

The Dalles Dam Fishway Status Report

12/09/18

Inspection Period: Dec. 2nd, - Dec. 8th, 2018

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: 46.8 °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')	10.3	
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'		
153 Weir crest depth	0	1.1' ± 0.1'		
Junction pool weir JP6	0	0.0		
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	2.64 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, 8, 18	MU1 (1-1,1-2, 1-3) MU8 (8-1,8-3) & MU18 (18-2) and endgate open; Unit 8 OOS using MU9	
Turbine trashrack drawdown	0	<1.5', biwky		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP	Bus maintenance work	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Predators;

Eagle, Gull and Merganser numbers increasing as expected per seasonal trend

Operation:

East fishladder dewatered 12/3. Juveniles: 1 ch, 9 st, 2 lamprey. Adults: 1 st, 1 lamprey, 2 sturgeon, 2 walleye, ~600 shad
East fishway channels dewatered 12/6. ~12 sturgeon, ~30 lamprey, ~5 chinook, 1 steelhead, a few juvenile chinook

Current Outages;

MU5 forced OOS blade seals and transformer replace. RTS 3/21/2019
MU6 OOS annual and transformer replace. RTS 3/21/2019
MU7 and MU8 OOS bus work. RTS 12/6/2018
MU16 OOS transformer replacement. RTS 3/28/2019
MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

Maintenance

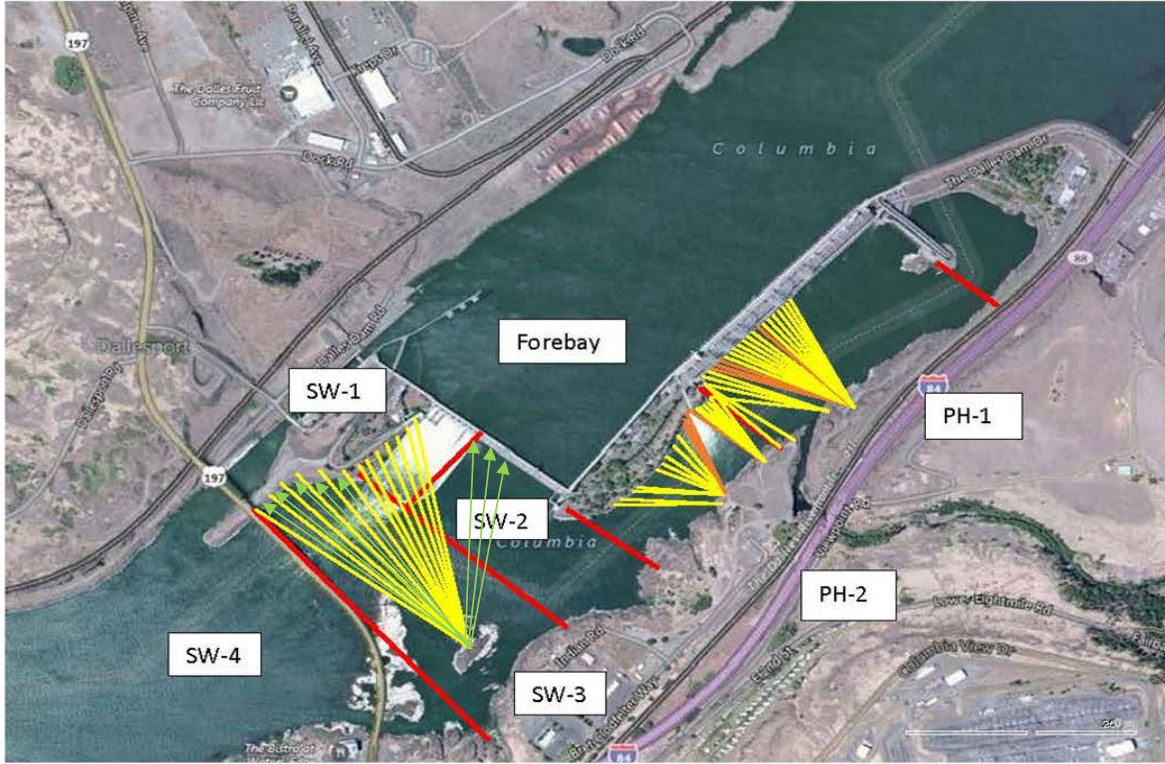
East ladder to be dewatered Dec3. North ladder dewater Jan 22.
East count station brush out of service, TDE awaiting parts.
Both count stations to be refloored and new electrical wiring this winter in prep for new contractor.
Collection channel dewatering pumps 3 and 4 out for rehab. Install early Dec. Sufficient pump capacity available with other pumps for Dec3 dewater.
