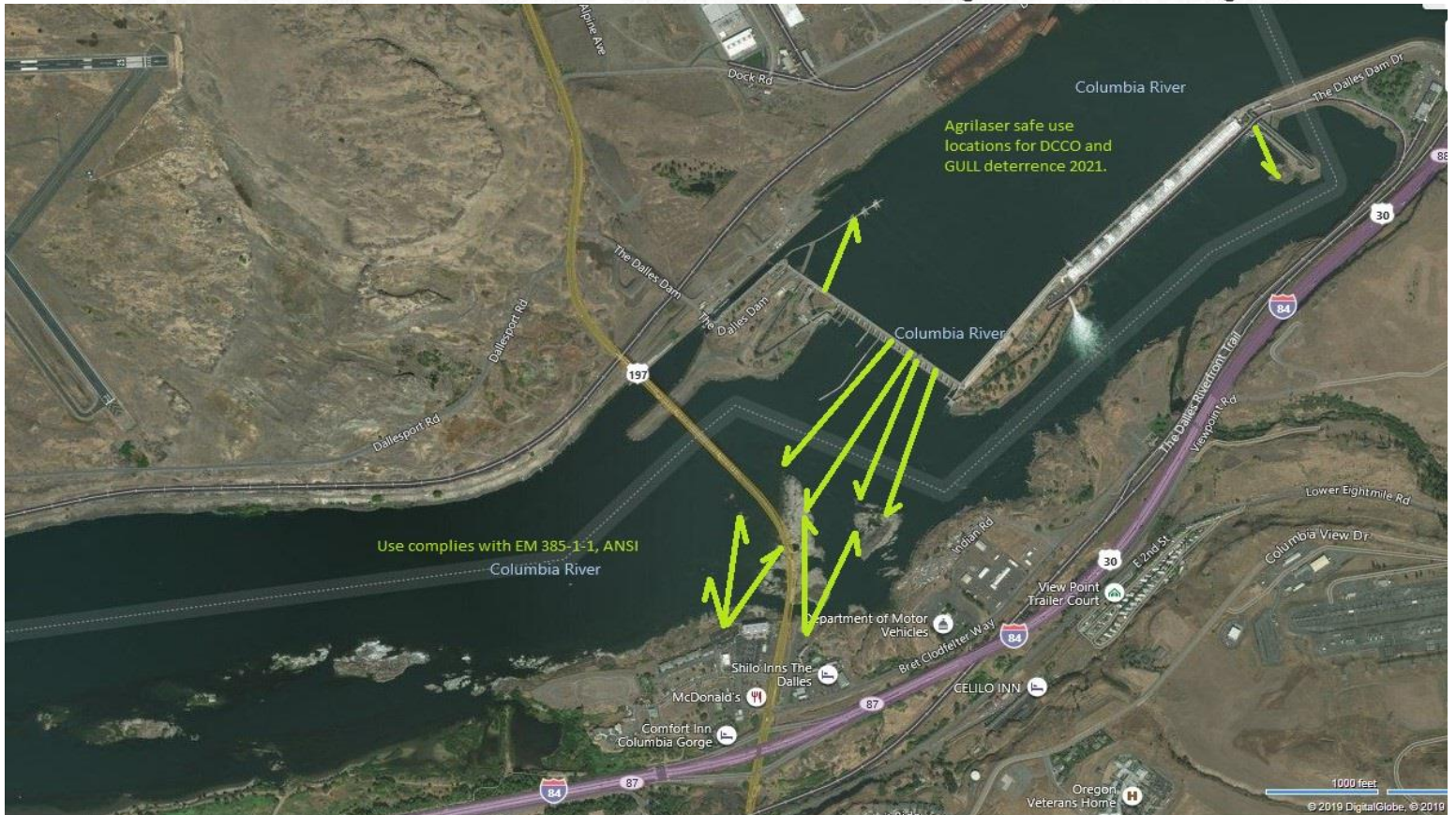
New Avian Lines and laser deterrent zones



