

# The Dalles Dam Fishway Status Report

09/09/18

Inspection Period: September 2 - 8, 2018

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21	Temperature: 68.3 °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')		10.6		
Entrance weir N2	0	Closed				
PUD Intake differential	2	≤ 0.5'				excessive aquatic weeds requiring frequent raking
<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	0	1.0' ± 0.1'				
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')		13.0		
Entrance weir E3	0	depth (≥ 8')		13.0		
Collection channel velocity	0	1.5 - 4 fps	2.32 fps	Range: SS, 1.72 fps to MU 20, 2.77fps		
Transportation channel velocity	0	1.5 - 4 fps	2.52 fps			
North channel velocity	0	1.5 - 4 fps	2.69 fps			
South channel velocity	0	1.5 - 4 fps	3.80 fps			
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'		1.4		
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	1-1,1-2, 1-3,8-1,8-3, 18-2 and endgate open			
Turbine trashrack drawdown	0	<1.5', biwkly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP	units 13-16 OOS			
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

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

USDA avian hazing ended 7/31. Some pelicans and low numbers juvenile gulls.

### **Inspection Period: September 2 - 7, 2018**

North and east adult fishways in full operation

Night flow reduction at east fishway entrances for lamprey research continues. 18 of 19 test nights completed.

Sluiceway open with 6 sluiceway operation (1, 8 & 18)

### **Current Outages;**

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 for overhaul. RTS 9/13/2018

MU20 OOS for annual. RTS 9/13/2018

### **MaintenanceA20:M45A20:M46A35A20:L44A20A20:M45**

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

Rebuilding spare gearboxes for entrance and exit weirs.

Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.

Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.

Diffuser valve rehab beyond project maintenance capability. Exploring options.

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. Comprehensive spillway assessment review underway.

Spillgate climbing inspection underway. No problems found.

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

Lower Columbia River Forebay Temperature Monitoring – Underway

*AWS construction* - Commissioning test date TBD.

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

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

*Fish Counters* - Ongoing through Oct30.

*Pikeminnow dam angling*- Continues. **Release of bass and walleye discussion at FPOM continues. States determining if salmonid take is 'significant'**

ODFW monthly fishway inspections continue. No problems reported.

*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. Spare weir completed ~8/1. East weirs to complete this winter.

Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction for research on improved lamprey passage.

Lamprey trapping by tribes completed at east count station within picket leads. Catch target 1056 lamprey per tribe not achieved..

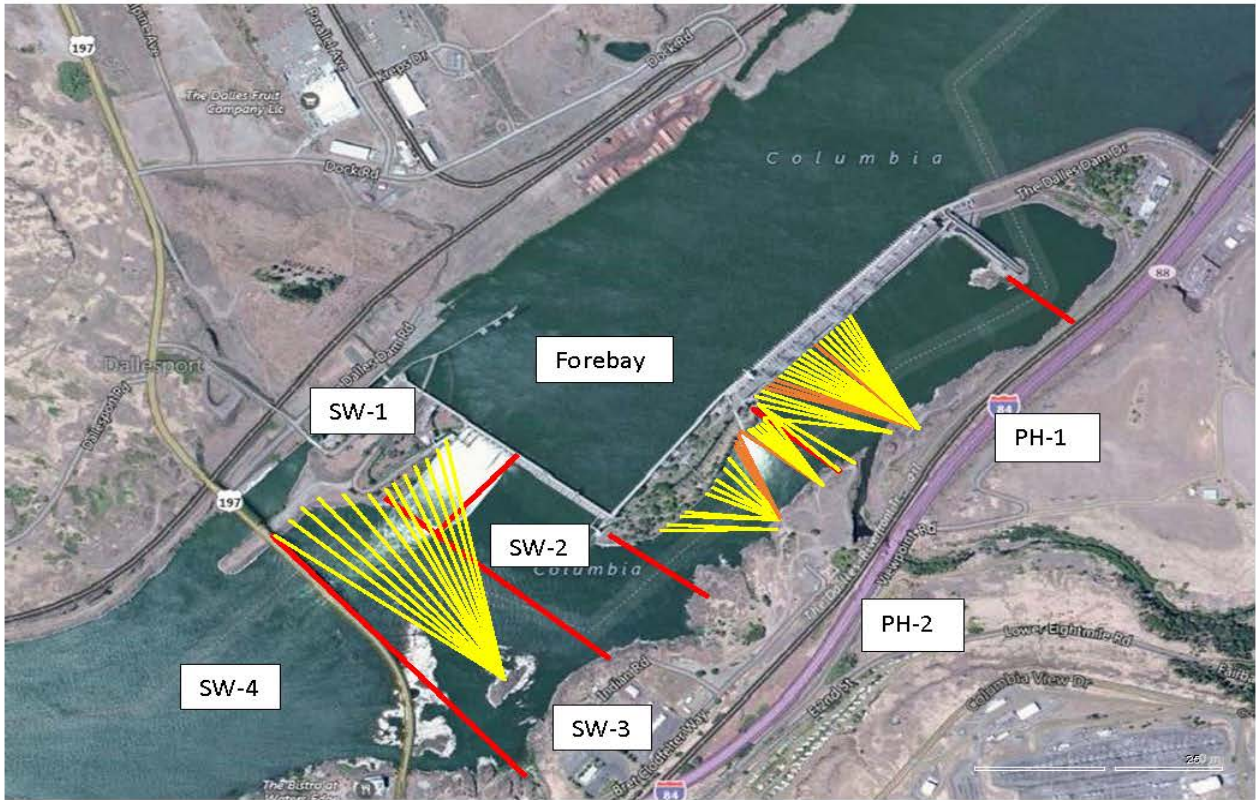
*Fish unit breaker replace* - Prep work in progress. Installation 12/1/18 - 1/14/19, includes commissioning.

