

# The Dalles Dam Fishway Status Report

09/23/18

Inspection Period: September 16 - 22, 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: 66.4 °F	Secchi: 5.6 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'	1.3			
Entrance weir N1	0	depth (≥ 8')	10.6			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 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	1	1.0' ± 0.1'	>1.1'			
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')	13.4			
Entrance weir E3	0	depth (≥ 8')	13.4			
Collection channel velocity	0	1.5 - 4 fps	2.54 fps	Range: MU15, 2.0 fps to MU 7, 2.77fps		
Transportation channel velocity	0	1.5 - 4 fps	2.46 fps			
North channel velocity	0	1.5 - 4 fps	2.74 fps			
South channel velocity	0	1.5 - 4 fps	3.58 fps			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.6			
Entrance weir W2	0	depth (≥ 8')	8.6			
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', biweekly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

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

USDA installed 20 additional avian lines downstream of spillway 9/19. Low numbers of gulls, Pelican are gone and mergansers increasing

### **Inspection Period:**

North and east adult fishways in full operation  
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

### **Maintenance**

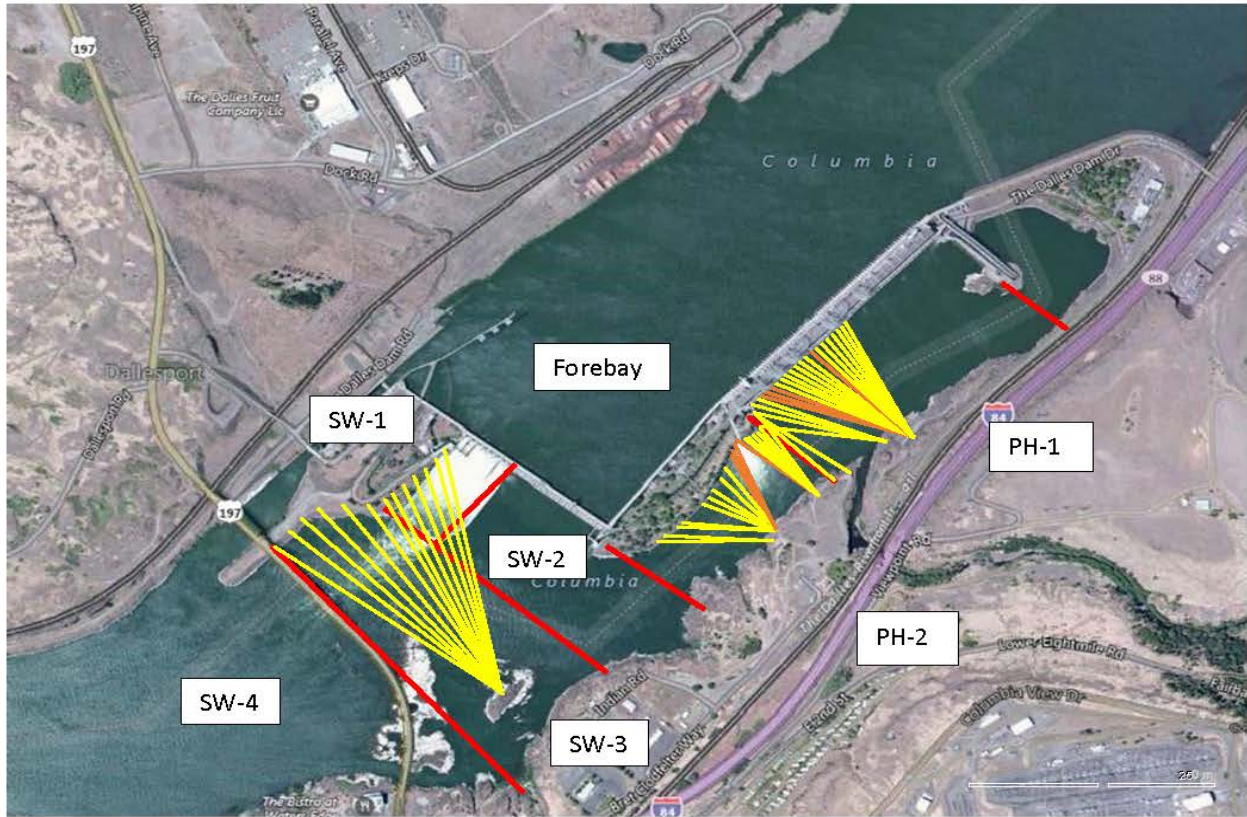
East count station brush out of service, TDE awaiting parts. Requires manual cleaning.  
Rebuilding spare gearboxes for entrance and exit weirs.  
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.  
Planning 154 -157 rehab/weir wheel replace next winter. 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.

