

The Dalles Dam Fishway Status Report

4/21/2018

Inspection Period: 04/15/2018-04/21/2018

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:	21	Temperature:	48.2 °F
			Comments		Secchi:	3.6 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')	9.7			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'	0			
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'				
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')	12.5			
Entrance weir E3	0	depth (≥ 8')	12.5			
Collection channel velocity	0	1.5 - 4 fps	2.17 fps	Range: Bay MU 5, 2.77 fps to MU 18, 1.83 fps		
Transportation channel velocity	0	1.5 - 4 fps	2.47 fps			
North channel velocity	0	1.5 - 4 fps	1.90 fps			
South channel velocity	0	1.5 - 4 fps	2.48 fps			
West entrance differential	0	1.0' - 2.0'	1.7			
Entrance weir W1	0	depth (≥ 8')	9.1			
Entrance weir W2	0	depth (≥ 8')	9.1			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.3			
Entrance weir S2	0	depth (≥ 8')	8.3			
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	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds and Sea lions:

Gull numbers increasing as expected. USDA hazers on site.

Operations

Spillway open for fish passage. Volume tracking spill cap.

North and east fishways in full operation.

Sluiceway open with 6 sluiceway operation

Current Outages;

MU5 Forced OOS 1135 3/22/2018 - 1700 4/19/2018 for blade seal inspection .

MU9 OOS 0001 3/5/2018 - 1700 4/17/18 for Annual

MU10 OOS 0730 3/5/2018 - 1700 5/1/2018 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 weir electrical panel FCQ7 installation completed. Demo of old FCQ7 complete, awaiting removal due to AWS contract.

East exit oil boom - new plan eliminating need for anchor placement. 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 - Construction progress continues. Commissioning dates Apr23-27, night shifts.

PSMFC completed second weekly sampling report for the North Wasco County PUD's dewatering structure. No concerns.

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

Fish Counters - Continues without issues.

Pikeminnow dam angling - To resume with higher water temps. High walleye by-catches 2017. **Release of non native predators awaiting WDFW decision.**

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 Apr16.

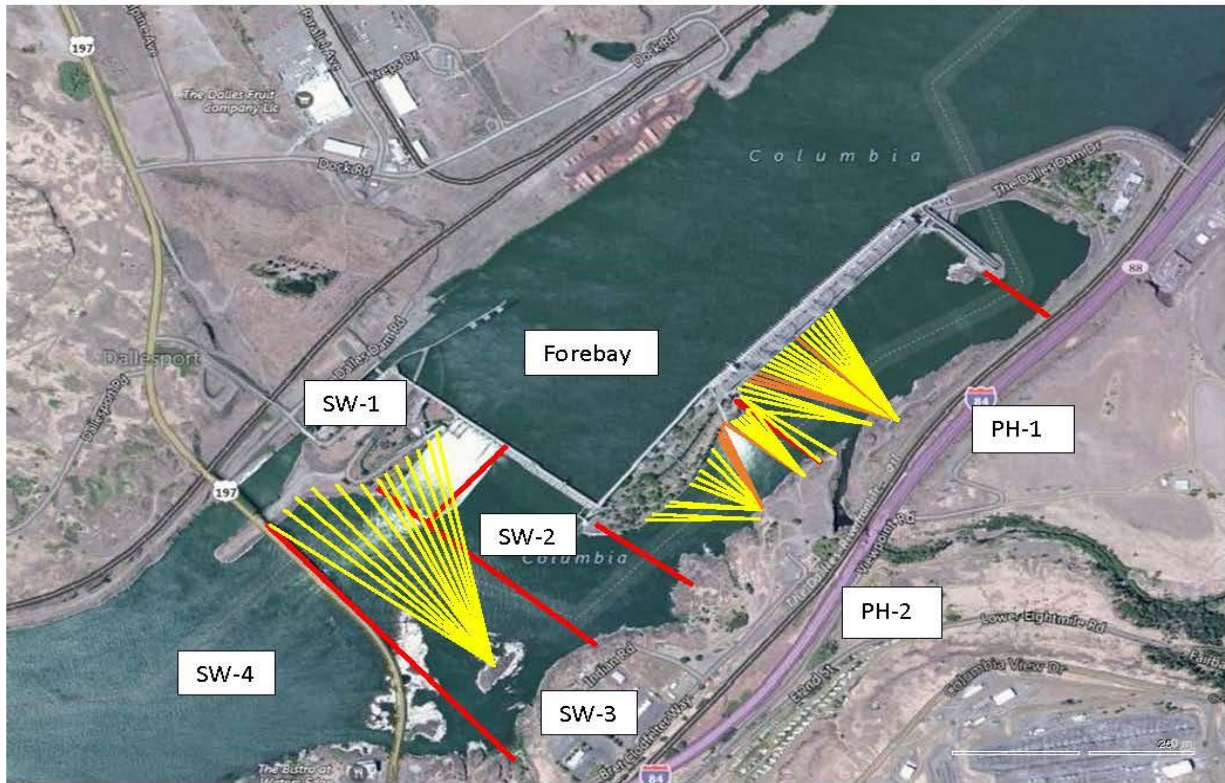
Fish unit breaker replace - Prep work in progress. Installation delayed to next winter outage.