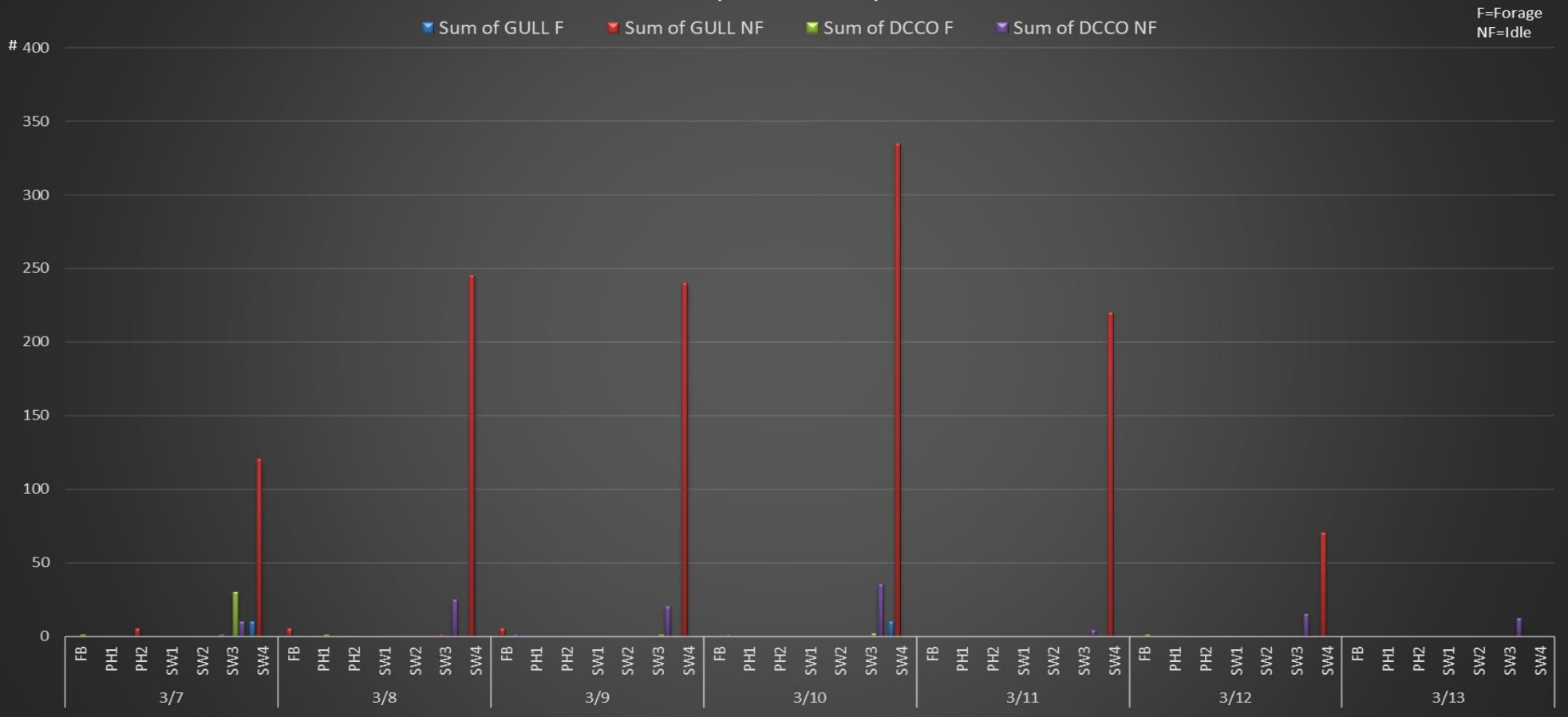
Red lines = avian zones

Yellow lines = current wires

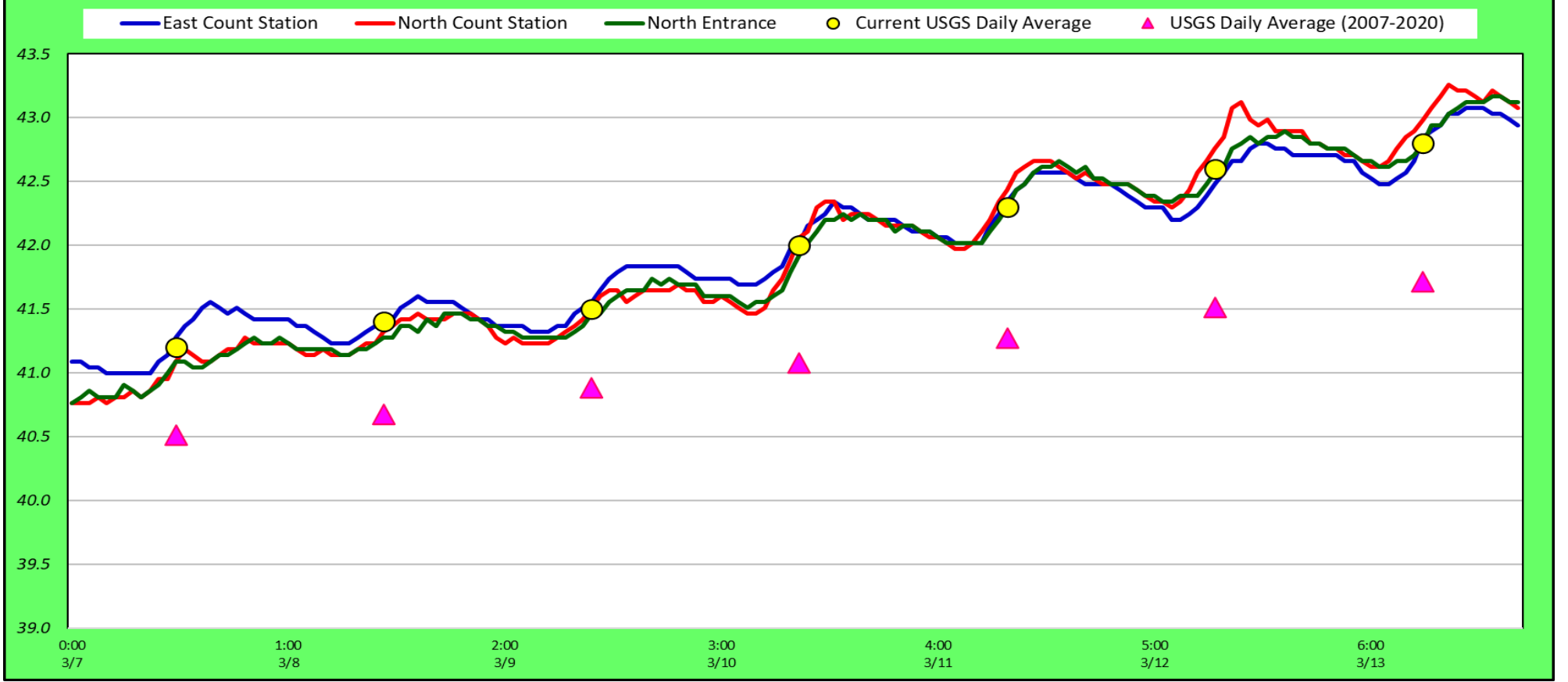
Orange lines = down or missing wires



Daily Avian Activity



Adult Fish Ladders-River Temperatures



Secchi:		°F
3/7	4.0	Sun 41.2
3/8	4.0	Mon 41.4
3/9	6.0	Tue 41.5
3/10	4.0	Wed 42.0
3/11	5.0	Thurs 42.3
3/12	5.0	Fri 42.6
3/13	4.5	Sat 42.8
	4.6	AVG 42.0

USGS March

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

out of criteria

Date:	North Ladder		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
3/7	1.2	9.4	1.9	3.3	12.3	12.3	9.8	1.4	10.3	10.3	-2.5	1.0	9.0	9.1
	1.2	9.5	1.6	3.4	12.6	12.6	9.9	1.4	10.5	10.5	-2.5	0.9	9.3	9.3
3/8	1.2	9.5	1.6	4.3	12.9	13.0	10.8	1.6	10.2	10.2	-1.7	1.0	9.1	9.2
	1.3	9.5	1.5	4.7	13.3	13.4	11.2	1.6	10.4	10.3	-1.4	0.9	9.3	9.5
