

# The Dalles Dam Fishway Status Report

6/24/2018

Inspection Period: 06/17/2018-06/24/2018

## 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	Criteria	Total Number of Inspections:		Temperature:
	Out of Criteria	Limit	Comments		
	0		20	62.9 °F	
			Water clarity improved.	Secchi:	4.5 feet
<b>NORTH FISHWAY</b>					
Exit differential	0	≤ 0.5'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.3' ± 0.1'	Range 1.0 -1.4	Increased from 1' to 1.3' to allow shad passage.	
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'	0		
<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	1.3' ± 0.1'	Water depth over ladder weirs		
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')	13.2		
Entrance weir E3	0	depth (≥ 8')	13.1		
Collection channel velocity	0	1.5 - 4 fps	2.05 fps	Range: Bay MU 20, 1.62 fps to MU 10/14, 2.46 fps	
Transportation channel velocity	0	1.5 - 4 fps	2.25 fps		
North channel velocity	0	1.5 - 4 fps	2.05 fps		
South channel velocity	0	1.5 - 4 fps	3.73 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')	8.5		
Entrance weir S2	0	depth (≥ 8')	8.5		
<b>JUVENILE PASSAGE</b>					
Sluicgate 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	Small numbers of juvenile salmon and matu		
Spill volume/pattern	0	None			
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

## OTHER ISSUES:

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

USDA boat and shore hazing continues. Moderate gull numbers and intermittent flocks of pelicans.  
No sea lion sightings this week.

### **Operations**

North and east adult fishways in full operation. East ladder adjusted to 1.3' for shad passage. North adjusted to 1.3' when spillway reduced enough to allow shad in.  
Night flow reduction at east fishway entrances for lamprey research continues. Fish unit flow reduced from 2500cfs to 2000cfs. Six of 19 test nights completed.  
Sluiceway open with 6 sluiceway operation (1, 8 and 18)

### **Current Outages;**

MU5 forced OOS for gov oil problem. RTS 6/21/2018  
MU15 forced OOS transformer replacement. RTS 8/6/2018  
MU16 forced OOS transformer replacement. RTS 6/29/2018,

