

# The Dalles Dam Fishway Status Report

3/25/2018

Inspection Period: 03/18/2018-03/24/2018

## 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: 43.5 °F
			Comments	Secchi: 4.6 feet
<b>NORTH FISHWAY</b>				
Exit differential	0	≤ 0.5'		
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.0' ± 0.1'		
Entrance differential	1	1.0' - 2.0'	1.2	PUD Breaker trip
Entrance weir N1	0	depth (≥ 8')	9.4	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'	0	
<b>EAST FISHWAY</b>				
Exit differential	5	≤ 0.5'	weir 156 inop-TDE fixed	
Removable weirs 154-157	5	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')	11.9	
Entrance weir E3	0	depth (≥ 8')	11.9	
Collection channel velocity	0	1.5 - 4 fps	2.5fps	
Transportation channel velocity	0	1.5 - 4 fps	2.6fps	
North channel velocity	0	1.5 - 4 fps	2.4fps	
South channel velocity	0	1.5 - 4 fps	2.9fps	
West entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir W1	0	depth (≥ 8')	8.5	
Entrance weir W2	0	depth (≥ 8')	8.5	
Entrance weir W3	0	No criteria		
South entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir S1	0	depth (≥ 8')	8.7	
Entrance weir S2	0	depth (≥ 8')	8.7	
<b>JUVENILE PASSAGE</b>				
Sluiceway operation	0	Units 1, 21	1-2, 1-3 - 21-1, 21-2 and endgate open	
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'	
Spill volume/pattern	0	None		
Turbine Unit Priority	5	per FPP	MU4 FOOS	
Turbine 1% Efficiency	0	per FPP		

## OTHER ISSUES:

### **Birds and Sea lions:**

gull and cormorant numbers and activity increasing. No sea lions spotted

### **Operations**

NWCPUD performed a load reject test at The Dalles Fishway plant on 3/20/18 to review actual plant responses. During the test, the circuit breaker at Spearfish Substation was tripped by KPUD at 09:00. . The plant failed to automatically bypass water until an operator could intervene.

The bypass flow was restored at approximately 10:00 and NWCPUD resumed troubleshooting the restart procedure at the plant.

North and east fishways in full operation.

Sluiceway open with 4 gate operation. Six gate operation will start Apr 1.

### **Current Outages;**

MU4 OOS 0001 3/19/2018 - 1700 4/5/2018 for Annual, Blade Seal Replacement and T2 Dobel testing

MU5 FOOS 1135 3/22/2018 - 1700 4/17/2018 for blade seal inspection .

MU9 OOS 0001 3/5/2018 - 1700 4/12/2018 for Annual

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

MU15 FOOS through 1700 6/29/2019 GSU transformer replacement

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

MU17 OOS 0630 9/11/2017 - 1700 4/12/2018 for O/H

MU18 OOS 0630 1/8/2018 - 1700 4/12/2018 for O/H & Head cover upgrade

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

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

### **Maintenance;**

Adjustable weir 157 bottom dragged on water surface, TDE fixed

East exit weir 156 malfunction addressed and corrected

East exit weir electrical panel FCQ7 installation completed. Demo of old FCQ7 near complete.

East exit oil boom anchor installation with John Day boat. Date to be determined.

Collection channel diffuser permanent closure start delayed until next winter outage.

East exit 155, 156, 158 weir gearboxes rehabbed and reinstalled. Electrical hookup complete.

Collection channel stuck dewatering pump removed. Repair underway.

*Long term repair items*; 154 -157 rehab/weir wheel replace, 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.

### **Research/Construction/Contractors:**

*AWS construction* - Construction progress continues. Commissioning testing date TBD

*Fish Counters* - Start April 1

*Pikeminnow dam angling* - Done for season with a total catch at 1776. Highest invasive walleye by-catches do date. **All non-native predators are released.**

ODFW resumed monthly fishway inspection visits

*Lamprey minor mods* - Rounded entrance weir caps installed and operational prior to Ladder water up

Lamprey counterbalance hoist being negotiated with project and end-user to expedite trapping

*Railroad track removal* - Tailrace deck rail removal approx. half completed.