Plans complete for fishway automation replacement. Purchase parts and start assembly this year. Start install winter of 2019/20
East ladder exit weirs 154 -157 rehab/weir wheel replace start first week of Dec.
Diffuser valve rehab planning underway. Repair of west entrance diffuser 2-1 this winter. Exploring options for unused diffusers. In FPOM review.
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 11/7, awaiting results
Zebra mussel velliger sampling resumes next spring.
Lower Columbia River Forebay Temperature Monitoring completed. Equipment removed. To resume next season.
AWS construction - Commissioning test complete. AWS operation with single fish unit test Nov28.
PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review. Installation postponed to winter 2019/20.
PITAGS North and east fishladder data collection at count stations continues. Will maintain equipment during dewatering.
Fish Counters - Resumes 4/1/19.
Pikeminnow dam angling - Caught 1785 YTD. Resumes next spring.
ODFW monthly fishway inspections concluded 10/16
Lamprey minor mods - Rounded entrance weir caps installed south, west, north entrances. East weir to be completed mid Dec.
Univ of Idaho lamprey radiotelemetry track underway through November. Coordinating antenna maintenance this winter.
Lamprey trapping by tribes completed for season. Awaiting final numbers. Project to construct 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 - Alternatives in review. Test of AWS backup with single fish unit 11/28 was successful achieving criteria without hydraulic concerns.
Transformer replacement - Install T8 underway (units 15 and 16). Sequence schedule modified from original

