

The Dalles Dam Fishway Status Report

February 24th, 2019

Inspection Period: Feb. 17 - Feb. 23, 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: 7	Temperature: 36.2 °F
Comments: Secchi: 5+ feet				
NORTH FISHWAY - Returned with bypass flow Feb 7				
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')	9.4	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY - Fish units off, AWS off Feb7				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	4	Per forebay	Weir 157 cable failure When forebay < 159.5 east exit in criteria	
Weir 158-159 differential	2	1.0' ± 0.1'	Weir 158 malfunctioning. Limit switch adjusted.	
Count station differential	0	≤ 0.3'		
153 Weir crest depth	2	1.1' ± 0.1'	Result of 157 failure	
Junction pool weir JP6	0	0.0		
East entrance differential	7	1.0' - 2.0'	No attraction flow	
Entrance weir E1	closed	No criteria		
Entrance weir E2	0	depth (≥ 8')		
Entrance weir E3	0	depth (≥ 8')		
Collection channel velocity	closed	1.5 - 4 fps		
Transportation channel velocity	closed	1.5 - 4 fps		
North channel velocity		1.5 - 4 fps	2.4 fps on 2/21/2019	
South channel velocity	closed	1.5 - 4 fps		
West entrance differential	15	1.0' - 2.0'	FISHLADDER FLOW ONLY	
Entrance weir W1	15	depth (≥ 8')		
Entrance weir W2	15	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	15	1.0' - 2.0'		
Entrance weir S1	15	depth (≥ 8')		
Entrance weir S2	15	depth (≥ 8')		
JUVENILE PASSAGE				
Sluicelgate operation	0	Units 1, 18	MU1 (1-1) & MU18 (18-3) endgate closed	
Turbine trashrack drawdown	0	<1.5', biwkly		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP	Bus maintenance work	
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 authority issues. NOAA and NWD informed of dilemma.
No Sea Lion observations

Operation:

North fish ladder returned to service 2/7 with bypass flow for entrance attraction.
East fishladder in service. AWS backup closed 2/7 with return of north fishway. Fish units remain out of service for breaker replacement through mid March.
AWS backup to return to service Feb 28.

Current Outages;

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS slipped from 1/9/19 to approximately mid March.
MU1 and MU2 (T1 transformer) OOS for FU breaker replace. RTS 2/26/19 - Schedule slipped from 1/9/19
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
MU15 OOS exciter replace. RTS 2/27/2019
MU16 OOS exciter replace. RTS 3/28/2019.
MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

