

The Dalles Dam Fishway Status Report

9/2/2018

Inspection Period: 08/26/2018-09/01/2018

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	Temperature: Secchi:
			21 conditions ok-cooling down	69.4 °F 5.1 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')	10.8	
Entrance weir N2	0	Closed		
PUD Intake differential	1	≤ 0.5'		excessive aquatic weeds requiring frequent raking
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	1.0' ± 0.1'		
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')	12.6	
Entrance weir E3	0	depth (≥ 8')	12.6	
Collection channel velocity	0	1.5 - 4 fps	2.36 fps	Range: MU21, 1.65 fps to MU 17, 2.69fps
Transportation channel velocity	0	1.5 - 4 fps	2.34 fps	
North channel velocity	0	1.5 - 4 fps	2.89 fps	
South channel velocity	0	1.5 - 4 fps	3.99 fps	
West entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir W1	0	depth (≥ 8')	8.5	
Entrance weir W2	0	depth (≥ 8')	8.5	
Entrance weir W3	0	No criteria		
South entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir S1	0	depth (≥ 8')	8.3	
Entrance weir S2	0	depth (≥ 8')	8.3	
JUVENILE PASSAGE				
Sluiceway operation	0	Units 1, 21	1-1,1-2, 1-3,8-1,8-3, 18-2	and endgate open
Turbine trashrack drawdown	0	<1.5', biwkly		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP	units 13-16	OOS
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds and Sea lions:

USDA avian hazing ended 7/31. Some pelicans and low numbers juvenile gulls.
USDA installation of additional spillway avian lines approved for installation 9/19.

Fishway operations

North and east adult fishways in full operation
Night flow reduction at east fishway entrances for lamprey research continues. 18 of 19 test nights completed.
Sluiceway open with 6 sluiceway operation (1, 8 & 18)

Current Outages;

MU5 forced OOS blade seals. RTS 1/21/2018
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 9/10/2019
MU15 OOS transformer replacement. RTS 11/01/2018
MU16 OOS transformer replacement. RTS 6/29/2019
MU19 OOS for overhaul. RTS 9/13/2018
MU20 OOS for annual. RTS 9/13/2018

Maintenance

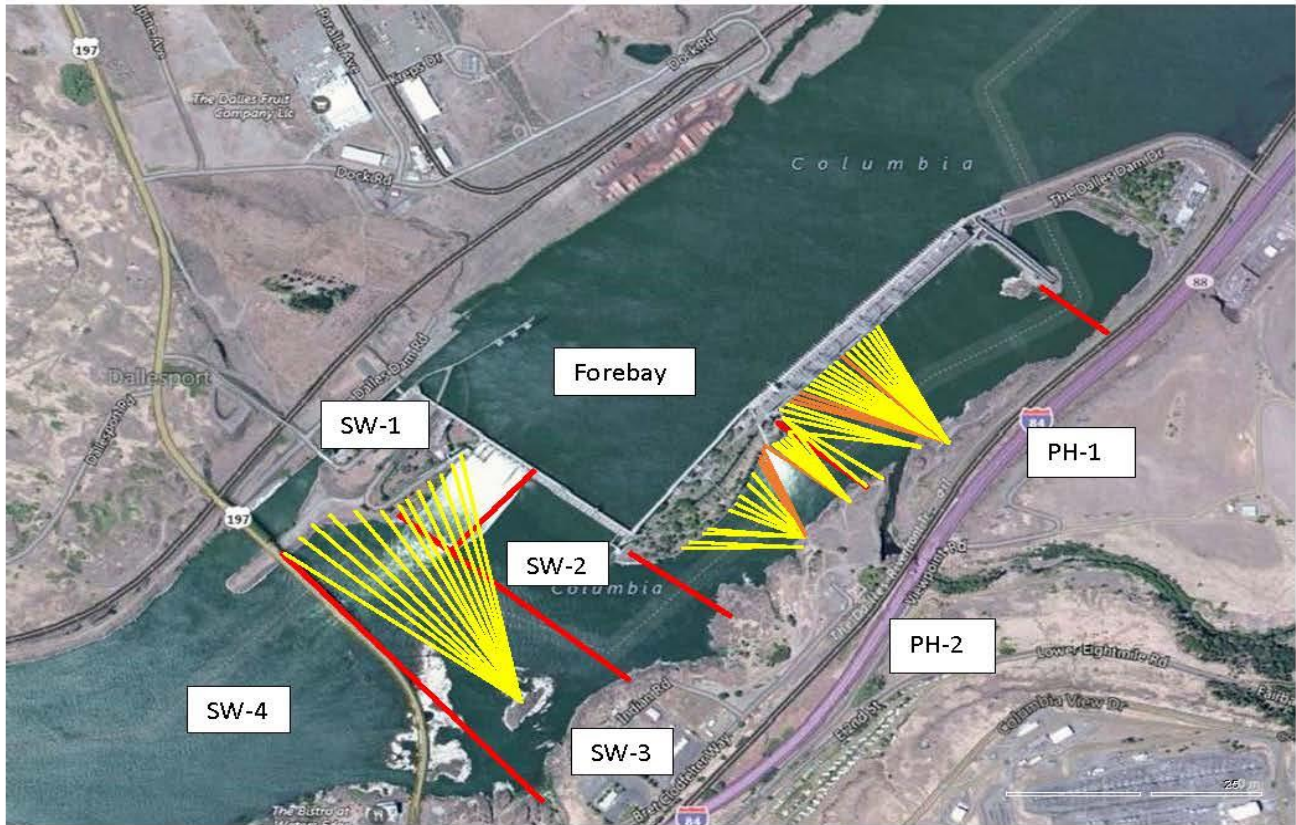
East count station brush out of service, TDE awaiting parts. Requires manual cleaning.
Rebuilding spare gearboxes for entrance and exit weirs.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.
Diffuser valve rehab beyond project maintenance capability. Exploring options.
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. Comprehensive spillway assessment review underway.
Spillgate climbing inspection underway. No problems found.

