

The Dalles Dam Fishway Status Report

10/29/2017

Inspection Period: 10/22/2017-10/28/2017

THE DALLES DAM



The Dalles Project-Fisheries
 P.O. Box 564
 The Dalles, OR 97058-9998
 Phone: 541-506-3800

Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:	21	Temperature:	57.3 °F
			Comments	Secchi:	0.0	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'	1.4			
Entrance weir N1	0	depth (≥ 8')	9.0			
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 calibrated 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	9.2			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	12.1			
Entrance weir E3	0	depth (≥ 8')	12.1			
Collection channel velocity	0	1.5 - 4 fps	2.51			
Transportation channel velocity	0	1.5 - 4 fps	2.31			
North channel velocity	0	1.5 - 4 fps	2.40			
South channel velocity	0	1.5 - 4 fps	3.26			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.6			
Entrance weir W2	0	depth (≥ 8')	8.6			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.3			
Entrance weir S2	0	depth (≥ 8')	8.3			
JUVENILE PASSAGE						
Sluiceway 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

Operations

North and east fishladders in full operation.

Spill opened 15kcfs on Oct25 1400-1800 in preparation for expected AWS construction vibration near east fishladder.

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 during winter outage.

Rebuilding entrance weir and east exit weir spare gearboxes.

Designing fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection.

Fishway dewatering schedule and work list draft reviewed. Items include; Diffuser valve rehab scope, dewater pump rehab, south weir rehab, Weir caps (lamprey)

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.

Pikeminnow dam angling - Done for season with a total catch at 1776

AWS construction - Planning season 2 schedule. Extensions Oct/Nov night work and Nov day work FPOM approved. Commissioning plan underway for Mar 31.

Vibration sensors installed on east ladder and each side of junction pool. Spill 15K on Oct 19, 21, 22 and 25 due to threshold exceedance.

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

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

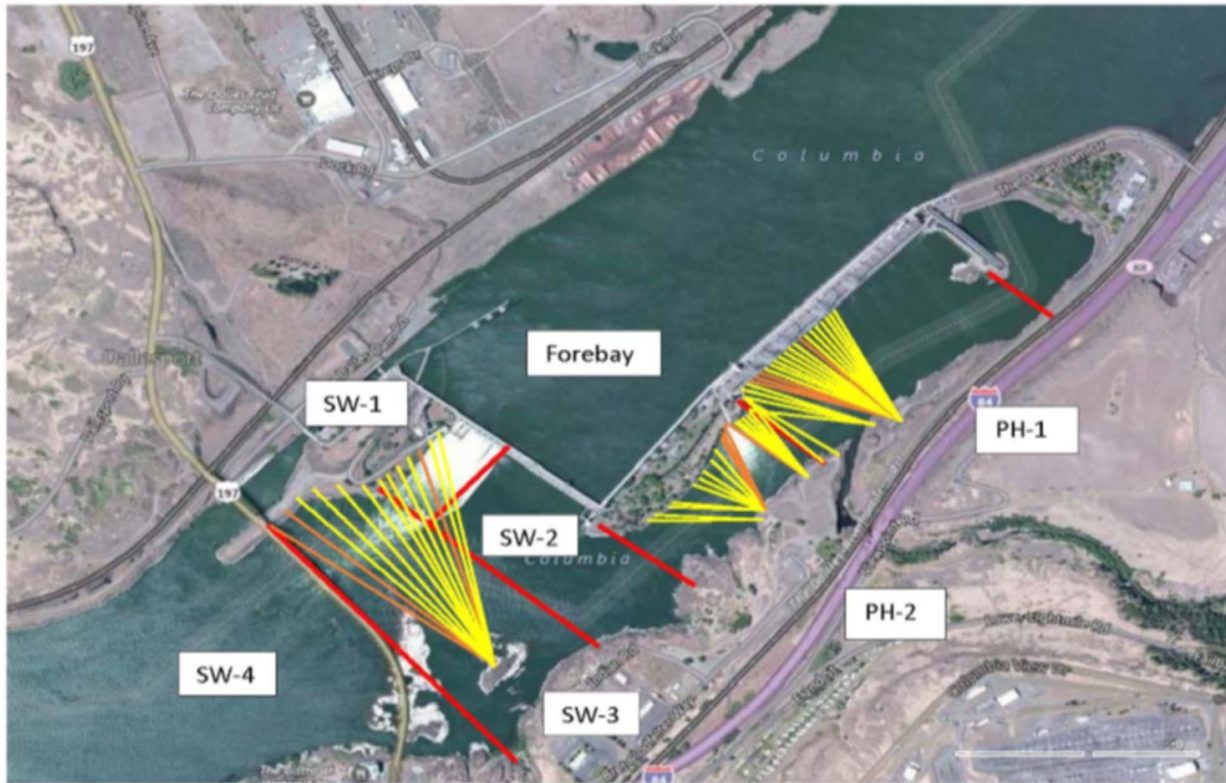
Fish unit breaker replace.- Manufacture this summer and install winter 2017. Switchover Feb 2018.

