

# The Dalles Dam Fishway Status Report

04/14/19

Inspection Period: April 7 - April 13, 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: Comments: Fish units back in service.	21	Temperature: Secchi:	47.7 °F 2.6 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	0	1.0' - 2.0'	1.4			
Entrance weir N1	0	depth (≥ 8')	9.9			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
<b>EAST FISHWAY - Fish units testing, AWS shut down.</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	1	1.1' ± 0.1'	1.3'			
Junction pool weir JP6	0	0.0				
East entrance differential	0	1.0' - 2.0'				
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')				
Entrance weir E3	0	depth (≥ 8')				
Collection channel velocity	0	1.5 - 4 fps	Not available			
Transportation channel velocity	0	1.5 - 4 fps	Not available			
North channel velocity	0	1.5 - 4 fps	1.57 fps on 4/11 with high tailwater			
South channel velocity	0	1.5 - 4 fps	Not available			
West entrance differential	3	1.0' - 2.0'				
Entrance weir W1	3	depth (≥ 8')				
Entrance weir W2	3	depth (≥ 8')				
Entrance weir W3	closed	No criteria				
South entrance differential	3	1.0' - 2.0'				
Entrance weir S1	7	depth (≥ 8')	4 at 7.9' depth			
Entrance weir S2	7	depth (≥ 8')	4 at 7.9' depth			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18;				
Turbine trashrack drawdown	0	<1.5', biweekly	Not available			
Spill volume/pattern	0	None	Gates 1 through 8 open to flex spill pattern.			
Turbine Unit Priority	13	per FPP	MU 5 and 6 OOS for maintenance			
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

### **Predators;**

Gull numbers building. USDA hazers start Apr15. Plans for testing green laser deterrent.

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 operation.

East fishladder in service with intermittent AWS flow through Apr7. Fish Units returned Apr8.

Spillway open for juvenile passage Apr10.

Sluiceway open per Fish Passage Plan.

### **Current Outages;**

FU1 and FU2 OOS delayed fish unit breaker replacement contract. RTS 4/8/2019. (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: PLC adjusted for east entrance tailwater sensor.

Collection channel dewatering pumps 5 and 6 rehab ongoing. 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. Removal plan forthcoming.

FFU and project fisheries staff video monitoring count stations.

*AWS backup* - Valve room 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. Starting assembly.

*Fish unit breaker replace*.- Schedule completion now Apr10. (schedule slip from Jan15)

