

The Dalles Dam Fishway Status Report

February 9th, 2019

Inspection Period: Feb. 3 - Feb. 9, 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: 15	Temperature: 40.1 °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'	1.5	
Entrance weir N1	0	depth (≥ 8')	8.8	
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	8	Per forebay	Weir 157 cable failure.	When forebay < 159.5 east exit in criteria
Weir 158-159 differential	1	1.0' ± 0.1'	Deep due to 157 failure and lower forebay.	
Count station differential	0	≤ 0.3'		
153 Weir crest depth	1	1.1' ± 0.1'	Result of 157 failure	
Junction pool weir JP6	0	0.0		
East entrance differential	4	1.0' - 2.0'		
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	3.0fps on 2/7/2019	
South channel velocity	closed	1.5 - 4 fps		
West entrance differential	15	1.0' - 2.0'	AWS + 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				
Sluiceway operation	0	Units 1, 18	MU1 (1-1) & MU18 (18-3) endgate closed	
Turbine trashrack drawdown	0	<1.5', biwklly		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP	Bus maintenance work	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Predators;

Eagle numbers decreasing in westrick park.

No Sea Lion observations

USDA contract in progress. Possible loss of ability to haze sea lions near entrances due to authority issues.

Operation:

North fish ladder returned to service 2/7 with bypass flow for entrance attraction.

East fishladder in service. AWS closed 2/7 with return of north fishway. Fish units remain out of service for breaker replacement.

Current Outages;

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS 2/28/19. Schedule slipped from 1/9/19

MU1 and MU2 (T1 transformer) OOS for FU breaker replace. RTS 1/28/19 - Schedule slipped from 1/9/19

MU5 forced OOS blade seals and T3 transformer replace. RTS 3/21/2019. Expect 16 week T3 schedule slip.

MU6 OOS annual and T3 transformer replace. RTS 3/21/2019. Expect 16 week T3 schedule slip.

MU12 FOOS through 1700 2/14/2019 for Blade Seals

MU16 OOS exciter replacement. 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 in coming weeks, requiring partial ladder dewatering.

East and north count station electrical upgrade ongoing.

Collection channel dewatering pumps 5 and 6 removed for rehab.

Fishway automation equipment assembly starting. Install winter of 2019/20

Diffuser valve status evaluation ongoing. Planning underway for rehab. In FPOM review.

Vegetation removal from south channel rock walls complete. Goats to remove vegetation on top side. North ladder vegetation removal after 1/22/19

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 in progress at east count station for AWS operation. Thirteen days reviewed, 10 chinook and 28 steelhead counted.

AWS construction - Follow on construction items identified. Some vent leakage in 7' valve room corrected. Intake differential 3.5' corrected with overnight shutdown.

PSMFC weekly sampling for North Wasco County PUD resumes next spring. 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 support.

Pikeminnow dam angling - Caught 1785 YTD. Fishing resumes next spring. Debate over bass and walleye catch and release continues.

ODFW monthly fishway inspections concluded 10/16. Awaiting annual report.

Lamprey minor mods - Rounded weir caps completed on all entrance weirs. Site visit for potential LPS planning.

Univ of Idaho lamprey radiotelemetry - Second season of lamprey passage night flow reduction test to resume in May.

Lamprey trapping by tribes - Project to construct single lift hoist mechanism for next trapping season.

