

# The Dalles Dam Fishway Status Report

8/26/2018

Inspection Period: 08/19/2018-8/25/2018

## THE DALLES DAM



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	Temperature: Secchi:
			21 conditions ok-cooling down	71.7 °F 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')	10.7	
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	1	Per forebay	157 malfunction; now repaired	
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')	12.7	
Entrance weir E3	0	depth (≥ 8')	12.7	
Collection channel velocity	0	1.5 - 4 fps	2.24 fps	Range: MU12, 2.05 fps to MU 1, 2.69fps
Transportation channel velocity	0	1.5 - 4 fps	2.34 fps	
North channel velocity	0	1.5 - 4 fps	2.56 fps	
South channel velocity	0	1.5 - 4 fps	3.75 fps	
West entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir W1	0	depth (≥ 8')	8.7	
Entrance weir W2	0	depth (≥ 8')	8.7	
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')	8.6	
<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', 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.  
USDA installation of additional spillway avian lines in approved for installation 9/19.

### **Fishway operations**

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;**

MU3 and MU4 OOS for annual. RTS 8/23/2018  
MU5 forced OOS blade seals. RTS 1/21/2018  
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 8/30/2019  
MU15 OOS transformer replacement. RTS 10/01/2018  
MU16 OOS transformer replacement. RTS 6/29/2019  
MU19 OOS for overhaul. RTS 9/7/2018  
MU20 OOS for annual. RTS 9/7/2018

### **Maintenance**

East count station brush out of service, TDE awaiting parts. Requires manual cleaning.  
Rebuilding spare gearboxes for entrance and exit weirs.  
Reviewing winter maintenance schedule and task list.  
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 - Full flow test completed night of Aug 6. Commissioning test date TBD.  
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*- Continues  
**Non native (bass and walleye) bycatch release by WDFW dam anglers. Remains FPOM agenda item for resolution.**  
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. Night flow reduction for research on improved lamprey passage.  
Lamprey trapping by tribes to continue at east count station within picket leads with low catch rates. Catch target 1056 lamprey per tribe.  
*Fish unit breaker replace* - Prep work in progress. Installation 12/1/18 - 1/15/19.  
*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



## 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		
8/19	JED	PM	FB	0	1	1	43	0	0	0	0	0	0	0	0	45	BLHE
			PH1	0	0	0	5	0	0	0	0	0	0	3	0	8	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	1	0	0	0	0	0	0	0	0	1	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	0	0	4	13	0	0	0	0	0	0	0	0	17	
8/20	JWR	AM	FB	0	0	0	74	0	0	0	0	0	0	0	74		
			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	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	2	7	2	3	0	0	0	0	0	0	0	0		14
8/21	CEA	PM	FB	0	0	14	79	0	0	0	0	0	0	1	94	Osprey Osprey  calm, smoky, warm (6:30 pm)	
			PH1	0	0	3	4	0	0	0	0	0	0	1	8		
			PH2	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		
			SW2	0	0	1	0	0	0	0	0	0	0	0	1		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0		
8/22	JWR	AM	FB	0	0	1	52	0	0	0	0	0	0	0	53	COME	
			PH1	0	0	0	2	0	0	0	0	0	0	0	2		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	2	4	0	0	0	0	0	0	1	7		
8/23	JED	PM	FB	0	0	5	27	0	0	0	0	0	0	0	32	2 F north, 3 F east exit.  Windy, dusty, warm  COME	
			PH1	0	0	2	8	0	0	0	0	0	0	0	10		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	0	0	0	0	0	0	0	8	8		
8/24	JED	AM	FB	0	0	1	55	0	0	0	0	0	0	0	56	warm, dusty, 10mph w  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	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	5	0	0	7	0	0	0	0	0	1	6	19		
8/25	CEA	PM	FB	0	0	3	37	0	0	0	0	0	0	0	40	1 DCCO foraging PH1b  windy, cloudy	
			PH1	0	0	5	2	0	0	0	0	0	0	0	7		
			PH2	0	0	0	1	0	0	0	0	0	0	0	1		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	6	0	0	0	0	0	0	0	0	6		
			SW3	0	0	0	13	0	0	0	0	0	0	0	13		