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		
10/22	GJF	PM	FB	0	0	0	15	0	0	0	10	0	0	0	0	25	
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	6	
			PH2	0	0	0	1	0	0	0	0	0	0	0	0	1	
			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	40	0	31	0	0	0	0	0	0	0	0	71	
			SW4	0	10	0	2	0	0	0	0	0	0	0	12		
10/23	GJF	AM	FB	0	0	0	56	0	0	0	0	0	0	0	0	56	
			PH1	0	3	0	1	0	0	0	0	0	0	0	0	4	
			PH2	4	0	2	0	0	0	0	0	0	0	0	0	6	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	7	35	0	40	0	0	0	0	0	0	0	0	82	
			SW4	0	24	0	1	0	0	0	0	0	0	0	25		
10/24	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH1	0	0	0	9	0	0	0	0	0	0	0	0	9	
			PH2	8	0	0	0	0	0	0	0	0	0	0	0	8	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	7	0	0	34	0	0	0	0	0	0	0	0	41	
			SW4	0	464	0	19	0	0	0	0	0	0	0	483		
10/25	JWR	AM	FB	0	0	0	5	0	0	0	6	0	0	0	0	11	
			PH1	0	0	1	2	0	0	0	0	0	0	0	0	3	
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	2	
			SW3	0	0	4	18	0	0	0	0	0	0	0	0	22	
			SW4	0	199	0	22	0	0	0	0	0	0	0	221		
10/26	JWR	PM	FB	0	0	0	3	0	0	0	0	0	0	0	0	3	
			PH1	0	0	0	16	0	0	0	0	0	0	0	0	16	
			PH2	11	0	0	0	0	0	0	0	0	0	0	0	11	
			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	61	0	0	0	27	0	0	0	0	0	0	88	
			SW4	0	305	0	0	0	14	0	0	0	0	0	319		
10/27	JWR	AM	FB	0	0	4	4	0	0	0	7	0	0	0	0	15	
			PH1	0	1	0	3	0	0	0	0	0	0	0	0	4	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	2	
			SW3	0	0	2	25	0	0	0	0	0	0	0	0	27	
			SW4	0	277	0	9	0	0	0	0	0	0	0	286		
10/28	JWR	PM	FB	0	0	1	0	0	0	0	0	0	0	0	0	1	
			PH1	0	0	0	15	0	0	0	0	0	0	0	0	15	
			PH2	0	12	0	0	0	0	0	0	0	0	0	0	12	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	3	0	0	0	0	0	0	0	0	0	3	
			SW3	0	0	0	36	0	0	0	0	0	0	0	0	36	
			SW4	0	381	0	17	0	0	0	0	0	0	0	398		

