

# The Dalles Dam Fishway Status Report

10/20/18

Inspection Period: Oct. 14 - Oct. 20th, 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	21	Temperature: 60.4 °F	Secchi: 5.4 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'	1.3			
Entrance weir N1	0	depth (≥ 8')	9.2			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
<b>EAST FISHWAY</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	2	1.1' ± 0.1'	periods of >1.2	10/20 am, pm		
Junction pool weir JP6	0	0.0				
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	13.1			
Entrance weir E3	0	depth (≥ 8')	13.1			
Collection channel velocity	0	1.5 - 4 fps	2.32 fps	<b>Range: FU2, 4.78fps to MU 20, 2.05 fps on 10/14/18</b>		
Transportation channel velocity	0	1.5 - 4 fps	2.53 fps			
North channel velocity	0	1.5 - 4 fps	2.4 fps			
South channel velocity	0	1.5 - 4 fps	3.99 fps			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.5			
Entrance weir W2	1	depth (≥ 8')	8.5			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir S1	0	depth (≥ 8')	8.3			
Entrance weir S2	0	depth (≥ 8')	8.3			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 21	3-1,3-2, 3-3,8-1,8-3, 18-2 and endgate open			
Turbine trashrack drawdown	0	<1.5', biweekly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

### **Predators;**

Few foraging birds on project. Awaiting NWD determination of using lethal means to support gull hazing next season.

No sea lion sightings this week.

**Release of invasive bass/walleye bycatch** by WDFW dam anglers continued through this angling season. Lethal removal being discussed at FPOM.

### **Operation:A5:L29A5:M31A5:M32A5:M3A5:L28**

East and north fishway in full operation.

Sluiceway open with 6 sluiceway operation (3, 8 & 18). Unit 3 gates return to unit 1 on Oct 22

### **Current Outages;**

MU1 OOS annual RTS 10/22/2018

MU2 OOS annual RTS 10/18/2018

MU5 forced OOS blade seals. RTS 1/21/2018

MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 9/10/2019

MU15 OOS transformer replacement. RTS 11/01/2018

MU16 OOS transformer replacement. RTS 6/29/2019

MU19 OOS transformer acetylene, RTS 10/25/18

### **Maintenance**

Dewatering schedule complete. East ladder dewater Dec4. North ladder dewater Jan 15. Schedule and task list provided to FPOM.

East count station brush out of service, TDE awaiting parts. Requires manual cleaning.

Collection channel dewatering pumps 3 and 4 out for rehab. Pump 4 requires pump/motor replacement. RTS by 12/1/18.

Planning 154 -157 rehab/weir wheel replace next winter. Wheels being machined.

Diffuser valve rehab beyond project maintenance capability. Exploring options. Diffuser valve long term plan in FPOM review.

Fish related /non-fish funded items; Spillway assessment underway. Spillway crane replace and spillgate 9 to be included.

All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Comprehensive spillway assessment review underway.

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

Zebra mussel veliger sampling completed for the year by project fisheries. Samples provided to Portland State Univ. No mussels found to date.

Lower Columbia River Forebay Temperature Monitoring – Done for season Equipment removal 10/29/18.

*AWS construction* - Commissioning test complete.

PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review. Installation planned for this winter.

PITAGS North and east fishladder data collection at count stations continues.

*Fish Counters* - Continues through Oct31.

*Pikeminnow dam angling* - Caught 1785 YTD .

ODFW monthly fishway inspections continue. No problems reported.

*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. East weir to be complete December.

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.

