

# The Dalles Dam Fishway Status Report

12/26/2016

Inspection Period: 12/18/2016 - 12/24/2016

THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

*Fishways are inspected once daily during winter*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7		Temperature: 41.1 °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		≤ 0.5'				
Removable weirs 154-157		Per forebay				
Weir 158-159 differential		1.0' ± 0.1'				
Count station differential		≤ 0.3'				
Weir crest depth		1.0' ± 0.1'				
Junction pool weir JP6		depth (≥ 7')				
East entrance differential		1.0' - 2.0'				
Entrance weir E1		No criteria				
Entrance weir E2		depth (≥ 8')				
Entrance weir E3		depth (≥ 8')				
Collection channel velocity		1.5 - 4 fps				
Transportation channel velocity		1.5 - 4 fps				
North channel velocity		1.5 - 4 fps				
South channel velocity		1.5 - 4 fps				
West entrance differential		1.0' - 2.0'				
Entrance weir W1		depth (≥ 8')				
Entrance weir W2		depth (≥ 8')				
Entrance weir W3		No criteria				
South entrance differential		1.0' - 2.0'				
Entrance weir S1		depth (≥ 8')				
Entrance weir S2		depth (≥ 8')				
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	NA	Units 1, 18	Closed midnight Dec15			
Turbine trashrack drawdown	NA					
spill off	NA					
Turbine Unit Priority	NA	per FPP	Out of fish passage season			
Turbine 1% Efficiency	NA	per FPP	Out of fish passage season			

***OOS for winter maintenance***

**Birds/Sea lions:**

No sea lions observed. High numbers of Cormorants. Bald Eagles starting to arrive in westrick park;  
Bird observation data collected once daily. Refer to Avian Zone map and bird count.  
Two of 13 spillway avian lines broke closest to bridge. Preparing work plan for USDA install contract.

**Operations:**

All east fishway dewatering and fish salvage completed.  
Sluiceway closed per Fish Passage Plan Dec15. Excessive endgate leakage was addressed with limit adjustments.

**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 as funding allows.  
East ladder dewatered Dec 1 through end Feb for AWS backup construction. North ladder dewatering Jan 3 - 17.  
Planned winter work; East exit weirs 154 and 159 coupler/sealer replacement, ladder expansion joint repair, N1 weir rehab, W1 weir repair/wheel replace.  
*Long Term repair maintenance plans*; 154 -157 rehab/weir wheel replace, collection channel diffusers decommission, repair failed diffusers.  
*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.