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

Lower Columbia River Forebay Temperature Monitoring – Underway  
*AWS construction* - Commissioning test potentially done with last flow test.  
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.  
*Pikeminnow dam angling*- Continues. Bass/walleye bycatch release being discussed at FPOM. 8 caught for the week (9/17-9/23) and 1766 YTD  
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 weir complete next winter.  
Univ of Idaho lamprey radiotelemetry track underway. Antennas will remain in place and recording through sometime in September  
Lamprey trapping by tribes completed, awaiting final numbers.  
*Fish unit breaker replace*.- Prep work in progress. Installation 12/1/18 - 1/14/19.  
*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			
9/16	JWR	PM	FB	0	1	0	0	0	0	0	0	0	0	0	1	2	OSPREY COME	
			PH1	0	0	1	6	0	0	0	0	0	0	0	3	10		
			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
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	12	3	33	0	0	0	0	0	0	0	0	0		48
9/17	JWR	AM	FB	0	0	4	28	0	0	0	0	0	0	0	0	32	COME	
			PH1	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		
			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	2	1	20	0	0	0	0	0	0	0	0	7		30
9/18	JWR	PM	FB	0	0	2	8	0	0	0	0	0	0	0	0	10	COME	
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	1		3
			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
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	1	36	0	0	0	0	0	0	0	0	0		37
9/19	JWR	AM	FB	0	1	0	24	0	0	0	0	0	0	0	0	25	COME	
			PH1	0	0	0	3	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
			SW1	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
			SW3	0	0	3	49	0	0	0	0	0	0	0	0	0		52
9/20	CEA	PM	FB	3	0	1	10	0	0	0	0	0	0	0	0	14	COME, all PH1a	
			PH1	0	0	2	33	0	0	0	0	0	0	0	9	44		
			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
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	3	0	0	0	0	0	0	0	0	0		3
9/21	CEA	AM	FB	0	0	1	101	0	0	0	0	0	0	0	0	102	COME, all PH1a sunny, calm	
			PH1	0	1	0	16	0	0	0	0	0	0	0	4	21		
			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
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0		1
			SW3	0	0	0	15	0	0	0	0	0	0	0	0	0		15
9/22	CEA	PM	FB	0	0	0	17	0	0	0	0	0	0	0	0	17	COME, 2F DCCO in PH1b  cloudy, windy	
			PH1	0	1	2	27	0	0	0	0	0	0	0	2	32		
			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
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	4	0	0	0	0	0	0	0	0	0		4