**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
08/19/18	384	350	34	112	60	52	2	2	0	4	0	0	2
08/20/18	437	408	29	91	50	41	7	6	1	2	0	0	14
08/21/18	631	583	48	119	70	49	10	5	5	7	0	0	40
08/22/18	666	613	53	107	71	36	8	8	0	1	0	0	53
08/23/18	697	630	67	126	86	40	18	17	1	4	0	0	40
08/24/18	724	634	90	106	68	38	12	12	0	5	0	0	40
08/25/18	974	844	130	186	137	49	37	35	2	2	0	0	20
<b>total</b>	<b>4513</b>	<b>4062</b>	<b>451</b>	<b>847</b>	<b>542</b>	<b>305</b>	<b>94</b>	<b>85</b>	<b>9</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>209</b>

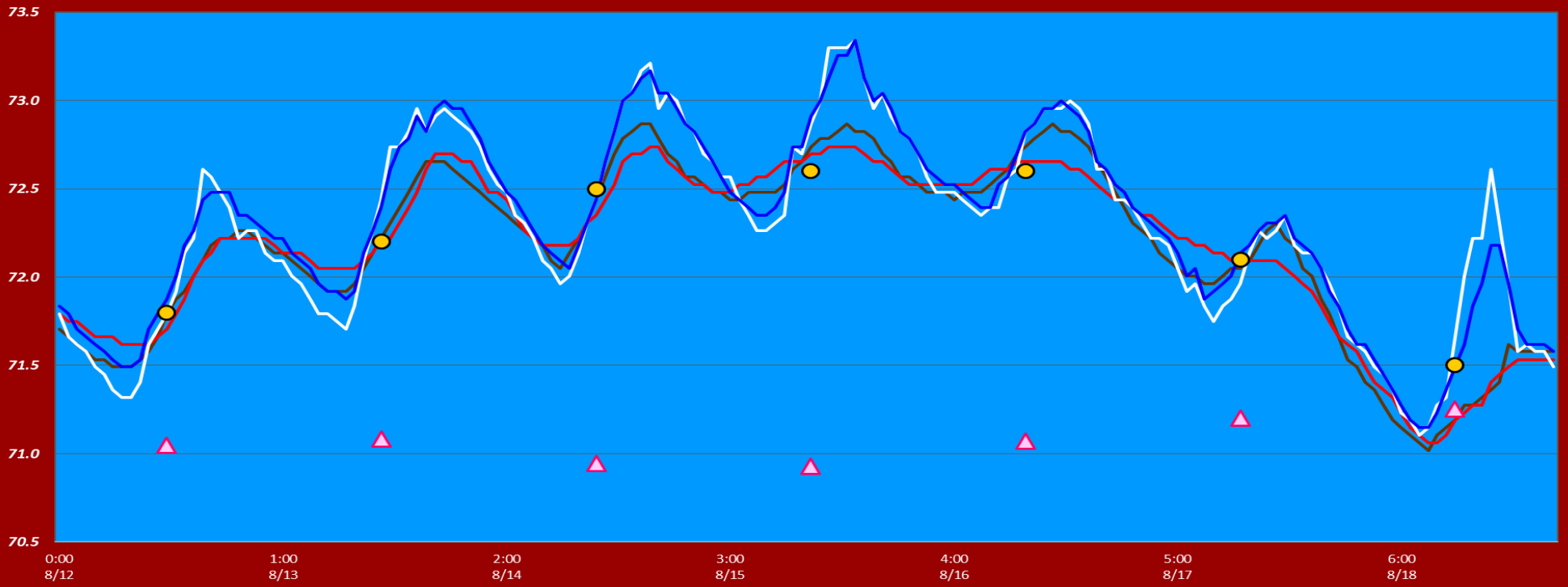
## The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
08/19/18	170	160	10	123	74	49	0	0	0	5	0	0	12
08/20/18	184	172	12	79	37	42	6	4	2	2	0	0	8
08/21/18	310	294	16	64	40	24	4	4	0	2	0	0	6
08/22/18	440	421	19	55	31	24	4	4	0	0	0	0	16
08/23/18	366	338	28	89	52	37	11	11	0	2	0	0	30
08/24/18	344	304	40	100	76	24	9	7	2	1	0	0	7
08/25/18	380	366	14	115	68	47	18	17	1	2	0	0	6
<b>total</b>	<b>2194</b>	<b>2055</b>	<b>139</b>	<b>625</b>	<b>378</b>	<b>247</b>	<b>52</b>	<b>47</b>	<b>5</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>85</b>
<b>% North</b>	<b>32.7</b>	<b>33.6</b>	<b>23.6</b>	<b>42.5</b>	<b>41.1</b>	<b>44.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>35.9</b>	<b>0.0</b>	<b>0.0</b>	<b>28.9</b>

