

The Dalles Dam Fishway Status Report

January 13th, 2018

Inspection Period: Jan. 06 - Jan. 12, 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: Comments: FU's off 12/1 for dewatering	Temperature: 42.3 °F 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')	10.1	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY - Dewatered for annual maintenance				
Exit differential		≤ 0.5'		
Removable weirs 154-157		Per forebay		
Weir 158-159 differential		1.0' ± 0.1'		
Count station differential		≤ 0.3'		
153 Weir crest depth		1.1' ± 0.1'		
Junction pool weir JP6		0.0		
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')		
JUVENILE PASSAGE				
Sluiceway 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;

Eagle numbers increasing in westrick park.

No Sea Lion observations

Green laser bird deterrant tested with promising results on roosting gulls. Another tool for USDA to use next season, but not a complete solution.

Operation:

East fish ladder dewatered. RTS 1/15/19. AWS backup open 1/17/19

North ladder in service. To be dewatered 1/22/19

Current Outages;

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS 1/31/19. 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

MU6 OOS annual and T3 transformer replace. RTS 3/21/2019

MU12 FOOS through 1700 1/31/2019 for Blade Seals

MU16 OOS exciter replacement. RTS 3/28/2019

MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

Maintenance

Debris removed from east ladder count station.

Installed seals on weir 158 to improve overflow performance.

East count station window brush replaced.

Count station reflooring and electrical upgrade start 1/22/19.

Collection channel dewatering pumps 3 and 4 installed.

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

East ladder exit weirs 156 and 157 installed with new wheels. Weirs 154 and 155 do be completed next winter.

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

Zebra mussel veliger sampling resumes next spring.

Lower Columbia River Forebay Temperature Monitoring completed. Equipment removed. To resume next spring.

AWS construction - Commissioning test and operation with single fish unit test completed. Follow on construction items identified.

PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank installation postponed to winter 2019/20.

PITAGS North and east fishladder data collection at count stations continues. Will maintain equipment during dewatering.

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 entrance weir caps installed south, west, north entrances. East weirs completed. Guide blocker added to reduce pinch mortalities.

Univ of Idaho lamprey radiotelemetry completed. New antenna mounts at east, west and south installed Jan 2. Lamprey passage test to resume in May.

Lamprey trapping by tribes completed for season. Awaiting final numbers. Project to construct single lift hoist mechanism for next trapping season.

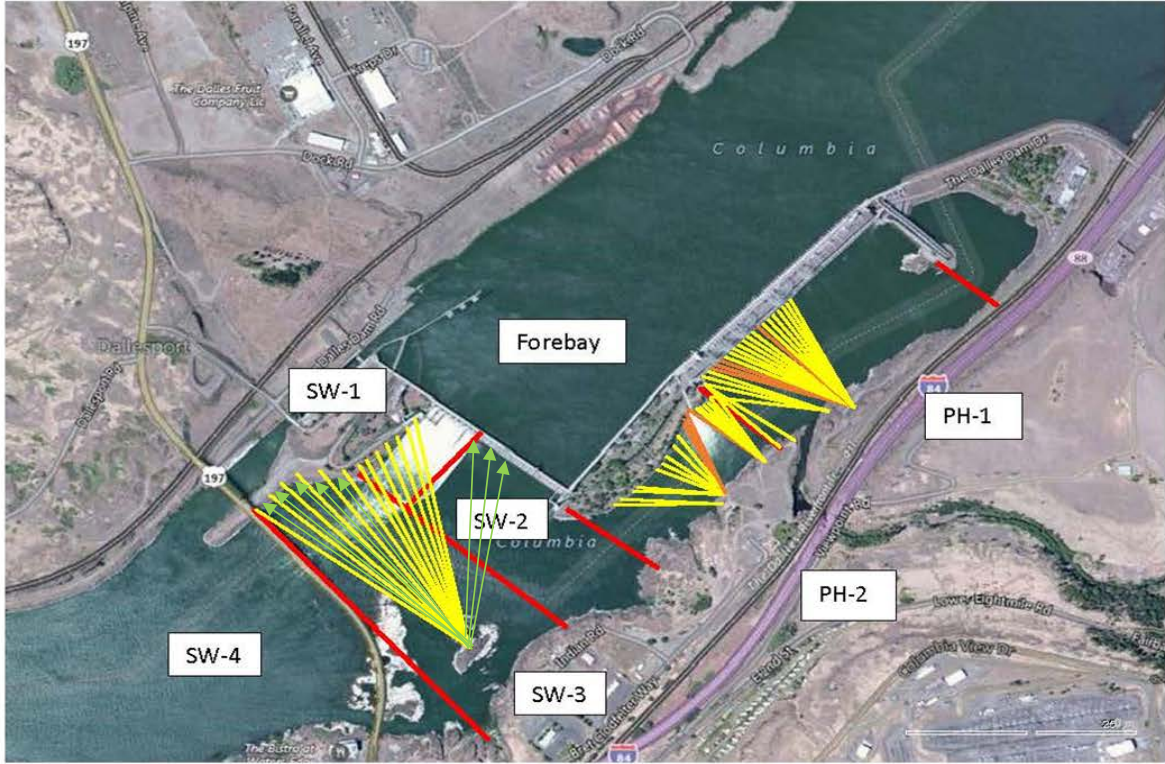
Fish unit breaker replace - Prep work in progress. Installation 12/1/18 - 1/14/19.