Research/Construction/Contractors:

Lower Columbia River Forebay Temperature Monitoring – Underway
AWS construction - Commissioning test date TBD.
PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review.
PITAGS North and east fishladder data collection at count stations continues.
Fish Counters - Ongoing.
Pikeminnow dam angling- Continues. Bass/walleye bycatch release being discussed at FPOM
ODFW monthly fishway inspections continue. No problems reported.
Lamprey minor mods - Rounded entrance weir caps installed south, west, north entrances. Spare weir completed ~8/1. East weir complete next winter.
Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction for research on improved lamprey passage.
Lamprey trapping by tribes to continue at east count station within picket leads with low catch rates. Catch target 1056 lamprey per tribe.
Fish unit breaker replace .- Prep work in progress. Installation 12/1/18 - 1/14/19.
Fish unit rehab - Development plan continues. Alternatives in review. Exploring potential use of AWS backup with single fish unit during construction period.
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

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			
8/26	CEA	AM	FB	0	0	2	29	0	0	0	0	0	0	0	0	0	31	partly cloudy, breezy
			PH1	0	0	4	5	0	0	0	0	0	0	0	0	0	9	
			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	1	0	0	0	0	0	0	0	1	0	2	
			SW3	5	0	3	7	0	0	0	0	0	0	0	0	0	15	
SW4	60	16	0	7	0	0	0	0	0	0	0	1	0	84	Osprey			
8/27	JWR	PM	FB	0	0	3	39	0	0	0	0	0	0	0	0	0	42	
			PH1	0	0	1	1	0	0	0	0	0	0	0	0	0	2	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			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	4	0	0	0	0	0	0	0	0	0	0	0	4	
SW4	6	23	0	6	0	0	0	0	0	0	0	0	0	35				
8/28	JWR	AM	FB	0	0	1	21	0	0	0	0	0	0	0	0	0	22	
			PH1	0	0	0	2	0	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	
			SW3	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
SW4	11	34	0	4	0	0	0	0	0	0	1	0	0	50				
8/29	JED	PM	FB	2	1	12	102	0	0	0	0	0	0	0	0	0	117	Overcast, windy, hot.
			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	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
SW4	35	35	2	14	0	0	0	0	0	0	0	12	0	98				
8/30	JWR	AM	FB	0	0	0	26	0	0	0	0	0	0	0	0	0	26	
			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	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
SW4	46	13	0	21	0	0	0	0	0	0	0	0	8	88				
8/31	JED	PM	FB	0	1	1	35	0	0	0	0	0	0	0	0	0	37	1 osprey warm, sunny and windy
			PH1	0	0	1	4	0	0	0	0	0	0	1	0	6		
			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	1	0	1	6	0	0	0	0	0	0	0	5	0	13	
SW4	5	30	0	30	0	0	0	0	0	0	0	0	0	65				
9/1	JED	AM	FB	0	0	0	8	0	0	0	0	0	0	1	0	9	1 osprey 2 MERG sunny, hot, windy	
			PH1	0	0	0	2	0	0	0	0	0	0	0	2	4		
			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	1	0	0	1	0	0	0	0	0	0	0	0	0		2
			SW3	0	0	4	20	0	0	0	0	0	0	0	3	0		27
SW4	0	0	0	1	0	0	0	0	0	0	0	12	0	13				

