

# The Dalles Dam Fishway Status Report

04/06/19

Inspection Period: March 31 - April 6, 2019

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

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

The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections: 21	Temperature: 45.7 °F
Comments: Spilling attraction flow to north ladder				
Secchi: 3.1 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	0	1.0' - 2.0'	1.4	
Entrance weir N1	0	depth (≥ 8')	9.4	Gates 1,7,8 open for a total 15.1Kcfs from 0600 to 1800; closed 3/21 with AWS start-up
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		
<b>EAST FISHWAY - Fish units off, AWS backup system forced closed 2 days</b>				
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'	1.0' preferred but 1.1' allowed for necessity.	
Junction pool weir JP6	0	0.0		
East entrance differential	3	1.0' - 2.0'	No attraction flow 3/31 pm - 4/2 pm	
Entrance weir E1	closed	No criteria		
Entrance weir E2	3	depth (≥ 8')	AWS flow for attraction: OOS 3/31-4/2	
Entrance weir E3	3	depth (≥ 8')	AWS flow for attraction: OOS 3/31-4/2	
Collection channel velocity	closed	1.5 - 4 fps	minimal flow	
Transportation channel velocity	closed	1.5 - 4 fps	minimal flow	
North channel velocity	0	1.5 - 4 fps	2.64 fps on 4/2	
South channel velocity	closed	1.5 - 4 fps	minimal flow	
West entrance differential	21	1.0' - 2.0'		
Entrance weir W1	21	depth (≥ 8')		
Entrance weir W2	21	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	21	1.0' - 2.0'		
Entrance weir S1	21	depth (≥ 8')		
Entrance weir S2	21	depth (≥ 8')		
<b>FISHLADDER FLOW ONLY Gates W1,2,3 and S1,2 closed</b>				
<b>JUVENILE PASSAGE</b>				
Sluicelgate operation	0	Units 1, 8, 18;	Unit 15 in lieu of 18 until 4/4	
Turbine trashrack drawdown	0	<1.5', biwklly		
Spill volume/pattern	0	None	Gates 1,7,8 open for a total 15.1Kcfs from 0600 to 1800 on 4/2	
Turbine Unit Priority	2	per FPP	31-Mar-19	
Turbine 1% Efficiency	0	per FPP		

## OTHER ISSUES:

### **Predators;**

Low piscivorous birds numbers. Large numbers of gulls still observed around Miller Island nesting rocks and the mouth of Klickitat river.  
USDA hazing start Apr15. Training Apr 9-11 at The Dalles Dam. Adding green laser test for gull hazing. Still awaiting NWD decision on use of lethal gull removal.  
Ongoing FPOM discussions concerning bass/walleye release by pikeminnow dam angling crew. Resolution for this season appears unlikely. **Catch and release of known invasive predators to juvenile salmonids likely to continue through the 2019 WDFW dam angling program.** This will be the third year of discussions.

### **Operation:**

North fish ladder in full service since Feb7. Spill for attraction flow resumed Mar31 with the forced outage of the AWS backup flow for the east fishway.  
East fishladder in service with intermittent AWS flow. Fish Unit breaker replacement extended to Apr10.

### **Current Outages;**

FU1 and FU2 OOS delayed fish unit breaker replacement contract. RTS est 4/10/2019. (delay from original RTS of 1/15/19)  
MU5 forced OOS blade seals and T3 transformer replace. RTS 7/12/2019.  
MU6 OOS annual and T3 transformer replace. RTS 7/12/2019.  
MU19 and MU20 forced OOS transformer acetylene production. RTS 10/28/2019

