

The Dalles Dam Fishway Status Report

March 3rd, 2019

Inspection Period: Feb. 24 - March 2, 2019

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 13	Temperature: 36.0 °F
			Comments:	Secchi: 5+ 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')	9.5	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY - Fish units off, AWS backup system forced closed				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay	157 weir repaired	
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	0	1.1' ± 0.1'	Result of 157 failure	
Junction pool weir JP6	0	0.0		
East entrance differential	6	1.0' - 2.0'	No attraction flow	
Entrance weir E1	closed	No criteria		
Entrance weir E2	6	depth (≥ 8')	No attraction flow	
Entrance weir E3	6	depth (≥ 8')	No attraction flow	
Collection channel velocity	closed	1.5 - 4 fps		
Transportation channel velocity	closed	1.5 - 4 fps		
North channel velocity	0	1.5 - 4 fps	2.52 fps on 3/1/2019	
South channel velocity	closed	1.5 - 4 fps		
West entrance differential	6	1.0' - 2.0'		
Entrance weir W1	6	depth (≥ 8')		
Entrance weir W2	6	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	6	1.0' - 2.0'		
Entrance weir S1	6	depth (≥ 8')		
Entrance weir S2	6	depth (≥ 8')		
FISHLADDER FLOW ONLY				
JUVENILE PASSAGE				
Sluiceway operation	0	Units 3, 18	Unit 1 OOS. Unit 3 gates open. Unit 18 gates alternate with spillway operation until further notice.	
Turbine trashrack drawdown	0	<1.5', biwklly		
Spill volume/pattern	0	None	2k from bay 1 for north fishway attraction Mar 2, 4, and 6.	
Turbine Unit Priority	6	per FPP	Unit 1 OOS for fish unit breaker connect. Unit 3 operating with open sluiceways.	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Predators;

USDA contract in progress. Possible loss of ability to haze sea lions near entrances due to legal authority issues. NOAA and NWD notified.
No Sea Lion observations this week
Ongoing FPOM discussions concerning bass/walleye release by pikeminnow dam angling crew.

Operation:

North fish ladder in service since Feb7.
East fishladder in service with ladder flow only. Fish Unit breaker replacement extended to third week March. AWS backup system attempted to open Feb28, but closed due to valve vibration issues. Emergency FPOM meeting Mar1 to determine operation; intermittent 2K spill for north attraction. Follow up meeting Mar7.

Current Outages;

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS est 4/1/2019.
MU1 and MU2 (T1 transformer) OOS for FU breaker replace. RTS 3/11/19
MU5 forced OOS blade seals and T3 transformer replace. RTS 7/12/2019.
MU6 OOS annual and T3 transformer replace. RTS 7/12/2019.
MU13 OOS OOS annual. RTS 3/29/2019
MU14 OOS overhaul. RTS 3/29/2019
MU16 OOS exciter replace. RTS 3/28/2019.
MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