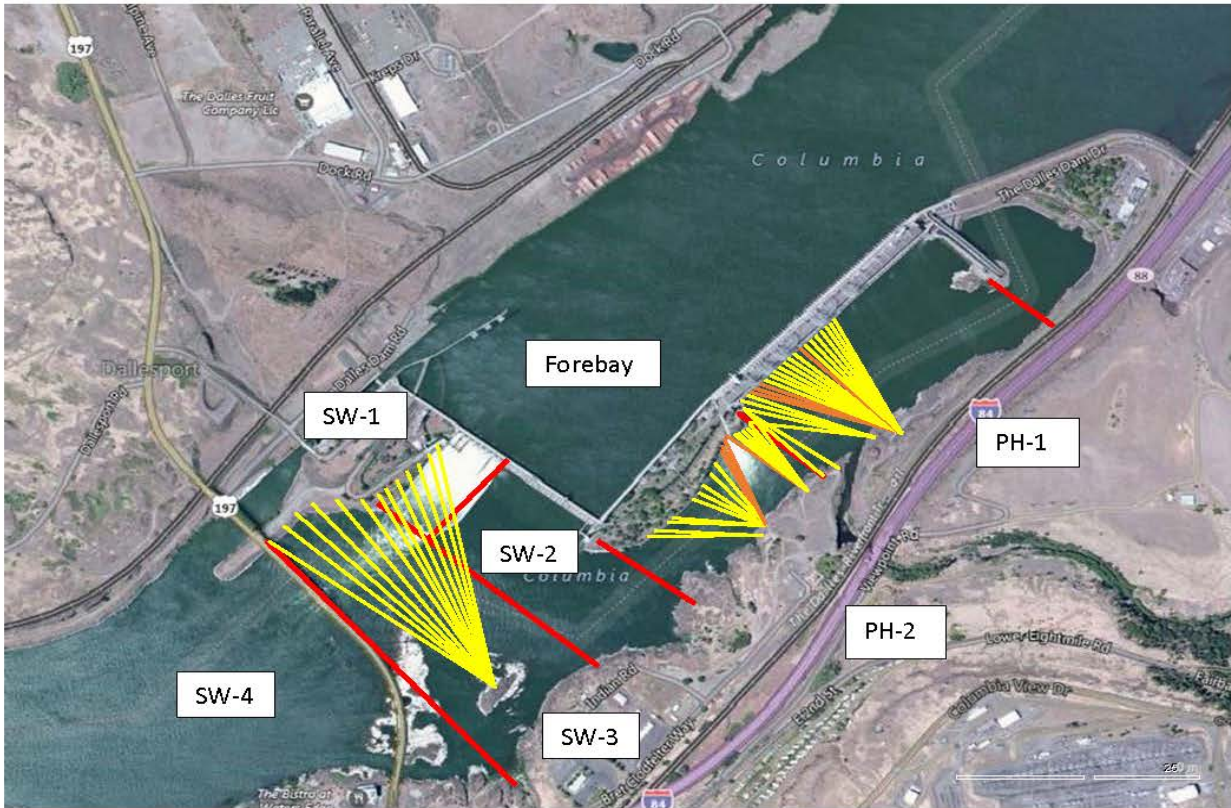
*Fish unit breaker replace* - Work in progress. Completion Feb18, 2018. Two weeks commission testing required.

*Fish unit rehab* - Phase 1A report Jan 2018. Award 2020. Completion 2022.

*Transformer replacement* - Install start May 2018.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