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		
4/15	CEA	PM	FB	0	0	2	48	0	0	0	0	0	0	0	0	50	Rainy, cloudy 55°F
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	3	
			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	1	0	0	0	0	0	0	0	0	0	1	
4/16	CEA	AM	FB	0	3	0	33	0	0	0	0	0	0	0	0	36	partly cloudy, breezy 52°F BAEA
			PH1	0	1	0	5	0	0	0	0	0	0	0	0	6	
			PH2	0	0	1	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	
4/17	JED	PM	FB	0	0	4	24	0	0	0	0	0	0	0	0	28	Windy, overcast cool.
			PH1	1	0	0	1	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	4	0	0	0	0	0	0	0	0	0	0	0	4	
4/18	JED	AM	FB	0	6	2	40	0	0	0	0	0	0	0	0	48	Overcast, calm cool.
			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	20	3	0	0	0	0	0	0	0	0	0	0	23	
4/19	JWR	PM	FB	0	1	1	22	0	0	0	0	0	0	0	1	25	Osprey
			PH1	0	1	0	3	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	0	0	0	0	0	0	0	0	0	0	0	
			SW3	6	1	0	0	0	0	0	0	0	0	0	0	7	
4/20	JWR	AM	FB	0	0	1	19	0	0	0	0	0	0	0	0	20	
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	3	
			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	4	0	0	0	0	0	0	0	0	0	0	0	4	
4/21	JWR	PM	FB	0	2	3	11	0	0	0	0	0	0	0	0	16	
			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	0	0	1	0	0	0	0	0	0	0	0	0	1	
SW4	38	12	0	2	0	0	0	0	0	0	0	0	52				

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
4/15	2	2	0	1	1	0	0	0	0	0	0	0	0
4/16	6	5	1	2	1	1	0	0	0	0	0	0	0
4/17	8	8	0	5	4	1	0	0	0	0	0	0	0
4/18	5	5	0	4	4	0	0	0	0	0	0	0	0
4/19	13	13	0	3	2	1	0	0	0	0	0	0	0
4/20	11	11	0	0	0	0	0	0	0	0	0	0	0
4/21	14	14	0	6	2	4	0	0	0	0	0	0	0
total	59	58	1	21	14	7	0	0	0	0	0	0	0

