

The Dalles Dam Fishway Status Report

12/17/2016

Inspection Period: 12/11/2016 - 12/17/2016

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: 16		Temperature: 44.6 °F	
			Comments: Fall like conditions on project		Secchi: 4.9 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	≤ 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')				
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 18	Closed midnight Dec15			
Turbine trashrack drawdown	0					
spill off						
Turbine Unit Priority	0	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. 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 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. New FCR1 panel (tied to FCQ7) installation completed.
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.
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:

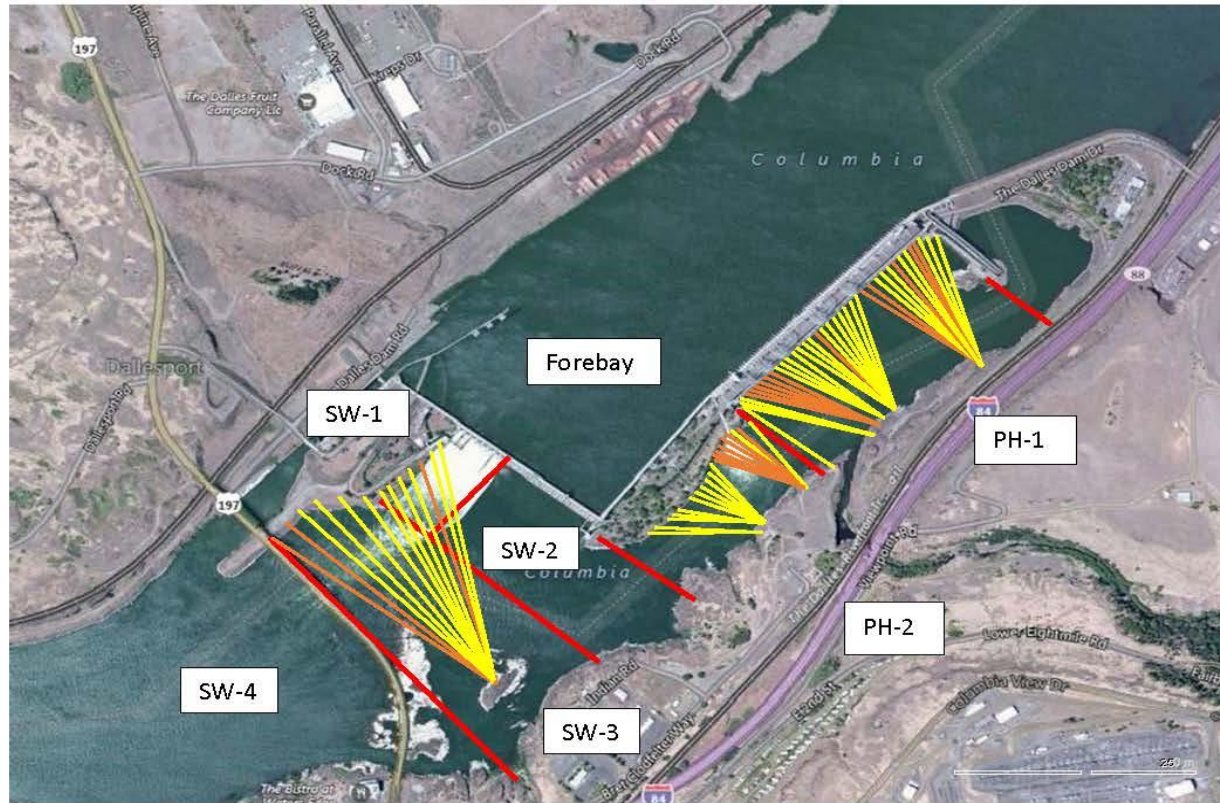
Unit 1 EAL environmental acceptable grease - Coordinated and approved through FPOM.
North fishladder rehab/rock wall stabilizing - Awaiting funding. Possible 2018/19.
East fishladder AWS emergency backup - Forebay diving started. Preparing for junction pool concrete cutting. Jackhammering at base continues.