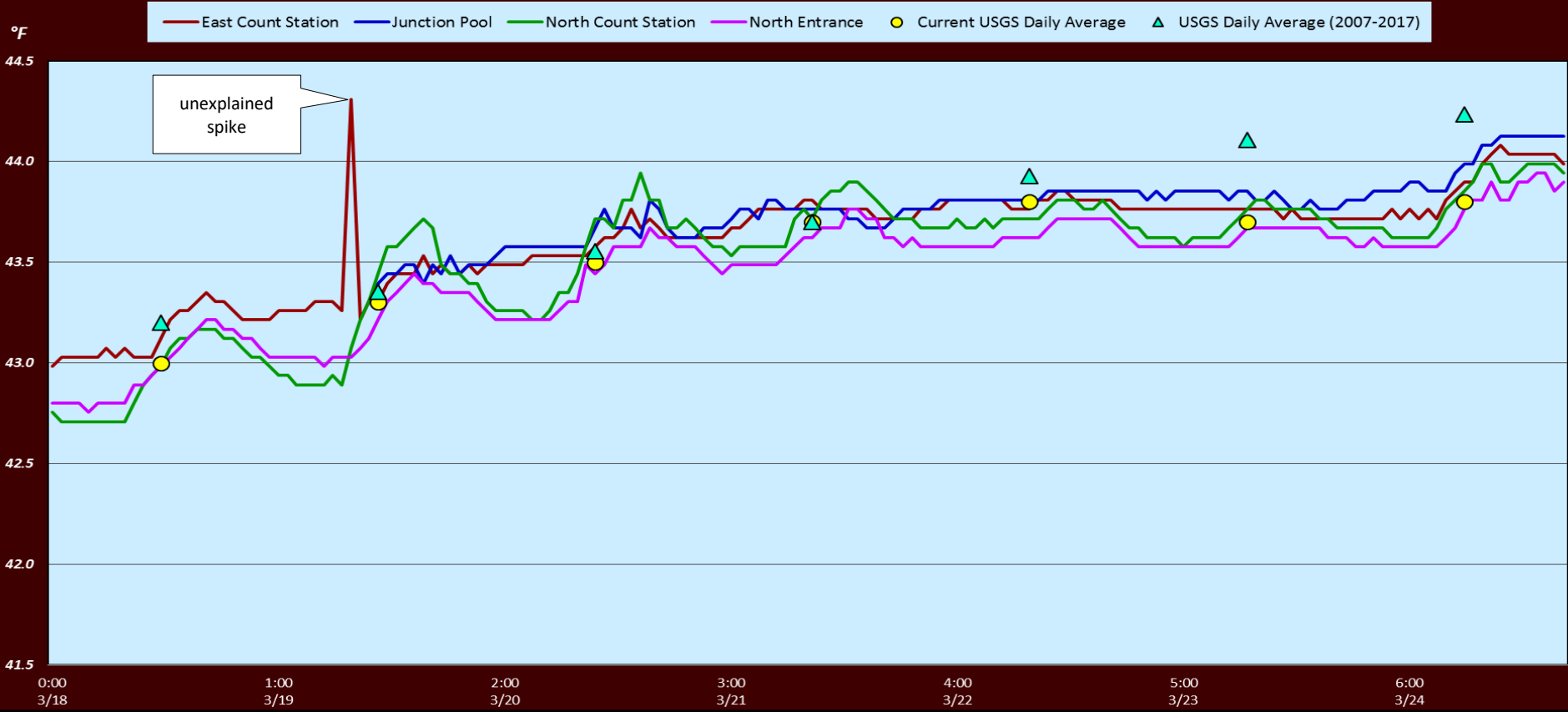
Yellow lines = current wires

Orange lines = down or missing wires

2018 Piscivorous Bird Counts																				
Date	Observer	AM/PM	Zone	F=foraging, NF=non-foraging												Total birds in zone	Notes			
				Gull		Cormorant		Caspian tern		Grebe		Pelican		Other						
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF					
3/18	JED	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
			PH1	0	0	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	0	0	0	
			SW1	0	0	0	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	0	0	0	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/19	JWR	AM	FB	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4		
			PH1	0	0	0	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	0	0	0	0
			SW1	0	0	0	0	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	0	0	0	0
			SW3	0	1	0	66	0	0	0	0	0	0	0	0	0	0	0	0	67
			SW4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3/20	JED	PM	FB	0	0	1	5	0	0	0	0	0	0	0	0	0	0	6		
			PH1	0	0	0	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	0	0	0	
			SW1	0	1	0	0	0	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	0	0	0	
			SW3	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27
			SW4	0	28	0	6	0	0	0	0	0	0	0	0	0	0	0	0	34
3/21	JWR	AM	FB	0	0	0	47	0	0	0	0	0	0	0	0	0	0	47		
			PH1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
			PH2	0	0	0	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	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
			SW4	0	33	0	2	0	0	0	0	0	0	0	0	0	0	0	0	35
3/22	CEA	PM	FB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
			PH1	0	0	0	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	0	0	0	
			SW1	0	0	0	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	0	0	0	
			SW3	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
			SW4	7	55	1	3	0	0	0	0	0	0	0	0	0	0	0	0	66
3/23	CEA	AM	FB	3	0	1	33	0	0	0	0	0	0	0	0	0	0	37		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	0	0	1	0	0	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	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
			SW4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3/24	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
			PH2	0	0	0	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	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	19
			SW4	3	29	0	2	0	0	0	0	0	0	0	0	0	0	0	0	34

