

The Dalles Dam Fishway Status Report

4/28/2018

Inspection Period: 04/22/2018-04/28/2018

THE DALLES DAM



The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
Phone: 541-506-3800

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	Temperature: 50.5 °F Secchi: 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'	1.4	
Entrance weir N1	0	depth (≥ 8')	9.8	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'	0	
EAST FISHWAY				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	1	Per forebay	Weir 156 4/26	
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'	1.6	
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')	12.6	
Entrance weir E3	0	depth (≥ 8')	12.5	
Collection channel velocity	0	1.5 - 4 fps	2.23 fps	Range: Bay MU 16, 1.79 fps to MU 21, 3.07 fps
Transportation channel velocity	0	1.5 - 4 fps	2.10 fps	
North channel velocity	0	1.5 - 4 fps	2.20fps	
South channel velocity	0	1.5 - 4 fps	2.73 fps	
West entrance differential	0	1.0' - 2.0'	1.6	
Entrance weir W1	0	depth (≥ 8')	9.7	
Entrance weir W2	0	depth (≥ 8')	9.7	
Entrance weir W3	0	No criteria		
South entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir S1	0	depth (≥ 8')	8.5	
Entrance weir S2	0	depth (≥ 8')	8.5	
JUVENILE PASSAGE				
Sluiceway operation	0	Units 1, 21	1-1,1-2, 1-3,8-1,8-3, 18-2 and endgate open	
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'	
Spill volume/pattern	0	None	Bays 1-8, Range: 26.4%-56%	
Turbine Unit Priority	8	per FPP	MU 9,10,11,12 pres.	
Turbine 1% Efficiency	3	per FPP	Turbines exceeding limit due to FERC mandated setting, outside of operator control.	

OTHER ISSUES:

Birds and Sea lions:

Gull numbers increasing as expected. USDA hazers working from boat and shore. USDA also made attempts to haze sea lion from near east entrance.

Operations

Spillway open for fish passage. Tracking spill cap. Refer to spill tab.

North and east fishways in full operation.

Sluiceway open with 6 sluiceway operation

Current Outages;

MU10 OOS 0730 3/5/2018 - 1700 5/17/2018 for O/H

MU15 Forced OOS through 1700 6/29/2019 GSU transformer replacement

MU16 Forced OOS through 1700 6/29/2019 for GSU transformer, Exciter, Head Cover Upgrade & Strainer

MU11 OOS - RTS 4/26/2018 for Annual

MU12 OOS - RTS 4/26/2018 for Annual

MU19 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production

MU20 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production

Maintenance;

Rebuilt spare gearboxes for entrance and exit weirs.

East exit oil boom - new plan eliminating need for anchor placement. Will involve connection to new AWS peirnose. Refer to pic. To be presented to FPOM.

Collection channel dewatering pumps 3 and 4 removed for rehab.

Wheels to be replaced on N1 spare weir, due to excessive wear.

Long term repair items ; Planning for 154 -157 rehab/weir wheel replace and diffuser valve overhaul (rehab and decommission).

Fish related /non-fish funded items; Spillway assessment, spillway crane replace and spillgate 9. All awaiting funding.

All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Charter in place for comprehensive spillway assessment.

Periodic assessment team evaluated spillway deficiencies and found trunnion pins as highest on priority list.

Research/Construction/Contractors:

AWS construction - Commissioning dates Apr23-27, night shift. Flow testing attempted 4/26 night, but valve could not be fully opened.

PSMFC completed weekly sampling report for the North Wasco County PUD's dewatering structure. No concerns. Planning underway for new sample collection.

PITAGS repaired defective pit tag components-not transmitting at east count station

Fish Counters - Continues without issues.

Pikeminnow dam angling starting first week in May. High walleye by-catches 2017. **Issue of release of non native predators for may FPOM review.**

ODFW resumed monthly fishway inspections.

Lamprey minor mods - Rounded entrance weir caps installed south, west and north entrances. East weirs planned for next winter.

Lamprey trap planning meeting held Apr16. Trapping to continue at east count station within picket leads.