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

The Dalles East

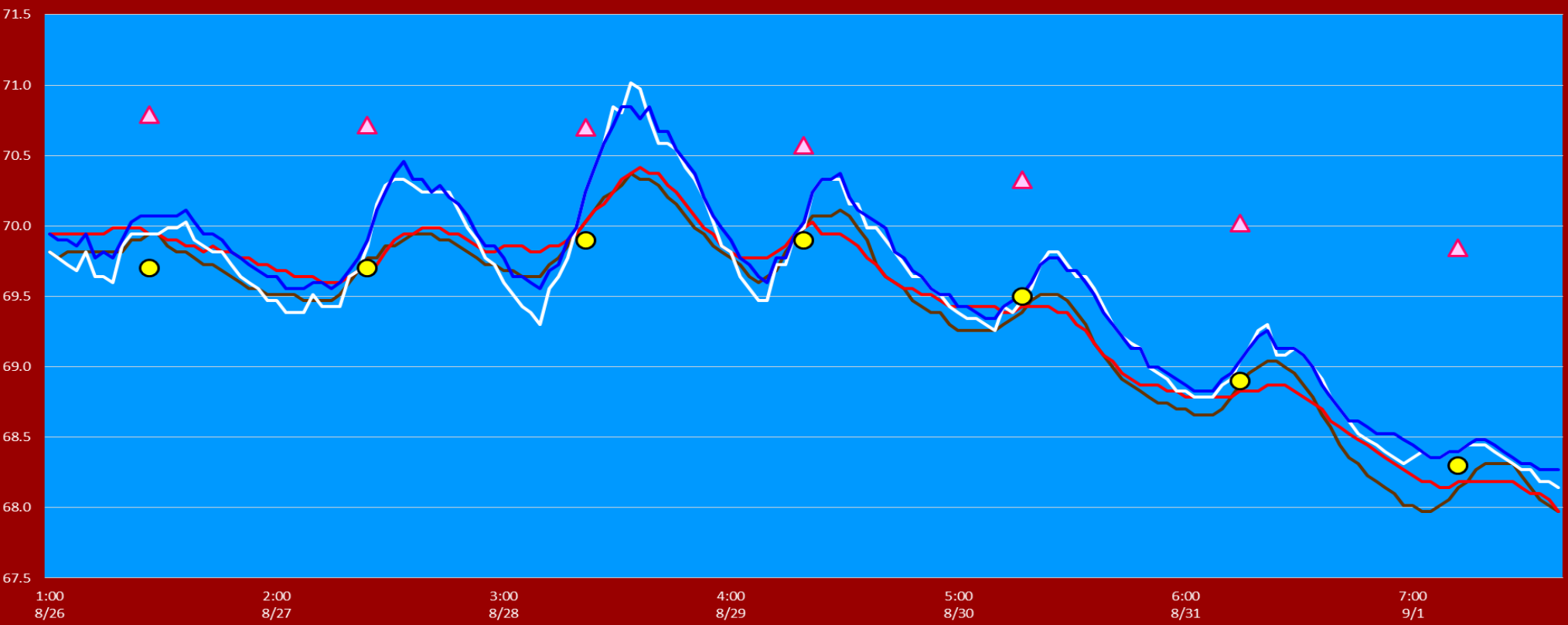
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/26	1556	1400	156	461	288	173	99	97	2	1	0	0	2
8/27	1384	1212	172	519	355	164	94	88	6	5	0	0	14
8/28	1000	887	113	311	221	90	93	77	16	2	0	0	40
8/29	1094	930	164	356	250	106	111	100	11	4	0	0	53
8/30	1405	1231	174	485	348	137	220	185	35	1	0	0	40
8/31	2206	1979	227	669	494	175	337	306	31	10	0	0	40
9/1	3919	3434	485	1258	946	312	537	502	35	12	0	0	20
total	12564	11073	1491	4059	2902	1157	1491	1355	136	35	0	0	209

