

# The Dalles Dam Fishway Status Report

1/8/2017

Inspection Period: 01/07/2017 - 01/07/2017

THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

*Fishways are inspected once daily during winter*

<b>The Dalles Dam</b>	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7	Temperature: 39.5 °F
			Comments: Fall like conditions on project	Secchi: 5.0 feet

### NORTH FISHWAY

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'
Entrance weir N1	0	depth (≥ 8')
Entrance weir N2	0	Closed
PUD Intake differential	0	≤ 0.5'

***Out for winter maintenance***

### EAST FISHWAY

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')

***Out for winter maintenance and  
AWS backup construction***

### JUVENILE PASSAGE

Sluiceway operation	NA	Units 1, 18	Closed. Reopens Mar1 for fish passage
Turbine trashrack drawdown	NA		
spill	NA		
Turbine 1% Efficiency	NA	per FPP	Out of fish passage season
Turbine Unit Priority	NA	per FPP	Out of fish passage season



**Birds/Sea lions:**

No sea lions observed. High numbers of Cormorants. High Bald Eagle numbers 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. Work plan and hazing contract routed for approvals.

**Operations:**

North fishladder dewatered Jan 4. Entrance below tailwater attempted Jan 5 but postponed due to low temperatures and ice coverage. (refer to pic tab)

**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 to continue as funding allows.  
East ladder dewatered Dec 1 through end Feb for AWS backup construction. North ladder dewatering Jan 4 - 17.  
Winter work in progress; East exit weirs 154 and 159 coupler/seal 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.