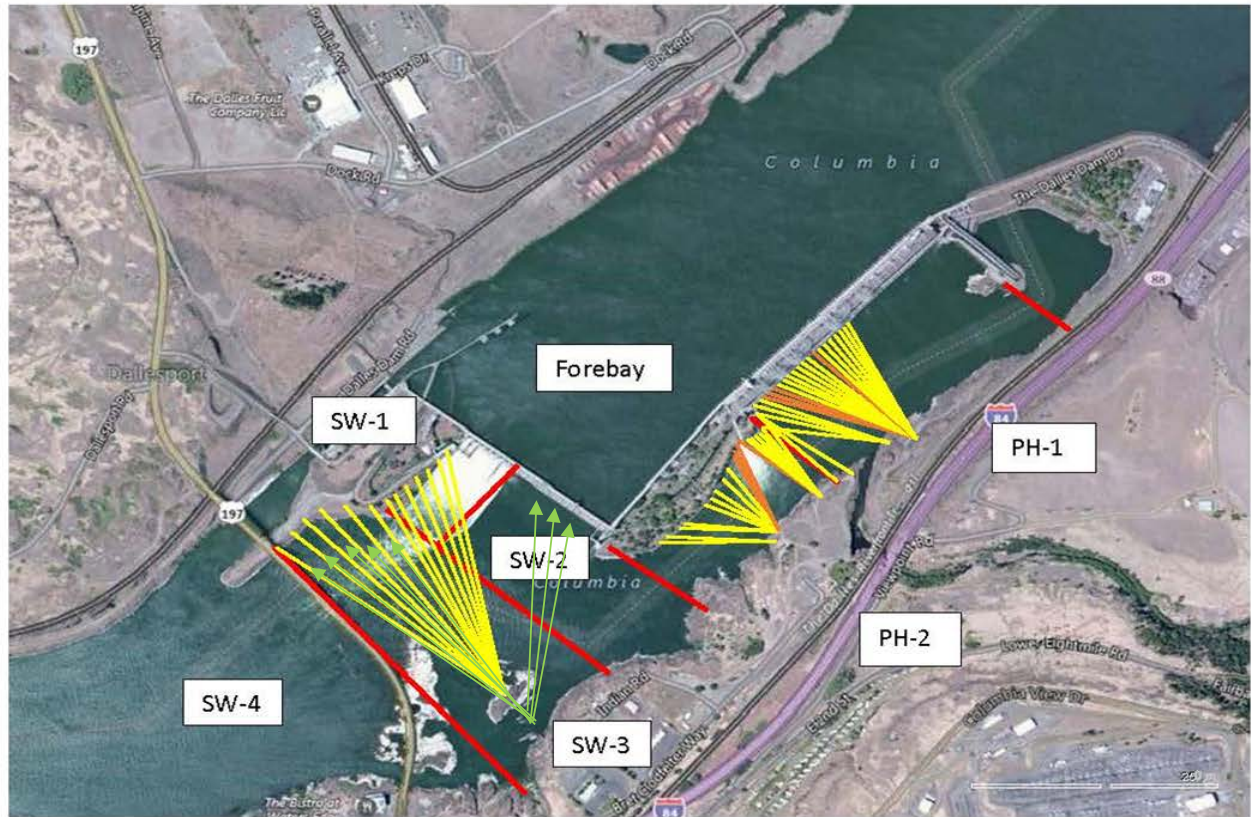
Maintenance

Weir 157 cable failure repair complete Feb28.
Collection channel dewatering pumps 5 and 6 removed for rehab. Housing cracks repaired. Reinstall prior to next winter.
Fishway automation equipment assembly starting. Install winter of 2019/20
Diffuser valve status evaluation ongoing. Planning underway for rehab.
Hiring goats to remove vegetation on top side in March. More cost effective than people.
Fish related /non-fish funded items; Spillway assessment underway. Spillway crane replace and spillgate 9 repair included.
All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Comprehensive spillway assessment review underway.

Research/Construction/Contractors:

Bathymetry of spillwall and spill basin completed. District dive/ROV personnel inspected spill basin w/ ROV unit (12/11), awaiting results
Video monitoring at east count station for AWS operation; Ten chinook and 39 steelhead passed while AWS backup open. Four steelhead while AWS closed.
AWS construction - Vibration issues of 10' valve on start up Feb 28 forced emergency closure. Bulkheads installed. Team evaluating problem for resolution.
Follow on construction items to be addressed through summer.
PSMFC weekly sampling for North Wasco County PUD resumes Apr1. New sample collection tank installation postponed to winter 2019/20.
PITAGS North and east fishladder data collection at count stations continues. Inquiring 15 mile creek steelhead overshoot information through ODFW.
Fish Counters - Likely start with video 4/1/19 until contractor issues resolved. Fish Field Unit to provide video support.
Pikeminnow dam angling - Caught 1785 YTD. Fishing resumes next spring. Debate over release of invasive bass and walleye continues in FPOM.
ODFW report from last summer walleye gut samples John Day; "*Probability of salmon in the diet was higher for walleye than northern pikeminnow (.214 vs .133)*"
ODFW monthly fishway inspections concluded 10/16. Awaiting annual report.
Lamprey minor mods - Site visit for potential LPS planning.
Univ of Idaho lamprey radiotelemetry - Second season of lamprey passage night flow reduction test to resume in May.
Tribal lamprey trapping - Project to construct single lift hoist mechanism prior to next trapping season.
Fish unit breaker replace - Schedule delay completion slip to mid March, with additional 1 week functional testing by project.
Fish unit rehab - Test of AWS backup with single fish unit complete. Will affect rehab alternative selection.
Transformer replacement - Install T3 underway (units 5 and 6). Sequence schedule modified from original