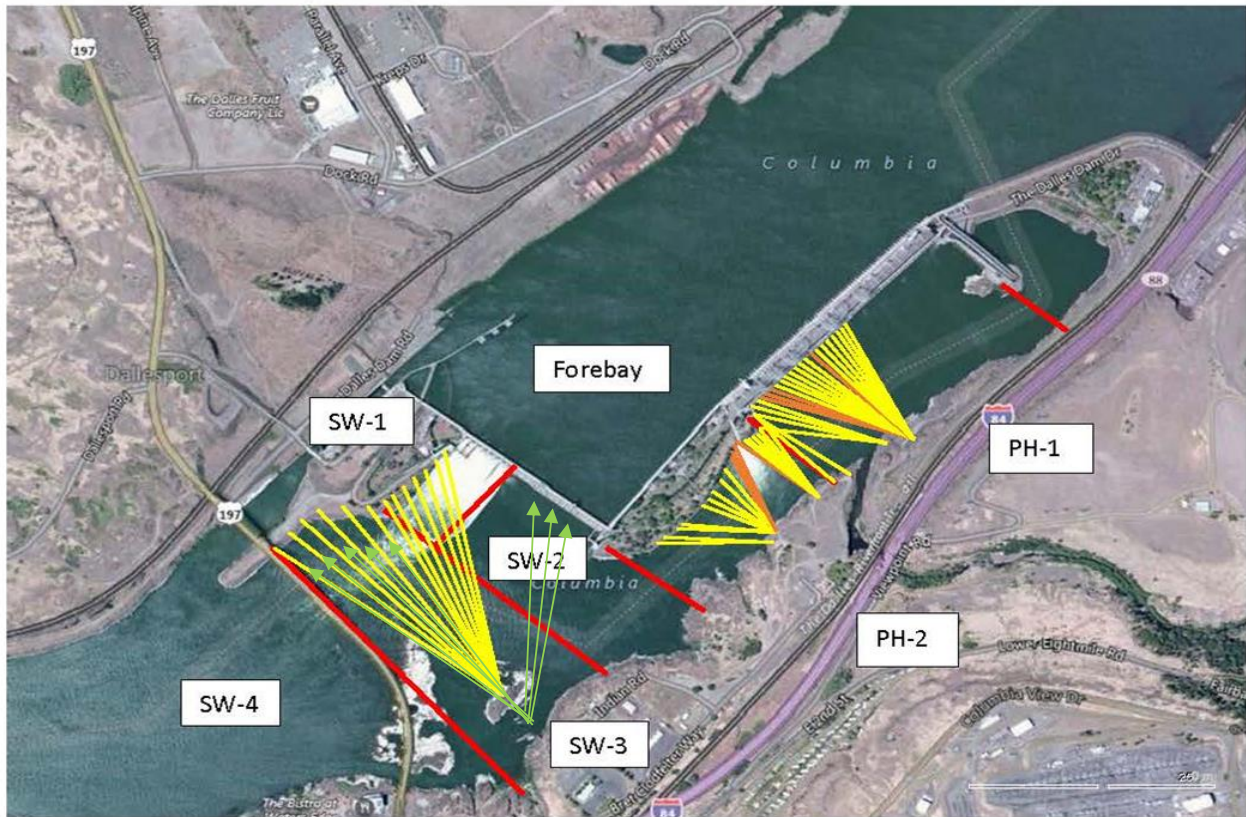
*Fish unit rehab* - Design on hold until further notice.