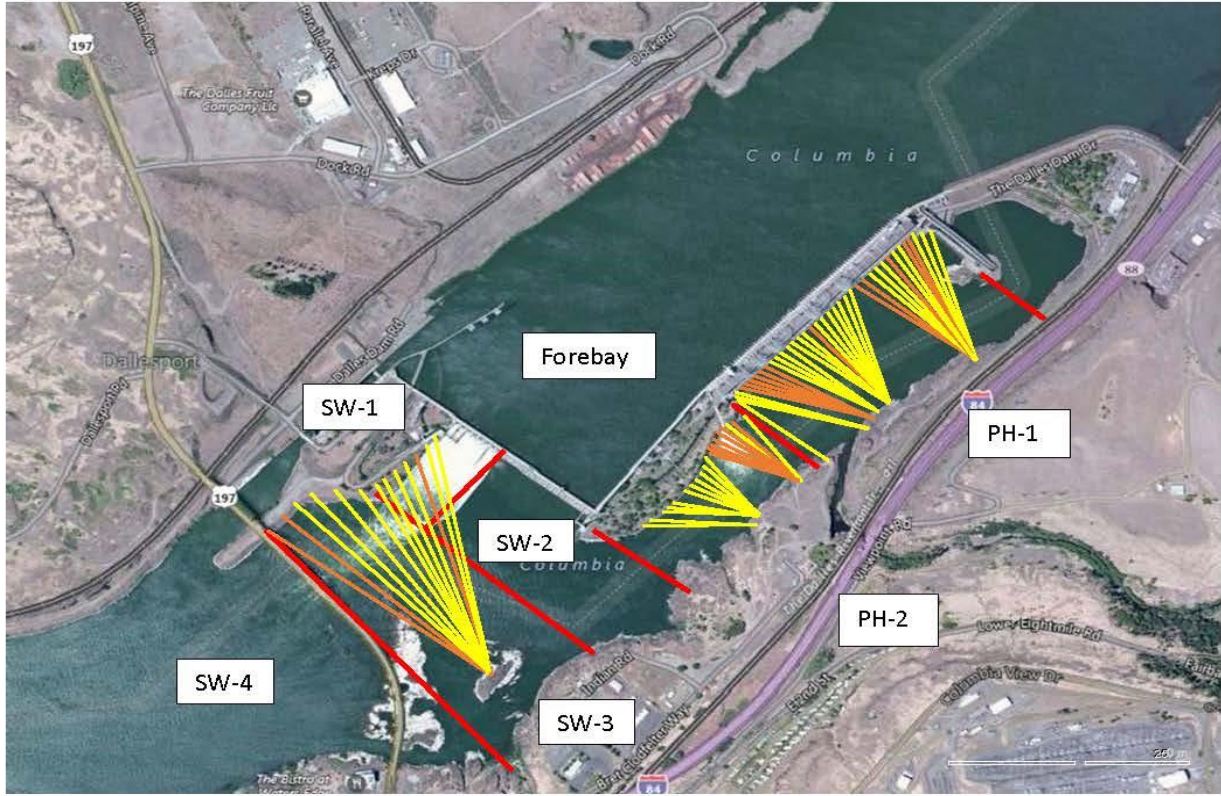
**Research/Construction:**

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 underway. Scaffold and work platform in junction pool. Junction pool concrete east side removed.  
Jackhammering of hole resumed. Forebay slot cutting via dive for peirs underway.  
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 some day.  
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 tribal trap hoist improvements design underway. Rounded entrance weir caps design underway, planned fab '17, install '17/'18.

**Research/Contractors:**

Kiewit on site for east fishladder AWS backup. Monitoring work progress. Refer to Pic tabs.

