

The Dalles Dam Fishway Status Report

12/31/2016

Inspection Period: 12/25/2016 - 12/31/2016

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

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'	1.4	
Entrance weir N1	0	depth (≥ 8')	9.2	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		

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')		

Winter maintenance and AWS backup co

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. Bald Eagles steadily increasing 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:

North fishway dewatering and fish salvage Jan 4.

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.
Planned winter work; 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.

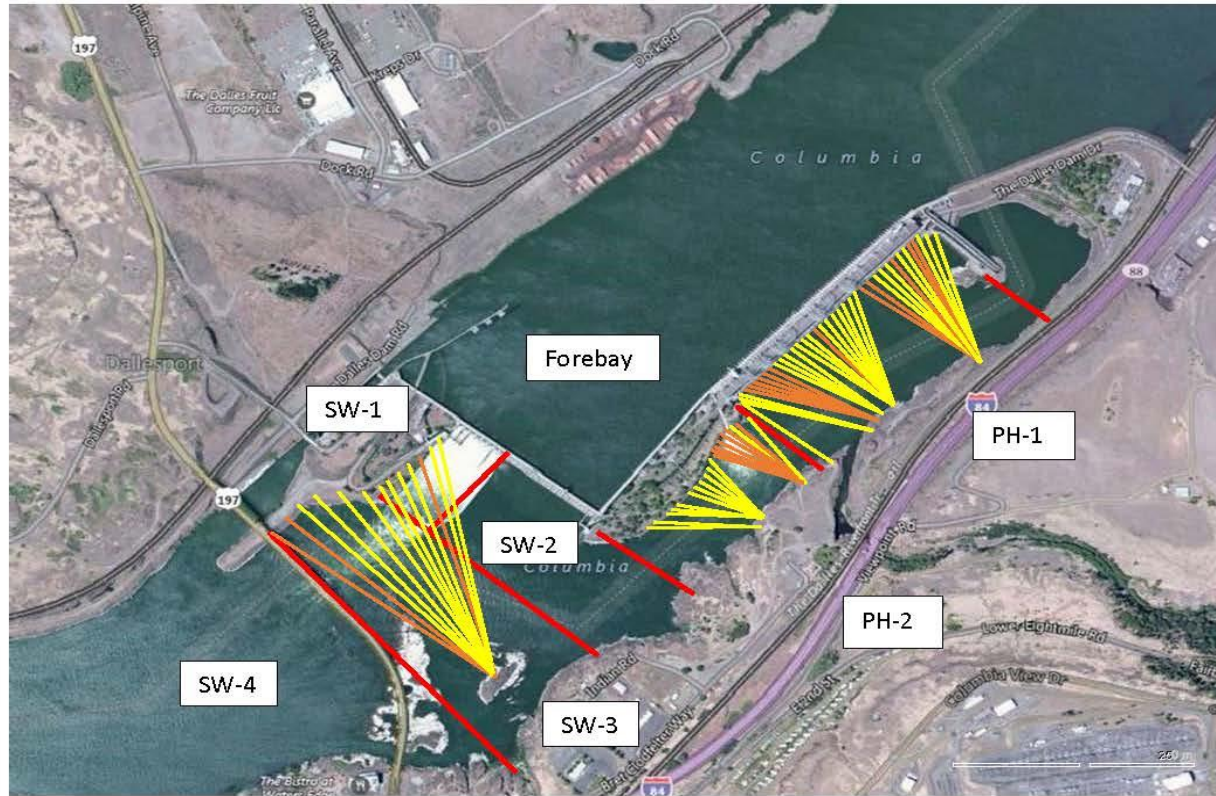
Research/Construction:

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 for concrete cutting.
Jackhammering resumed at base. Forebay slot cutting 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 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. Refer to Pic tabs.
East ladder PIT antenna communication lost due to room overheating. Corrective measures taken.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