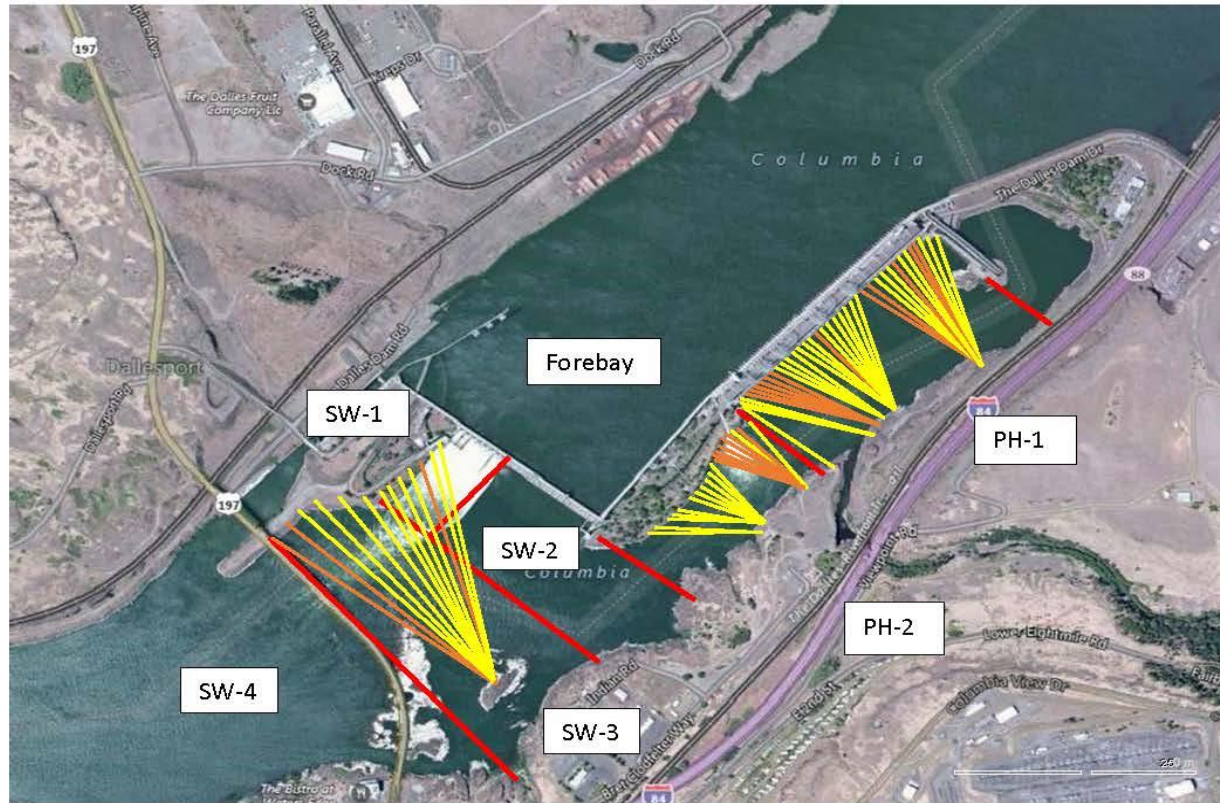
**Research/Construction:**

Unit 1 EAL environmental acceptable grease - Coordinated and approved through FPOM.  
North fishladder rehab/rock wall stabilizing - Awaiting funding. Possible 2018/19.  
East fishladder AWS emergency backup - Forebay diving started. Preparing scaffold for junction pool concrete cutting. Core drilling at base started.  
Railroad track removal - Mobilizing for work start this winter. MOC under development for work over sluiceway next spring. Crane rail replacement 2021.  
Tailrace crane rehab - Work resumed. Completion unknown.  
Fish unit breaker replace.- Work start fall 2017. Switch over Jan 2018.  
Fish unit rehab - Award planned for 2020. Completion 2022.  
Transformer replacement - Install start May 2018. Sequence being reviewed for least fish passage risk. MOC to be provided to FPOM.  
N Wasco Co PUD Memo of Agreement - Reviewing final comments.  
Lamprey minor mods - East count station tribal trap hoist improvements and rounded entrance weir caps planned 2018. Planning meeting Dec 19.

**Research/Contractors:**

Kiewit on site for east fishladder AWS backup. Monitoring work progress.  
East ladder PIT antenna communication lost. PITAGIS trouble shooting.