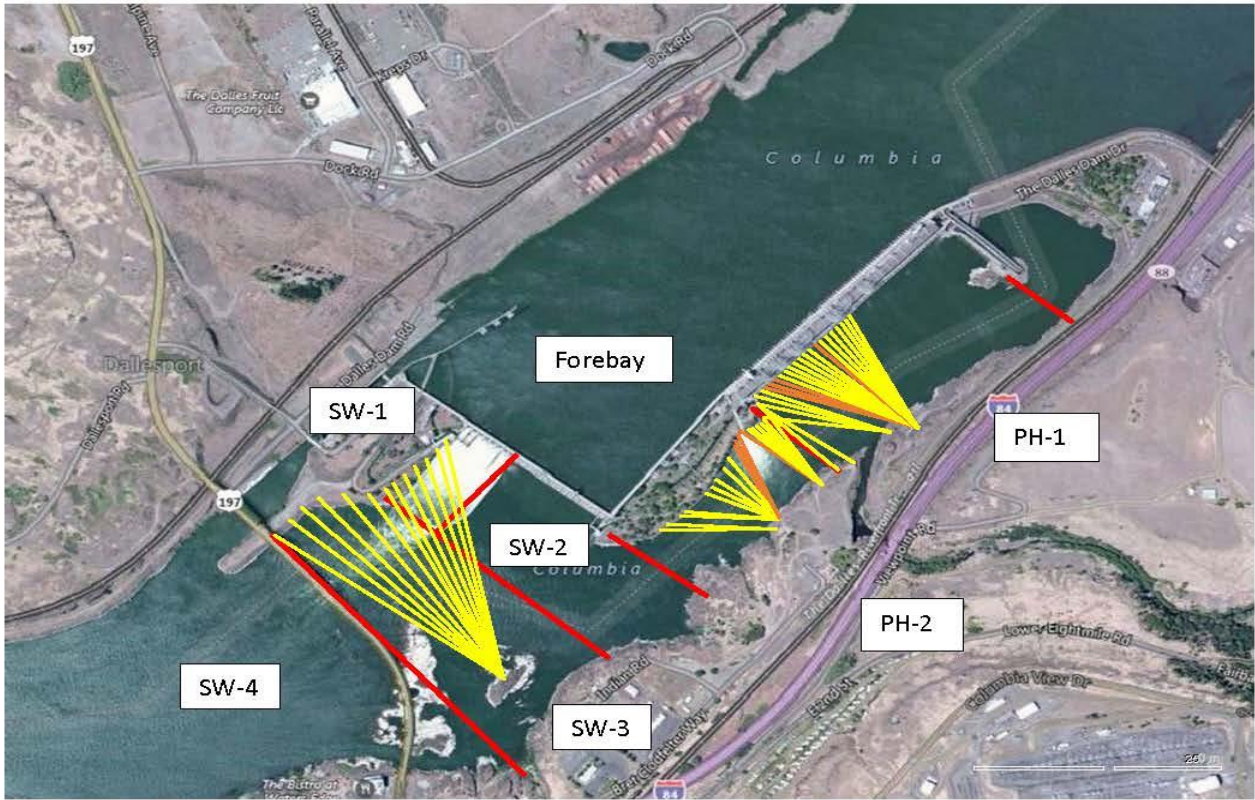
### **Maintenance**

Rebuilding spare gearboxes for entrance and exit weirs.  
East exit oil boom - Fabe in July. Install Aug7. Low forebay requested.  
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement. Maintenance plan to cycle through 2 pumps per year.  
Wheel replacement on N1 spare weir in progress.  
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.  
Planning start of diffuser valve rehab next winter. Multiple year job.  
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. Plan for comprehensive spillway assessment.

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

Lower Columbia River Forebay Temperature Monitoring – Phase 1 on 5/22, Phase 2 boat work upcoming 6/19  
*AWS construction* - Commissioning full flow test night of Aug6/7, FPOM approved.  
PSMFC weekly sampling completed for the North Wasco County PUD's. No concerns. New sample collection tank design in review.  
PITAGS North and east fishladder data collection at count stations continues.  
*Fish Counters* - Ongoing.  
*Pikeminnow dam angling*- Week 25: 6/18-6/24 219 caught, 602 YTD  
**Non native (bass and walleye) bycatch released by WDFW continues. Discussions continue.**  
ODFW resumed monthly fishway inspections. No problems reported.  
*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. Spare weir to be completed this FY. East weir complete next winter.  
Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction done on 6/4 and 6/5 as part of research for improved lamprey passage.  
Lamprey trapping by tribes to continue at east count station within picket leads end of June. Catch target 1056 lamprey per tribe.  
*Fish unit breaker replace* .- Prep work in progress. Installation delayed to next winter outage.  
*Fish unit rehab* - Development plan continues. Alternatives reviewed. Likely selection of increased flow Kaplan units.  
*Transformer replacement* - Install T8 underway (units 15 and 16). Sequence schedule modified,

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		
6/17	JWR	AM	FB	0	0	3	39	0	0	0	3	0	0	0	0	45	
			PH1	0	0	2	4	0	0	0	0	0	0	0	0	6	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW3	23	0	0	0	0	0	0	0	0	38	0	0	61	
SW4	36	0	0	0	0	0	0	0	25	23	0	0	84				
6/18	JWR	PM	FB	0	0	2	27	0	0	0	1	0	1	0	0	31	-30 PELICAN am obs gull and pelican gone in pm obs
			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	4	2	0	0	0	0	0	0	0	0	0	0	6	
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0				
6/19	JWR	AM	FB	0	0	5	83	0	0	0	0	0	0	0	0	88	
			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	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	26	2	1	0	0	0	0	0	0	44	0	0	73	
SW4	18	57	0	0	0	0	0	0	12	39	0	0	126				
6/20	JED	PM	FB	0	0	3	52	0	0	0	0	0	0	0	0	55	east sunny, windy, hot
			PH1	0	0	2	0	0	0	0	0	1	0	0	0	3	
			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	1	0	0	0	0	0	0	0	0	2	
			SW3	7	7	0	0	0	0	0	0	0	0	0	0	14	
SW4	4	290	0	0	0	0	0	0	1	17	0	0	312				
6/21	BC	AM	FB	0	4	2	99	0	0	0	0	0	0	1	106	osprey, 1930hrs BLHE sunny, windy, hot	
			PH1	0	0	0	0	0	0	0	0	0	0	1	1		
			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	10	1	0	0	0	0	0	0	0	1	0	0		12
SW4	14	60	1	0	0	0	0	0	0	20	0	0	95				
6/22	JED	PM	FB	0	0	0	27	0	0	0	0	0	0	0	0	27	sunny, windy, hot
			PH1	0	0	0	0	0	0	0	0	0	0	1	0	1	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	30	0	0	0	0	0	0	0	11	0	0	0	41	
SW4	3	0	0	0	0	0	0	0	6	27	0	0	36				
6/23	JED	AM	FB	0	0	2	38	0	0	0	0	0	0	0	40	sunny, windy, hot	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0		0
			PH2	1	0	0	0	0	0	0	0	0	0	0	0		1
			SW1	3	0	0	0	0	0	0	0	0	0	0	0		3
			SW2	0	0	2	0	0	0	0	0	0	0	0	0		2
			SW3	12	35	0	0	0	0	0	0	3	0	0	0		50
SW4	21	65	0	0	0	0	0	0	4	25	0	0	115				

