

# The Dalles Dam Fishway Status Report

12/15/18

Inspection Period: Dec. 9 - Dec. 15, 2018

## 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 Out of Criteria	Criteria Limit	Total Number of Inspections: Comments: <b>FU's off 12/1 for dewatering</b>	7	Temperature: #DIV/0! °F	Secchi: 5+ 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'	#DIV/0!			
Entrance weir N1	0	depth (≥ 8')	#DIV/0!			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
<b>EAST FISHWAY - Dewatered for annual maintenance</b>						
Exit differential		≤ 0.5'				
Removable weirs 154-157		Per forebay				
Weir 158-159 differential		1.0' ± 0.1'				
Count station differential		≤ 0.3'				
153 Weir crest depth		1.1' ± 0.1'				
Junction pool weir JP6		0.0				
East entrance differential		1.0' - 2.0'				
Entrance weir E1		No criteria				
Entrance weir E2		depth (≥ 8')				
Entrance weir E3		depth (≥ 8')				
Collection channel velocity		1.5 - 4 fps				
Transportation channel velocity		1.5 - 4 fps				
North channel velocity		1.5 - 4 fps	2.64 fps			
South channel velocity		1.5 - 4 fps				
West entrance differential		1.0' - 2.0'				
Entrance weir W1		depth (≥ 8')				
Entrance weir W2		depth (≥ 8')				
Entrance weir W3		No criteria				
South entrance differential		1.0' - 2.0'				
Entrance weir S1		depth (≥ 8')				
Entrance weir S2		depth (≥ 8')				
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18	MU1 (1-2, 1-3) & MU18 (18-1, 18-2) endgate open			
Turbine trashrack drawdown	0	<1.5', biweekly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP	Bus maintenance work			
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

### **Predators;**

Eagle, Gull and Merganser numbers increasing as expected per seasonal trend  
No Sea Lion observations

### **Operation:**

East fishladder dewatered 12/3. *Juveniles:* 1 chinook, 9 steelhead, 2 lamprey. *Adults:* 1 st, 1 lamprey, 2 sturgeon, 2 walleye, ~600 shad  
East fishway channels dewatered 12/6. *Juveniles:* 5 lamprey, 1 steelhead. *Adults:* 12 sturgeon, 39 adult lamprey, , 2 chinook, 1 adult steelhead  
One adult chinook and 4 lamprey mortalities as result of the dewatering. MFR provided to FPOM. Preventative measures being discussed.

### **Current Outages;**

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS 1/15/18  
MU1 and MU2 OOS for FU breaker replace. RTS 12/19/18  
MU5 forced OOS blade seals and T3 transformer replace. RTS 3/21/2019  
MU6 OOS annual and T3 transformer replace. RTS 3/21/2019  
MU16 OOS exciter replacement. RTS 3/28/2019  
MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

