

The Dalles Dam Fishway Status Report

11/26/2017

Inspection Period: 11/19/2017-11/25/2017

THE DALLES DAM



The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21	Temperature: Secchi:	49.6 °F 5.0 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'	1.3			
Entrance weir N1	0	depth (≥ 8')	8.9			
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	Auto adjusts 1' increments Work cleaning circuit boxes performed.			
Weir 158-159 differential	0	1.0' ± 0.1'	158 callibrated and adjusted.			
Count station differential	0	≤ 0.3'	Picket leads raked as needed. Debris load light.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	0.0	9.9			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	11.0			
Entrance weir E3	0	depth (≥ 8')	11.0			
Collection channel velocity	0	1.5 - 4 fps	2.59			
Transportation channel velocity	0	1.5 - 4 fps	2.21			
North channel velocity	0	1.5 - 4 fps	2.69			
South channel velocity	0	1.5 - 4 fps	3.35			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	2	depth (≥ 8')	8.3			
Entrance weir W2	0	depth (≥ 8')	8.3			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.6			
Entrance weir S2	0	depth (≥ 8')	8.6			
JUVENILE PASSAGE						
Sluicgate operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'			
Spill volume/pattern	0		Spillway closed midnight Aug31			
Turbine Unit Priority	14	per FPP	MU 13-16 oos			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

No sea lion sightings. Hundreds of gulls on site, increased foraging in PH2 at sluiceway outfall

High predation rates on listed species by Miller Island gulls.(Ref; Grant County PUD/Priest Rapids Coordinating Committee)

Operations

North and east fishladders in full operation.

Sluiceway open with 6 gates (units 1, 8 and 18)

Current Outages;

T8 (MU15 & MU16) out for transformer failure. Transformer replacement 7/5/18.

MU17 out for overhaul. Return 12/14/17.

MU14 out for disconnect maint. Return 12/8/17

MU13 out for overhaul. Return 12/8/17

Maintenance;

East exit weir electrical panel FCQ7 partially installed. Engineering design and CADD drawings continues. Further installation possible this winter.

Rebuilding entrance weir and east exit weir spare gearboxes.

East exit oil boom installation by AWS contract this winter. Scope in review.

Fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection. Scope in review.

Fishway dewater work list; Diffuser valve rehab scope, dewater pump rehab, south weir rehab, Weir caps (lamprey), east exit weir 155,156,158 gearbox rehab

Other repair maintenance plans for upcoming fiscal years; 154 -157 rehab/weir wheel replace, diffuser valve overhaul (rehab and decommission).

Fish related /non-fish funded items; Spillway assessment, spillway crane replace and spillgate 9. All awaiting funding.

All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Charter in place for comprehensive spillway assessment.

Research/Construction/Contractors:

Fish Counters - Normandau counters on site through Oct 31. Video review counting through the winter.

Pikeminnow dam angling - Done for season with a total catch at 1776. Highest invasive walleye by-catches do date being released. Concern brought to FPOM.

AWS construction - Extensions Oct/Nov night work and mid Nov day work FPOM approved. Dive day Nov 13 per FPOM approval. Commissioning testing Mar 31.

Lamprey minor mods - Rounded entrance weir cap parts for all entrances recieved. Moorings fabricating. Tribal lamprey trap hoist design pending.

Railroad track removal - Tailrace deck start Nov nights (FPOM approved)