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

## The Dalles East

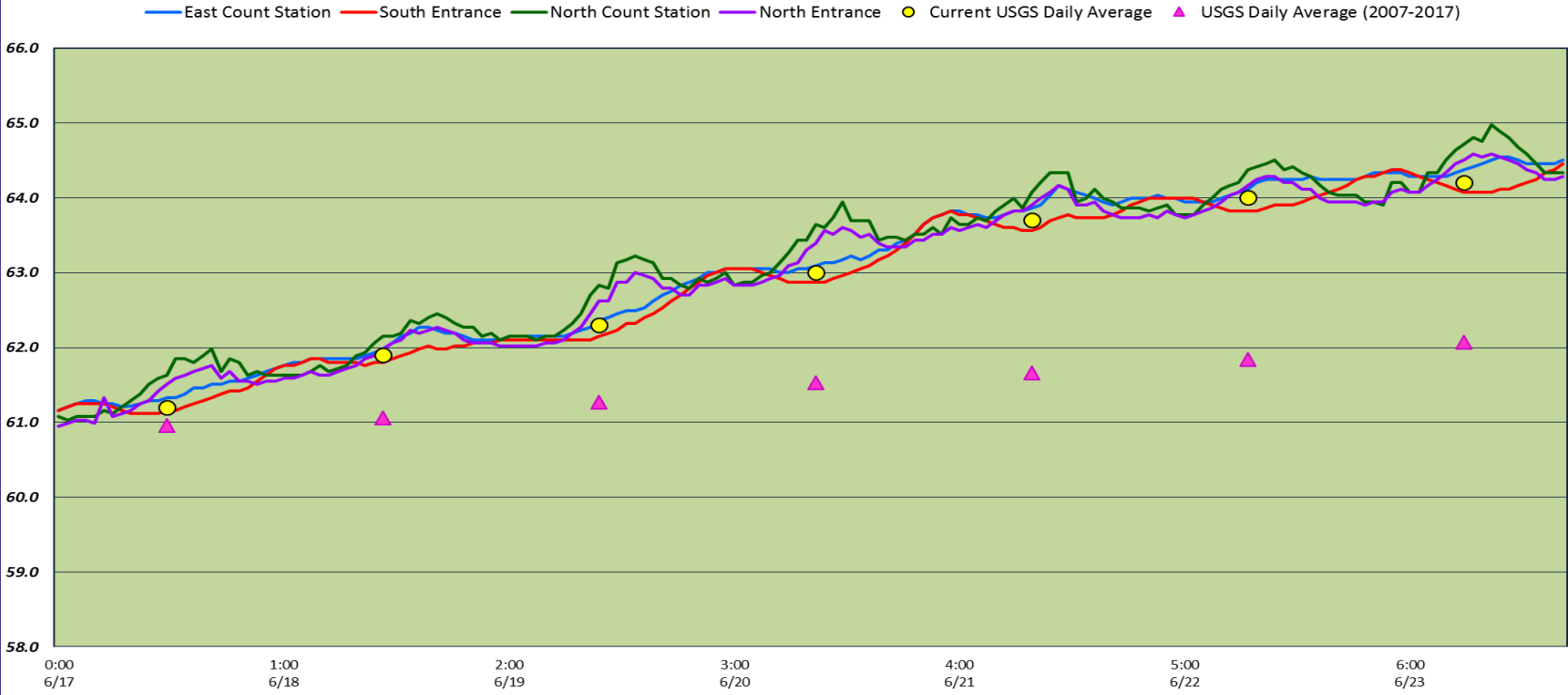
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/17	1062	1001	61	36	12	24	0	0	0	2750	0	0	17
6/18	853	817	36	29	13	16	0	0	0	2288	0	0	8
6/19	853	787	66	39	17	22	0	0	0	2498	0	0	36
6/20	787	710	77	48	26	22	0	0	0	3330	0	0	60
6/21	754	680	74	24	12	12	0	0	0	3116	0	0	72
6/22	750	664	86	81	49	32	0	0	0	3874	0	0	94
6/23	1268	1188	80	55	20	35	0	0	0	5492	0	0	220
<b>total</b>	<b>6327</b>	<b>5847</b>	<b>480</b>	<b>312</b>	<b>149</b>	<b>163</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23348</b>	<b>0</b>	<b>0</b>	<b>507</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
6/17	685	655	30	8	2	6	0	0	0	1838	0	0	6
6/18	681	665	16	13	6	7	0	0	0	1536	0	0	17
6/19	762	714	48	19	12	7	0	0	0	1650	0	0	19
6/20	493	486	7	6	4	2	0	0	0	2149	0	0	46
6/21	666	620	46	27	20	7	0	0	0	2605	0	0	60
6/22	593	575	18	13	7	6	0	0	0	4322	0	0	55
6/23	474	448	26	12	4	8	0	0	0	2102	0	0	149
<b>total</b>	<b>4354</b>	<b>4163</b>	<b>191</b>	<b>98</b>	<b>55</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16202</b>	<b>0</b>	<b>0</b>	<b>352</b>
<b>% North</b>	<b>40.8</b>	<b>41.6</b>	<b>28.5</b>	<b>23.9</b>	<b>27.0</b>	<b>20.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>41.0</b>

