

The Dalles Dam Fishway Status Report

03/31/19

Inspection Period: March 24 - March 30, 2019

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections: 21	Temperature: 42.9 °F
Comments: Spilling attraction flow to north ladder				
Secchi: 2.8 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')	9.4	Gates 1,7,8 open for a total 15.1Kcfs from 0600 to 1800; closed 3/21 with AWS start-up
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		
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	1	1.1' ± 0.1'	1.0' preferred but 1.1' allowed for necessity.	
Junction pool weir JP6	0	0.0		
East entrance differential	14	1.0' - 2.0'	No attraction flow until 3/21 pm	
Entrance weir E1	closed	No criteria		
Entrance weir E2	14	depth (≥ 8')	AWS flow for attraction.	
Entrance weir E3	14	depth (≥ 8')	AWS flow for attraction.	
Collection channel velocity	closed	1.5 - 4 fps	minimal flow	
Transportation channel velocity	closed	1.5 - 4 fps	minimal flow	
North channel velocity	0	1.5 - 4 fps		
South channel velocity	closed	1.5 - 4 fps	minimal flow	
West entrance differential	21	1.0' - 2.0'		
Entrance weir W1	21	depth (≥ 8')		
Entrance weir W2	21	depth (≥ 8')		
Entrance weir W3	closed	No criteria		
South entrance differential	21	1.0' - 2.0'		
Entrance weir S1	21	depth (≥ 8')		
Entrance weir S2	21	depth (≥ 8')		
FISHLADDER FLOW ONLY Gates W1,2,3 and S1,2 closed				
JUVENILE PASSAGE				
Sluiceway operation	0	Units 3, 18	Unit 1 OOS until 3/20; unit 3-2,3 and 18-1,2 gates open. Starting 3/20, unit 1 gates 2,3 open, unit 3 gates closed.	
Turbine trashrack drawdown	0	<1.5', biweekly		
Spill volume/pattern	0	None	Gates 1,7,8 open for a total 15.1Kcfs from 0600 to 1800; closed 3/21 with AWS start-up	
Turbine Unit Priority	14	per FPP	Unit 1 returned to service 3/20	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Predators;

Low piscivorous birds numbers. Large numbers of gulls observed around Miller Island nesting rocks and the mouth of Klickitat river.

USDA hazing contract approved. Training Apr 9-11 at The Dalles. Adding green laser test for gull hazing. Still awaiting NWD decision on use of lethal gull removal. Ongoing FPOM discussions concerning bass/walleye release by pikeminnow dam angling crew. Resolution for this season appears doubtful. **Catch and release of known invasive predators to juvenile salmonids likely to continue through the 2019 WDFW dam angling program.** This will be the third year of discussions.

Operation:

North fish ladder in full service since Feb7. Spill for attraction flow resumed Mar31 with the forced outage of the AWS backup flow for the east fishway. East fishladder in service with AWS flow. Fish Unit breaker replacement extended to Apr10. AWS forced out of service Mar31 for flooded valve room.

Current OutaA13:M36ges;

FU1 and FU2 OOS delayed fish unit breaker replacement contract. RTS est 4/10/2019. (delay from original RTS of 1/15/19)

MU5 forced OOS blade seals and T3 transformer replace. RTS 7/12/2019.

MU6 OOS annual and T3 transformer replace. RTS 7/12/2019.

MU19 and MU20 forced OOS transformer acetylene production. RTS 10/28/2019

Maintenance:

Calibrations: Entrance weirs in calibration specs. Backflushed east entrance still-well but it remains plugged and slow to respond to fluctuations.

Collection channel dewatering pumps 5 and 6 removed for rehab. Pump 1 ready for install.

Fishway automation assembly starts in April. Install winter of 2019/20

Diffuser valve status evaluation by engineering underway. Will help determine rehab process.

Contract for goats to remove vegetation on top side of north ladder and south channel in May.

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

FFU and project fisheries staff video monitoring count stations. Total march counts; East 8 chinook and 283 steelhead / North 1 chinook and 86 steelhead.

