

# The Dalles Dam Fishway Status Report

12/11/2016

Inspection Period: 12/04/2016 - 12/10/2016

THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

*Fishways are inspected twice daily plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 16		Temperature: 47.8 °F	
			Comments: Fall like conditions on project		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')	9.2			
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				
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')				
East entrance differential	0	1.0' - 2.0'				
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')				
Entrance weir E3	0	depth (≥ 8')				
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'				
Entrance weir W1	0	depth (≥ 8')				
Entrance weir W2	0	depth (≥ 8')				
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'				
Entrance weir S1	0	depth (≥ 8')				
Entrance weir S2	0	depth (≥ 8')				
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0					
spill off						
Turbine Unit Priority	4	per FPP	MU's 3, 15, and 16 OOS			
Turbine 1% Efficiency	0	per FPP				

***OOS for winter maintenance***

**Birds/Sea lions:**

No sea lions observed. High numbers of Cormorants.  
Bird observation data collected once daily. Refer to Avian Zone map and bird count.  
Two of 13 spillway avian lines broke closest to bridge. Awaiting USDA cost estimate.

**Operations:**

All east fishway dewatering activities completed.

**Current Outages;**

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.  
MU21 out for exciter failure RTS unknown

**Maintenance:**

New east exit weir electrical panel FCQ7 installation continues. New FCR1 panel installation completed, which is tied to FCQ7  
East ladder dewatered Dec 1 through end Feb for AWS backup construction. North ladder dewatering Jan 3 - 17.

Planned winter work; East exit weirs coupler/sealer replacement, ladder expansion joint repair, vegetation removal and routine PMs.  
*Long Term repair maintenance plans*; 154 -157 weir wheel replace, collection channel diffusers decommission, repair failed diffusers - all awaiting funding  
*Fish related /non-fish funded items*; Spillway crane and spillgate 9, both awaiting funding.  
All spillway items on Critical Infrastructure list and Unfunded Requirement list.