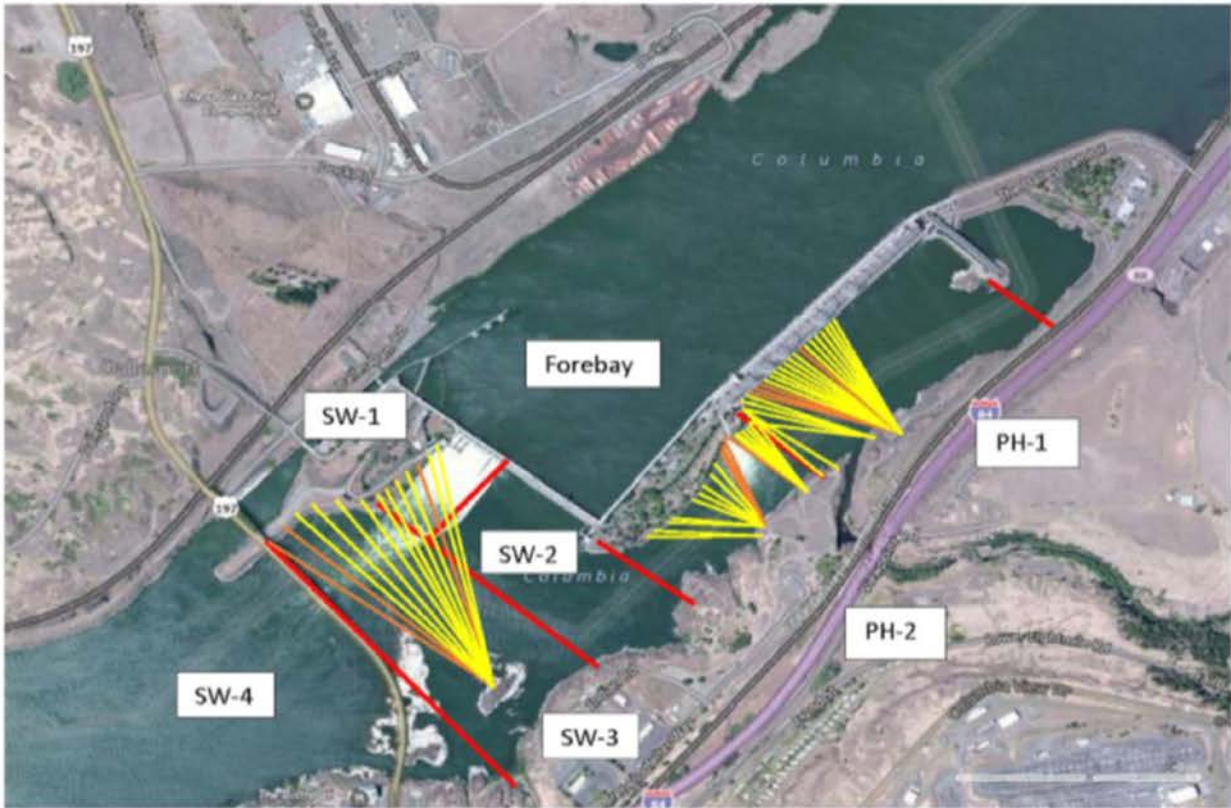
Fish unit breaker replace - Start behind schedule. Demo start Dec4. Completion Feb18, 2018. Two weeks commission testing required.

Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022.

Transformer replacement - Install start May 2018.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

2017 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	observer	time	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			
11/19	pm	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME COME
			PH1	41	41	0	47	0	0	0	0	0	0	0	0	64	193	
			PH2	1	28	0	0	0	0	0	0	0	0	0	9	0	38	
			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	2	69	0	52	0	0	0	0	0	0	0	0	0	123	
			SW4	25	217	0	49	0	0	0	0	0	0	0	291			
11/20	bc	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME on wall
			PH1	0	18	0	12	0	0	0	0	0	0	0	0	36	66	
			PH2	14	0	6	0	0	0	0	0	0	0	0	0	0	20	
			SW1	0	6	0	0	0	0	0	0	0	0	0	0	0	6	
			SW2	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
			SW3	0	0	0	14	0	0	0	0	0	0	0	0	0	14	
			SW4	0	65	0	0	0	0	0	0	0	0	0	65			
11/21	bc	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME spillwall
			PH1	25	0	8	15	0	0	0	0	0	0	25	0	73		
			PH2	15	0	0	0	0	0	0	0	0	0	0	0	15		
			SW1	0	125	0	0	0	0	0	0	0	0	0	0	125		
			SW2	0	53	0	36	0	0	0	0	0	0	0	0	89		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW4	0	105	0	0	0	0	0	0	0	0	105				
11/22	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	24	2	0	15	0	0	0	0	0	0	13	31	85		
			SW1	0	6	0	0	0	0	0	0	0	0	0	0	6		
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW3	0	58	1	34	0	0	0	0	0	0	0	0	93		
			SW4	0	85	0	2	0	0	0	0	0	0	87				
11/23	JWR	PM	FB	0	1	1	0	0	0	0	3	0	0	0	0	5	COME	
			PH1	9	39	4	22	0	0	0	0	0	6	17	97			
			PH2	11	0	0	0	0	0	0	0	0	0	0	0	11		
			SW1	0	53	0	0	0	0	0	0	0	0	0	0	53		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW3	0	26	3	37	0	0	0	0	0	0	0	0	66		
			SW4	0	150	0	18	0	0	0	0	0	0	168				
11/24	JWR	AM	FB	1	6	2	2	0	0	0	0	0	0	0	0	11	COME	
			PH1	8	13	6	25	0	0	0	0	0	25	35	112			
			PH2	0	0	4	0	0	0	0	0	0	0	0	0	4		
			SW1	0	71	1	0	0	0	0	0	0	0	0	0	72		
			SW2	0	0	3	0	0	0	0	0	0	0	0	0	3		
			SW3	0	0	0	35	0	0	0	0	0	0	0	0	35		
			SW4	0	50	0	7	0	0	0	0	0	0	57				
11/25	JWR	PM	FB	0	17	0	0	0	0	0	21	0	0	0	25	63	COME	
			PH1	14	16	2	34	0	0	0	0	0	0	55	121			
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	49	0	0	0	0	0	0	0	0	0	0	49		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	36	0	0	0	0	0	0	0	0	36		
			SW4	0	73	0	23	0	0	0	0	0	0	96				