AWS backup - Valve room flooding on 3/31/19 forced emergency closure. Team evaluating for return to service ASAP.

AWS Follow on construction items to be addressed this summer. Flood alarm in valve room might be helpful addition to list.

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. PIT tagged 15 mile creek steelhead; 39 of 43 steelhead passed over The Dalles Dam.

Fish Counters - Official counting starts 4/1/19 via video until contractor issues resolved. Fish Field Unit providing video support. Project fisheries assisting in review.

Pikeminnow dam angling - Resumes next spring. Preparation underway. Bass/Walleye release continues a FPOM discussion.

ODFW monthly fishway inspections resumes in March.

Lamprey minor mods - Site visit for potential LPS planning around junction pool.

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. Materials and plans on hand.

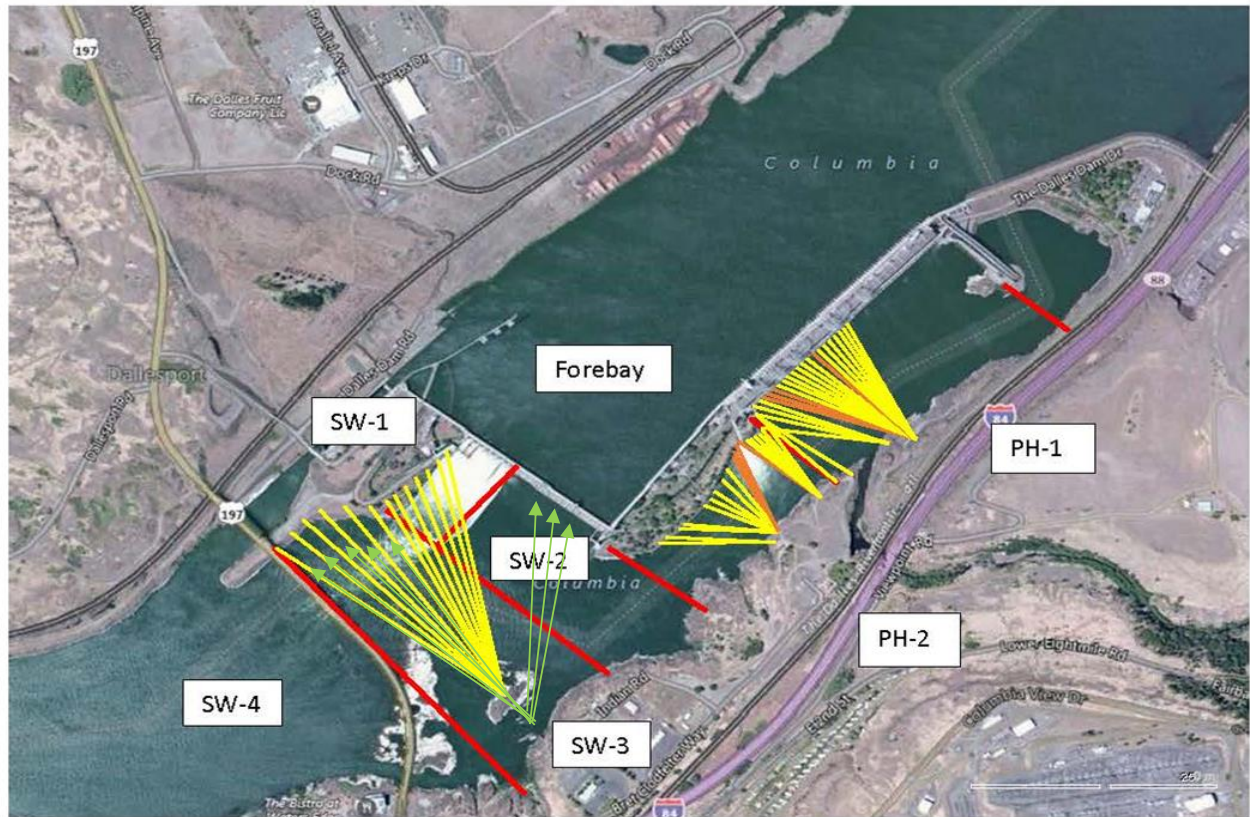
Fish unit breaker replace - Schedule completion now Apr10. (schedule slip from Jan15)

Fish unit rehab - Design on hold until further notice.