*Fish unit rehab* - Development plan continues. Alternatives in review. Exploring potential use of AWS backup with single fish unit during construction period.

*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

## 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		
9/2	JED	PM	FB	1	0	0	16	0	0	0	0	0	0	0	0	17	sunny, hot, calm
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	2	
			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	1	0	3	43	0	0	0	0	0	0	0	0	47	
9/3	JWR	AM	FB	1	0	1	53	0	0	0	0	0	0	0	55	COME	
			PH1	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		
			SW1	0	0	2	0	0	0	0	0	0	0	0	2		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	61	0	0	0	0	0	0	0	10		71
9/4	CEA	PM	FB	0	0	0	25	0	0	0	0	0	0	1	2	28	OSPREY
			PH1	0	0	4	0	0	0	0	0	0	0	0	4		
			PH2	2	0	2	0	0	0	0	0	0	0	0	4		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	5	0	0	0	0	0	0	0	0	5		
			SW3	0	0	7	24	0	0	0	0	0	0	6	0	37	
9/5	CEA	PM	FB	0	0	0	30	0	0	0	0	0	0	1	31	OSPREY OSPREY	
			PH1	0	0	8	23	0	0	0	0	0	0	1	32		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	0	2	0	0	0	0	0	0	0	0	2		
			SW2	0	0	5	0	0	0	0	0	0	0	1	6		
			SW3	0	0	16	0	0	0	0	0	0	0	0	16		
9/6	JED	PM	FB	0	2	0	39	0	0	0	0	0	0	1	0	42	OSPREY 3 east, 2 west, MERG sunny, hot, calm
			PH1	0	0	5	12	0	0	0	0	0	0	3	0	20	
			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	7	7	27	0	0	0	0	0	0	5	0	46	
9/7	JED	AM	FB	0	0	5	33	0	0	0	0	0	0	2	0	40	OSPREY MERG HOT, SUNNY, CALM
			PH1	0	0	0	5	0	0	0	0	0	0	4	0	9	
			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	2	0	2	21	0	0	0	0	0	0	4	0	29	
9/8	CEA	PM	FB	0	0	0	11	0	0	0	0	0	0	0	11	COME, all PH1a  warm, sunny, breezy	
			PH1	0	1	0	16	0	0	0	0	0	0	4	21		
			PH2	3	0	1	0	0	0	0	0	0	0	0	4		
			SW1	0	0	1	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	1	0	0	0	0	0	0	0	1		
			SW3	0	32	0	30	0	0	0	0	0	0	5	67		
SW4	0	30	2	12	0	0	0	0	0	0	0	44					