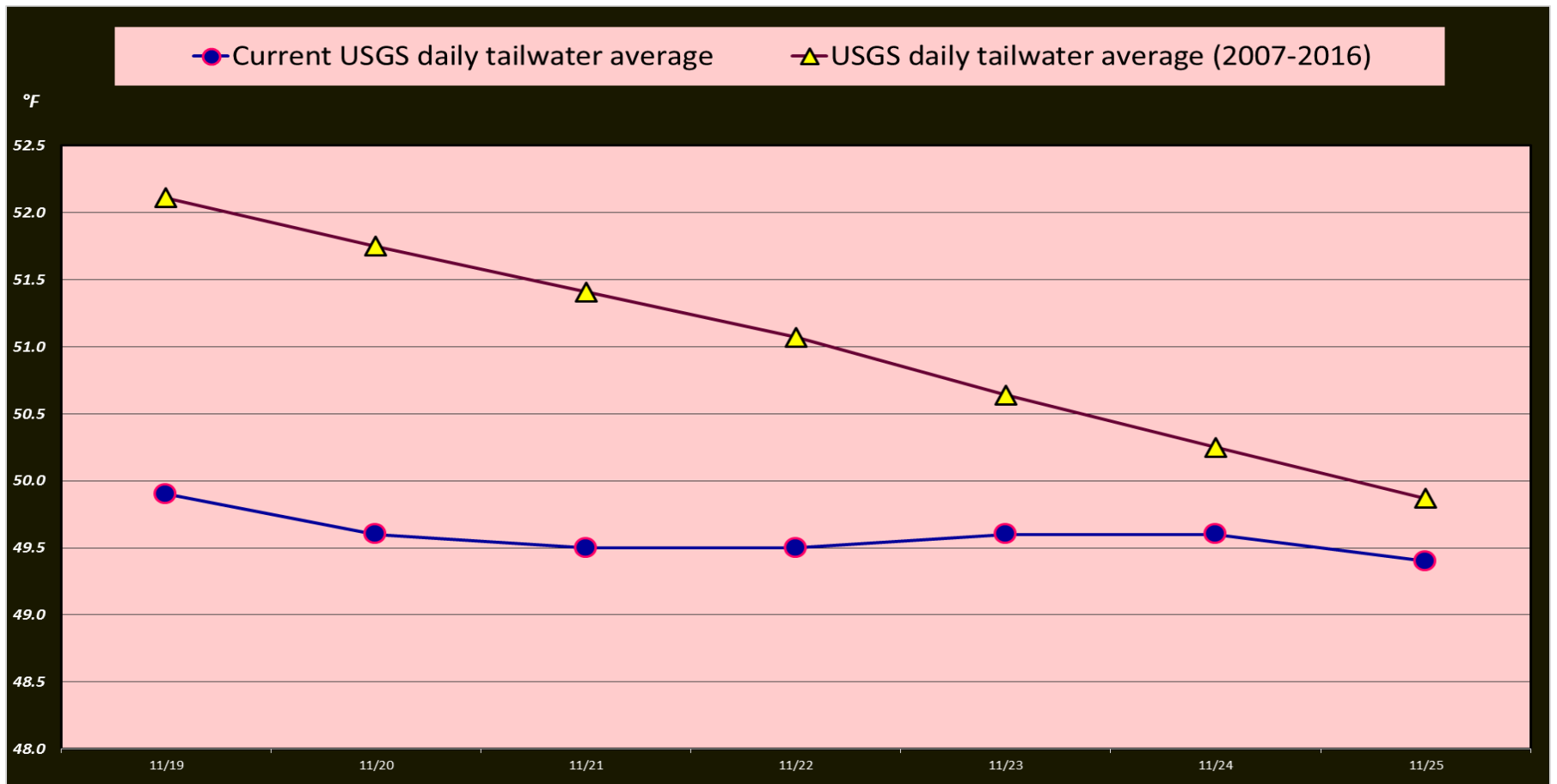
Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
11/19	21	16	5	4	2	2	4	4	0	0	0	0	0
11/20	48	46	2	1	1	0	6	6	0	0	0	0	0
11/21	39	34	5	4	4	0	0	0	0	0	0	0	0
11/22	61	58	3	8	5	3	13	13	0	0	0	0	0
11/23	20	17	3	3	1	2	7	5	2	0	0	0	0
11/24	19	19	0	7	6	1	7	7	0	0	0	0	0
11/25	39	35	4	7	6	1	2	2	0	0	0	0	0
total	247	225	22	34	25	9	39	37	2	0	0	0	0