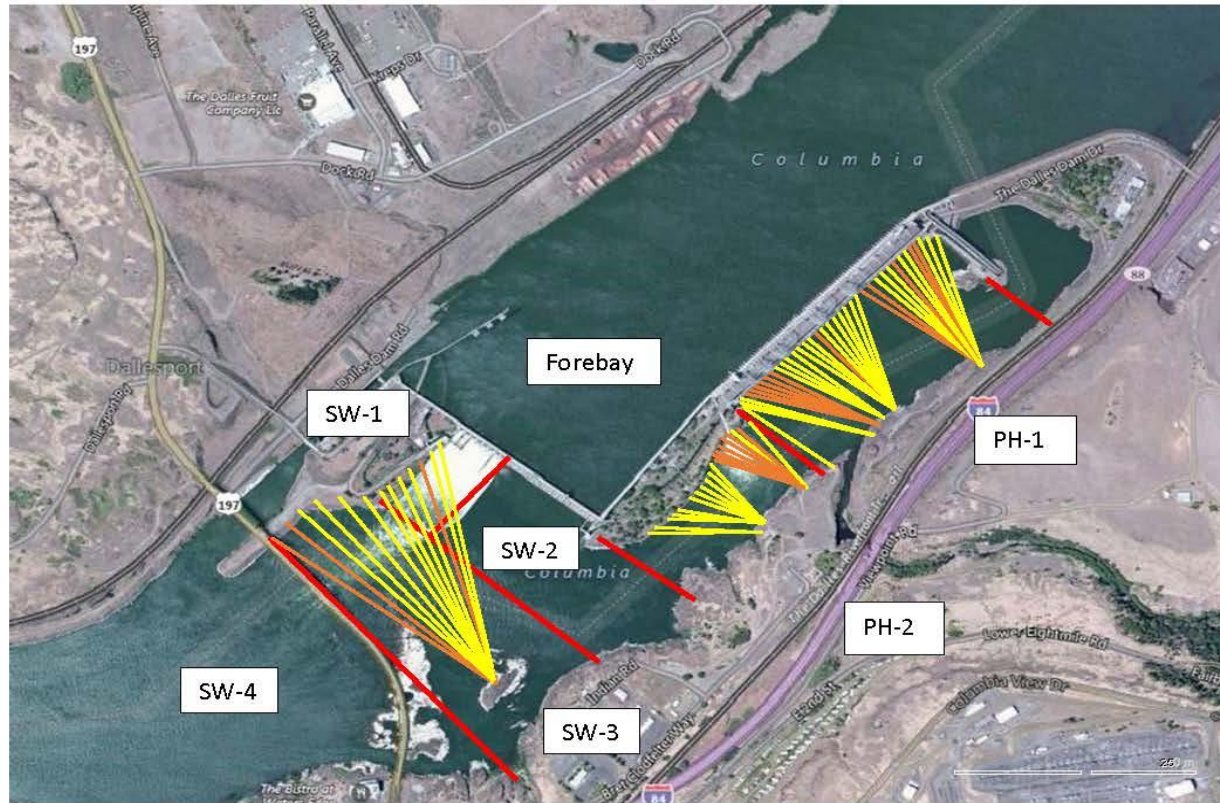
**Research/Construction:**

Unit 1 environmental acceptable grease - Coordinated and approved through FPOM.  
North fishladder rehab/rock wall stabilizing - Awaiting funding.  
East fishladder AWS emergency backup - Prefab continues north staging area. Digging continues below fishladder. Concrete jackhammering started.  
Forebay scaffold work platform installed and intermittent dive operations started.  
Railroad track removal - Start in water work period 2016. Possible work over sluiceway next summer. Crane rail replacement postponed to 2021.  
Tailrace crane rehab - Work resumed. Completion Dec.  
Fish unit breaker replace.- Work start fall 2017. Switch over Jan 2018.  
Transformer replacement - Install start May 2018. Requires 4 months per transformer bank.  
N Wasco Co PUD Memo of Agreement - Reviewing for final.  
Fish unit rehab - Award planned for 2020. Completion 2022.  
Fish unit breaker replacement - Start in water work period 2017/18  
Lamprey minor mods - Rounded weir caps planned for all entrances 2018. Fab and install with project labor. Planning meeting Dec 19.

**Research/Contractors:**

Kiewit on site for AWS backup. Monitoring work progress.