**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
9/2	3333	2834	499	1354	1024	330	742	708	34	4	0	0	14
9/3	4362	3880	482	1744	1348	396	732	671	61	0	0	0	37
9/4	3500	3170	330	2097	1505	592	941	826	115	4	0	0	32
9/5	3338	2908	430	1916	1513	403	717	659	58	0	0	0	47
9/6	3668	3228	440	1501	1206	295	624	558	66	2	0	0	28
9/7	3006	2576	430	1352	1064	288	24	812	-788	5	0	0	28
9/8	3414	3100	314	1229	996	233	679	614	65	0	0	0	17
<b>total</b>	<b>24621</b>	<b>21696</b>	<b>2925</b>	<b>11193</b>	<b>8656</b>	<b>2537</b>	<b>4459</b>	<b>4848</b>	<b>-389</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>203</b>

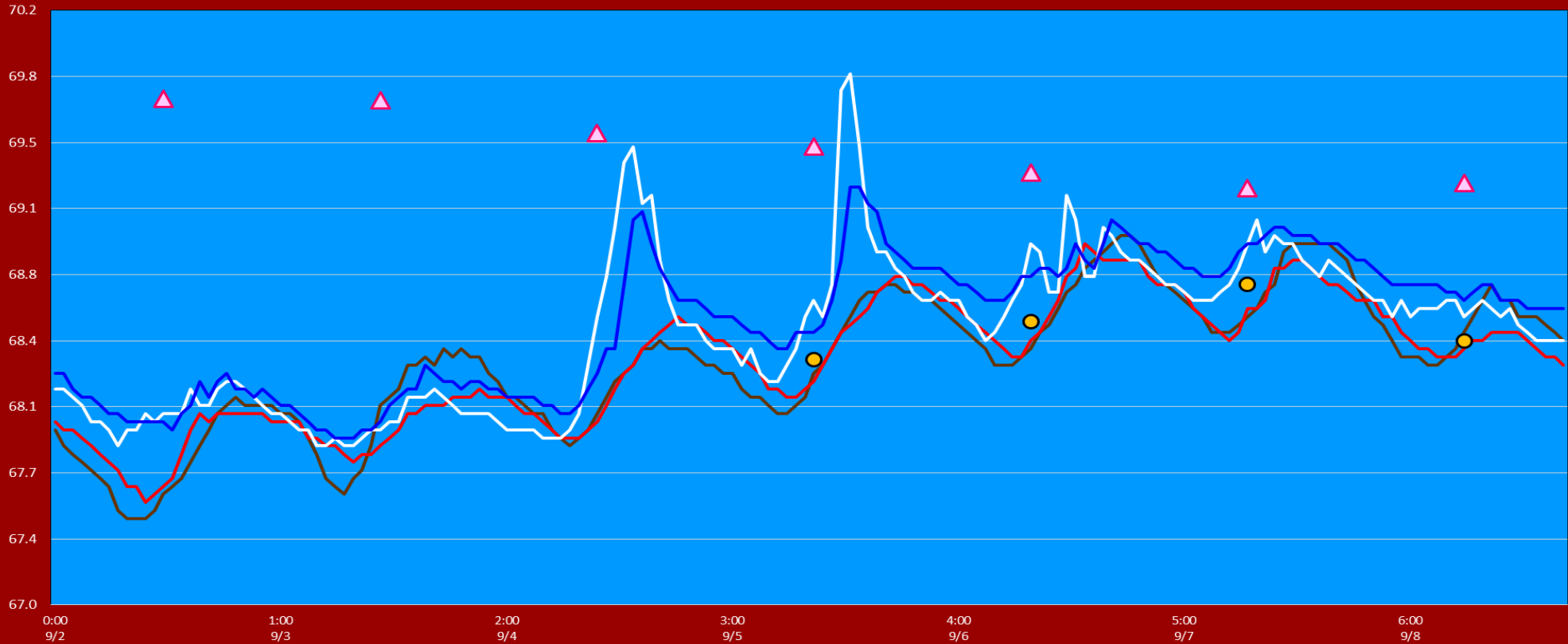
## The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/2	128	115	13	106	68	38	58	53	5	0	0	0	14
9/3	43	38	5	84	58	26	8	8	0	0	0	0	5
9/4	95	82	13	66	54	12	38	36	2	0	0	0	7
9/5	135	104	31	70	52	18	21	14	7	0	0	0	6
9/6	106	78	28	87	65	22	49	48	1	0	0	0	4
9/7	184	167	17	83	67	16	90	72	18	0	0	0	5
9/8	301	271	30	163	134	29	192	176	16	4	0	0	4
<b>total</b>	<b>992</b>	<b>855</b>	<b>137</b>	<b>659</b>	<b>498</b>	<b>161</b>	<b>456</b>	<b>407</b>	<b>49</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>45</b>
<b>% North</b>	<b>3.9</b>	<b>3.8</b>	<b>4.5</b>	<b>5.6</b>	<b>5.4</b>	<b>6.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>21.1</b>	<b>0.0</b>	<b>0.0</b>	<b>18.1</b>