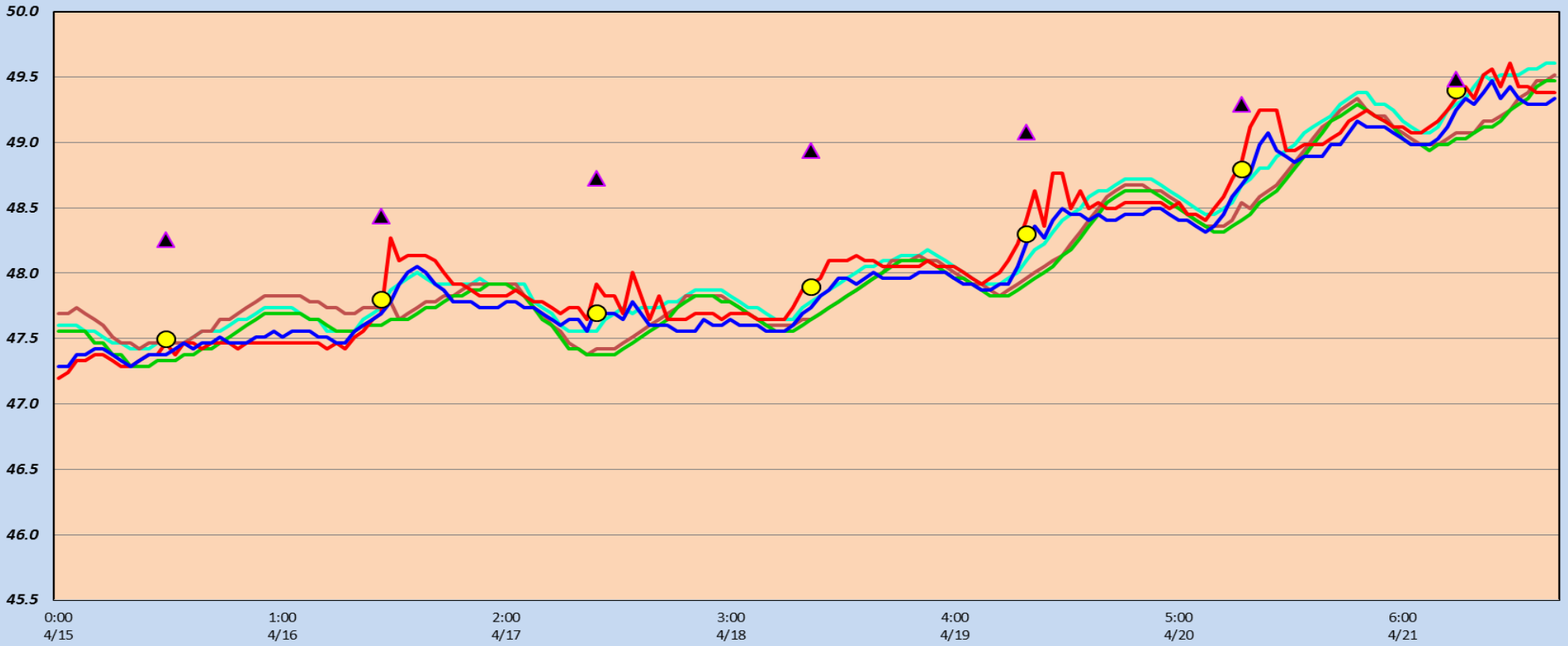
The Dalles North

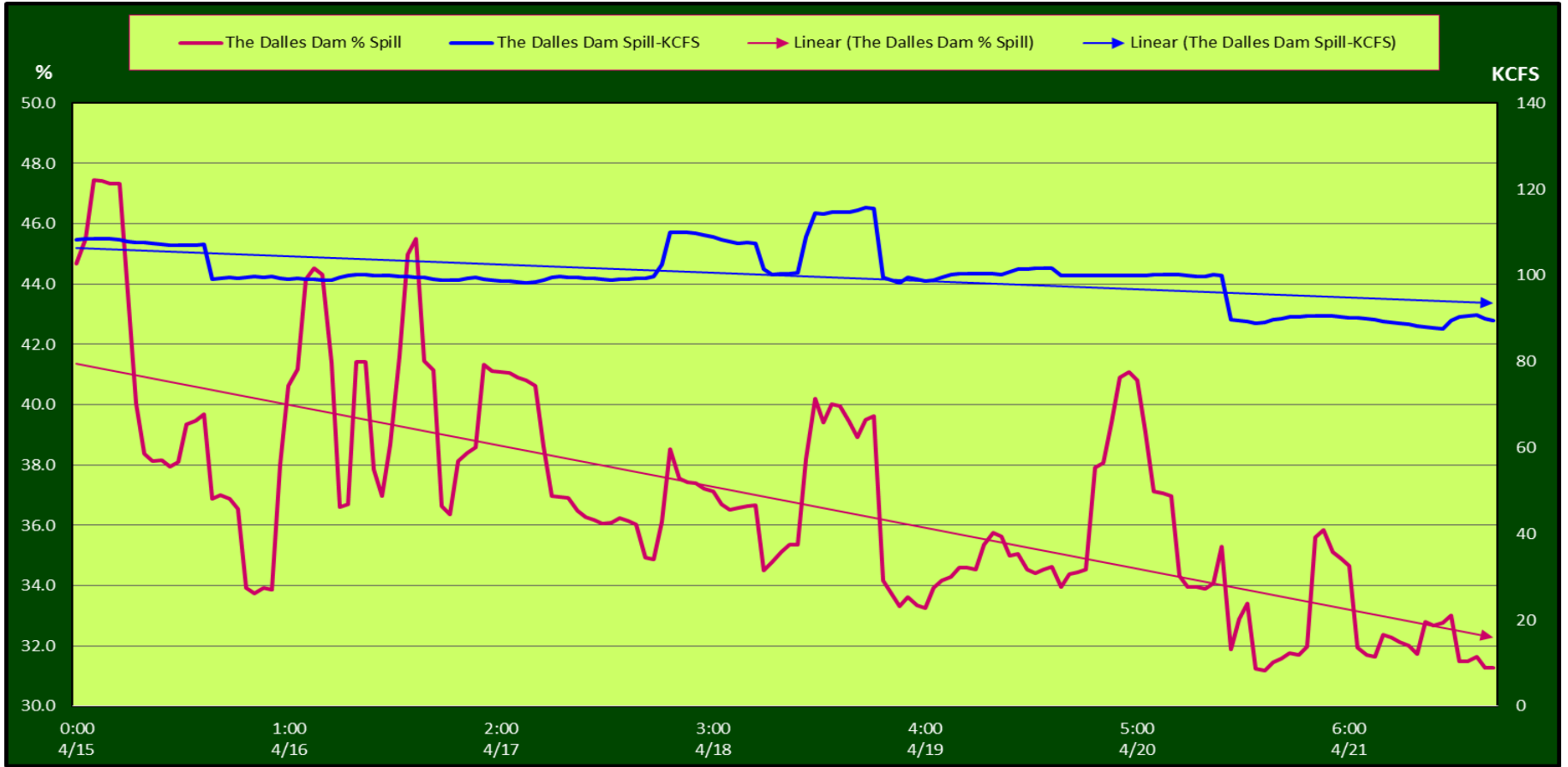
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
4/15	1	1	0	0	0	0	0	0	0	0	0	0	0
4/16	0	0	0	0	0	0	0	0	0	0	0	0	0
4/17	0	0	0	1	1	0	0	0	0	0	0	0	0
4/18	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19	1	1	0	0	0	0	0	0	0	0	0	0	0
4/20	2	2	0	0	0	0	0	0	0	0	0	0	0
4/21	4	4	0	0	0	0	0	0	0	0	0	0	0
total	8	8	0	1	1	0	0	0	0	0	0	0	0
% North	11.9	12.1	0.0	4.5	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FISH COUNT