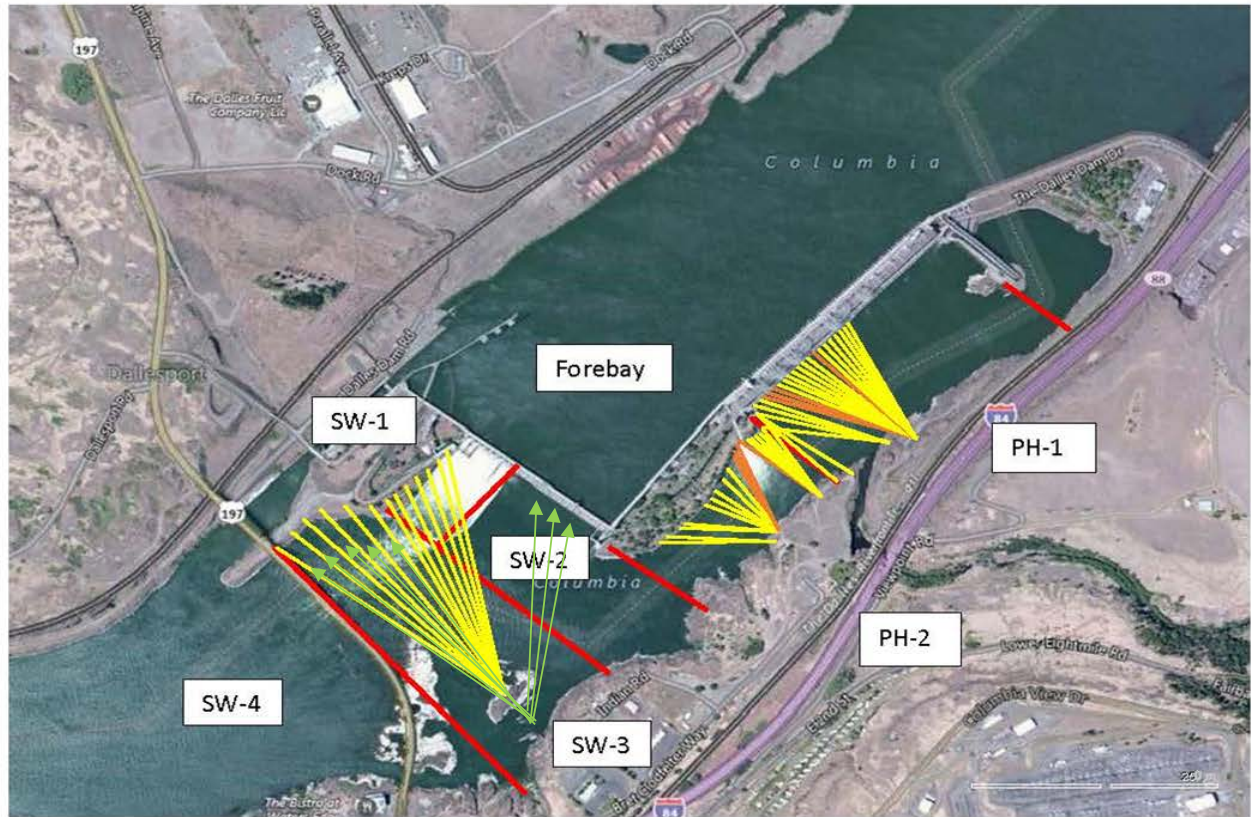
Maintenance

Weir 157 cable failure causing some ladder flow criteria problems. Repair planned prior to 3/1/19.
Collection channel dewatering pumps 5 and 6 removed for rehab. Housing crack repair underway.
Fishway automation equipment assembly starting. Install winter of 2019/20
Diffuser valve status evaluation ongoing. Planning underway for rehab.
Vegetation removal from south channel rock walls complete. Goats to remove vegetation on top side in March.
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. One steelhead while closed.
AWS construction - Follow on construction items identified. Does not affect ability to operate. Construction through summer.
PSMFC weekly sampling for North Wasco County PUD resumes 4/1/19. New sample collection tank installation postponed to winter 2019/20.
PITAGS North and east fishladder data collection at count stations continues.
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. AWS backup open during this time.
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