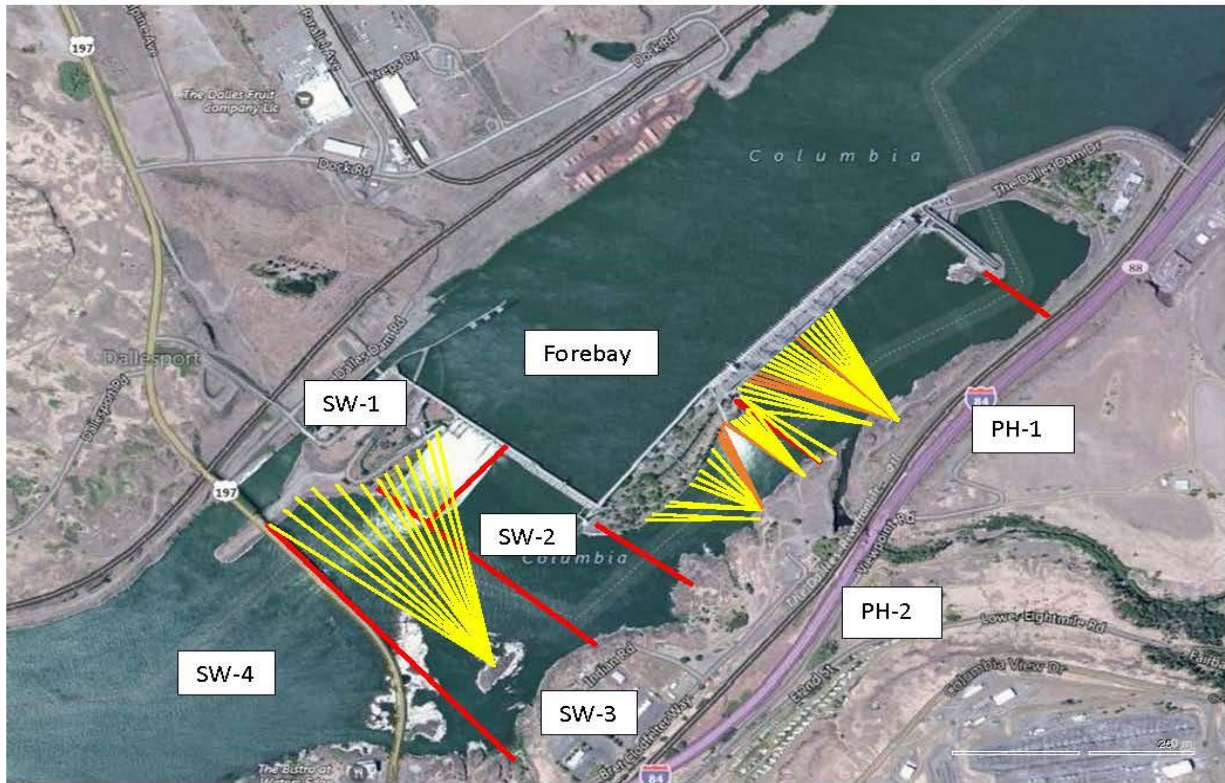
Fish unit breaker replace .- Prep work in progress. Installation delayed to next winter outage.

Fish unit rehab - Development plan continues. Alternatives reviewed. Likely selection of increased flow Kaplan units.

Transformer replacement - Install start delayed. Date to be determined.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

2018 Piscivorous Bird Counts																	
F=foraging, NF=non-foraging																	
Date	Observer	AM/PM	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in zone	Notes
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF		
4/22	JWR	AM	FB	0	5	4	24	0	0	0	0	0	0	0	0	33	
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	4	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	0	1	0	0	0	0	0	0	0	0	0	0	1	
4/23	JWR	PM	FB	0	1	0	35	0	0	0	0	0	0	0	0	36	effective boat hazing
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/24	JWR	AM	FB	0	0	2	37	0	0	0	0	0	0	0	0	39	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	8	1	0	0	0	0	0	0	0	0	0	0	9	
4/25	JED	PM	FB	0	0	6	32	0	0	0	0	0	0	0	0	38	Sun, calm
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/26	JED	AM	FB	0	4	2	46	0	0	0	0	0	0	0	0	52	osprey Sun, calm
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	0	0	0	0	0	0	0	0	0	0	0	1	1	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	4	0	0	0	0	0	0	0	0	0	0	0	4	
4/27	JED	PM	FB	0	4	10	42	0	0	0	0	0	0	0	0	56	osprey very windy, sun/cloud mix
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	1	
			PH2	8	0	0	0	0	0	0	0	0	0	0	1	9	
			SW1	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW2	10	0	0	0	0	0	0	0	0	0	0	0	10	
			SW3	5	0	1	0	0	0	0	0	0	0	0	0	6	
4/28	JED	AM	FB	0	1	0	41	0	0	0	0	0	0	0	1	43	osprey sunny, 15mph W
			PH1	0	0	4	2	0	0	0	0	0	0	0	0	6	
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	3	
			SW1	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	5	15	0	1	0	0	0	0	0	0	0	0	21	

Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

The Dalles East

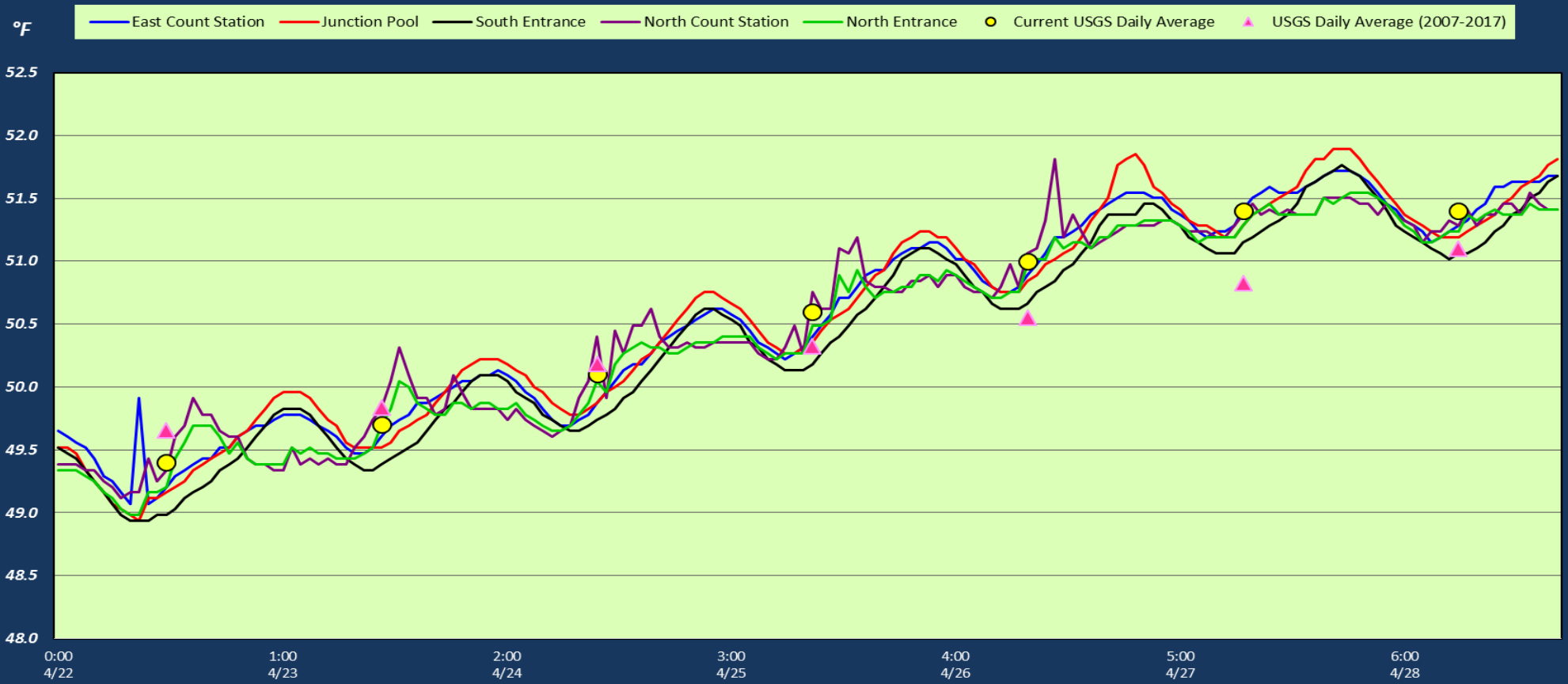
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
4/22	6	6	0	2	1	1	0	0	0	0	0	0	0
4/23	25	24	1	1	1	0	0	0	0	0	0	0	0
4/24	29	29	0	2	0	2	0	0	0	0	0	0	0
4/25	47	46	1	1	0	1	0	0	0	0	0	0	0
4/26	58	56	2	0	0	0	0	0	0	0	0	0	0
4/27	58	58	0	0	0	0	0	0	0	0	0	0	0
4/28	124	114	10	0	0	0	0	0	0	0	0	0	0
total	347	333	14	6	2	4	0	0	0	0	0	0	0