Approved by: Ron Twiner  
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

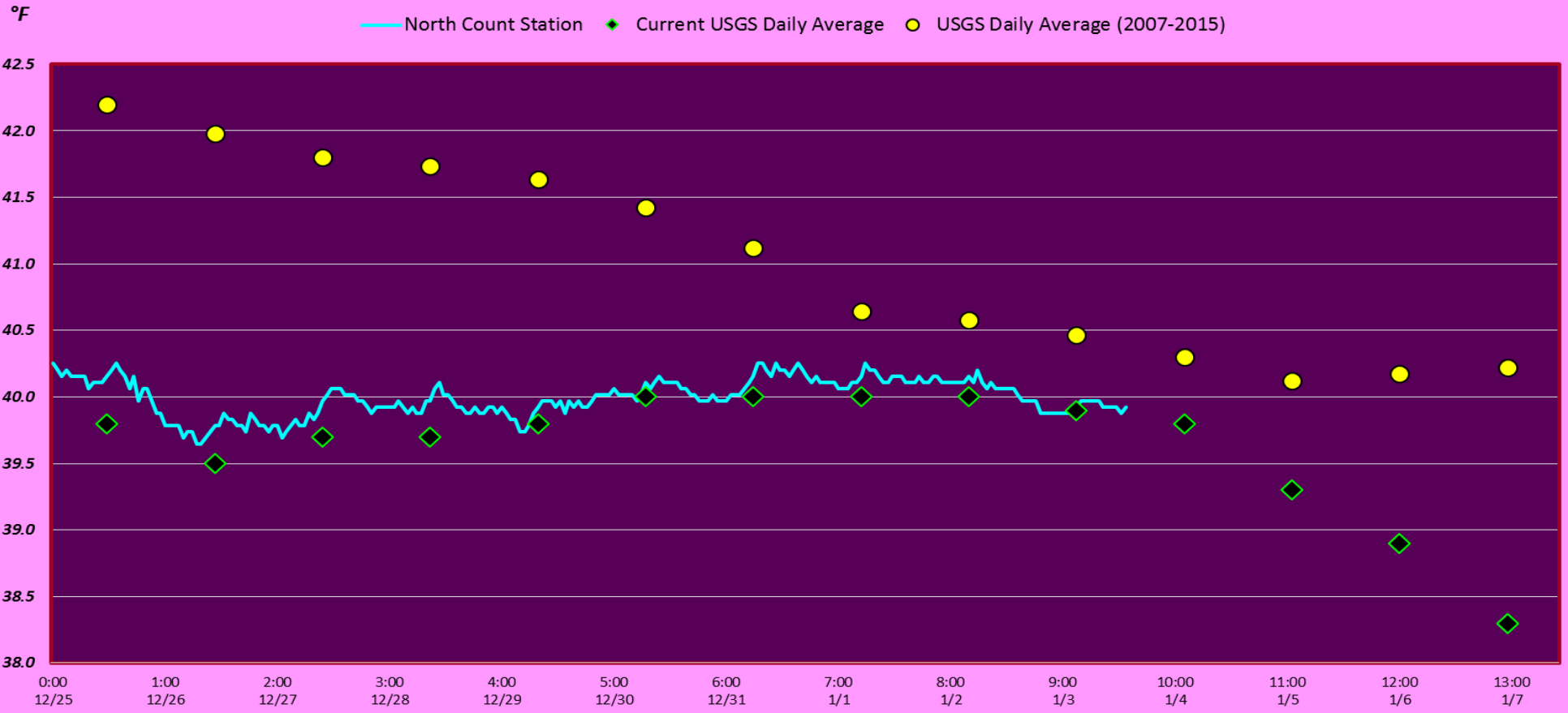
Orange lines = down or missing wires

## 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			
1/1/17	GJF	PM	FB	0	12	8	0	0	0	5	0	0	0	0	2	27	BAEA COME BAEA	
			PH1	7	0	4	0	0	0	0	0	0	0	0	5	0		16
			PH2	5	0	0	0	0	0	0	0	0	0	0	0	39		44
			SW1	0	27	0	0	0	0	0	0	0	0	0	0	0		27
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	3	0	88	0	0	0	0	0	0	0	0	0		91
1/2/17	GJF	AM	FB	0	74	11	2	0	0	6	0	0	0	0	3	96	BAEA COME BAEA	
			PH1	3	0	4	0	0	0	0	0	0	0	7	0	14		
			PH2	2	0	0	0	0	0	0	0	0	0	0	47	49		
			SW1	0	19	2	0	0	0	0	0	0	0	0	0	21		
			SW2	0	3	2	0	0	0	0	0	0	0	0	0	5		
			SW3	0	2	0	154	0	0	0	0	0	0	0	5	161		
1/3/17	GJF	PM	FB	0	4	7	0	0	0	3	0	0	0	7	21	BAEA BAEA		
			PH1	2	0	0	0	0	0	0	0	0	0	0	2			
			PH2	2	0	0	0	0	0	0	0	0	0	0	51		53	
			SW1	0	2	0	0	0	0	0	0	0	0	0	0		2	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		0	
			SW3	0	0	0	133	0	0	0	0	0	0	0	0		133	
1/4/17	JWR	AM	FB	0	0	8	0	0	0	0	0	0	0	0	8	1 BAEA, 1 GBHE BAEA BAEA BAEA		
			PH1	0	0	1	1	0	0	0	0	0	0	0	0		2	
			PH2	0	0	0	0	0	0	0	0	0	0	1	43		44	
			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	3	0	63	0	0	0	0	0	0	0	2		68	
1/5/17	JWR	PM	FB	0	1	10	0	0	0	0	0	0	0	4	15	BAEA COME 56 BAEA, 3 GBHE BAEA BAEA		
			PH1	0	0	1	2	0	0	0	0	0	0	0	2		5	
			PH2	0	0	0	0	0	0	0	0	0	0	0	59		59	
			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	92	0	0	0	0	0	0	0	3		95	
1/6/17	JWR	AM	FB	0	0	6	0	0	0	0	0	0	0	2	8	BAEA BAEA BAEA		
			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	114	0	0	0	0	0	0	0	0		114	
1/7/17	JWR	PM	FB	0	1	0	101	0	0	0	0	0	0	1	103	BAEA BAEA BAEA BAEA BAEA		
			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	18	0	145	0	0	0	0	0	0	0	0		163	
<i>daily averages</i>				0.4	3.4	1.3	18.3	0.0	0.0	0.1	0.2	0.0	0.0	0.3	5.6	29.7		

# The Dalles Dam River Temperatures



USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201701.html>

2016	Temperatures	Secchi:		2017	Temperatures
12/25	39.8	5.0	Sun	1/1	40.0
12/26	39.5	5.0	Mon	1/2	40.0
12/27	39.7	5.0	Tue	1/3	39.9
12/28	39.7	5.0	Wed	1/4	39.8
12/29	39.8	5.0	Thurs	1/5	39.3
12/30	40.0	5.0	Fri	1/6	38.9
12/31	40.0	5.0	Sat	1/7	38.3
	<b>39.8</b>	<b>5.0</b>	<b>AVG</b>		<b>39.5</b>

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

= Out of criteria

Date:	North Ladder							East Ladder						
	North Entrance		East Entrance				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
1/1/17	North and East Adult Fish Ladders down for winter maintenance													
1/2/17														
1/3/17														
1/4/17														
1/5/17														
1/6/17														
1/7/17														

Fishways are inspected twice daily plus one SCADA inspection.



Too much ice coverage to dewater north fishway entrance below tailwater. Postponed. Would require ice fishing tactics for fish salvage.





Concrete sections removed from junction pool wall