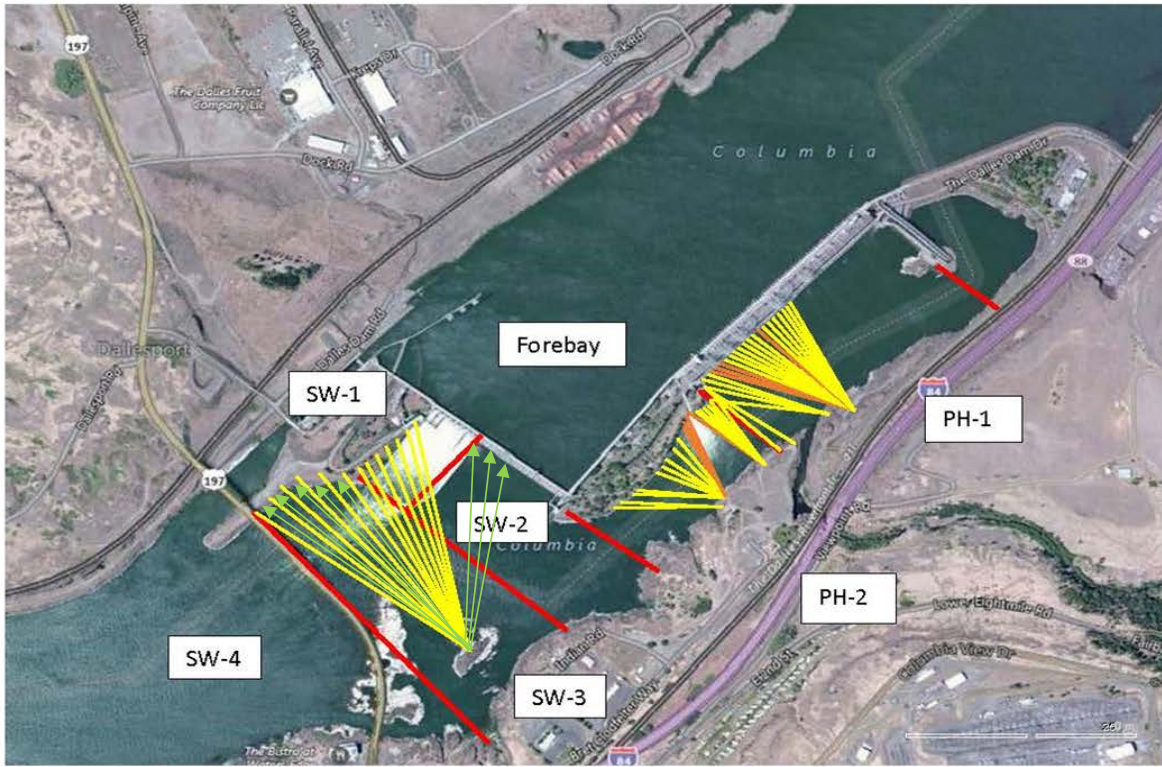
*Fish unit breaker replace* .- Prep work in progress. Installation 12/1/18 - 1/14/19.

*Fish unit rehab* - Development plan continues. Alternatives in review. Test of AWS backup with single fish unit Nov28. FPOM approved.

*Transformer replacement* - Install T8 underway (units 15 and 16). Sequence schedule modified from original

Approved by: 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			
10/14	JED	PM	FB	4	0	0	0	0	0	32	0	0	0	0	0	36	Juv. shad morts in Nav. lock COME sunny, warm calm GBHE	
			PH1	0	0	4	25	0	0	0	0	0	0	6	10	45		
			PH2	3	0	4	0	0	0	0	0	0	0	0	0	7		
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	2		
			SW2	2	0	1	1	0	0	0	0	0	0	0	2	0		6
			SW3	0	25	4	55	0	0	0	0	0	0	0	0	0		84
			SW4	0	110	0	0	0	0	0	0	0	0	0	110			
10/15	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	0	19	0	0	0	0	0	0	0	7	26		
			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	1	0	0	0	0	0	0	0	0	0	0	1		
			SW3	0	10	0	63	0	0	0	0	0	0	0	0	0		73
			SW4	0	313	0	11	0	0	0	0	0	0	0	324			
10/16	JED	PM	FB	30	0	0	0	0	0	35	0	0	0	1	0	66	BAEA COME sunny, warm calm	
			PH1	0	0	1	27	0	0	0	0	0	0	3	13	44		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	2		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	3	0	35	0	0	0	0	0	0	0	0	0		38
			SW4	35	150	0	0	0	0	0	0	0	0	0	185			
10/17		AM	FB	0	0	0	0	0	0	0	0	0	0	10	0	10	GREBE COME, GBHE sunny, calm, 65 degrees COME	
			PH1	0	1	0	17	0	0	0	0	0	0	0	0	0		40
			PH2	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	1		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	4	4	2	54	0	0	0	0	0	0	0	3	2		69
			SW4	20	360	0	0	0	0	0	0	0	0	0	380			
10/18	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	0	10	0	0	0	0	0	0	0	4	14		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	67	0	55	0	0	0	0	0	0	0	0	0		122
			SW4	0	324	0	31	0	0	0	0	0	0	0	355			
10/19	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	2	11	0	0	0	0	0	0	0	5	18		
			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	59	0	65	0	0	0	0	0	0	0	0	0		124
			SW4	0	322	0	84	0	0	0	0	0	0	0	406			
10/20	CEA	PM	FB	2	0	1	0	0	0	0	0	0	2	0	5	COME 29 COME, 1 GBHE COME		
			PH1	0	2	6	36	0	0	0	0	0	0	2	28		74	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0		0	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0		1	
			SW2	0	2	0	0	0	0	0	0	0	0	0	0		2	
			SW3	0	65	1	60	0	0	0	0	0	0	1	0		127	
			SW4	0	225	0	0	0	0	0	0	0	0	225				