### **Maintenance:**

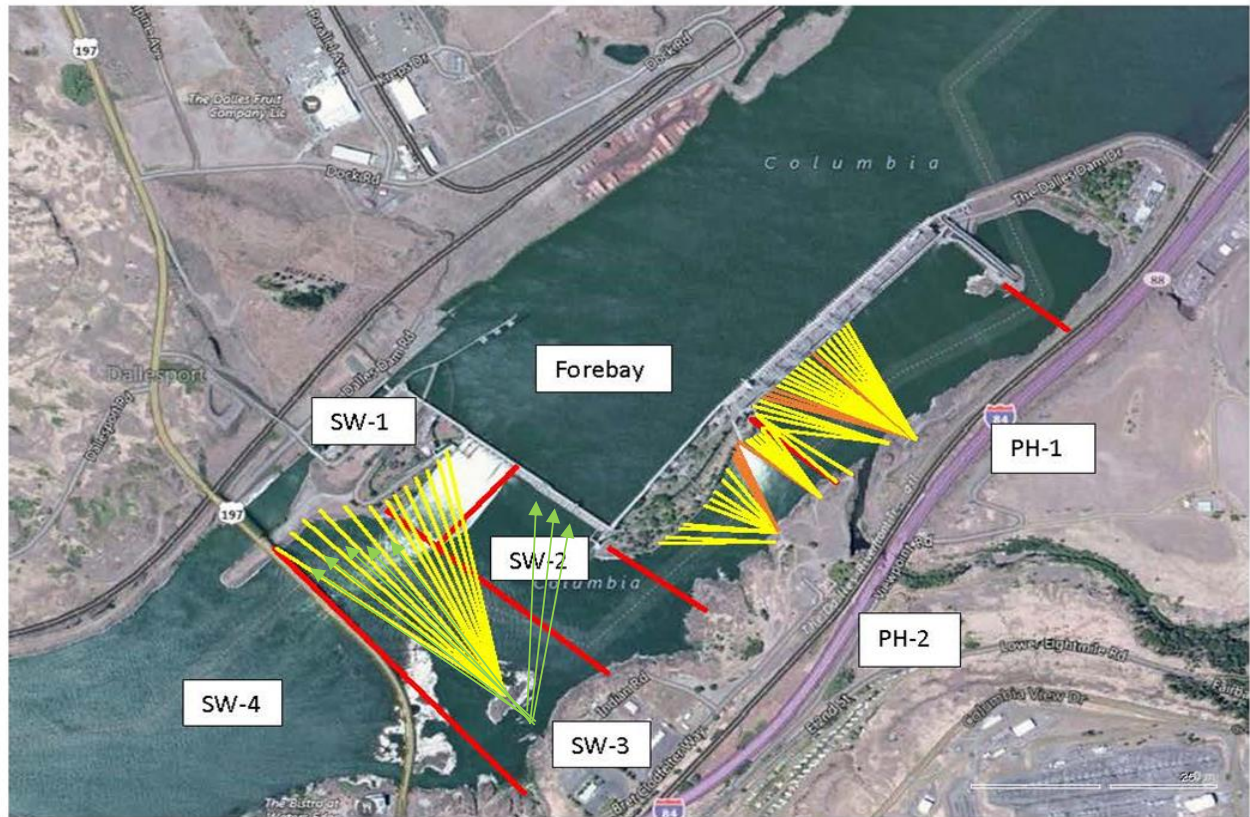
Calibrations: Entrance weirs in calibration specs. Maintenance working on inaccuracy issues with entrance tailwater sensor.  
Collection channel dewatering pumps 5 and 6 removed for rehab. Pump 1 ready for install.  
Fishway automation assembly starts April. Install winter of 2019/20  
Diffuser valve status evaluation by engineering underway to help determine a process for rehab.  
Contract for goats to remove vegetation on top side of north ladder and south channel in May.  
Fish related /non-fish funded items; Spillway assessment underway. Spillway crane replace and spillgate 9 repair included.  
All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Comprehensive spillway assessment review underway.

