

# The Dalles Dam Fishway Status Report

12/4/2017

Inspection Period: 11/26/2017-12/2/2017

## THE DALLES DAM



The Dalles Project-Fisheries  
 P.O. Box 564  
 The Dalles, OR 97058-9998  
 Phone: 541-506-3800

*Fishways are inspected twice daily plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:	21	Temperature:	48.7 °F
			Comments	Secchi:	5.0	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'	1.4			
Entrance weir N1	0	depth (≥ 8')	9.0			
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	Auto adjusts 1' increments Work cleaning circuit boxes performed.			
Weir 158-159 differential	0	1.0' ± 0.1'	158 calibrated and adjusted.			
Count station differential	0	≤ 0.3'	Picket leads raked as needed. Debris load light.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	0.0	9.7			
East entrance differential	0	1.0' - 2.0'	1.6			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	11.0			
Entrance weir E3	0	depth (≥ 8')	11.0			
Collection channel velocity	0	1.5 - 4 fps				
Transportation channel velocity	0	1.5 - 4 fps				
North channel velocity	0	1.5 - 4 fps				
South channel velocity	0	1.5 - 4 fps				
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.2			
Entrance weir W2	0	depth (≥ 8')	8.2			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.5			
Entrance weir S2	0	depth (≥ 8')	8.5			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'			
Spill volume/pattern	0		Spillway closed midnight Aug31			
Turbine Unit Priority	14	per FPP	MU 13-16 oos			
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

### **Birds/Sea lions:**

No sea lion sightings. Very high gull and cormorant numbers. Few early eagle sightings at Westrick park.

Avian Work Group study results show high predation rates on listed species by Miller Island gulls.(Ref; Grant County PUD/Priest Rapids Coordinating Committee)

### **Operations**

North and east fishladders in full operation.

Sluiceway open with 6 gates (units 1, 8 and 18) through Nov30.

### **Current Outages;**

T8 (MU15 & MU16) out for transformer failure. Transformer replacement 7/5/18.

MU17 out for overhaul. Return 12/14/17.

MU14 out for disconnect maint. Return 12/8/17

MU13 out for overhaul. Return 12/8/17

Fish unit 1 and 2 off 0001 Dec 1 for annual fishway outage

### **Maintenance;**

East fishladder dewatered Dec1. One chinook, 3 steelhead, 5 lamprey and 42 juvenile steelhead removed/released to river. Three sturgeon moved to tailwater.

Attempted to dewater east fishway channels Dec2, but water levels would not drop in time to safely remove all fish. Postponed to Dec3.

East exit weir electrical panel FCQ7 partially installed. Further install awaiting design and CADD drawings.

Entrance weir cap fab completed by moorings. Install to start next week on south and west weirs.

East exit oil boom installation by AWS contract this winter. Scope in review.

Fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection. Scope in review.

Fishway dewater work list; Diffuser valve rehab scope, dewater pump rehab, south weir rehab, Weir caps (lamprey), east exit weir 155,156,158 gearbox rehab

Other repair maintenance plans for upcoming fiscal years; 154 -157 rehab/weir wheel replace, diffuser valve overhaul (rehab and decommission).

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. Charter in place for comprehensive spillway assessment.

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

*Fish Counters* - Normandau counters on site through Oct 31. Video review counting through the winter.

*Pikeminnow dam angling* - Done for season with a total catch at 1776. Highest invasive walleye by-catches do date being released. Concern brought to FPOM.

*AWS construction* - Extensions Oct/Nov night work and mid Nov day work FPOM approved. Dive day Nov 13 per FPOM approval. Commissioning testing Mar 31.

*Lamprey minor mods* - Rounded entrance weir cap parts for all entrances recieved. Moorings fabricating. Tribal lamprey trap hoist design pending.