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

## The Dalles East

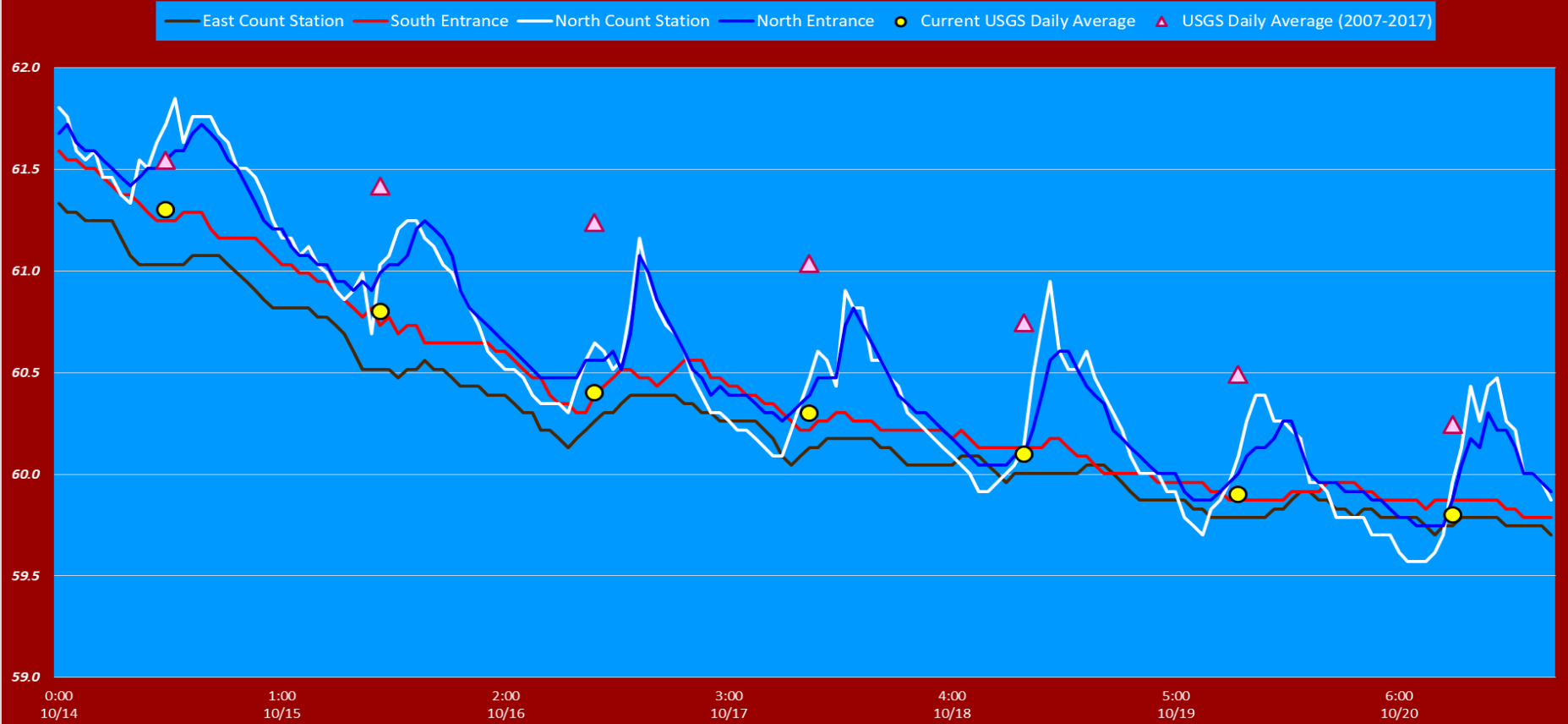
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/14	429	337	92	271	185	86	90	85	5	0	0	0	1
10/15	337	239	98	241	175	66	66	58	8	0	0	0	0
10/16	225	148	77	273	193	80	43	35	8	0	0	0	0
10/17	249	161	88	262	182	80	51	43	8	0	0	0	0
10/18	151	97	54	194	121	73	56	43	13	0	0	0	0
10/19	179	119	60	218	144	74	60	53	7	0	0	0	0
10/20	483	410	73	191	120	71	103	92	11	0	0	0	1
<b>total</b>	<b>2053</b>	<b>1511</b>	<b>542</b>	<b>1650</b>	<b>1120</b>	<b>530</b>	<b>469</b>	<b>409</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>