*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

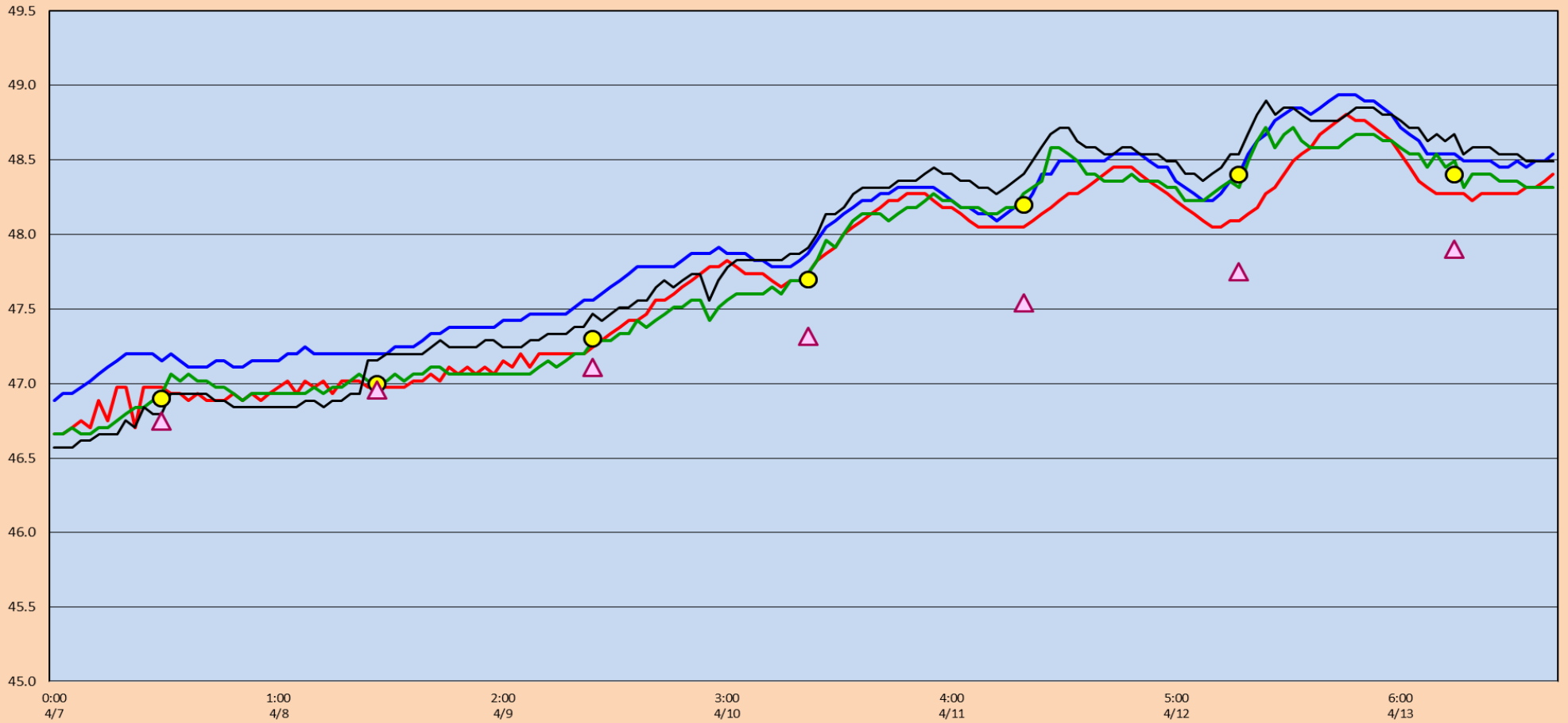
F=foraging, NF=non-foraging

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				
4/7/19	CEA	AM	FB	0	0	0	16	0	0	0	0	0	0	0	0	0	16		
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	2	5	all PH1 east; other = COME	
			PH2	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	rainy, 50F
			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	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/8/19	JWR	PM	FB	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
			PH1	10	0	0	0	0	0	0	0	0	0	0	0	0	10		
			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	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW3	0	0	0	2	0	0	0	0	0	0	0	0	0	2		
			SW4	0	2	0	0	0	0	0	0	0	0	0	0	0	2		
4/9/19	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH1	15	0	0	0	0	0	0	0	0	0	0	0	0	15		
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	0	3		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	6	0	0	0	0	0	0	0	0	0	0	0	0	6		
			SW3	0	0	0	4	0	0	0	0	0	0	0	0	0	4		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/10/19	JED	PM	FB	0	0	0	85	0	0	0	0	0	0	0	0	0	85	At 1800 DCCO were non-reactive to green light.	
			PH1	8	12	0	0	0	0	0	0	0	0	0	0	0	20	At 1400 demo green light on stationary gulls.	
			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	overcast, windy, 50F
			SW3	0	0	2	2	0	0	0	0	0	0	0	0	0	4		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/11/19	JED	AM	FB	0	0	0	28	0	0	0	0	0	0	0	0	28	CO were very reactive to 40 minutes of green light and left the structure.		
			PH1	30	10	0	0	0	0	0	0	0	0	3	0	43	COME. At 1300 stationary gulls attenuated to green light		
			PH2	0	0	0	0	0	0	0	0	0	0	2	0	2	Osprey		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, windy, 50F	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Count was performed at 0830	
			SW3	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		
4/12/19	JED	PM	FB	0	0	1	49	0	0	0	0	0	0	1	0	51	CO highly reactive to green light, left the structure BPA tower. Osprey F		
			PH1	3	0	0	0	0	0	0	0	0	0	0	0	3	0700 12 gulls attenuated to green light.		
			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	0	Sunny, windy, 50F	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	1	0	0	0	0	0	0	0	0	0	0	0	0	1		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4/13/19	JED	AM	FB	0	1	0	20	0	0	0	0	0	0	0	0	21	highly reactive to green light, left the BPA tower and returned by 900		
			PH1	10	14	2	0	0	0	0	0	0	0	0	0	26	0900 24 gulls attenuated to green light. Gull count 0 by 1200		
			PH2	0	0	0	0	0	0	0	0	0	0	1	0	1	Osprey		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast, 5mph W, 50F	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	1	0	0	0	0	0	0	0	0	0	0	0	0	1		
			SW4	6	0	0	0	0	0	0	0	0	0	0	0	0	6	Gulls visible at high altitude passing west to east.	