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

Bathymetry of spillwall and spill basin completed. District ROV inspection found some rock accumulation in front of spillbay 10.  
FFU and project fisheries staff video monitoring count stations. Total march counts; East 8 chinook and 283 steelhead / North 1 chinook and 86 steelhead.  
*AWS backup* - Valve room flooding on 3/31/19 forced emergency closure. Manually returned to service 4/2/19 after damage assessment. Electrical repair needed.  
AWS Follow on construction items to be addressed this summer. Flood alarm in valve room to be added to list.  
PSMFC weekly sampling for North Wasco County PUD resumed Apr1. High fry numbers as expected. Refer to PCMFC weekly sample report.  
PITAGS north and east fishladder data collection at count stations continues.  
*Fish Counters* - Official counting starts 4/1/19 via video until contractor issues resolved. Fish Field Unit providing video support. Project fisheries assisting in review.  
*Pikeminnow dam angling* - Resumes this spring. Bass/Walleye release continues a FPOM discussion.  
ODFW monthly fishway inspections resumes in March.  
*Lamprey minor mods* - Site visit for potential LPS planning around junction pool.  
Univ of Idaho lamprey radiotelemetry - Second season of lamprey passage night flow reduction test to resume in May.  
Tribal lamprey trapping - Project to construct single lift hoist mechanism prior to next trapping season. Materials and plans on hand.  
*Fish unit breaker replace*.- Schedule completion now Apr10. (schedule slip from Jan15)  
*Fish unit rehab* - Design on hold until further notice.  
*Transformer replacement* - Install T3 underway

Approved by: 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

## 2019 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	Observer	AM/PM	Zone	Gull		Cormorant		Caspian tern		Grebe		White Pelican		Other		Total birds in zone	Notes		
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF				
3/31/19	JWR	AM	FB	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
			PH2	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	
			SW2	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	
4/1/19	JWR	PM	FB	1	1	0	0	0	0	0	0	0	0	0	0	0	2		
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			PH2	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	
			SW2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
			SW3	0	2	0	6	0	0	0	0	0	0	0	0	0	0	8	
4/2/19	JED	AM	FB	1	0	1	13	0	0	2	0	0	0	0	0	0	17		
			PH1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, calm, 55F
			SW1	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	
			SW3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
4/3/19	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		
			PH2	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	
			SW2	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	overcast, windy, 50F
4/4/19	JED	AM	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		
			PH2	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	Overcast, showers, calm 47F.
			SW2	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	3	0	3	COME	
4/5/19	CEA	AM	FB	0	0	0	8	0	0	0	0	0	0	0	1	9	9	Osprey	
			PH1	0	0	0	4	0	0	0	0	0	0	1	0	5	5	COME	
			PH2	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	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, calm, 48 F
			SW3	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	
4/6/19	CEA	PM	FB	0	0	0	26	0	0	0	0	0	0	0	0	26	26		
			PH1	0	0	2	3	0	0	0	0	0	0	1	0	6	6	2 DCCO F PH1 west	
			PH2	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	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, breezy, 55 F
			SW3	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	
4/6/19	CEA	PM	SW4	0	0	0	1	0	0	0	0	0	0	0	0	1	1		

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

	Secchi:		USGS: Temperatures
3/31	2.5	Sun	44.7
4/1	2.5	Mon	45.1
4/2	3.0	Tue	45.4
4/3	3.0	Wed	45.7
4/4	3.5	Thurs	46.1
4/5	3.5	Fri	46.4
4/6	4.0	Sat	46.5
	3.1	AVG	45.7

[USGS river temp APRIL.](#)