Transformer replacement - Install T3 underway

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		White Pelican		Other		Total birds in zone	Notes		
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF				
3/24/19	CEA	PM	FB	0	0	0	17	0	0	0	0	0	0	0	0	0	17	in towers	
			PH1	0	0	6	0	0	0	0	0	0	0	0	1	1	8	all PH1east; other = COME	
			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		
3/25/19	JED	AM	FB	0	0	0	20	0	0	0	0	0	0	0	0	0	20		
			PH1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	TUVU Vulture	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast, calm, 45F
			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	3	0	0	0	0	0	0	0	0	4	7	TUVU	
3/26/19	JED	PM	FB	0	0	0	14	0	0	0	0	0	0	0	0	0	14		
			PH1	0	0	1	3	0	0	0	0	0	0	0	3	0	7	COME	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Sun, calm 50F
			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	3	0	0	0	0	0	0	0	2	0	5	COME	
3/27/19	JED	AM	FB	0	0	1	0	0	0	0	0	0	0	0	1	2	BAEA on BPA tower, nav. Lock		
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2			
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, calm 45F.
			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	13	0	0	0	0	0	0	0	0	9	22	TUVU	
3/28/19	JED	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0			
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2			
			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	0	sun, calm, 43F
			SW3	0	0	0	13	0	0	0	0	0	0	0	0	0	13		
3/29/19	JWR	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	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	6	0	0	0	0	0	0	0	0	0	6		
3/30/19	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	1	1	BAEA		
			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	1	0	0	0	0	0	0	0	0	0	1		

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

	Secchi:		USGS: Temperatures
3/24	4.0	Sun	41.8
3/25	3.0	Mon	42.1
3/26	2.5	Tue	42.5
3/27	2.5	Wed	42.9
3/28	2.5	Thurs	43.1
3/29	2.5	Fri	43.8
3/30	2.5	Sat	44.3
	2.8	AVG	42.9

[USGS river temp MARCH.](#)

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

SCADA INSPECTION
= Out of criteria

Date:	North Ladder Entrance		East Ladder						
	Differential	N1 Depth	East Entrance- open			JP 6		West Entrance- closed	South Entrance- closed
			Differential	E1 Depth	E2 Depth	E3 Depth			
3/24			1.7	No Criteria	10.3	10.3	12.1		
	1.4	9.5	1.6		10.6	10.6	12.6		
	1.4	9.5	1.6		10.3	10.3	12.7		
3/25			1.4		10.6	10.7	13.0		
	1.5	9.6	1.3		10.7	10.8	12.4		
	1.4	9.3	1.4		10.7	10.8	12.2		
3/26			1.3		10.8	10.7	12.6		
	1.3	8.9	1.6		9.5	9.5	12.5		
	1.4	9.6	1.4		9.6	9.6	12.6		
3/27			1.5		9.0	8.9	13.2		
	1.4	9.4	1.3		10.5	10.4	11.9		
	1.4	9.4	1.4		9.4	9.5	12.8		
3/28			1.1		10.5	10.1	12.7		
	1.4	9.4	1.2		10.4	10.4	12.6		
	1.4	9.4	1.2		10.0	10.0	12.5		
3/29			1.2	8.9	9.1	13.6			
	1.4	9.5	1.2	8.9	9.0	13.6			
	1.4	9.5	1.5	8.9	8.9	12.6			
3/30			1.3	9.1	9.1	13.1			
	1.4	9.3	1.4	9.0	9.0	13.0			
	1.4	9.6	1.3	9.1	9.1	13.3			
AVG:	1.4	9.4	1.4	9.8	9.8	12.7			

Fishways are inspected twice daily plus one SCADA inspection.

The Dalles Dam Adult Fish Ladder/River Temperatures