The Dalles Dam Adult Fish Ladder(s) River Temperatures

East Count Station Junction Pool South Entrance North Count Station North Entrance Current USGS Daily Average USGS Daily Average (2007-2017)





		USGS: USGS river temp
Secchi:		Temperatures
4/15	4.0	Sun 47.5
4/16	4.0	Mon 47.8
4/17	4.0	Tue 47.7
4/18	3.5	Wed 47.9
4/19	3.5	Thurs 48.3
4/20	3.5	Fri 48.8
4/21	3.0	Sat 49.4
	3.6	AVG 48.2

**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
4/15	SCADA		1.6		12.5	12.5	15.5	1.7	8.9	8.9		1.4	8.4	8.4
	1.4	9.6	1.6		12.4	12.4	15.8	1.7	8.7	8.7		1.5	8.4	8.4
	1.4	9.7	1.6		12.4	12.4	15.4	1.7	8.7	8.7		1.6	8.2	8.2
4/16	SCADA		1.7		12.5	12.5	15.6	1.7	8.8	8.8		1.5	8.4	8.5
	1.5	9.7	1.5		12.5	12.5	14.4	1.7	8.9	8.9		1.5	8.4	8.4
	1.4	9.7	1.5		12.5	12.5	15.0	1.6	8.7	8.7		1.5	8.3	8.3
4/17	SCADA		1.5		12.5	12.5	14.5	1.6	8.8	8.8		1.5	8.2	8.2
	1.4	9.7	1.6		12.6	12.6	14.8	1.6	8.8	8.8		1.5	8.2	8.2
	1.4	9.7	1.7		12.4	12.4	15.0	1.6	8.8	8.8		1.4	8.3	8.3
4/18	SCADA		1.7		12.5	12.5	15.4	1.7	8.8	8.8		1.6	8.3	8.3
	1.4	9.8	1.6		12.4	12.4	16.0	1.7	8.7	8.7		1.6	8.2	8.2
	1.4	9.8	1.6		12.5	12.5	15.5	1.7	8.8	8.9		1.5	8.4	8.4
4/19	SCADA		1.7		12.6	12.6	15.9	1.7	9.5	9.5		1.6	8.3	8.3
	1.5	9.7	1.6		12.5	12.5	15.9	1.7	9.6	9.6		1.5	8.4	8.4
	1.5	9.7	1.6		12.5	12.5	15.8	1.7	9.5	9.5		1.6	8.3	8.3
4/20	SCADA		1.6	12.5	12.5	15.4	1.6	9.5	9.5	1.5	8.2	8.3		
	1.4	9.8	1.6	12.5	12.5	15.4	1.6	9.5	9.5	1.6	8.3	8.3		
	1.4	9.7	1.7	12.4	12.4	15.6	1.7	9.5	9.5	1.6	8.4	8.5		
4/21	SCADA		1.6	12.5	12.5	15.4	1.6	10.0	10.0	1.5	8.4	8.4		
	1.4	9.8	1.6	12.5	12.5	15.4	1.7	9.5	9.5	1.7	8.2	8.2		
	1.4	9.9	1.6	12.5	12.5	15.4	1.5	10.0	10.0	1.5	8.5	8.5		
AVG:	1.4	9.7	1.6	12.5	12.5	15.4	1.7	9.1	9.1	1.5	8.3	8.3		

Fishways are inspected twice daily plus one SCADA inspection.



AWS construction completed 10' valve room. Ready for commission testing next week.