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

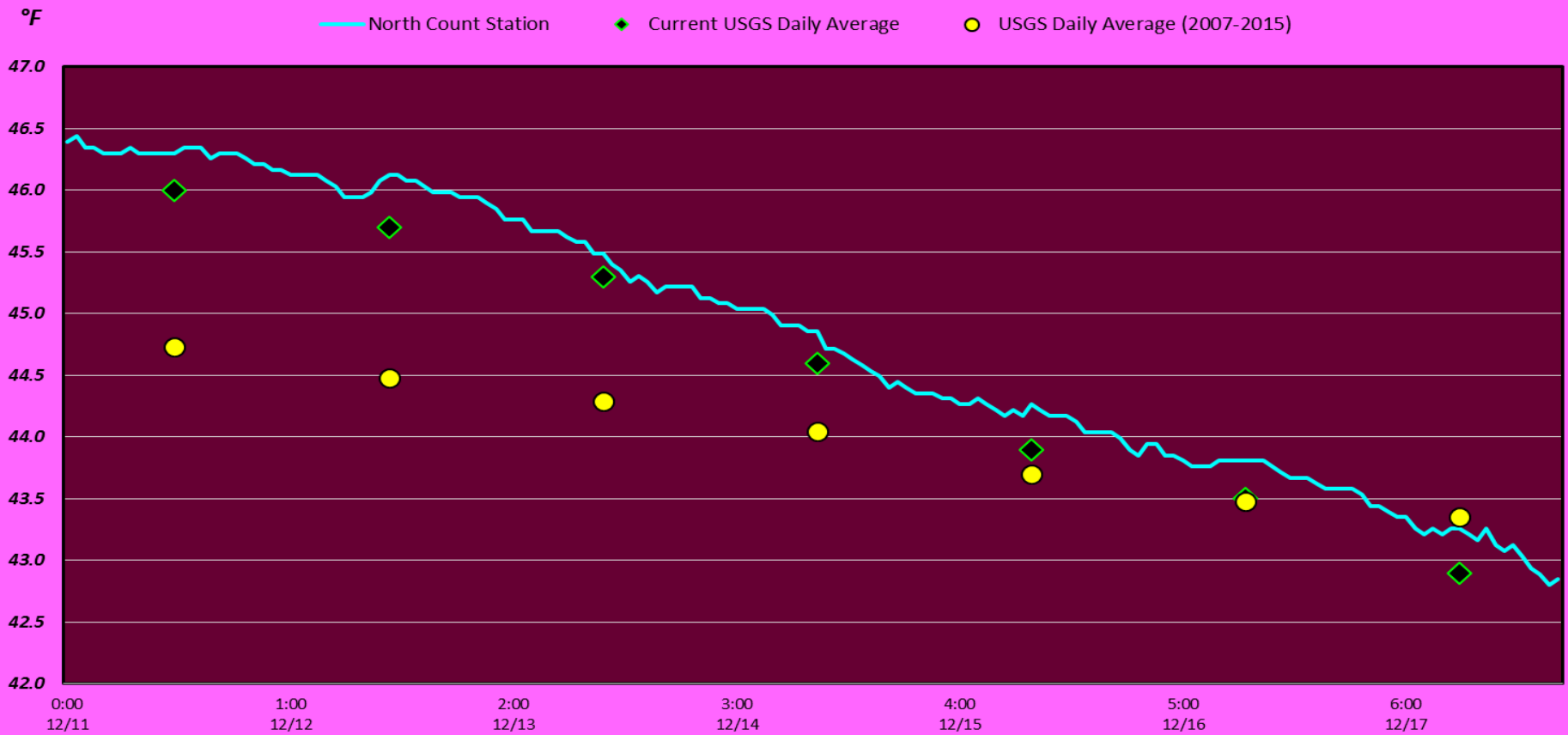
Orange lines = down or missing wires

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			
12/11/16	JWR	AM	FB	0	0	0	0	0	0	0	71	0	0	0	0	71	COME BAEA	
			PH1	0	0	4	17	0	0	0	0	0	0	0	4	0		25
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	2		2
			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	6	0	20	0	0	0	0	0	0	0	0	0		26
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/12/16	JWR	PM	FB	0	0	0	0	0	0	0	82	0	0	0	0	82	COME	
			PH1	0	0	0	6	0	0	0	0	0	0	0	5	11		
			PH2	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
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	13	0	40	0	0	0	0	0	0	0	0	0		53
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/13/16	JWR	AM	FB	0	0	0	0	0	0	0	68	0	0	0	0	68		
			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		0
			SW1	0	176	0	0	0	0	0	0	0	0	0	0	0		176
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	7	0	55	0	0	0	0	0	0	0	0	0		62
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/14/16	GJF	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	Zero Visibility	
12/15/16	JWR	AM	FB	0	0	0	0	0	0	0	59	0	0	0	0	59		
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW1	0	15	0	0	0	0	0	0	0	0	0	0	0		15
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	43	0	0	0	0	0	0	0	0	0		43
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/16/16	GJF	PM	FB	0	0	0	0	0	0	0	87	0	0	0	1	88	BAEA come	
			PH1	3	0	19	12	0	0	0	0	0	0	0	9	0		43
			PH2	7	0	0	0	0	0	0	0	0	0	0	0	0		7
			SW1	0	49	0	0	0	0	0	0	0	0	0	0	0		49
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	34	0	0	0	0	0	0	0	0	0		34
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12/17/16	GJF	AM	FB	0	0	0	0	0	0	0	64	0	0	0	1	65		
			PH1	1	0	27	13	0	0	0	0	0	0	11	0	52		
			PH2	10	0	0	0	0	0	0	0	0	0	0	0	10		
			SW1	0	59	0	0	0	0	0	0	0	0	0	0	59		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	69	0	0	0	0	0	0	0	0	0		69
			SW4	0	0	0	14	0	0	0	0	0	0	0	0	0		14
<i>daily averages</i>				0.4	6.6	1.0	6.6	0.0	0.0	0.0	8.8	0.0	0.0	0.5	0.2	24.2		

The Dalles Dam North Adult Fish Ladder River/Water Temperatures



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	46.0
5.0	Mon	45.7
5.0	Tue	45.3
4.0	Wed	44.6
5.0	Thurs	43.9
5.0	Fri	43.5
5.0	Sat	42.9
4.9	AVG	44.6

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	
12/11	1.4	9.2													
12/12	1.2	9.4													
12/13	1.3	9.2	East Fish Ladder out of service for winter maintenance												
12/14	1.5	9.2													
12/15	1.3	9.3													
12/16	1.4	9.2													
12/17	1.5	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!	

Fishways are inspected twice daily plus one SCADA inspection.



Excavation of valve place under east fishladder. Ready to cut junction pool wall.



Rock hammering of dam face near complete. Prep for drilling hole.



Forebay platform continues with intermittent dive work and clamshell dredging.