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

SCADA INSPECTION

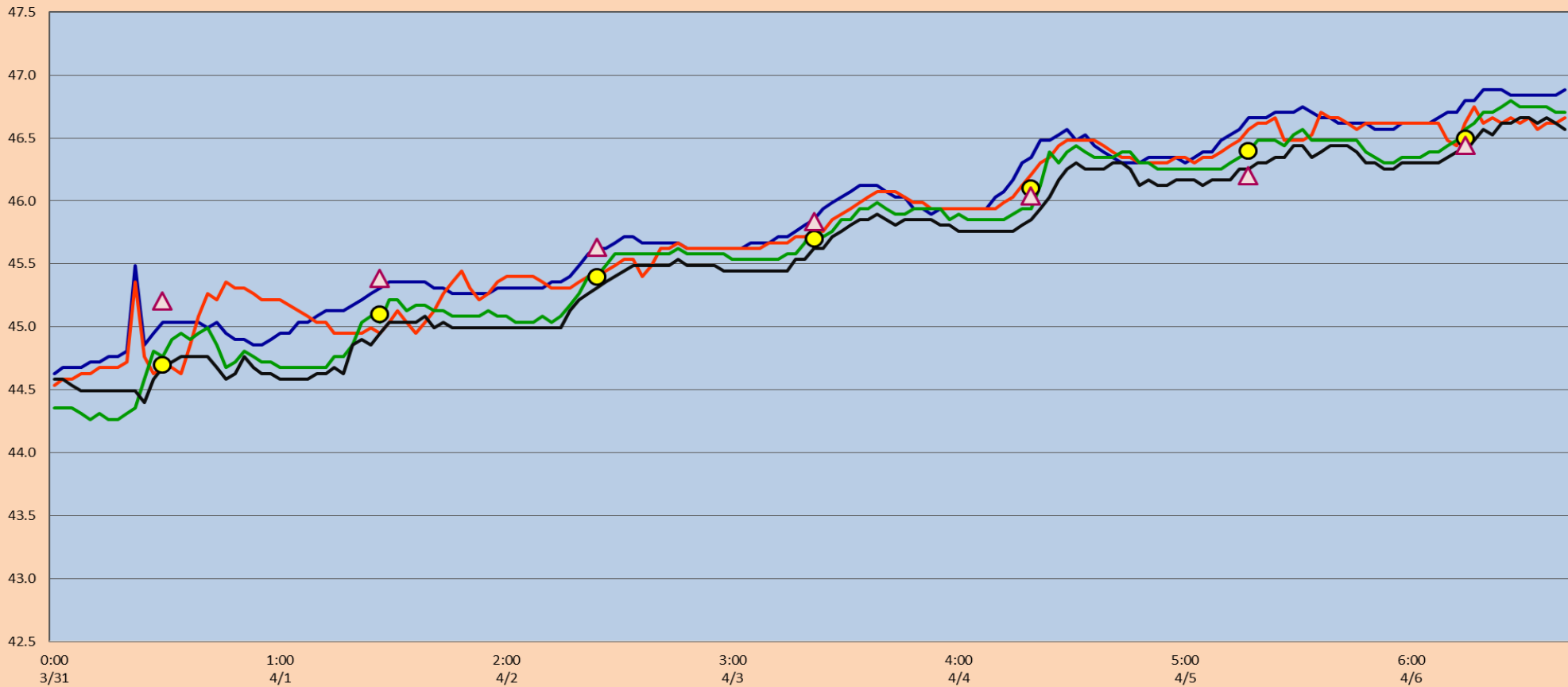
= Out of criteria

Date:	North Ladder Entrance		East Ladder						
	Differential	N1 Depth	East Entrance- open				JP 6	West Entrance- closed	South Entrance- closed
			Differential	E1 Depth	E2 Depth	E3 Depth			
3/31			1.5	No	9.1	9.1	12.6		
	1.4	9.4	1.4		9.0	9.0	13.1		
	1.4	9.4	-0.4		closed	6.0	14.9		
4/1			-0.3		closed	6.1	13.0		
	1.4	9.4	-0.3		closed	5.9	12.8		
	1.4	9.4	1.6			2.3	12.6		
4/2									
	1.4	9.1	0.2		closed	6.1	11.9		
	1.3	9.1	1.2		8.6	8.5	10.9		
4/3			1.8		9.3	9.3	11.5		
	1.4	9.3	2.0		10.5	10.5	10.7		
	1.4	9.1	1.3		10.5	10.5	11.5		
4/4			1.4		10.5	10.5	11.6		
	1.3	9.7	1.9		10.2	9.8	12.3		
	1.3	9.4	1.8		10.5	10.5	11.2		
4/5			1.3	11.6	11.7	11.5			
	1.4	9.4	1.6	11.5	11.5	11.9			
	1.4	9.4	1.5	11.9	11.9	11.9			
4/6			1.7	11.0	11.1	12.2			
	1.4	9.4	1.6	11.2	11.1	12.2			
	1.4	9.4	1.8	12.7	12.5	13.1			
<b>AVG:</b>	<b>1.4</b>	<b>9.4</b>	<b>1.2</b>		<b>10.5</b>	<b>9.2</b>	<b>12.2</b>		

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

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

— East Count Station — South Entrance — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2017)



# Spill kcfs