Approved by: 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

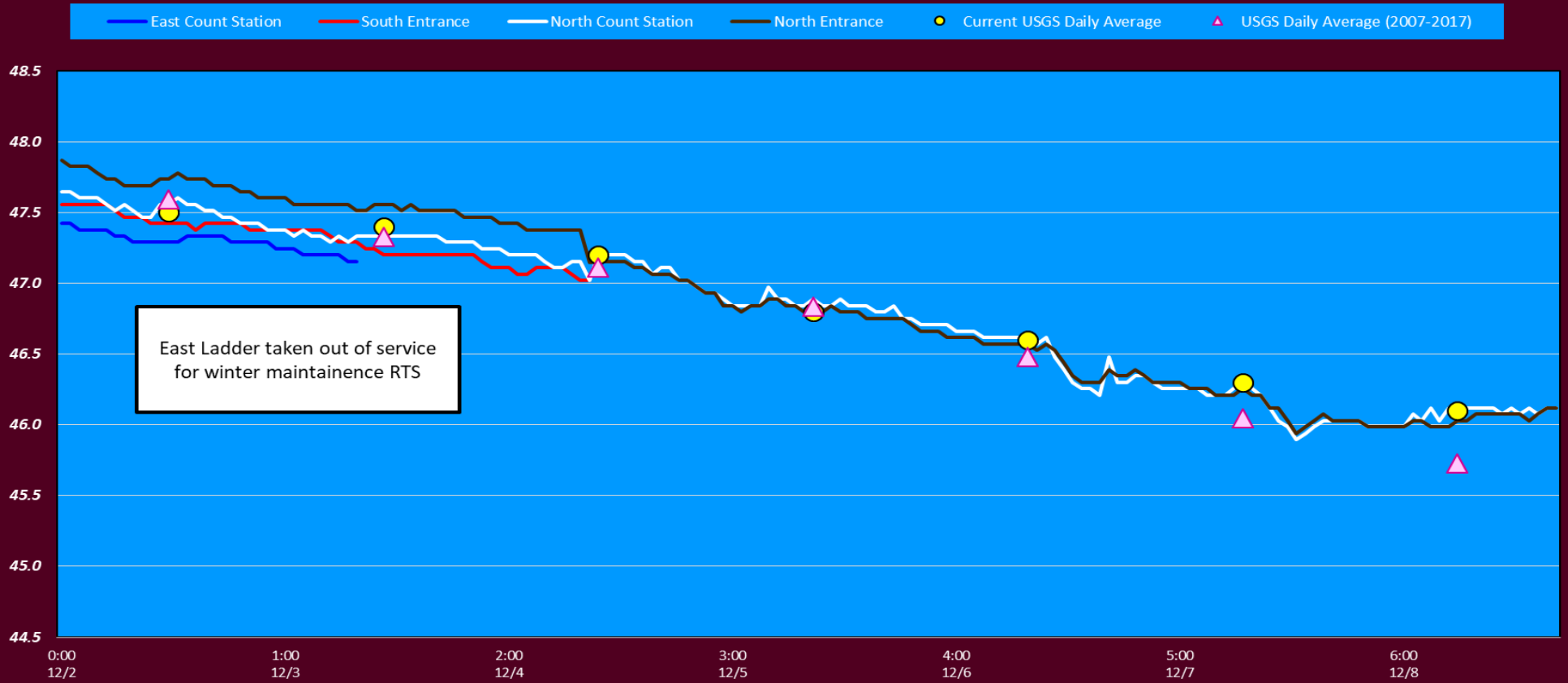
2018 Piscivorous Bird Counts

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		
12/2	JED	AM	FB	1	1	0	0	0	0	1	0	0	0	0	2	5	1BAEA, 1GBHE
			PH1	4	1	5	34	0	0	0	0	0	0	46	1	91	COME
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW1	0	0	1	0	0	0	0	0	0	0	3	0	4	COME
			SW2	3	0	0	0	0	0	0	0	0	0	0	0	3	Calm, overcast, cool.
			SW3	3	28	1	30	0	0	0	0	0	0	0	0	62	
12/3	CEA	PM	FB	0	119	1	0	0	0	0	0	0	0	32	0	152	COME
			PH1	33	5	0	14	0	0	0	0	0	0	30	1	83	COME, GBHE
			PH2	10	0	0	0	0	0	0	0	0	0	0	0	10	
			SW1	0	14	0	0	0	0	0	0	0	0	0	1	15	GBHE
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	43	0	62	0	0	0	0	0	0	6	0	111	COME
12/4		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	
12/5		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	
12/6	JED	PM	FB	0	288	0	0	0	0	0	0	0	0	0	0	288	
			PH1	4	0	1	15	0	0	0	0	0	0	2	13	35	COME
			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	3	0	1	0	0	0	0	0	0	0	0	0	4	Calm, overcast, cool.
			SW3	0	50	0	60	0	0	0	0	0	0	0	0	110	
12/7		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	
12/8		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	

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

The Dalles Dam Adult Fish Ladder(s) River Temperatures



	Secchi:		USGS: Temperatures
12/2	5+	Sun	47.5
12/3	5+	Mon	47.4
12/4	5+	Tue	47.2
12/5	5+	Wed	46.8
12/6	5+	Thurs	46.6
12/7	5+	Fri	46.3
12/8	5+	Sat	46.1
	5+	AVG	46.8

**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
12/2	1.1	9.9												
12/3	1.4	9.8												
12/4	1.4	9.8												
12/5	1.4	9.9												
12/6	1.4	13.0												
12/7	1.4	10.0												
12/8	1.4	10.0												
AVG:	1.4	10.3												

Ladder dewatered for maintainence RTS 01/20/2019

Fishways are inspected twice daily plus one SCADA inspection.