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

# 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)



		USGS:
Secchi:		Temperatures
4/7	4.0	Sun 46.9
4/8	2.5	Mon 47.0
4/9	2.5	Tue 47.3
4/10	2.5	Wed 47.7
4/11	2.5	Thurs 48.2
4/12	2.0	Fri 48.4
4/13	2.0	Sat 48.4
	2.6	AVG 47.7

[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											
			East Entrance- open					West Entrance				South Entrance		
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
4/7			1.7		13.0	13.0	12.8	4.1	closed	closed	0.0	4.8	closed	closed
	2.0	9.4	1.7		13.1	13.0	13.5	3.7	closed	closed	0.0	4.5	closed	closed
	1.5	9.4	1.8		13.0	13.1	14.0	3.7	closed	closed	0.0	4.5	closed	closed
4/8			1.5		13.5	13.5	13.5	1.4	8.0	8.0	0.0	1.3	8.2	8.3
	1.4	9.8	1.6		11.9	11.9	14.2	1.1	7.9	7.9	0.0	1.2	8.2	8.2
	1.4	10.0	1.7		12.0	12.0	14.3	1.0	7.9	7.9	0.0	1.2	8.1	8.1
4/9			1.8		13.6	13.6	15.2	1.4	8	8	0	1.4	8.3	8.3
	1.3	10.1	1.5		13.5	13.6	15.4	1.2	7.9	7.9	0	1.3	8.3	8.3
	1.3	10.2	1.5		13.5	13.5	16	1.4	7.9	7.9	0	1.4	8.1	8.1
4/10			1.6		13.5	13.5	13.5	1.3	8	8	0	1.4	8.3	8.3
	1.4	10.1	1.7		14.8	14.8	18.9	1.5	8	8	0	1.4	8.3	8.3
	1.4	10.0	1.6		13.9	14	18.6	1.4	8.5	8.5	0	1.4	8.1	8.1
4/11			1.6		13.9	13.9	18.7	1.5	8.4	8.4	0	1.4	8.2	8.2
	1.4	10.1	1.7		13.8	13.8	18.6	1.4	8.6	8.6	0	1.4	8.2	8.2
	1.4	10.1	1.6		14	14	17.8	1.4	8.4	8.4	0	1.3	8.3	8.3
4/12			1.5		13.9	13.9	17.2	1.3	8.5	8.5	0	1.4	8.1	8.1
	1.5	9.9	1.5		13.9	13.9	17	1.4	8.5	8.5	0	1.3	8.1	8.1
	1.4	10.1	1.5		14.5	14	16	1.2	8.4	8.4	0	1.2	8.1	8.1
4/13			1.5		13.9	13.9	14.9	1.2	8.4	8.4	0	1.2	8.1	8.1
	1.4	10.1	1.4		13.9	13.9	14.6	1.2	8.1	8.1	0	1.2	8.1	8.1
	1.4	9.9	1.6		12.6	12.5	12.7	1.1	8.3	8.3	0	1.2	8.1	8.1
<b>AVG:</b>	<b>1.4</b>	<b>9.9</b>	<b>1.6</b>		<b>13.5</b>	<b>13.5</b>	<b>15.6</b>	<b>1.7</b>	<b>8.2</b>	<b>8.2</b>	<b>0.0</b>	<b>1.8</b>	<b>8.2</b>	<b>8.2</b>

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