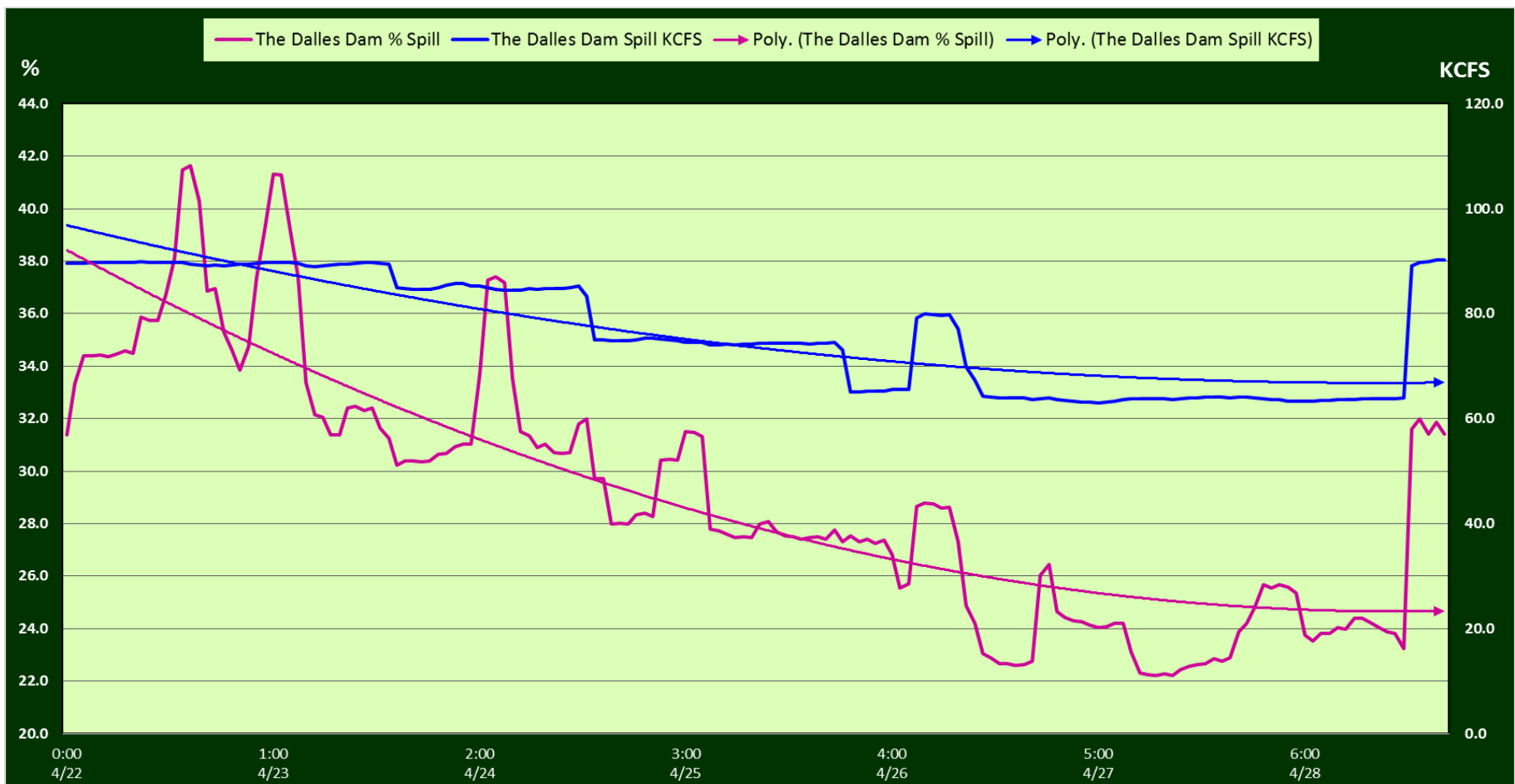
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
4/22	0	0	0	0	0	0	0	0	0	0	0	0	0
4/23	4	4	0	0	0	0	0	0	0	0	0	0	0
4/24	2	2	0	0	0	0	0	0	0	0	0	0	0
4/25	12	12	0	0	0	0	0	0	0	0	0	0	0
4/26	8	8	0	0	0	0	0	0	0	0	0	0	0
4/27	32	32	0	0	0	0	0	0	0	0	0	0	0
4/28	63	62	1	0	0	0	0	0	0	0	0	0	0
total	121	120	1	0	0	0	0	0	0	0	0	0	0
% North	25.9	26.5	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[Fish Counts](#)