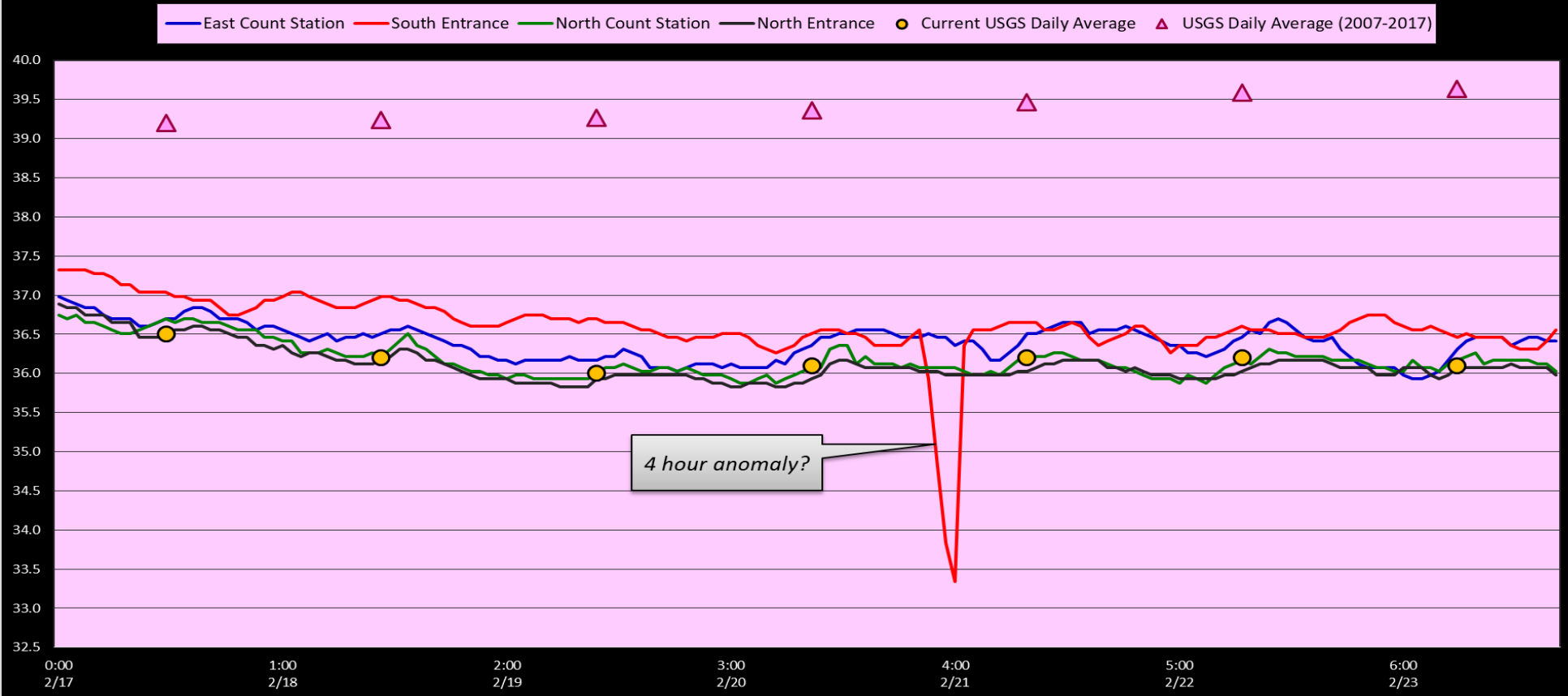
2019 Piscivorous Bird Counts

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			
2/17/19		PM	FB	0	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	0	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
2/18/19		AM	FB	0	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	0	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
2/19/19	CEA	PM	FB	0	0	4	0	0	0	0	0	0	0	2	1	7	2 BAEA F, 1 GBHE NF	
			PH1	0	0	0	0	0	0	0	0	0	0	1	0	1	BAEA	
			PH2	0	0	0	0	0	0	0	0	0	0	0	13	13	12 BAEA, 1 GBHE	
			SW1	0	0	0	0	0	0	0	0	0	0	1	0	1	COME	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	37	0	0	0	0	0	0	0	0	37		
2/20/19	JED	AM	FB	5	0	0	0	0	0	0	0	0	5	0	10	BAEA		
			PH1	1	0	0	0	0	0	0	0	0	0	1	2	GBHE		
			PH2	0	0	0	0	0	0	0	0	0	2	5	7	1 BAEA F, 1GBHE F, 5 BAEA NF		
			SW1	0	0	0	0	0	0	0	0	0	4	0	4	BAEA		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	Mixed sun, wind 10mph E, 38F	
			SW3	0	0	1	35	0	0	0	0	0	4	2	42	4 COME F, 2 BAEA NF		
2/21/19	JED	PM	FB	0	0	1	0	0	0	0	0	0	0	0	1			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0			
			PH2	0	0	0	0	0	0	0	0	0	0	13	13	BAEA		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	Sunny, 40F, calm	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	1	14	0	0	0	0	0	10	0	25	COME		
2/22/19	CEA	AM	FB	0	0	0	0	0	0	0	0	0	0	4	4	BAEA		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0			
			PH2	0	0	0	0	0	0	0	0	0	0	9	9	8 BAEA, 1 GBHE		
			SW1	0	0	0	0	0	0	0	0	0	1	1	2	1 COME F, 1 BAEA NF		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	14	0	0	0	0	0	0	0	14	14	calm, partly cloudy, approx 27 F	
2/23/19	CEA	PM	FB	0	0	0	2	0	0	0	0	0	0	4	6	3 BAEA, 1 GBHE		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0			
			PH2	0	0	0	0	0	0	0	0	0	0	4	4	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	Sunny, 40F, calm	
			SW3	0	0	0	17	0	0	0	0	0	0	0	17	17		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					

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

The Dalles Dam River/Ladder Temperatures



	Secchi:		USGS: Temperatures
2/17	5+	Sun	36.5
2/18	5+	Mon	36.2
2/19	5+	Tue	36.0
2/20	5+	Wed	36.1
2/21	5+	Thurs	36.2
2/22	5+	Fri	36.2
2/23	5+	Sat	36.1
	5+	AVG	36.2

[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
2/17	1.3	9.7	out of service											
2/18	1.5	9.0												
2/19	1.3	9.6												
2/20	1.4	9.5												
2/21	1.3	9.6												
2/22	1.4	9.4												
2/23	1.4	9.3												
AVG:	1.4	9.4												

Fishways are inspected twice daily plus one SCADA inspection.