*Railroad track removal* - Tailrace deck start Nov nights (FPOM approved)

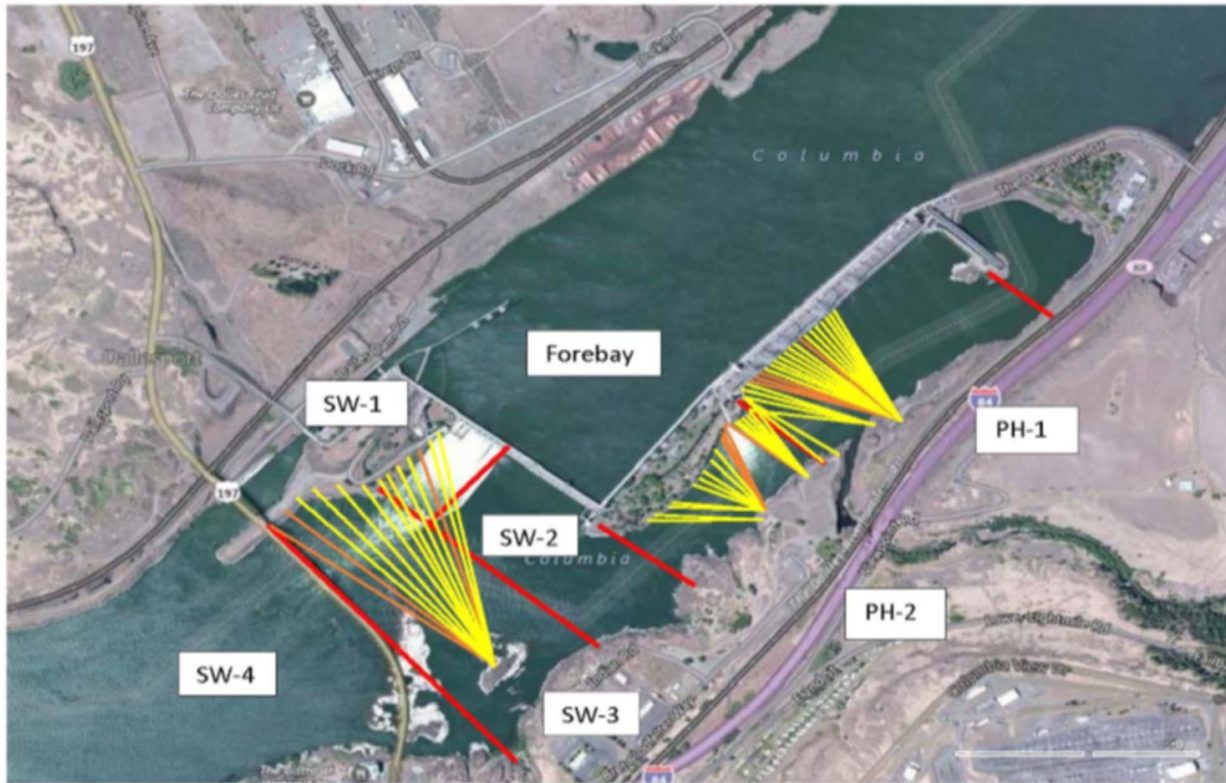
*Fish unit breaker replace*.- Start behind schedule. Demo start Dec4. Completion Feb18, 2018. Two weeks commission testing required.

*Fish unit rehab* - Phase 1A report Jan 2018. Award 2020. Completion 2022.

*Transformer replacement* - Install start May 2018.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

# 2017 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	observer	time	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			
11/26	JWR	AM	FB	0	9	3	0	0	0	1	25	0	0	0	0	38	COME	
			PH1	10	27	4	41	0	0	0	0	0	0	12	18	112		
			PH2	6	0	0	0	0	0	0	0	0	0	0	0	0	6	GBHE
			SW1	0	71	0	0	0	0	0	0	0	0	0	0	1	72	
			SW2	0	0	0	5	0	0	0	0	0	0	0	0	0	5	
			SW3	0	0	0	48	0	0	0	0	0	0	0	0	0	48	
SW4	0	45	0	16	0	0	0	0	0	0	0	0	0	61				
11/27	JWR	PM	FB	0	11	1	0	0	0	0	0	0	0	0	0	12	COME	
			PH1	8	23	2	40	0	0	0	0	0	0	0	28	101		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	1	5	BAEA COME
			SW1	16	0	0	0	0	0	0	0	0	0	2	0	18		
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW3	0	0	4	24	0	0	0	0	0	0	0	0	0	28	
SW4	0	54	0	18	0	0	0	0	0	0	0	0	0	72				
11/28	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					
11/29	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					
11/30	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					
12/1		PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					
12/2		AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					