3/9	1.4	9.4	1.3	7.9	14.0	14.1	11.9	1.7	10.3	10.3	-0.6	0.9	9.4	9.6
	1.4	9.5	1.8	8.0	14.1	14.2	12.0	1.6	10.2	10.2	-0.5	1.1	9.3	9.4
3/10	1.4	9.4	1.5	8.0	13.0	13.2	12.0	1.6	10.3	10.3	-0.5	1.0	9.1	9.2
	1.4	9.4	1.4	8.1	13.3	13.6	12.1	1.7	10.2	10.3	-0.4	1.0	9.3	9.3
3/11	1.4	9.5	1.5	7.7	13.1	13.4	11.7	1.6	10.2	10.4	-0.6	1.0	9.1	9.2
	1.3	9.5	1.6	7.1	12.6	12.8	11.2	1.7	10.2	10.4	-1.2	0.9	9.1	9.1
3/12	1.3	9.5	1.5	6.9	13.0	13.0	11.0	1.6	10.2	10.2	-2.5	1.0	9.0	9.0
	1.3	9.4	1.6	6.3	12.4	12.4	10.4	1.5	10.3	10.4	-3.1	1.0	9.0	9.0
3/13	1.3	9.4	1.3	6.8	13.0	13.0	10.8	1.6	10.3	10.3	-2.8	1.1	8.9	8.9
	1.3	9.7	1.6	6.2	12.4	12.4	10.2	1.5	10.3	10.3	-3.3	1.1	8.8	8.8
AVG:	1.3	9.5	1.6	6.3	13.0	13.1	11.1	1.6	10.3	10.3	-1.7	1.0	9.1	9.2

Fishways are inspected once daily.



Jim Day scanning Browns Island Heron rookery for PITs