The Dalles Dam Adult Fish Ladder(s) River Temperatures





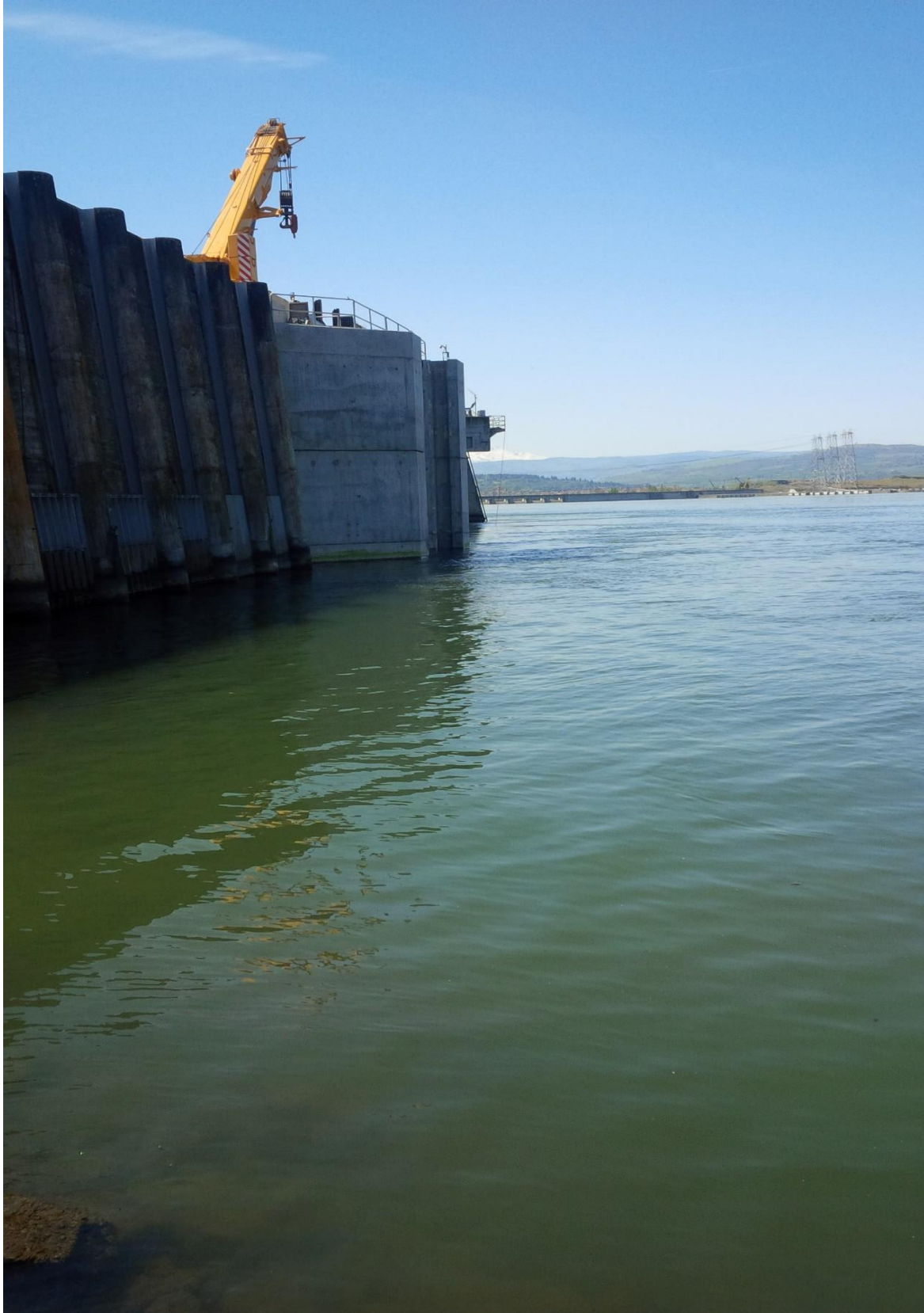
		USGS: USGS river temp	
	Secchi:		Temperatures
4/22	3.5	Sun	49.4
4/23	3.5	Mon	49.7
4/24	3.0	Tue	50.1
4/25	3.0	Wed	50.6
4/26	4.0	Thurs	51.0
4/27	4.0	Fri	51.4
4/28	3.5	Sat	51.4
	3.5	AVG	50.5