Approved by: Ron Twiner  
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

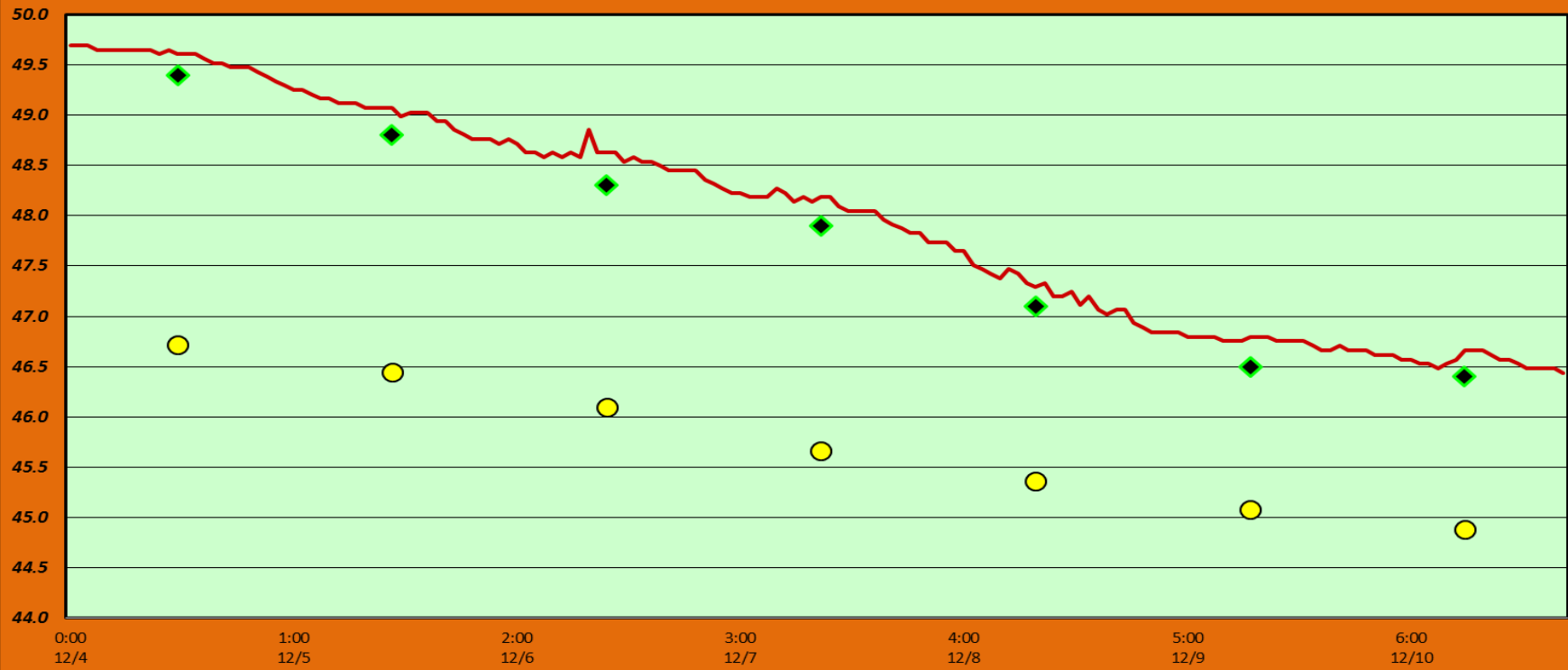
## 2016 Piscivorous Bird Counts

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				
12/4/16		PM	FB	0	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	0		0
			PH2	0	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		0
			SW2	0	0	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	0		0
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/5/16	GJF	AM	FB	0	78	5	0	0	0	0	8	0	0	0	0	0	91	come gbhe	
			PH1	0	4	18	11	0	0	0	0	0	0	39	11	83			
			PH2	13	0	3	0	0	0	0	0	0	0	0	0	16			
			SW1	0	55	0	0	0	0	0	0	0	0	0	3	58			
			SW2	1	0	2	0	0	0	0	0	0	0	0	0	3			
			SW3	0	0	0	9	0	0	0	0	0	0	0	0	9			
			SW4	0	44	0	5	0	0	0	0	0	0	0	0	49			
12/6/16	GJF	PM	FB	0	0	0	0	0	0	129	0	0	0	1	130	baea come gbhe			
			PH1	0	0	17	0	0	0	0	0	0	29	9	55				
			PH2	12	0	6	0	0	0	0	0	0	0	0	18				
			SW1	0	49	0	0	0	0	0	0	0	0	3	52				
			SW2	0	7	0	0	0	0	0	0	0	0	0	7				
			SW3	0	0	2	93	0	0	0	0	0	0	0	0		95		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0		0		
12/7/16	GJF	AM	FB	0	0	2	0	0	0	116	0	0	0	0	118	come gbhe			
			PH1	6	0	27	21	0	0	0	0	0	39	0	93				
			PH2	12	0	0	0	0	0	0	0	0	0	0	12				
			SW1	0	76	0	0	0	0	0	0	0	0	2	78				
			SW2	0	3	0	0	0	0	0	0	0	0	0	3				
			SW3	0	34	0	79	0	0	0	0	0	0	0	113				
			SW4	0	0	0	3	0	0	0	0	0	0	0	3				
12/8/16	JWR	PM	FB	0	5	0	0	0	0	114	0	0	0	0	119				
			PH1	0	0	0	0	0	0	0	0	0	0	0	0				
			PH2	1	0	0	0	0	0	0	0	0	0	0	1				
			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	7	0	24	0	0	0	0	0	0	0	31				
			SW4	0	0	0	0	0	0	0	0	0	0	0	0				
12/9/16	JWR	AM	FB	0	4	0	0	0	0	75	0	0	0	0	79				
			PH1	0	0	0	11	0	0	0	0	0	0	0	11				
			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	17	0	0	0	0	0	0	0	17				
			SW4	0	0	0	0	0	0	0	0	0	0	0	0				
12/10/16	JWR	PM	FB	0	0	0	0	0	0	73	0	0	0	0	73	BAEA			
			PH1	0	0	0	2	0	0	0	0	0	0	0	2				
			PH2	0	0	0	0	0	0	0	0	0	0	3	3				
			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	1	0	0	0	14	0	0	0	0	0	15				
			SW4	0	0	0	0	0	0	0	0	0	0	0	0				
<i>daily averages</i>				0.9	7.5	1.7	5.6	0.0	0.3	0.0	10.5	0.0	0.0	2.2	0.7	29.3			

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

— North Count Station    ◆ Current USGS Daily Average    ● USGS Daily Average (2007-2015)



**USGS:** [Nov - http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201611.lcol.html](http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201611.lcol.html)

Secchi:		Temperatures
5.0	Sun	49.4
5.0	Mon	48.8
5.0	Tue	48.3
5.0	Wed	47.9
5.0	Thurs	47.1
5.0	Fri	46.5
5.0	Sat	46.4
5.0	AVG	47.8

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

= Out of criteria

North Ladder			East Ladder												S P I L L  O F F
North Entrance		East Entrance					West Entrance				South Entrance				
Date:	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
12/4	1.4	9.1													
12/5	1.4	9.2													
12/6	1.3	9.2	<b>East Fish Ladder out of service for winter maintenance</b>												
12/7	1.5	9.1													
12/8	1.3	9.2													
12/9	1.4	9.2													
12/10	1.3	9.3													
<b>AVG:</b>	<b>1.4</b>	<b>9.2</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<i>Fishways are inspected twice daily plus one SCADA inspection.</i>															



Jackhammer start on downstream dam face.



Forebay work platform