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

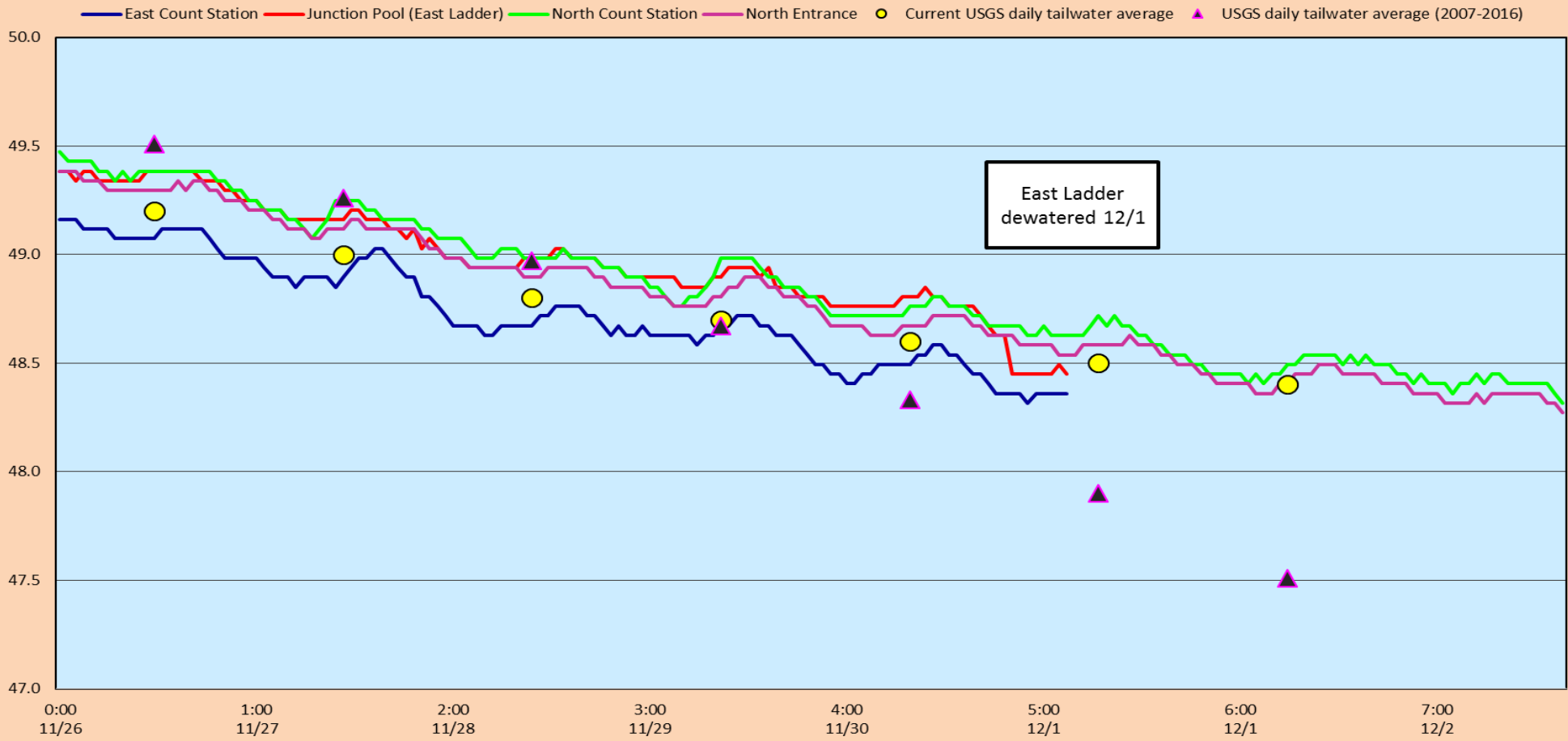
### The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
11/26	23	21	2	7	2	5	5	5	0	0	0	0	-1
11/27	41	35	6	14	4	10	3	2	1	0	0	0	0
11/28	29	24	5	24	7	17	4	4	0	0	0	0	0
11/29	26	22	4	27	8	19	4	4	0	0	0	0	0
<b>total</b>	<b>119</b>	<b>102</b>	<b>17</b>	<b>72</b>	<b>21</b>	<b>51</b>	<b>16</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-1</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
11/26	10	8	2	2	1	1	2	2	0	0	0	0	0
11/27	10	10	0	1	1	0	0	0	0	0	0	0	0
11/28	4	2	2	4	2	2	4	4	0	0	0	0	0
11/29	-2	-1	-1	3	2	1	1	1	0	0	0	0	0
11/30	6	6	0	1	1	0	0	0	0	0	0	0	0
12/1	1	1	0	0	0	0	4	4	0	0	0	0	0
12/2	2	1	1	1	1	0	0	0	0	0	0	0	0
<b>total</b>	<b>31</b>	<b>27</b>	<b>4</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% North</b>	<b>20.7</b>	<b>20.9</b>	<b>19.0</b>	<b>14.3</b>	<b>27.6</b>	<b>7.3</b>	<b>40.7</b>	<b>42.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