## 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
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	0
10/14	23	12	11	12	13	-1	4	4	0	0	0	0	0
10/15	31	20	11	30	22	8	13	11	2	0	0	0	0
10/16	8	2	6	30	18	12	10	10	0	0	0	0	0
10/17	31	19	12	15	7	8	9	7	2	0	0	0	0
10/18	26	18	8	22	17	5	14	13	1	0	0	0	0
10/19	29	23	6	19	11	8	15	10	5	0	0	0	0
<b>20-Oct-18</b>	<b>51</b>	<b>46</b>	<b>5</b>	<b>30</b>	<b>20</b>	<b>10</b>	<b>22</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% North</b>	<b>2.4</b>	<b>3.0</b>	<b>0.9</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>4.5</b>	<b>4.0</b>	<b>7.7</b>	<b>#DIV/0!</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

[Fish Count](#)

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



USGS: USCS River Temps			
Secchi:		Temperatures	
10/14	6.0	Sun	61.3
10/15	5.0	Mon	60.8
10/16	5.0	Tue	60.4
10/17	6.0	Wed	60.3
10/18	5.0	Thurs	60.1
10/19	5.0	Fri	59.9
10/20	6.0	Sat	59.8
	5.4	AVG	60.4

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		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
10/14			1.6		13.5	13.4	11.2	1.6	8.4	8.4		1.5	8.3	8.3
	1.4	9.1	1.6		13.5	13.5	11.3	1.5	8.6	8.6		1.5	8.3	8.3
	1.4	9.2	1.6		13.4	13.4	11.2	1.6	8.4	8.4		1.5	8.2	8.2
10/15			2.0		13.4	13.4	11.7	1.6	8.6	8.6		1.5	8.3	8.3
	1.5	9.1	1.5		13.4	13.4	11.5	1.4	8.7	8.7		1.5	8.2	8.2
	1.4	9.1	1.4		13.4	13.4	11.5	1.5	8.7	8.7		1.5	8.2	8.2
10/16			1.6		13.5	13.5	11.9	1.5	8.9	8.9		1.5	8.4	8.4
	1.4	9.2	1.4		9.4	9.4	11.5	1.4	8.9	8.9		1.5	8.3	8.3
	1.5	9.0	1.4		13.4	13.4	10.8	1.5	8.3	8.3		1.5	8.2	8.2
10/17			1.6		13.5	13.5	11.4	1.6	8.4	8.4		1.5	8.3	8.3
	1.4	9.1	1.5		13.4	13.4	11.5	1.5	9.0	9.0		1.5	8.2	8.2
	1.4	9.2	1.3		13.4	13.5	11.0	1.4	8.7	8.7		1.4	8.2	8.2
10/18			1.3	13.5	13.5	10.7	1.4	8.8	8.8	1.4	8.3	8.3		
	1.3	9.4	1.4	13.6	13.6	10.9	1.4	8.8	8.8	1.4	8.4	8.4		
	1.3	9.3	1.4	13.5	13.5	10.6	1.4	8.6	8.6	1.4	8.4	8.4		
10/19			1.4	13.5	13.5	9.7	1.6	8.4	8.4	1.3	8.3	8.3		
	1.3	9.3	1.5	13.4	13.4	10.0	1.5	8.2	8.2	1.5	8.2	8.2		
	1.4	9.3	1.6	13.4	13.4	11.0	1.6	8.2	8.2	1.4	8.3	8.3		
10/20			1.9	13.4	13.4	10.0	1.5	8.0	8.0	1.4	8.3	8.3		
	1.0	9.3	1.6	13.0	12.2	8.4	1.4	8.1	8.1	1.3	8.4	8.4		
	1.2	8.9	1.5	11.4	11.4	8.1	1.5	8.2	7.7	1.3	8.3	8.3		
<b>AVG:</b>	<b>1.3</b>	<b>9.2</b>	<b>1.5</b>	<b>13.1</b>	<b>13.1</b>	<b>10.8</b>	<b>1.5</b>	<b>8.5</b>	<b>8.5</b>	<b>1.4</b>	<b>8.3</b>	<b>8.3</b>		

Fishways are inspected twice daily plus one SCADA inspection.