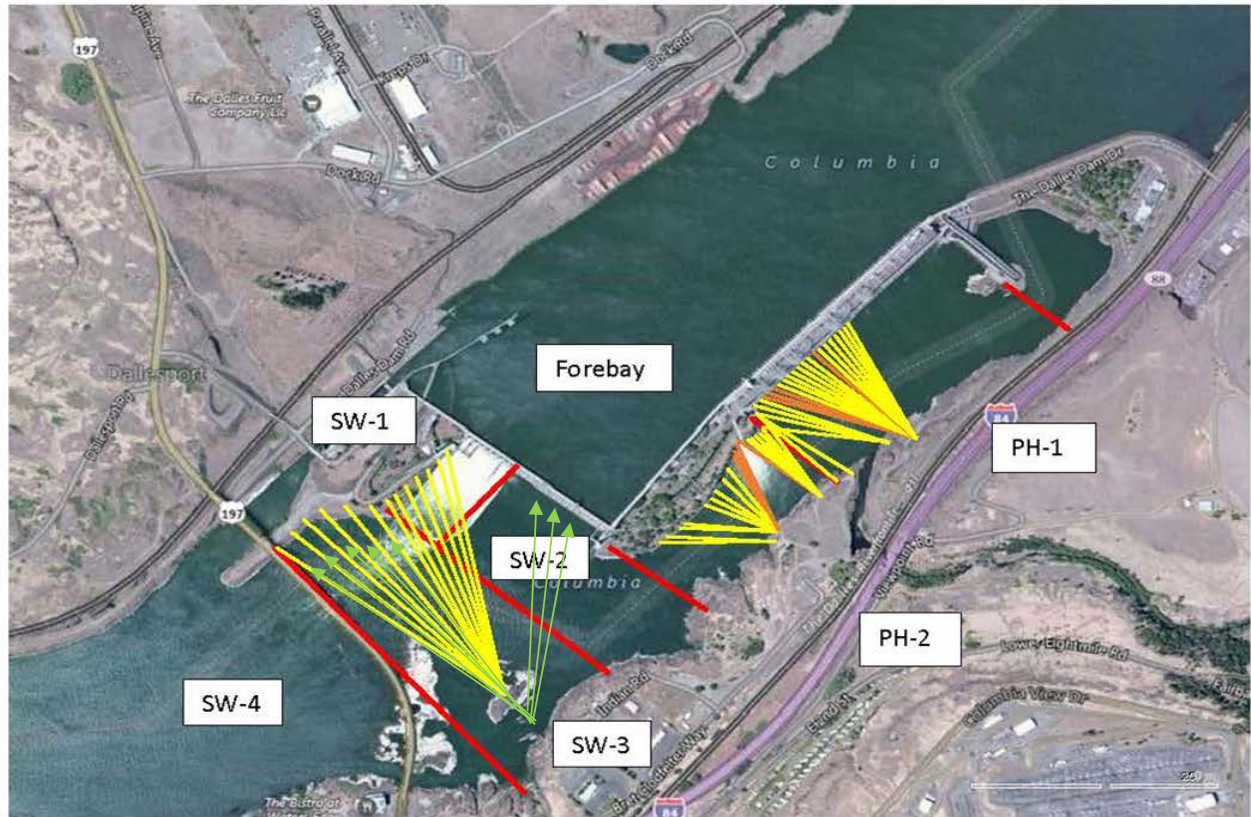
Fish unit breaker replace.- Prep work in progress. Potential delay through Feb.