Fish Count

# 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:** [USGS river temp August](#)

	Secchi:		Temperatures
8/19	6.0	Sun	71.7
8/20	5.0	Mon	72.2
8/21	5.0	Tue	72.2
8/22	5.0	Wed	72.3
8/23	5.0	Thurs	72.1
8/24	6.0	Fri	71.0
8/25	6.0	Sat	70.1
	5.4	AVG	71.7

Lamprey study= reduced velocity overnight

SCADA INSPECTION

= Out of criteria

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

Date:	North Ladder			East Ladder										
	North Entrance		Differential	E1 Depth	East Entrance			West Entrance			South Entrance			
	Differential	N1 Depth			E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
8/19			1.5		12.9	12.9	10.9	1.4	8.5	8.5		1.4	8.4	8.4
	1.3	10.7	1.5		12.9	12.9	11.0	1.4	8.5	8.5		1.4	8.4	8.3
	1.3	10.7	1.5		12.9	12.9	11.0	1.4	8.4	8.4		1.4	8.2	8.3
8/20			1.6		12.7	12.7	10.9	1.4	8.5	8.5		1.4	8.2	8.2
	1.3	10.7	1.7		12.8	12.8	11.2	1.5	8.5	8.5		1.5	8.2	8.2
	1.4	10.7	1.6		12.8	12.8	12.3	1.5	8.9	8.9		1.5	8.2	8.2
8/21			1.5		12.7	12.7	11.7	1.4	8.7	8.7		1.5	8.2	8.2
	1.4	10.7	1.5		12.8	12.8	12.2	1.3	8.8	8.8		1.4	8.2	8.2
	1.3	10.8	1.5		12.9	12.8	12.6	1.5	8.9	8.9		1.4	8.3	8.3
8/22			0.7		13.5	13.5	11.7	0.7	10.4	10.4		0.7	11.3	11.3
	1.3	10.7	1.6		12.4	12.4	12.2	1.6	8.4	8.4		1.4	8.4	8.4
	1.4	10.8	1.6		12.5	12.4	12.6	1.5	8.5	8.5		1.5	8.2	8.2
8/23			0.9		13.5	13.5	12.2	0.6	10.4	10.4		0.7	10.5	10.5
	1.3	10.7	1.6		12.4	12.4	12.2	1.6	8.4	8.4		1.4	8.4	8.4
	1.3	10.7	1.6		12.4	12.4	12.2	1.5	8.3	8.3		1.4	8.4	8.4
8/24			1.4	12.6	12.5	11.5	1.5	8.6	8.6	1.4	8.3	8.6		
	1.4	10.7	1.4	12.4	12.4	11.3	1.5	8.6	8.6	1.4	8.2	8.2		
	1.3	10.7	1.6	12.0	12.1	11.1	1.4	8.6	8.6	1.4	8.4	8.4		
8/25			1.5	12.3	12.3	10.7	1.4	8.5	8.5	1.3	8.4	8.4		
	1.4	10.8	1.6	12.0	12.0	11.1	1.5	8.4	8.4	1.4	8.3	8.3		
	1.3	10.8	1.5	13.1	13.0	11.8	1.6	8.5	8.5	1.5	8.2	8.2		
<b>AVG:</b>	<b>1.3</b>	<b>10.7</b>	<b>1.5</b>		<b>12.7</b>	<b>12.7</b>	<b>11.6</b>	<b>1.4</b>	<b>8.7</b>	<b>8.7</b>		<b>1.4</b>	<b>8.5</b>	<b>8.6</b>

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