[Fish Counts](#)

# 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
9/2	5.0	Sun	OOS
9/3	5.0	Mon	
9/4	6.0	Tue	
9/5	6.0	Wed	68.3
9/6	5.0	Thurs	68.5
9/7	6.0	Fri	68.7
9/8	5.0	Sat	68.4
	5.4	AVG	68.5

**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
9/2			1.4		13.2	13.3	10.2	1.5	8.4	8.4		1.4	8.3	8.2
	1.3	10.8	1.5		13.0	13.0	10.9	1.5	8.5	8.5		1.4	8.3	8.3
	1.2	10.8	1.6		12.9	12.9	11.1	1.6	8.4	8.4		1.4	8.4	8.3
9/3			1.3		13.5	13.5	10.6	1.4	8.6	8.6		1.4	8.2	8.2
	1.2	10.7	1.4		12.9	12.9	10.5	1.6	8.4	8.4		1.4	8.2	8.2
	1.1	10.9	1.6		13.0	13.0	11.0	1.6	8.6	8.6		1.4	8.3	8.3
9/4			1.5		13.0	12.9	10.8	1.5	8.4	8.4		1.3	8.4	8.4
	1.2	10.7	1.4		13.1	13.2	10.5	1.4	8.4	8.4		1.4	8.3	8.3
	1.3	10.5	1.6		13.1	13.2	11.5	1.6	8.5	8.5		1.3	8.5	8.4
9/5			1.4		12.2	12.3	10.2	1.6	8.5	8.5		1.4	8.3	8.3
	1.3	10.5	1.6		13.0	12.9	10.8	1.5	8.5	8.4		1.4	8.8	8.8
	1.3	10.6	1.9		13.1	13.0	11.3	1.5	8.6	8.6		1.4	8.3	8.3
9/6			1.5	13.2	13.2	11.1	1.5	8.6	8.6	1.4	8.2	8.2		
	1.3	10.5	1.5	13.0	13.0	11.1	1.4	8.6	8.6	1.4	8.4	8.4		
	1.3	10.4	1.6	13.1	13.1	11.3	1.4	8.6	8.6	1.4	8.4	8.4		
9/7			1.4	13.0	12.9	11.1	1.5	8.6	8.6	1.3	8.4	8.4		
	1.3	10.5	1.5	13.0	12.9	11.7	1.6	8.5	8.5	1.5	8.3	8.3		
	1.3	10.5	1.6	13.0	13.1	12.0	1.5	8.5	8.5	1.5	8.3	8.3		
9/8			1.4	12.9	12.9	12.7	1.4	8.6	8.6	1.4	8.3	8.3		
	1.3	10.6	1.6	13.0	13.1	11.9	1.5	8.8	8.8	1.4	8.3	8.3		
	1.3	10.7	1.5	13.1	13.0	11.8	1.5	8.6	8.6	1.4	8.4	8.4		
<b>AVG:</b>	<b>1.3</b>	<b>10.6</b>	<b>1.5</b>	<b>13.0</b>	<b>13.0</b>	<b>11.1</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.*