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

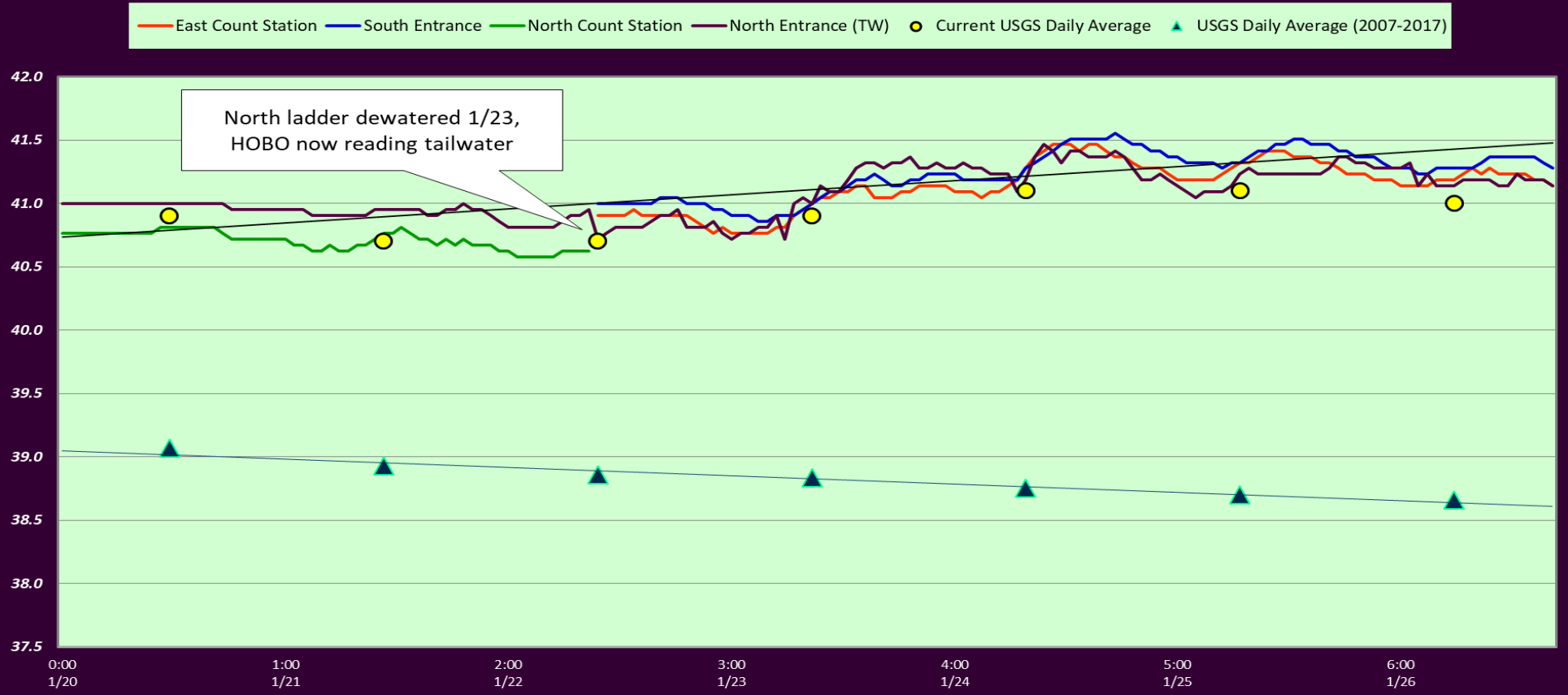

Additional avian lines installed 9/2018

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			
2/3/19	CEA	PM	FB	0	0	7	0	0	0	0	0	0	0	0	0	7		
			PH1	0	0	0	0	0	0	0	0	0	0	3	1	4	Other= 3 COME F east, GBHE NF west	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	15	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	
			SW3	0	0	0	55	0	0	0	0	0	0	0	0	0	55	breezy, partly cloudy, 44 ° F
2/4/19	JWR	AM	FB	0	1	8	0	0	0	0	0	0	1	4	14	BAEA		
			PH1	4	3	0	0	0	0	0	0	0	0	0	0	7		
			PH2	0	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	1	1	BAEA	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	45	0	0	0	0	0	0	0	0	0	45	
2/5/19	JED	PM	FB	3	40	6	0	0	0	0	0	0	0	1	50	BAEA		
			PH1	1	0	0	0	0	0	0	0	0	3	1	5	3 COME, 1BAEA		
			PH2	0	0	0	0	0	0	0	0	0	1	19	20	1 GBHE, 19 BAEA		
			SW1	0	0	0	0	0	0	0	0	0	1	13	14	1BAEA F, 2BAEA NF, 11GBHE		
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	2		
			SW3	1	0	0	55	0	0	0	0	0	0	0	1	57	BAEA	
2/6/19	JED	PM	FB	0	100	6	0	0	0	0	0	0	0	1	107	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	16	16	Partly sunny, calm, 31 F	
			SW1	0	0	0	0	0	0	0	0	0	1	10	11	1BAEA F, 10GBHE NF		
			SW2	0	0	0	0	0	0	0	0	0	1	0	1	Osprey		
			SW3	0	0	3	58	0	0	0	0	0	4	0	65	COME		
2/7/19	JED	PM	FB	0	0	8	0	0	0	0	0	0	0	1	9	BAEA		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	sunny, calm, 23 F	
			PH2	0	0	0	0	0	0	0	0	0	0	34	34	BAEA		
			SW1	0	0	0	0	0	0	0	0	0	0	1	1	BAEA		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	50	0	0	0	0	0	0	0	0	50		
2/8/19	JED	PM	FB	0	0	4	0	0	0	0	0	0	4	8	BAEA			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, calm, 23 F	
			PH2	0	0	1	0	0	0	0	0	0	0	24	25	BAEA		
			SW1	0	0	0	0	0	0	0	0	0	0	1	1	BAEA		
			SW2	0	0	0	0	0	0	0	0	0	2	0	2	COME		
			SW3	0	0	0	40	0	0	0	0	0	2	0	42	COME		
2/9/19	JED	AM	FB	0	0	6	0	0	0	0	0	0	2	8	BAEA			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	0	0	2	0	0	0	0	0	0	0	34	36	BAEA		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast, snowing, 31 F	
			SW2	0	0	0	0	0	0	0	0	0	2	0	2	COME		
			SW3	0	0	0	54	0	0	0	0	0	0	0	54			
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 Fish Ladder/River Temperatures



	Secchi:		USGS: Temperatures
2/3	5+	Sun	41.2
2/4	5+	Mon	41.5
2/5	5+	Tue	40.5
2/6	5+	Wed	40.2
2/7	5+	Thurs	39.7
2/8	5+	Fri	39.2
2/9	5+	Sat	38.7
	5+	AVG	40.1

[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
2/3	DEWATERED RTS 2/7/19		1.5	█	9.5	9.5	12.1	AWS OPERATION ONLY						
			1.5		9.5	9.5	12.0							
			1.4		9.5	9.6	12.1							
2/4			1.3		9.5	9.5	12.9							
			1.5		9.2	9.2	12.4							
2/5			-0.4		9.2	9.2	12.9							
			-0.4		9.2	9.2	12.9							
			1.6		9.3	9.3	12.4							
2/6			1.4		9.3	9.3	12.7							
			1.5		9.7	9.7	11.9							
		1.5	9.7	9.7	11.7									
2/7														
		1.5	8.7	1.5	9.7	9.8	11.5							
2/8		1.6	8.8	-0.4	9.7	9.7		NO AWS FLOW						
				-0.4	9.6	9.7	11.7							
2/9				-0.3	9.7	9.7	11.8							
		1.5	8.9											
AVG:	1.5	8.8	0.9		9.487	9.507	12.2							

Fishways are inspected twice daily plus one SCADA inspection.