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: Bryan Hert 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

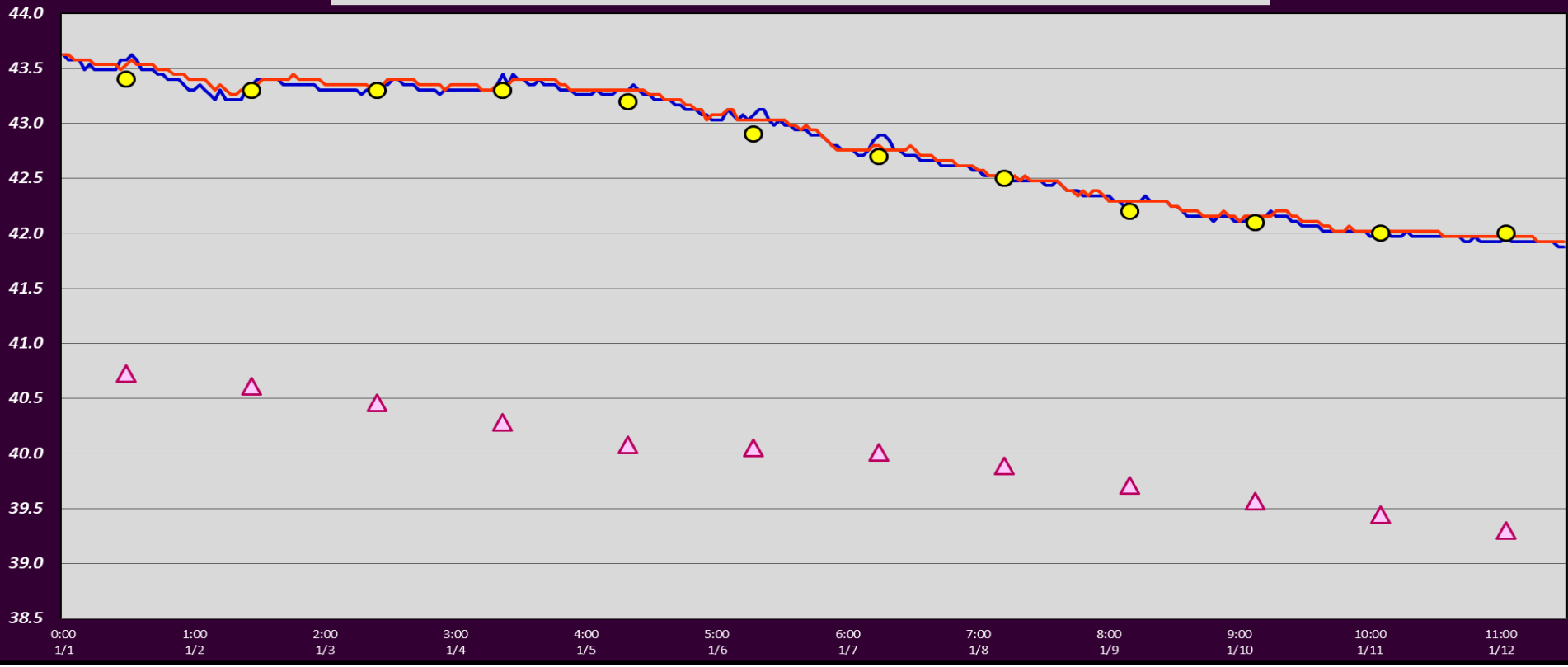
2019 Piscivorous Bird Counts

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					
1/6		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	0		
			PH2	0	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	0		
			SW2	0	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	0	0	
1/7	JED	AM	FB	0	0	8	0	0	0	0	0	0	0	2	1	11		BAEA		
			PH1	30	10	0	0	0	0	0	0	0	0	10	0	50		6 COME, 4 BAEA		
			PH2	0	0	0	0	0	0	0	0	0	0	4	24	28		2 BAEA F, 23 BAEA NF, 2 BLHE NF		
			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	0		
			SW3	0	0	0	85	0	0	0	0	0	0	0	0	0	85		Sunny, 45 F, Calm	
1/8	CEA	PM	FB	0	0	15	0	0	0	3	0	0	3	0	21		1 LOON,			
			PH1	0	0	0	0	0	0	0	0	0	1	0	1		COME			
			PH2	0	0	0	0	0	0	0	0	0	0	30	30		25 BAEA, 5 BLHE			
			SW1	0	22	0	0	0	0	0	0	0	0	1	23		BLHE			
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0				
			SW3	0	0	1	71	0	0	0	0	0	0	0	0	72				
1/9	JED	AM	FB	1	0	4	0	0	0	4	0	0	3	0	12		BAEA			
			PH1	20	70	0	0	0	0	0	0	0	2	2	94		BAEA			
			PH2	0	0	0	0	0	0	0	0	0	32	3	35		30 BAEA, 2BLHE, 3BAEA F			
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		Count prior to green light deterrent at 0900		
			SW2	0	0	4	0	0	0	0	0	0	0	0	0	4		Overcast, calm, 34 F		
			SW3	0	0	0	65	0	0	0	0	0	0	0	0	65				
1/10	JED	PM	FB	0	0	5	0	0	0	0	0	0	1	2	8		BAEA			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		Fog, calm, 34 F,		
			PH2	0	0	0	0	0	0	0	0	0	28	2	30		BAEA			