Approved by: Ron Twiner  
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

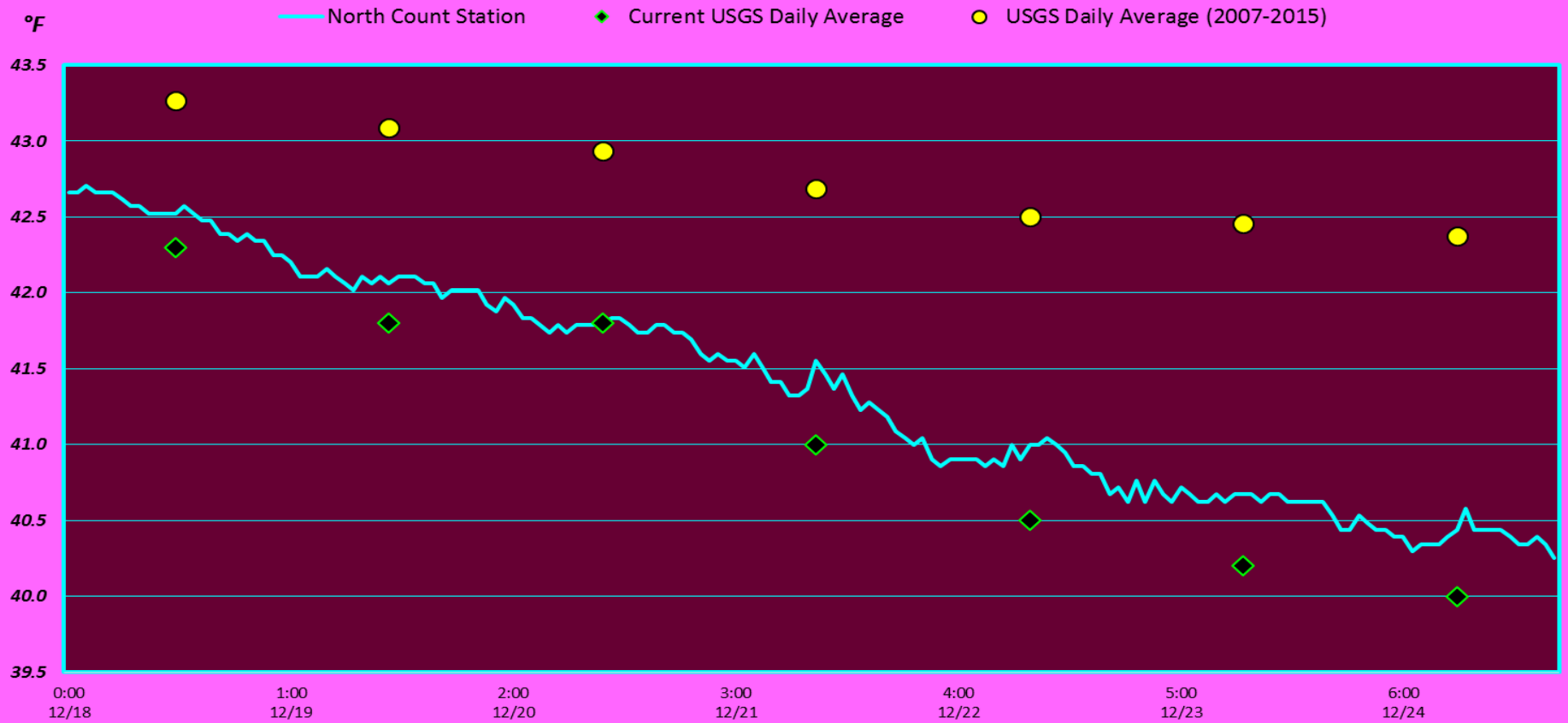
Orange lines = down or missing wires

## 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			
12/18/16	GJF	PM	FB	0	3	0	4	0	0	0	27	0	0	0	2	36	BAEA	
			PH1	18	0	2	2	0	0	0	0	0	0	0	0	22		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	6	10	BAEA
			SW1	0	28	0	0	0	0	0	0	0	0	0	0	0	28	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	14	0	91	0	0	0	0	0	0	0	0	0	105	
12/19/16	JWR	AM	FB	0	0	1	0	0	0	0	23	0	0	0	0	24	COME BAEA	
			PH1	0	0	0	0	0	0	0	0	0	0	2	1	3		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	3	3	GBHE
			SW1	0	129	0	0	0	0	0	0	0	0	0	0	0	129	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	59	0	0	0	0	0	0	0	0	4	63	
12/20/16	JWR	PM	FB	0	0	5	0	0	0	0	23	0	0	0	0	28	COME BAEA	
			PH1	0	0	3	0	0	0	0	0	0	0	1	0	4		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	GBHE
			SW1	0	133	0	0	0	0	0	0	0	0	0	0	0	133	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	3	0	57	0	0	0	0	0	0	0	0	1	61	
12/21/16	GJF	AM	FB	0	2	19	0	0	0	0	20	0	0	0	1	42	BAEA	
			PH1	6	0	2	5	0	0	0	0	0	0	0	0	13		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	5	5	2 BAEA, 3 GBHE
			SW1	0	138	2	0	0	0	0	0	0	0	0	0	0	140	
			SW2	0	21	0	0	0	0	2	0	0	0	0	0	0	23	
			SW3	0	0	0	116	0	0	0	0	0	0	0	0	0	116	
12/22/16	JWR	PM	FB	0	0	12	0	0	0	0	16	0	0	0	0	28	3 BAEA, 1 GBHE	
			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	4	4	GBHE
			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	5	0	82	0	0	0	0	0	0	0	0	1	88	
12/23/16	JWR	AM	FB	0	0	18	0	0	0	0	13	0	0	0	0	31	13 COME-F, 1 GBHE & 3 COME-NF	
			PH1	2	1	0	0	0	0	0	0	0	0	13	4	20		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	14	14	8 BAEA, 6 GBHE
			SW1	0	77	0	0	0	0	0	0	0	0	0	0	0	77	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	44	0	61	0	0	0	0	0	0	0	0	0	105	
12/24/16	EHK	AM	FB	0	0	0	1	0	0	0	12	0	0	0	0	13	BAEA	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4	8	BAEA
			SW1	0	36	0	0	0	0	0	0	0	0	0	0	0	36	
			SW2	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
			SW3	0	5	0	139	0	0	0	0	0	0	0	0	0	144	
SW4	0	35	0	0	0	0	0	0	0	0	0	0	0	35				
<i>daily averages</i>				0.7	13.8	1.3	12.6	0.0	0.0	0.0	2.7	0.0	0.0	0.4	1.1	32.6		

# The Dalles Dam North Adult Fish Ladder River/Water Temperatures



USGS: [http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201612\\_tcol.html](http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201612_tcol.html)

Secchi:		Temperatures
12/18	5.0	Sun 42.3
12/19	5.0	Mon 41.8
12/20	5.0	Tue 41.8
12/21	5.0	Wed 41.0
12/22	5.0	Thurs 40.5
12/23	5.0	Fri 40.2
12/24	5.0	Sat 40.0
	5.0	AVG 41.1

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

7-Jan-00

= 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	
12/18	1.3	9.2													
12/19	1.4	9.2													
12/20	1.4	9.2	<b>East Fish Ladder out of service for winter maintenance</b>												
12/21	1.5	9.3													
12/22	1.5	9.2													
12/23	1.4	9.3													
12/24	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>	

Fishways are inspected twice daily plus one SCADA inspection.





Pilot holes drilled. Jackhammering resumes.



Scaffold erected for work platform installation in junction pool.