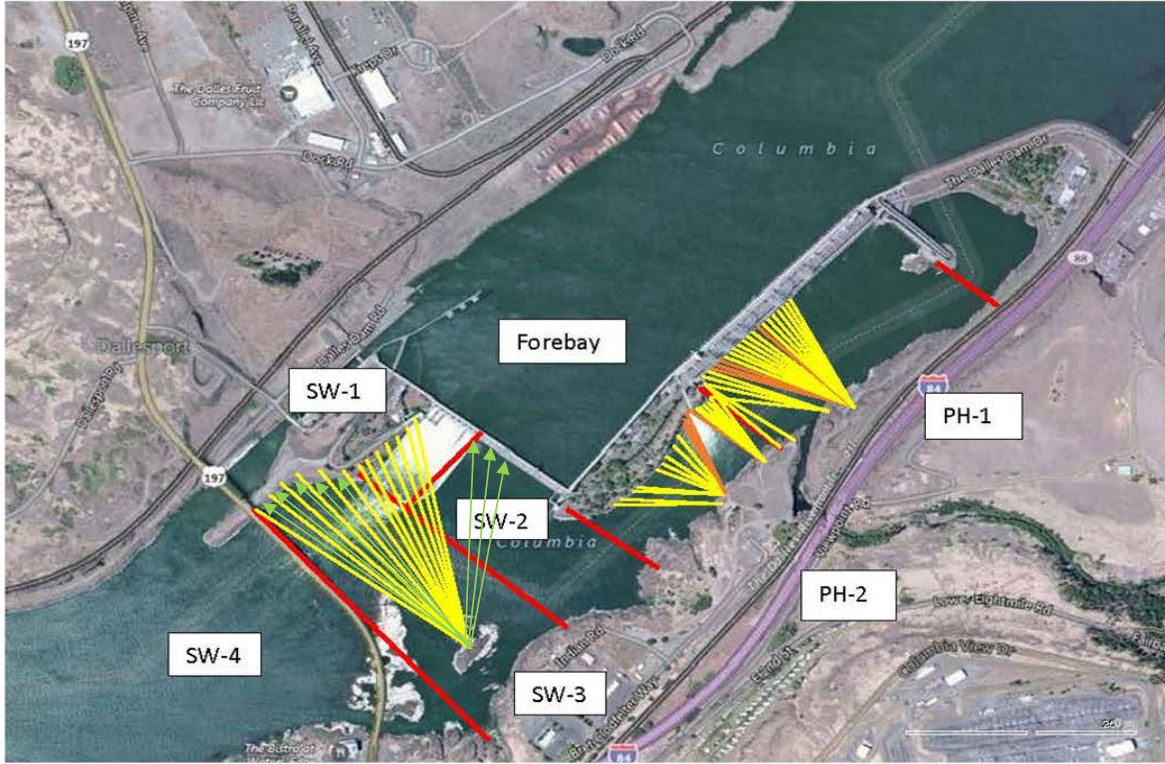
### **Maintenance**

East ladder dewatered Dec3. North ladder dewatering Jan 22.  
East count station brush frame removed for brush replace.  
Count station reflooring started.  
Collection channel dewatering pumps 3 and 4 out for rehab.  
Assembly starting on fishway automation replacement. Start install winter of 2019/20  
East ladder exit weirs 156 and 157 rehab/weir wheel replacement started.  
Repair of west entrance diffuser 2-1 delayed due to unanticipated water levels. Remaining diffuser repair in planning. In FPOM review.  
Starting vegetation removal from south channel rock walls.  
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 11/7, awaiting results  
Zebra mussel velliger sampling resumes next spring.  
Lower Columbia River Forebay Temperature Monitoring completed. Equipment removed. To resume next season.  
*AWS construction* - Commissioning test and operation with single fish unit test completed.  
PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review. Installation postponed to winter 2019/20.  
PITAGS North and east fishladder data collection at count stations continues. Will maintain equipment during dewatering.  
*Fish Counters* - Resumes 4/1/19.  
*Pikeminnow dam angling* - Caught 1785 YTD. Resumes next spring.  
ODFW monthly fishway inspections concluded 10/16  
*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. East weir to be completed mid Dec.  
Univ of Idaho lamprey radiotelemetry track underway through November. Coordinating antenna maintenance this winter.  
Lamprey trapping by tribes completed for season. Awaiting final numbers. Project to construct lift hoist mechanism for next trapping season.  
*Fish unit breaker replace* .- Prep work in progress. Installation 12/1/18 - 1/14/19.  
*Fish unit rehab* - Test of AWS backup with single fish unit 11/28 was successful achieving criteria, resulting in new alternative review.  
*Transformer replacement* - Install T8 underway (units 15 and 16). Sequence schedule modified from original

Approved by: Bryan Hert 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

## 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				
12/9	JED	PM	FB	4	0	1	0	0	0	0	0	0	0	0	0	0	5	Calm, overcast, cool.	
			PH1	14	10	0	66	0	0	0	0	0	0	0	30	7	127	COME	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	60	2	0	0	0	0	0	0	0	0	4	0	66	COME	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	51	2	50	0	0	0	0	0	0	0	1	0	104	COME	
12/10	JED	PM	FB	0	315	0	35	0	0	0	0	0	0	0	0	0	350		
			PH1	21	6	6	20	0	0	0	0	0	0	0	30	8	91	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	
			SW3	0	22	0	7	0	0	0	0	0	0	0	0	0	0	29	
12/11	JED	PM	FB	20	0	15	0	0	0	0	0	0	0	35	1	71			
			PH1	20	12	1	8	0	0	0	0	0	0	14	2	57	35COME, 1BAEA		
			PH2	1	0	1	0	0	0	0	0	0	0	0	4	6	15COME, 1GBHE F		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3GBHE, 1BAEA	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	cool, calm, rain,
			SW3	0	30	0	6	0	0	0	0	0	0	0	4	0	40	poor visibility	
12/12	CEA	AM	FB	0	0	1	0	0	0	0	0	0	0	0	0	1	71	COME	
			PH1	13	4	0	29	0	0	0	0	0	0	49	3	98	GBHE		
			PH2	2	0	0	0	0	0	0	0	0	0	0	1	3			
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	BAEA
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
			SW3	0	33	0	5	0	0	0	0	0	0	0	0	0	38		
12/13	CEA	PM	FB	0	0	0	0	0	0	1	0	0	0	0	1	2			
			PH1	11	22	12	28	0	0	0	0	0	0	49	1	123	Pied-billed grebe, BAEA		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COMe
			SW1	0	88	0	0	0	0	0	0	0	0	0	0	0	88	on spillwall	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	24	3	55	0	0	0	0	0	0	0	0	1	83	GBHE	
12/14	JWR	AM	FB	0	2	1	0	0	0	0	0	0	0	0	0	3			
			PH1	3	1	0	0	0	0	0	0	0	0	0	0	4			
			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	16	0	0	0	0	0	0	0	0	0	16		
12/15	JWR	PM	FB	0	0	4	0	0	0	0	0	0	0	0	0	4			
			PH1	8	4	0	0	0	0	0	0	0	0	0	0	12			
			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	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	23	0	0	0	0	0	0	0	0	0	23		

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

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



	Secchi:		USGS: Temperatures
12/2	5+	Sun	
12/3	5+	Mon	
12/4	5+	Tue	
12/5	5+	Wed	
12/6	5+	Thurs	
12/7	5+	Fri	
12/8	5+	Sat	
	5+	AVG	#DIV/0!

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

SCADA INSPECTION  
= Out of criteria

Date:	North Ladder			East Ladder										
	North Entrance		East Entrance					West Entrance				South Entrance		
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
12/2														
12/3														
12/4														
12/5														
12/6														
12/7														
12/8														
<b>AVG:</b>	#DIV/0!	#DIV/0!												

Ladder dewatered for maintainence RTS 01/20/2019

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