# The Dalles Dam Adult Fish Ladder(s) River/Water Temperature



USGS: <http://pweb.crohms.org/im/documents/ops/temp201711.html>

Secchi:		Temperatures
5.0	Sun	49.2
5.0	Mon	49.0
5.0	Tue	48.8
5.0	Wed	48.7
5.0	Thurs	48.6
5.0	Fri	48.5
5.0	Sat	48.4
5.0	AVG	48.7

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

= Out of criteria

Date:	North Ladder		East Ladder					West Entrance			South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
11/26			1.7	10.1	11.0	11.0	9.8	1.5	8.2	8.2		1.4	8.5	8.5
	1.4	9.0	1.7	10.0	11.0	11.1	10.8	1.5	8.2	8.2		1.6	8.4	8.4
	1.5	8.8	1.6	10.6	11.6	11.6	11.5	1.6	8.2	8.2		1.5	8.5	8.5
11/27			1.6	10.6	11.6	11.6	10.6	1.5	8.3	8.3		1.4	8.5	8.5
	1.4	8.9	1.4	10.4	11.4	11.4	10.4	1.5	8.1	8.1		1.7	8.4	8.4
	1.4	9.0	1.7	10.0	10.9	10.9	9.8	1.7	8.2	8.2		1.5	8.6	8.6
11/28			1.7	10.5	11.0	11.0	1.1	1.5	8.4	8.4		1.2	9.1	9.1
	1.4	8.9	1.5	10.4	11.0	11.0	10.0	1.4	8.2	8.2		1.5	8.4	8.4
	1.4	9.0	1.7	10.7	11.1	11.1	11.1	1.6	8.2	8.2		1.6	8.3	8.3
11/29			1.5	10.9	10.3	10.3	10.3	1.5	8.1	8.1		1.6	8.3	8.3
	1.3	9.0	1.5	10.9	10.5	10.5	10.5	1.5	8.1	8.1		1.6	8.3	8.3
	1.3	9.0	1.5	10.6	10.6	10.6	10.6	1.5	8.3	8.3		1.5	8.7	8.7
11/30			1.6	10.1	11.0	11.0	10.0	1.5	8.2	8.2		1.4	8.9	8.9
	1.3	9.0	1.6	10.1	11.0	11.0	10.0	1.4	8.3	8.3	1.5	8.6	8.6	
	1.3	9.0	floats tied-no plc readings											
12/1	1.3	9.0	East Ladder Dewatered											
12/2	1.3	9.0												
<b>AVG:</b>	<b>1.4</b>	<b>9.0</b>	<b>1.6</b>	<b>NO CRITERIA</b>	<b>11.0</b>	<b>11.0</b>	<b>9.7</b>	<b>1.5</b>	<b>8.2</b>	<b>8.2</b>	<b>NO CRITERIA</b>	<b>1.5</b>	<b>8.5</b>	<b>8.5</b>

Fishways are inspected twice daily plus one SCADA inspection.





New 10' pipe section capped. Digging underway for 10" valve room at base of dam.





Peirnose block installation underway in forebay.