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

= Out of criteria

Date:	North Ladder			East Ladder										
	North Entrance		Differential	East Entrance				West Entrance			South Entrance			
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
4/22	SCADA		1.5		12.5	12.5	14.7	1.5	9.9	9.9		1.5	8.5	8.5
	1.4	9.8	1.4		12.4	12.4	14.2	1.4	9.8	9.8		1.5	8.5	8.5
	1.4	9.8	1.4		12.4	12.4	14.2	1.4	9.8	9.8		1.5	8.5	8.5
4/23	SCADA		1.5		12.6	12.6	14.5	1.4	9.8	9.8		1.5	8.5	8.5
	1.4	9.8	1.6		12.6	12.6	14.7	1.5	9.9	9.9		1.5	8.5	8.5
	1.4	9.9	1.6		12.6	12.6	14.9	1.5	9.8	9.8		1.5	8.6	8.6
4/24	SCADA		1.4		12.6	12.6	14.4	1.5	9.8	9.8		1.5	8.5	8.5
	1.4	9.9	1.6		12.5	12.5	14.6	1.5	9.7	9.7		1.6	8.4	8.4
	1.4	9.6	1.4		12.4	12.4	14.8	1.6	9.6	9.6		1.6	8.5	8.5
4/25	SCADA		1.7		12.5	12.5	14.5	1.5	9.9	9.9		1.5	8.5	8.5
	1.4	9.8	1.7		12.4	12.4	14.4	1.5	9.6	9.6		1.6	8.4	8.4
	1.5	9.8	1.6		12.4	12.4	14.8	1.6	9.8	9.8		1.5	8.5	8.5
4/26	SCADA		1.5		12.5	12.5	14.3	1.5	9.5	9.5		1.6	8.4	8.4
	1.4	9.8	1.7		12.4	12.4	14.8	1.7	9.4	9.4		1.5	8.5	8.5
	1.3	9.9	1.7		12.6	12.6	15.6	1.7	9.5	9.5		1.6	8.4	8.5
4/27	SCADA		1.5	12.8	12.5	15.2	1.6	9.5	9.5	1.5	8.6	8.6		
	1.4	9.9	1.6	12.7	12.6	15.3	1.7	9.6	9.6	1.5	8.6	8.6		
	1.3	9.9	1.7	12.8	12.5	16.2	1.7	9.6	9.6	1.6	8.5	8.5		
4/28	SCADA		1.6	12.7	12.5	15.5	1.7	9.4	9.4	1.6	8.4	8.5		
	1.4	9.7	1.6	12.6	12.4	15.2	1.7	9.4	9.4	1.6	8.4	8.5		
	1.4	9.8	1.5	12.7	12.7	15.3	1.7	9.5	9.5	1.5	8.5	8.5		
AVG:	1.4	9.8	1.6	12.6	12.5	14.9	1.6	9.7	9.7	1.5	8.5	8.5		

Fishways are inspected twice daily plus one SCADA inspection.



Intake peirs for new AWS from water level.