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
8/26	810	768	42	460	298	162	29	28	1	1	0	0	12
8/27	772	706	66	405	266	139	39	37	2	0	0	0	8
8/28	802	742	60	350	228	122	68	67	1	0	0	0	6
8/29	1031	918	113	439	283	156	155	151	4	0	0	0	16
8/30	798	758	40	322	222	100	148	138	10	0	0	0	30
8/31	1738	1619	119	649	481	168	197	187	10	6	0	0	7
9/1	304	286	18	88	54	34	61	60	1	5	0	0	6
total	6255	5797	458	2713	1832	881	697	668	29	12	0	0	85
% North	33.2	34.4	23.5	40.1	38.7	43.2	0.0	0.0	0.0	25.5	0.0	0.0	28.9

The Dalles Dam Adult Fish Ladder(s) River Temperatures

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



			USGS:
Secchi:			Temperatures
8/26	6.0	Sun	69.7
8/27	5.0	Mon	69.7
8/28	5.0	Tue	69.9
8/29	5.0	Wed	69.9
8/30	5.0	Thurs	69.5
8/31	5.0	Fri	68.9
9/1	5.0	Sat	68.3
	5.1	AVG	69.4

**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		Differential	East Entrance				West Entrance			South Entrance			
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
8/26	1.4	10.7	1.5		13.0	13.1	12.5	1.5	8.5	8.5		1.4	8.3	8.3
	1.3	10.8	1.6		13.1	13.0	12.4	1.4	8.7	8.7		1.4	8.3	8.3
					12.9	12.8	12.2	1.5	8.5	8.5		1.4	8.3	8.3
8/27			1.3		12.9	12.9	77.3	1.4	8.8	8.8		1.3	8.4	8.4
	1.3	10.7	1.5		12.6	12.6	11.4	1.6	8.4	8.4		1.5	8.3	8.3
	1.3	10.8	1.5		12.6	12.6	11.4	1.6	8.4	8.4		1.5	8.3	8.3
8/28			1.5		12.4	12.4	10.7	1.5	8.3	8.3		1.4	8.3	8.3
	1.4	10.7	1.6		12.5	12.5	10.9	1.5	8.4	8.4		1.3	8.3	8.3
	1.3	10.8	1.5		12.5	12.5	11.0	1.6	8.3	8.3		1.3	8.4	8.4
8/29			1.6		12.6	12.6	11.9	1.6	8.3	8.3		1.4	8.3	8.3
	1.4	10.7	1.5		12.5	12.5	12.0	1.5	8.3	8.3		1.5	8.3	8.3
	1.3	10.8	1.5		12.6	12.6	12.3	1.5	8.9	8.9		1.4	8.4	8.4
8/30			1.5		12.4	12.4	11.1	1.4	8.6	8.6		1.4	8.2	8.2
	1.3	10.8	1.6		12.5	12.5	11.4	1.4	8.7	8.7		1.3	8.4	8.4
	1.3	11.2	1.5		12.6	12.6	11.7	1.6	8.6	8.6		1.4	8.3	8.3
8/31			1.2	12.5	12.5	10.2	1.3	8.4	8.4	1.3	8.4	8.4		
	1.3	10.6	1.5	12.3	12.4	10.3	1.4	8.5	8.5	1.4	8.3	8.3		
	1.3	10.8	1.6	12.5	12.4	10.5	1.3	8.5	8.5	1.4	8.3	8.3		
9/1			1.6	12.4	12.4	9.8	1.4	8.5	8.5	1.3	8.4	8.4		
	1.1	10.7	1.5	12.5	12.6	10.3	1.5	8.5	8.5	1.4	8.2	8.2		
	1.1	10.8	1.6	13.0	13.0	10.4	1.5	8.5	8.5	1.4	8.2	8.3		
AVG:	1.3	10.8	1.5	12.6	12.6	14.4	1.5	8.5	8.5	1.4	8.3	8.3		

Fishways are inspected twice daily plus one SCADA inspection.