Approved by: Mike Colesar acting for Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

—————> Additional avian lines installed 9/2018

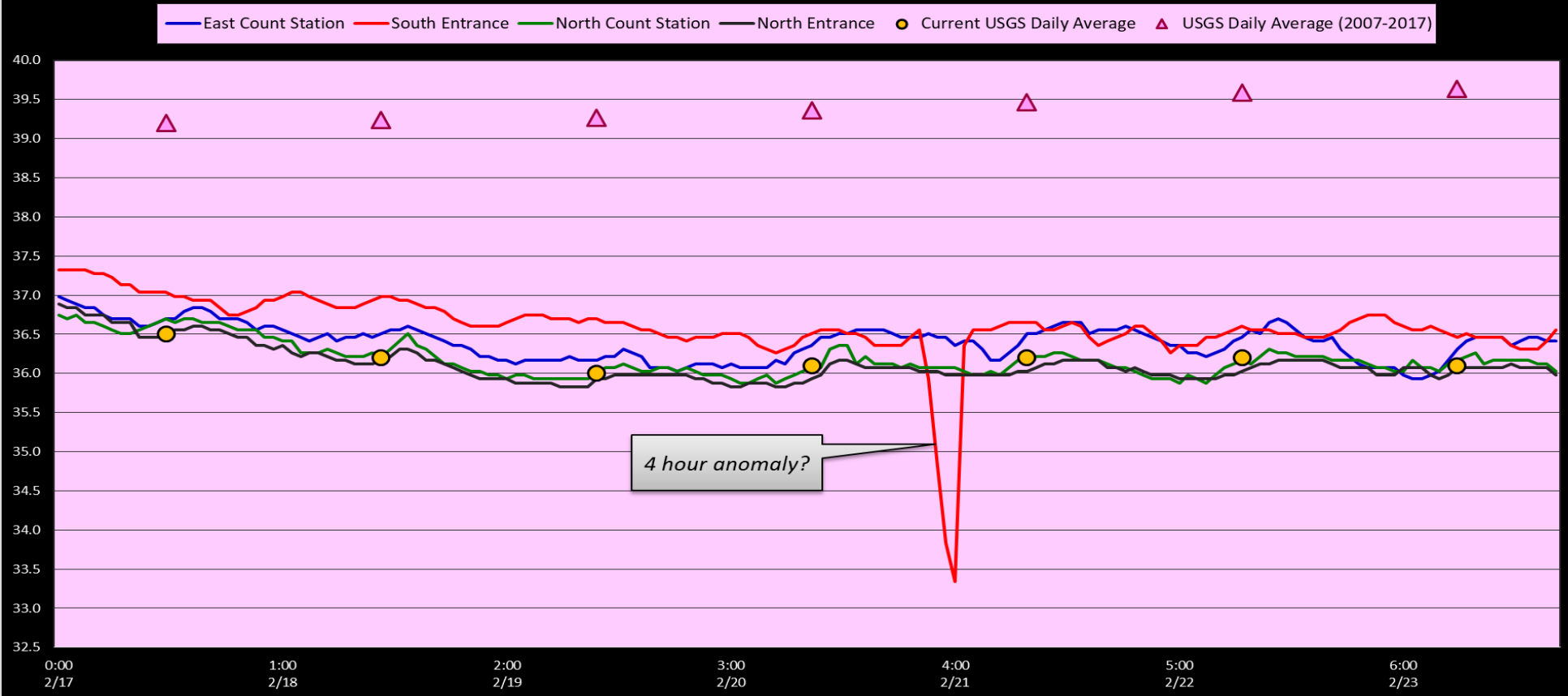
2019 Piscivorous Bird Counts

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			
2/24/19	CEA	PM	FB	1	0	0	0	0	0	0	0	0	0	0	1	2	BAEA	
			PH1	0	0	0	0	0	0	0	0	0	0	0	2	2	COME east, GBHE west	
			PH2	0	0	0	0	0	0	0	0	0	0	0	12	12	BAEA	
			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	cloudy, 34F, calm
			SW3	0	0	0	10	0	0	0	0	0	0	0	0	0	10	
2/25/19		PM	FB	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		
			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		
2/26/19		AM	FB	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		
			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		
2/27/19	JED	PM	FB	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	1	1	COME	
			PH2	0	0	0	0	0	0	0	0	0	0	0	1	1	BAEA	
			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	1	0	0	0	0	0	0	0	0	3	4	BAEA
2/28/19	JED	AM	FB	0	0	1	0	0	0	0	0	0	0	0	0	1	Sun, calm 30F	
			PH1	0	0	0	0	0	0	0	0	0	0	0	1	1	BAEA	
			PH2	0	0	0	0	0	0	0	0	0	0	0	1	1		
			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	3	0	0	0	0	0	0	0	0	0	3	
3/1/19	JED	PM	FB	0	30	0	1	0	0	0	0	0	0	0	0	31		
			PH1	0	0	3	0	0	0	0	0	0	0	0	0	3	Fog, calm, 32 F.	
			PH2	0	0	0	0	0	0	0	0	0	0	0	4	4	BAEA	