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

## The Dalles East

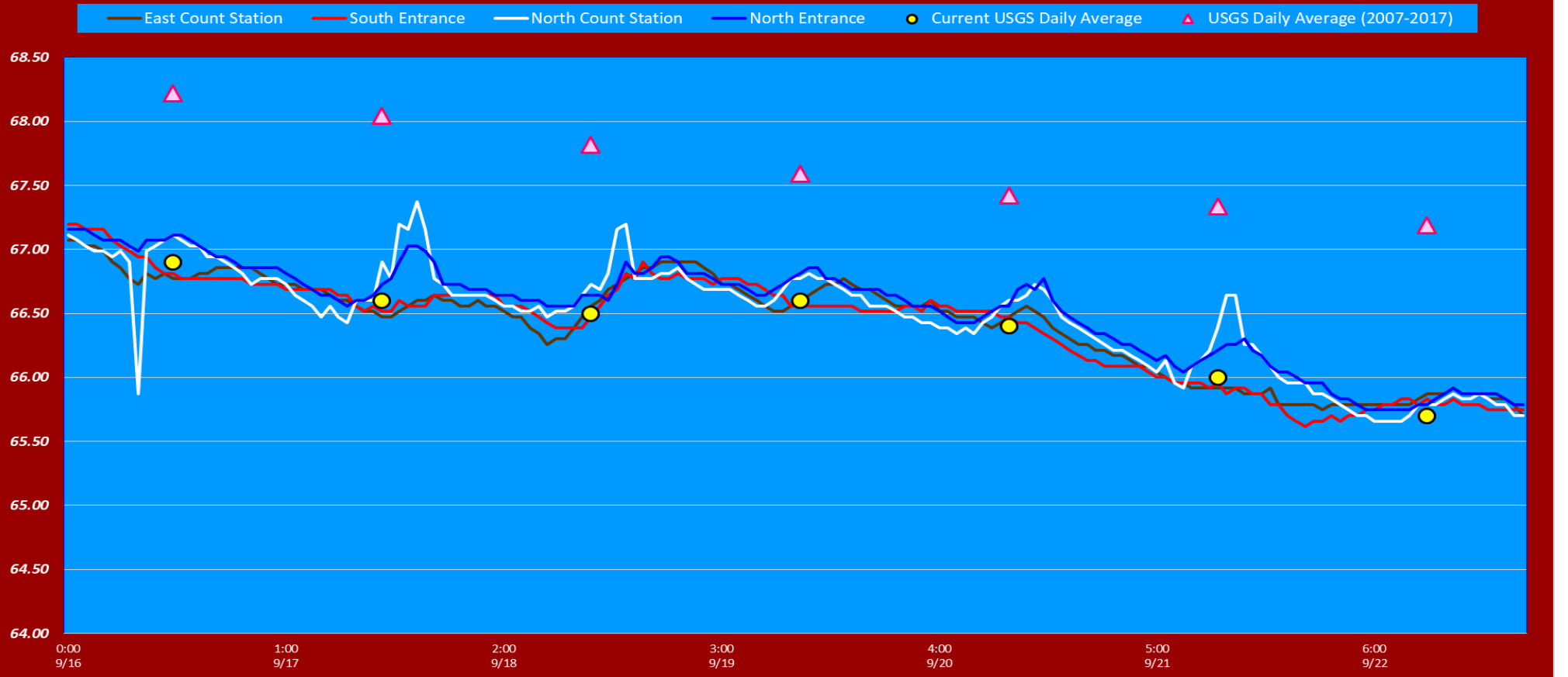
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/16	2070	1715	355	1446	1174	272	377	341	36	4	0	0	16
9/17	3447	3175	272	1458	1170	288	1009	949	60	-1	0	0	12
9/18	2920	2578	342	1934	1417	517	692	666	26	1	0	0	6
9/19	4439	3844	595	2224	1720	504	982	812	170	0	0	0	8
9/20	1343	1002	341	1373	1002	371	593	547	46	2	0	0	5
9/21	1650	1265	385	1358	1075	283	407	353	54	0	0	0	6
9/22	2443	1986	457	954	679	275	584	523	61	1	0	0	4
<b>total</b>	<b>18312</b>	<b>15565</b>	<b>2747</b>	<b>10747</b>	<b>8237</b>	<b>2510</b>	<b>4644</b>	<b>4191</b>	<b>453</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>57</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
9/16	288	246	42	406	330	76	96	73	23	0	0	0	1
9/17	77	66	11	135	113	22	14	12	2	0	0	0	2
9/18	441	374	67	385	296	89	82	59	23	1	0	0	2
9/19	251	193	58	210	166	44	70	60	10	0	0	0	2
9/20	95	70	25	207	176	31	64	48	16	0	0	0	4
9/21	151	95	56	142	108	34	54	41	13	0	0	0	1
9/22	264	167	97	199	144	55	33	28	5	0	0	0	4
<b>total</b>	<b>1567</b>	<b>1211</b>	<b>356</b>	<b>1684</b>	<b>1333</b>	<b>351</b>	<b>413</b>	<b>321</b>	<b>92</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>16</b>
<b>% North</b>	<b>7.9</b>	<b>7.2</b>	<b>11.5</b>	<b>13.5</b>	<b>13.9</b>	<b>12.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>12.5</b>	<b>0.0</b>	<b>0.0</b>	<b>21.9</b>