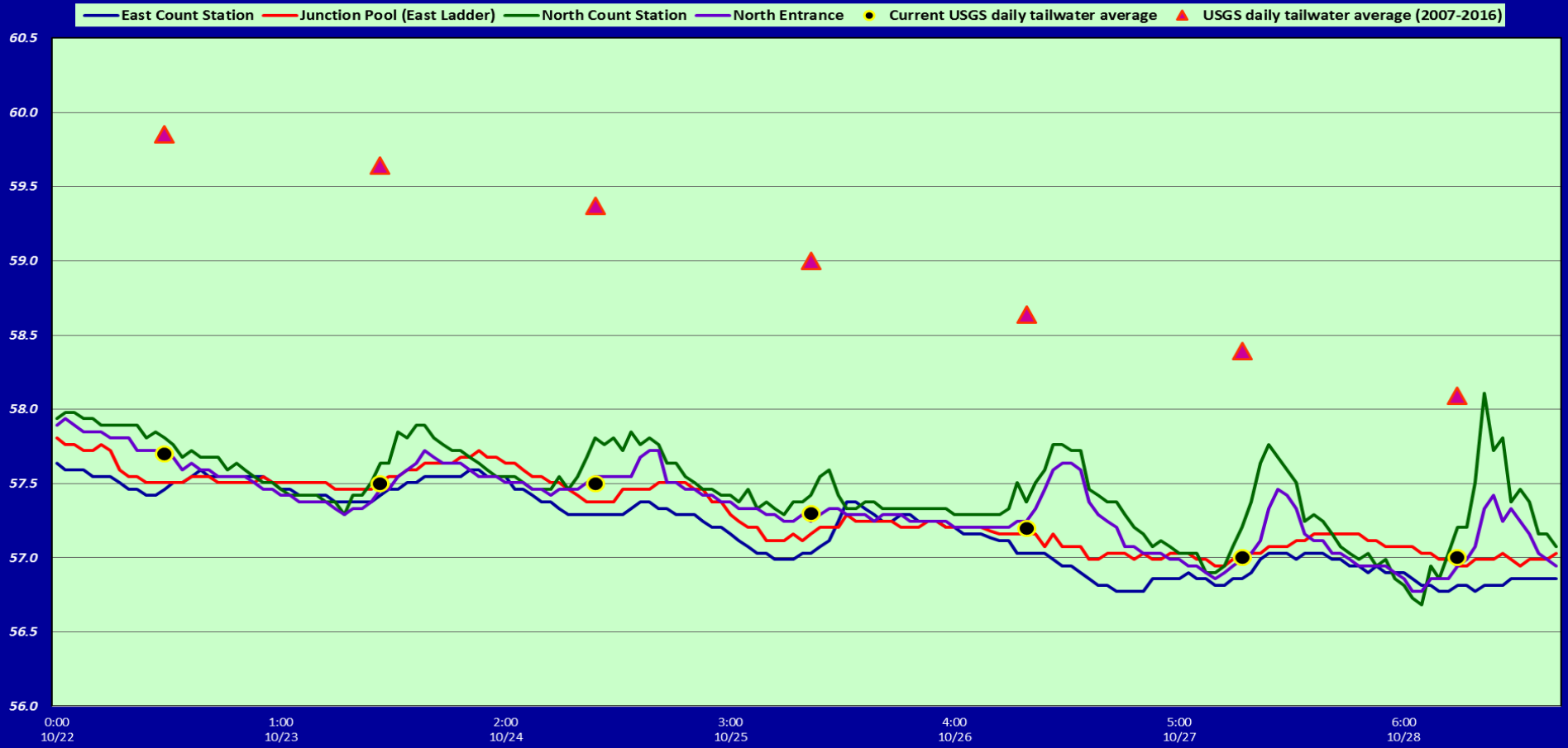
Key: BAEA = Bald Eagle; GBH = Great Blue Heron; COME = Common Merganser

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
10/22	449	418	31	201	113	88	160	150	10	0	0	0	0
10/23	372	305	67	186	103	83	121	109	12	0	0	0	0
10/24	223	192	31	162	96	66	54	48	6	0	0	0	0
10/25	231	179	52	198	115	83	83	66	17	0	0	0	0
10/26	102	86	16	101	67	34	35	31	4	0	0	0	0
10/27	73	66	7	107	60	47	34	28	6	0	0	0	0
10/28	105	91	14	59	35	24	8	8	0	0	0	0	0
total	1555	1337	218	1014	589	425	495	440	55	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
10/22	188	169	19	95	64	31	31	31	0	0	0	0	0
10/23	72	59	13	50	20	30	31	26	5	0	0	0	0
10/24	18	12	6	23	12	11	14	13	1	0	0	0	0
10/25	50	38	12	25	12	13	23	22	1	0	0	0	0
10/26	26	22	4	25	11	14	5	5	0	0	0	0	0
10/27	15	14	1	18	6	12	12	7	5	0	0	0	0
10/28	35	28	7	12	7	5	12	10	2	0	0	0	0
total	404	342	62	248	132	116	128	114	14	0	0	0	0
% North	20.6	20.4	22.1	19.7	18.3	21.4	20.5	20.6	20.3	0.0	0.0	0.0	0.0