			SW1	0	5	0	1	0	0	0	0	0	0	0	0	6		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	7	0	0	0	0	0	0	0	0	0	0	7	
3/2/19	JED	AM	FB	0	2	0	0	0	0	0	0	0	0	0	0	2	Numerous gulls travelling east and west.	
			PH1	0	0	0	0	0	0	0	0	0	0	0	1	1	BAEA	
			PH2	0	0	0	0	0	0	0	0	0	0	0	4	4	2 BAEA NF, 2 GBHE NF	
			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	3	0	0	0	0	0	0	0	0	2	5	GBHE

Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

The Dalles Dam River/Ladder Temperatures



	Secchi:		USGS: Temperatures
2/24	5+	Sun	36.0
2/25	5.0	Mon	36.0
2/26	5.0	Tue	36.0
2/27	5.0	Wed	35.9
2/28	5.0	Thurs	35.8
3/1	5.0	Fri	36.0
3/2	5.0	Sat	36.1
	5+	AVG	36.0

[USGS river temp February.](#)

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

SCADA INSPECTION

= 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
2/24				Closed				Closed	Closed	Closed	Closed	Closed	Closed	Closed
	1.4	9.4	-0.5		9.8	9.8	12.3							
2/25														
2/26														
2/27														
	1.4	9.7	-0.4		9.6	9.7	12.7							
2/28			-0.4		9.8	9.8	12.6							
	1.5	9.7	-0.4		9.6	9.6	12.5							
					9.6	9.6	12.5							
3/1			0.0		Closed	5.6	12.9							
	1.4	9.3	0.0			6.2	12.0							
	1.4	9.6	0.2			6.1	11.5							
3/2			0.0			5.6	10.7							
	1.3	9.4	0.2			6.0	11.0							
AVG:	1.4	9.5	-0.1	#DIV/0!	9.7	7.8	12.1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Fishways are inspected twice daily plus one SCADA inspection.