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0				
			SW2	2	0	1	0	0	0	0	0	0	0	0	0	3				
			SW3	0	0	5	42	0	0	0	0	0	0	0	0	47				
1/11	CEA	PM	FB	0	0	8	0	0	0	4	0	0	1	2	15		Other = BAEA			
			PH1	2	2	0	0	0	0	0	0	0	1	2	7		Ill east, other = 1 COME F, 1 BAEA NF, 1 GBHE NF			
			PH2	0	0	0	0	0	0	0	0	0	0	34	34		BAEA			
			SW1	0	13	0	0	0	0	0	0	0	0	0	13					
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	2				
			SW3	0	0	0	85	0	0	0	0	0	0	0	0	85				
1/12	CEA	AM	FB	0	0	4	0	0	0	1	0	0	0	0	5		Pied-billed grebe			
			PH1	0	0	0	0	0	0	0	0	0	2	0	2		BAEA, ph1a			
			PH2	0	0	0	0	0	0	0	0	0	0	33	33		31 BAEA, 2 GBHE			
			SW1	0	1	0	0	0	0	0	0	0	0	1	2		on spillwall; GBHE			
			SW2	0	0	0	0	0	0	0	0	0	0	1	1		GBHE			
			SW3	0	1	3	84	0	0	0	0	0	0	0	0	88				
SW4	0	70	0	0	0	0	0	0	0	0	0	0	70							

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

The Dalles Dam Adult Fish Ladder (North) / River Temperatures

— North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2017)



	Secchi:		USGS: Temperatures
1/6	5+	Sun	42.9
1/7	5+	Mon	42.7
1/8	5+	Tue	42.5
1/9	5+	Wed	42.2
1/10	5+	Thurs	42.1
1/11	5+	Fri	42.0
1/12	5+	Sat	42.0
	5+	AVG	42.3

**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
1/6	1.3	10.6												
1/7	1.3	9.4												
1/8	1.3	10.7												
1/9	1.4	10.0												
1/10	1.4	10.0												
1/11	1.4	10.0												
1/12	1.4	10.2												
AVG:	1.4	10.1												

Ladder dewatered for maintainence RTS ~01/20/2019

Fishways are inspected twice daily plus one SCADA inspection.