Salmon http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=10&fr_cdd=22&to_cdm=10&to_cdd=28&subbtn=salmon&op=sdaily

Lamprey http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=10&fr_cdd=22&to_cdm=10&to_cdd=28&subbtn=shad+lamprey&op=sdaily

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



USGS: <http://pweb.crohms.org/im/documents/ops/temp201710.html>

Secchi:		Temperatures
10/22	4.0	Sun 57.7
10/23	4.0	Mon 57.5
10/24	5.0	Tue 57.5
10/25	4.0	Wed 57.3
10/26	4.5	Thurs 57.2
10/27	5.0	Fri 57.0
10/28	5.0	Sat 57.0
	AVG	57.3

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
10/22			1.3	5.6	12.6	12.6	10.3	1.4	8.4	8.4		1.5	8.3	8.3
	1.2	9.3	1.7	5.4	12.5	12.4	11.9	1.5	8.3	8.3		1.6	8.2	8.3
	1.3	9.3	1.7	5.4	12.4	12.4	11.9	1.6	8.2	8.2		1.5	8.3	8.3
10/23			1.4	5.6	12.5	12.6	10.4	1.5	8.4	8.4		1.5	8.4	8.3
	1.3	9.3	1.3	5.4	12.5	12.5	10.0	1.5	8.3	8.3		1.5	8.3	8.3
	1.4	10.0	1.2	5.5	13.6	13.5	10.1	1.5	8.4	8.3		1.4	8.4	8.3
10/24			1.3	5.5	12.5	12.5	8.7	1.6	8.3	8.3		1.5	8.2	8.2
	1.2	9.1	1.3	5.4	12.4	12.4	8.6	1.6	8.1	8.1		1.5	8.2	8.2
	1.3	8.9	1.4	4.6	12.5	12.5	8.8	1.5	8.4	8.4		1.4	8.4	8.4
10/25			1.4	4.6	12.5	12.4	8.6	1.7	8.2	8.2		1.5	8.3	8.2
	1.4	9.2	1.6	4.5	11.8	11.8	8.0	1.6	8.2	8.2		1.5	8.2	8.2
	1.2	8.9	1.5	4.6	12.0	11.9	8.1	1.7	7.9	8.3		1.4	8.3	8.3
10/26			1.4	5.4	11.9	11.9	8.4	1.5	8.9	8.9		1.4	8.3	8.3
	1.4	8.8	1.3	4.8	11.5	11.5	8.7	1.4	9.0	9.0	1.5	8.3	8.3	
	1.4	8.8	1.3	4.8	11.5	11.5	8.7	1.4	9.0	9.0	1.5	8.3	8.3	
10/27			1.5	4.5	11.6	11.6	8.5	1.5	8.9	8.9	1.5	8.4	8.4	
	1.4	8.8	1.5	4.5	11.5	11.5	8.5	1.4	9.1	9.1	1.5	8.3	8.3	
	1.5	8.5	1.5	4.5	11.5	11.5	8.7	1.5	9.0	9.0	1.4	8.4	8.4	
10/28			1.5	4.6	11.5	11.5	8.6	1.4	9.1	9.1	1.3	8.4	8.4	
	1.5	8.5	1.4	4.5	11.4	11.3	8.7	1.6	9.0	9.0	1.5	8.2	8.2	
	1.4	8.8	1.5	4.8	11.5	11.5	8.7	1.5	9.0	9.0	1.5	8.3	8.3	
AVG:	1.4	9.0	1.4	NO CRITERIA	12.1	12.1	9.2	1.5	8.6	8.6	NO CRITERIA	1.5	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.



Barge crane setting up for AWS forebay work near east fishway exit.