The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
11/19	15	14	1	2	2	0	1	1	0	0	0	0	0
11/20	19	17	2	2	2	0	0	0	0	0	0	0	0
11/21	11	8	3	0	0	0	1	1	0	0	0	0	0
11/22	20	19	1	1	1	0	6	6	0	0	0	0	0
11/23	12	10	2	-1	-1	0	2	2	0	0	0	0	0
11/24	-4	-3	-1	0	0	0	-1	-1	0	0	0	0	0
11/25	6	6	0	2	0	2	3	3	0	0	0	0	0
total	79	71	8	6	4	2	12	12	0	0	0	0	0
% North	24.2	24.0	26.7	15.0	13.8	18.2	23.5	24.5	0.0	0.0	0.0	0.0	0.0



USGS: <http://pweb.crohms.org/tmt/documents/ops/temp/201711icol.html>

Secchi:		Temperatures
11/19	5.0	Sun 49.9
11/20	5.0	Mon 49.6
11/21	5.0	Tue 49.5
11/22	5.0	Wed 49.5
11/23	5.0	Thurs 49.6
11/24	5.0	Fri 49.6
11/25	5.0	Sat 49.4
	5.0	AVG 49.6

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

= 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
11/19			1.3	10.5	11.0	11.0	9.6	1.6	8.6	8.2		1.5	8.5	8.5
	1.2	9.1	1.3	10.5	11.0	11.0	9.6	1.6	7.7	8.3		1.5	8.6	8.6
	1.2	9.2	1.4	10.5	11.0	11.0	10.0	1.5	8.1	8.3		1.5	8.6	8.6
11/20			1.0	10.5	11.1	11.1	8.2	1.6	8.4	8.4		1.4	8.5	8.5
	1.4	9.1	1.3	10.6	11.1	11.1	10.4	1.5	8.2	8.4		1.5	8.6	8.6
	1.2	8.8	1.2	10.5	11.1	11.1	8.2	1.6	6.8	8.3		1.5	8.6	8.6
11/21			1.3	10.5	11.0	11.0	9.6	1.6	8.6	8.2		1.5	8.5	8.5
	1.4	8.9	1.6	10.6	11.0	11.1	10.1	1.4	8.4	8.4		1.5	8.6	8.6
	1.4	8.5	1.5	10.6	11.0	11.1	11.5	1.5	9.0	9.0		1.5	8.6	8.6
11/22			1.1	10.4	11.0	11.0	8.7	1.6	8.3	8.3		1.4	8.5	8.5
	1.4	8.9	1.7	9.9	10.6	10.6	11.4	1.6	8.3	8.3		1.5	8.6	8.6
	1.3	9.0	1.7	10.1	10.6	10.6	11.6	1.6	8.3	8.3		1.6	8.6	8.6
11/23			1.2	10.0	11.5	11.5	10.3	1.3	8.4	8.4		1.4	8.6	8.6
	1.3	9.0	1.2	10.0	11.5	11.5	10.3	1.3	8.4	8.4		1.4	8.6	8.6
	1.2	8.9	1.5	10.1	11.1	11.1	10.6	1.5	8.5	8.1		1.4	8.5	8.5
11/24			1.4	10.0	11.0	11.1	9.7	1.7	8.5	8.1	1.4	8.5	8.5	
	1.3	8.9	1.4	9.8	11.2	11.0	9.7	1.6	8.5	8.1	1.4	8.4	8.4	
	1.3	9.0	1.4	10.0	11.0	11.0	9.7	1.5	8.4	8.2	1.4	8.6	8.6	
11/25			1.4	10.0	11.0	11.0	9.8	1.6	8.3	8.2	1.5	8.6	8.6	
	1.3	8.9	1.5	10.0	11.0	11.0	9.9	1.5	8.3	8.2	1.4	8.5	8.5	
	1.3	9.0	1.4	10.0	11.0	11.0	9.5	1.4	8.3	8.2	1.4	8.6	8.6	
AVG:	1.3	8.9	1.4	NO CRITERIA	11.0	11.0	9.9	1.5	8.3	8.3	NO CRITERIA	1.5	8.6	8.6

Fishways are inspected twice daily plus one SCADA inspection.