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

# The Dalles Dam Adult fish Ladder(s) River/Water Temperatures



		USGS: USGS river temp	
Secchi:		Temperatures	
3/18	4.5	Sun	43.0
3/19	4.5	Mon	43.3
3/20	4.0	Tue	43.5
3/21	4.5	Wed	43.7
3/22	5.0	Thurs	43.8
3/23	5.0	Fri	43.7
3/24	4.5	Sat	43.8
	4.6	AVG	43.5

**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
3/18			1.7		12.0	12.0	12.4	1.3	8.8	8.8		1.5	8.7	8.7
	1.4	9.6	1.7		12.0	12.0	13.0	1.5	8.9	8.9		1.4	8.8	8.8
	1.2	9.6	1.4		12.0	12.0	12.2	1.4	9.1	9.0		1.3	8.9	8.9
3/19			1.6		11.9	11.9	13.3	1.4	8.8	8.8		1.5	8.7	8.7
	1.3	9.4	1.8		11.9	11.9	13.3	1.5	8.8	8.8		1.4	8.8	8.8
	1.3	9.5	1.6		12.0	12.0	12.5	1.3	8.8	8.8		1.8	8.8	8.8
3/20			1.7		12.0	12.0	13.0	1.4	8.8	8.8		1.4	8.7	8.7
	0.0	9.4	1.6		11.9	11.9	12.9	1.4	8.9	8.7		1.4	8.6	8.6
	1.3	9.5	1.5		12.0	12.0	12.0	1.5	8.2	8.2		1.4	8.8	8.7
3/21			1.7		12.0	12.0	12.7	1.5	8.4	8.4		1.4	8.7	8.7
	1.3	9.4	1.7		12.0	12.0	12.4	1.4	8.4	8.4		1.4	8.8	8.8
	1.3	9.5	1.5		12.0	12.0	12.4	1.5	8.2	8.2		1.5	8.6	8.6
3/22			1.7		12.0	12.0	13.6	1.6	8.3	8.3		1.6	8.6	8.6
	1.4	9.3	1.7		10.0	10.0	13.6	1.5	8.6	8.6		1.5	8.7	8.7
	1.1	9.5	1.6		12.0	12.0	13.2	1.5	8.3	8.3		1.5	8.8	8.8
3/23			1.7		12.0	12.0	13.6	1.6	8.3	8.3		1.6	8.6	8.6
	1.3	9.4	1.5		12.0	12.0	12.7	1.4	8.3	8.3		1.4	8.7	8.7
	1.3	9.4	1.7		12.0	12.0	12.7	1.5	8.4	8.3		1.4	8.7	8.7
3/24			1.7		12.0	12.0	12.7	1.5	8.3	8.3		1.4	8.7	8.7
	1.3	9.3	1.7		11.9	11.9	12.6	1.5	8.2	8.2		1.5	8.6	8.6
	1.3	9.4	1.5		12.0	12.0	12.1	1.4	8.2	8.2		1.4	8.7	8.7
<b>AVG:</b>	<b>1.2</b>	<b>9.4</b>	<b>1.6</b>		<b>11.9</b>	<b>11.9</b>	<b>12.8</b>	<b>1.5</b>	<b>8.5</b>	<b>8.5</b>		<b>1.5</b>	<b>8.7</b>	<b>8.7</b>

*Fishways are inspected twice daily plus one SCADA inspection.*



**Current AWS Progress**