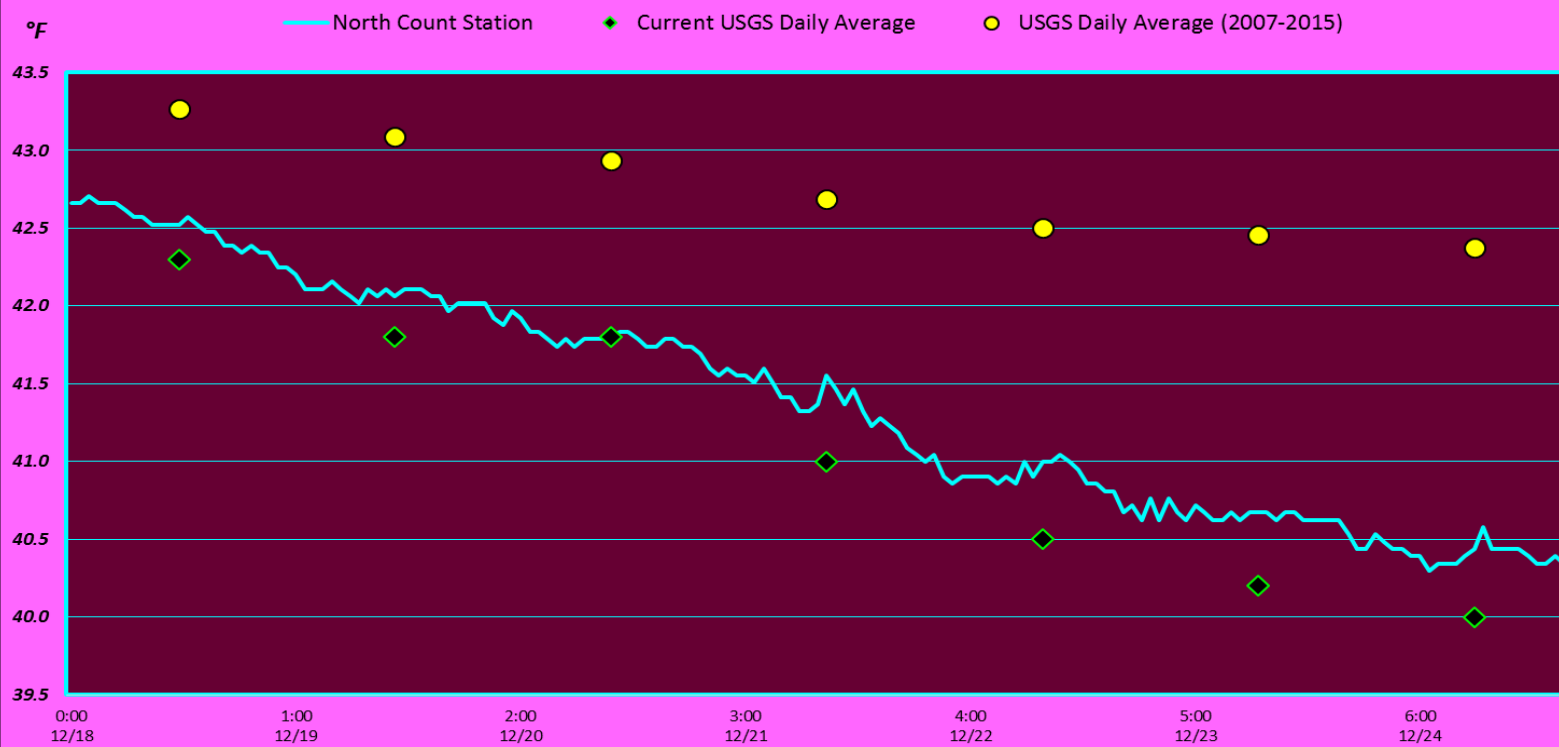
Orange lines = down or missing wires

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		
12/25/16		AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	No observations
			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	
12/26/16	EK	PM	FB	0	0	0	0	0	0	0	16	0	0	0	0	16	5 BAEA, 3 GBH
			PH1	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	0	0	0	1	0	0	0	0	0	0	0	8	9	
			SW1	0	36	0	0	0	0	0	0	0	0	0	0	36	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	16	0	53	0	0	0	0	0	0	0	0	69	
12/27/16	JWR	AM	FB	2	0	9	0	0	0	1	18	0	0	0	0	30	COME 18 BAEA, 4 GBHE
			PH1	0	0	1	0	0	0	0	0	0	0	2	0	3	
			PH2	0	0	0	0	0	0	0	0	0	0	0	22	22	
			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	13	0	104	0	0	0	0	0	0	0	0	117	
12/28/16	JWR	PM	FB	0	2	17	0	0	0	0	15	0	0	0	0	34	COME BAEA BAEA BAEA
			PH1	0	0	2	0	0	0	0	0	0	0	0	19	21	
			PH2	0	0	0	0	0	0	0	0	0	0	0	14	14	
			SW1	0	21	0	0	0	0	0	0	0	0	0	0	21	
			SW2	0	18	0	0	0	0	0	0	0	0	1	1	20	
			SW3	0	26	0	124	0	0	0	0	0	0	0	1	151	
12/29/16	JWR	AM	FB	1	0	0	0	0	0	2	13	0	0	1	2	19	BAEA COME 18 BAEA, 4 GBHE
			PH1	0	0	0	0	0	0	0	0	0	0	0	3	3	
			PH2	0	0	0	0	0	0	0	0	0	0	0	22	22	
			SW1	0	6	0	0	0	0	0	0	0	0	0	0	6	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	0	0	0	109	0	0	0	0	0	0	0	0	109	
12/30/16	GJF	PM	FB	0	3	2	0	0	0	0	19	0	0	0	1	25	BAEA baea come BAEA
			PH1	7	0	3	0	0	0	1	0	0	0	4	0	15	