[Fish Counts](#)

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



**USGS:** [USGS River Temp September](#)

	Secchi:		Temperatures
9/16	5.0	Sun	66.9
9/17	5.0	Mon	66.6
9/18	5.0	Tue	66.5
9/19	5.0	Wed	66.6
9/20	6.0	Thurs	66.4
9/21	6.0	Fri	66.0
9/22	6.0	Sat	65.7
	5.4	AVG	66.4

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
9/16			1.3		13.4	13.4	10.8	1.5	8.4	8.4		1.5	8.3	8.3
	1.3	10.6	1.5		13.4	13.4	11.0	1.6	8.2	8.2		1.5	8.3	8.3
	1.3	10.9	1.6		13.5	13.5	11.3	1.6	8.7	8.7		1.5	8.3	8.3
9/17			1.6		13.4	13.6	11.0	1.6	8.2	8.2		1.5	8.3	8.3
	1.3	10.5	1.5		13.5	13.5	11.1	1.6	8.5	8.5		1.4	8.3	8.3
	1.3	10.5	1.5		13.5	13.5	11.3	1.5	8.6	8.6		1.5	8.3	8.3
9/18			1.6		13.5	13.5	9.9	1.4	8.4	8.4		1.4	8.2	8.2
	1.3	10.5	1.5		13.6	13.6	10.6	1.5	8.4	8.4		1.4	8.3	8.3
	1.4	10.5	1.6		13.6	13.6	11.8	1.5	8.7	8.7		1.4	8.4	8.4
9/19			1.3		13.5	13.5	10.7	1.5	8.2	8.2		1.4	8.3	8.3
	1.3	10.4	1.4		13.5	13.5	10.2	1.5	8.2	8.2		1.4	8.2	8.2
	1.3	10.5	1.6		13.5	13.5	9.9	1.4	8.4	8.4		1.4	8.2	8.2
9/20			1.6		13.6	13.6	11.8	1.5	8.7	8.7		1.4	8.4	8.4
	1.2	10.7	1.5		12.9	12.9	10.8	1.3	8.8	8.8		1.4	8.2	8.2
	1.3	10.7	1.4		13.1	13.1	11.0	1.4	8.9	8.9		1.3	8.4	8.4
9/21			1.7	13.0	13.1	11.5	1.4	8.9	8.9	1.5	8.2	8.2		
	1.3	10.5	1.4	13.5	13.4	11.2	1.7	8.9	8.9	1.4	8.2	8.2		
	1.3	10.6	1.6	13.4	13.1	11.5	1.4	8.9	8.9	1.5	8.2	8.2		
9/22			1.4	13.4	13.0	11.0	1.4	8.8	8.8	1.4	8.3	8.3		
	1.3	10.6	1.5	13.5	13.1	12.6	1.4	8.8	8.8	1.4	8.2	8.2		
	1.3	10.5	1.5	13.1	13.2	11.4	1.4	8.8	8.8	1.5	8.2	8.2		
<b>AVG:</b>	<b>1.3</b>	<b>10.6</b>	<b>1.5</b>	<b>13.4</b>	<b>13.4</b>	<b>11.1</b>	<b>1.5</b>	<b>8.6</b>	<b>8.6</b>	<b>1.4</b>	<b>8.3</b>	<b>8.3</b>		

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

First of 16 lines installed day 1





Additional lines installed with the use of newly installed carrier lines



Four lines installed to spillway for a total of 20 lines installed  
by USDA wildlife services