[Fish Counts](#)

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



		USGS:	USGS river temp June
Secchi:		Temperatures	
6/17	3.5	Sun	61.2
6/18	4.0	Mon	61.9
6/19	4.0	Tue	62.3
6/20	5.0	Wed	63.0
6/21	5.0	Thurs	63.7
6/22	5.0	Fri	64.0
6/23	5.0	Sat	64.2
	4.5	AVG	62.9

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

Lamprey study= reduced velocity overnight  
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
6/17			1.6		13.9	13.9	11.8	1.9	8.2	8.2		1.5	8.3	8.3
	1.4	10.0	1.6		14.0	14.0	11.9	1.4	8.6	8.6		1.5	8.3	8.3
	1.4	9.9	1.3		14.0	14.0	11.1	1.4	8.4	8.4		1.4	8.3	8.3
6/18			1.5		14.1	14.1	10.9	1.4	8.5	8.5		1.5	8.3	8.3
	1.4	9.8	1.5		13.5	13.5	11.4	1.5	8.6	8.6		1.5	8.3	8.3
	1.4	10.0	1.4		14.0	14.0	11.4	1.6	8.6	8.6		1.5	8.3	8.3
6/19			1.5		14.0	14.0	10.3	1.1	9.6	9.6		1.4	8.3	8.3
	1.4	9.9	1.6		13.6	13.6	11.0	1.5	8.5	8.5		1.4	8.3	8.3
	1.3	9.9	1.5		12.7	12.7	12.1	1.4	8.7	8.7		1.5	8.3	8.3
6/20			0.7		13.0	13.0	11.3	0.5	8.9	8.9		0.6	10.6	10.7
	1.3	9.9	1.5		13.0	13.0	10.9	1.5	8.4	8.4		1.5	8.3	8.3
	1.4	10.0	1.6		13.0	13.0	13.1	1.6	8.5	8.5		1.5	8.4	8.4
6/21			1.1		12.9	12.9	x	1.4	8.3	8.3		1.5	8.2	8.2
	1.3	10.0	1.4		12.9	13.0	10.9	1.6	8.3	8.3		1.4	8.3	8.3
	1.4	10.0	1.5		13.0	13.0	13.5	1.6	8.4	8.4		1.6	8.3	8.3
6/22														
	1.3	10.0	1.6		12.5	12.5	12.3	1.5	8.5	8.5		1.4	8.6	8.6
	1.3	9.9	1.4		12.5	11.1	11.7	1.5	8.6	8.6		1.4	8.5	8.5
6/23			1.5		12.5	12.5	11.6	1.4	8.6	8.6		1.4	8.6	8.6
	1.3	9.9	1.6		12.5	12.5	12.2	1.5	8.5	8.5		1.4	8.6	8.6
	1.3	9.9	1.6		12.6	12.5	13.0	1.7	8.4	8.4		1.4	8.6	8.6
<b>AVG:</b>	<b>1.4</b>	<b>9.9</b>	<b>1.5</b>		<b>13</b>	<b>13</b>	<b>11.7</b>	<b>1.5</b>	<b>8.6</b>	<b>8.6</b>		<b>1.4</b>	<b>8.5</b>	<b>8.5</b>

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



East fishladder shad jam. Seems there's no shad shortage this year.