			PH2	0	0	0	0	0	0	0	0	0	0	0	15	15	
			SW1	0	33	0	0	0	0	0	0	0	0	0	0	33	
			SW2	0	0	5	0	0	0	0	0	0	0	0	0	5	
			SW3	0	2	9	111	0	0	0	0	0	0	0	0	111	
12/31/16	GJF	AM	FB	0	2	9	111	0	0	0	0	0	0	0	0	111	come BAEA gbhe
			PH1	7	4	10	2	0	0	1	0	0	0	12	0	36	
			PH2	4	0	1	0	0	0	0	0	0	0	0	10	15	
			SW1	0	17	0	0	0	0	0	0	0	0	0	2	19	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	4	0	97	0	0	0	0	0	0	0	0	101	
<i>daily averages</i>				<i>0.4</i>	<i>6.7</i>	<i>1.3</i>	<i>12.6</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>1.9</i>	<i>0.0</i>	<i>0.0</i>	<i>0.4</i>	<i>2.5</i>	<i>25.5</i>	

The Dalles Dam North Adult Fish Ladder River/Water Temperatures



USGS: http://www.nwd-wc.usace.army.mil/im/documents/ops/temp201612_tcol.html

Secchi:		Temperatures
5.0	Sun	42.3
5.0	Mon	41.8
5.0	Tue	41.8
5.0	Wed	41.0
5.0	Thurs	40.5
5.0	Fri	40.2
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												SPILL OFF
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	
12/26	1.4	9.3													
12/27	1.5	9.3													
12/28	1.4	9.3													
12/29	1.3	9.1													
12/30	1.3	9.2													
12/31	1.3	9.1													
AVG:	1.4	9.2	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

East Fish Ladder out of service for winter maintenance

Fishways are inspected twice daily plus one SCADA inspection.



Can almost see forebay from here.



Support decking atop junction pool grating for work platform.