

The Dalles Dam Fishway Status Report

09/16/18

Inspection Period: September 9 - 15, 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: 21	Temperature: 68.3 °F
Comments				
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')	10.5	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 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')	13.3	
Entrance weir E3	0	depth (≥ 8')	13.3	
Collection channel velocity	0	1.5 - 4 fps	2.32 fps	Range: SS, 1.72 fps to MU 20, 2.77fps
Transportation channel velocity	0	1.5 - 4 fps	2.52 fps	
North channel velocity	0	1.5 - 4 fps	2.69 fps	
South channel velocity	0	1.5 - 4 fps	3.80 fps	
West entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir W1	0	depth (≥ 8')	8.7	
Entrance weir W2	0	depth (≥ 8')	8.7	
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', biweekly		
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. Low numbers of gulls, Pelican are gone and mergansers increasing

Inspection Period:

North and east adult fishways in full operation
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

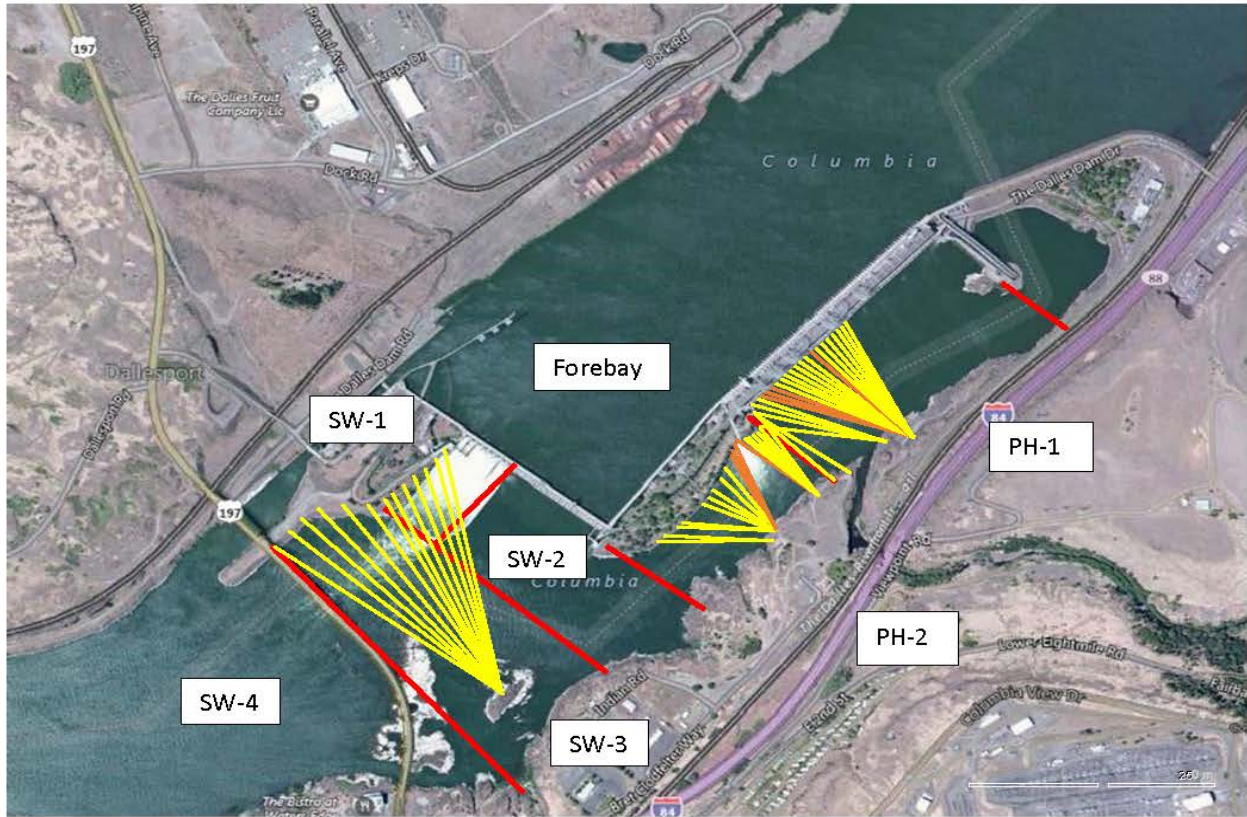
East count station brush out of service, TDE awaiting parts. Requires manual cleaning.
Rebuilding spare gearboxes for entrance and exit weirs.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.
Planning 154 -157 rehab/weir wheel replace next winter. 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 completed
Lamprey trapping by tribes completed, awaiting final numbers.
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				
9/9	CEA	AM	FB	0	0	0	78	0	0	0	0	0	0	0	0	0	78	COME, all PH1a warm, sunny, calm COME	
			PH1	0	1	0	7	0	0	0	0	0	0	0	4	0	12		
			PH2	0	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		0
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	1	23	0	0	0	0	0	0	0	0	4	28		
SW4	0	26	0	0	0	0	0	0	0	0	0	0	0	0	26				
9/10	JED	PM	FB	1	0	0	29	0	0	0	0	0	0	0	0	0	30	overcast, cool, 15mph OSPREY	
			PH1	0	1	2	7	0	0	0	0	0	0	0	0	0	10		
			PH2	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW1	0	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	1	0		1
			SW3	1	10	3	25	0	0	0	0	0	0	0	0	0	0		39
SW4	1	20	0	6	0	0	0	0	0	0	0	0	0	0	27				
9/11	JWR	AM	FB	0	2	1	58	0	0	0	0	0	0	0	0	0	61	COME	
			PH1	0	1	2	5	0	0	0	0	0	0	0	0	0	8		
			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	17	0	0	0	0	0	0	0	1	2	22		
SW4	0	48	0	0	0	0	0	0	0	0	0	0	0	48					
9/12	JED	PM	FB	0	0	0	33	0	0	0	0	0	0	1	0	34	OSPREY 2 COME, 1 OSPREY Overcast, sun, warm, 15mph COME		
			PH1	0	0	2	14	0	0	0	0	0	0	0	0	0		19	
			PH2	6	0	0	0	0	0	0	0	0	0	0	0	0		6	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0		1	
			SW3	2	7	6	25	0	0	0	0	0	0	0	0	0		40	
SW4	2	5	0	43	0	0	0	0	0	0	0	20	0	70					
9/13	JWR	AM	FB	0	1	1	36	0	0	0	0	0	0	0	0	38	COME COME		
			PH1	0	0	3	4	0	0	0	0	0	0	0	3	10			
			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	0	0	0	0	0	0	0	0	0	0	0			
			SW3	0	2	1	68	0	0	0	0	0	0	0	2	6		79	
SW4	0	16	0	2	0	0	0	0	0	0	0	0	0	18					
9/14	JED	PM	FB	1	0	0	10	0	0	0	0	0	0	20	0	31	18 COME, 2 OSPREY GBHE 6 COME Calm, clear, warm (4:30 pm) 1 OSPREY F, 5 COME		
			PH1	1	0	4	18	0	0	0	0	0	0	7	0	30			
			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	1	3	2	18	0	0	0	0	0	0	0	4	2		30	
SW4	0	115	0	22	0	0	0	0	0	0	0	0	0	137					
9/15	JWR	AM	FB	0	0	0	22	0	0	0	0	0	0	0	0	22	COME		
			PH1	0	0	0	12	0	0	0	0	0	0	0	4	16			
			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	32	0	0	0	0	0	0	0	0	0		32	
SW4	0	75	0	0	0	0	0	0	0	0	0	0	0	75					

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

The Dalles East

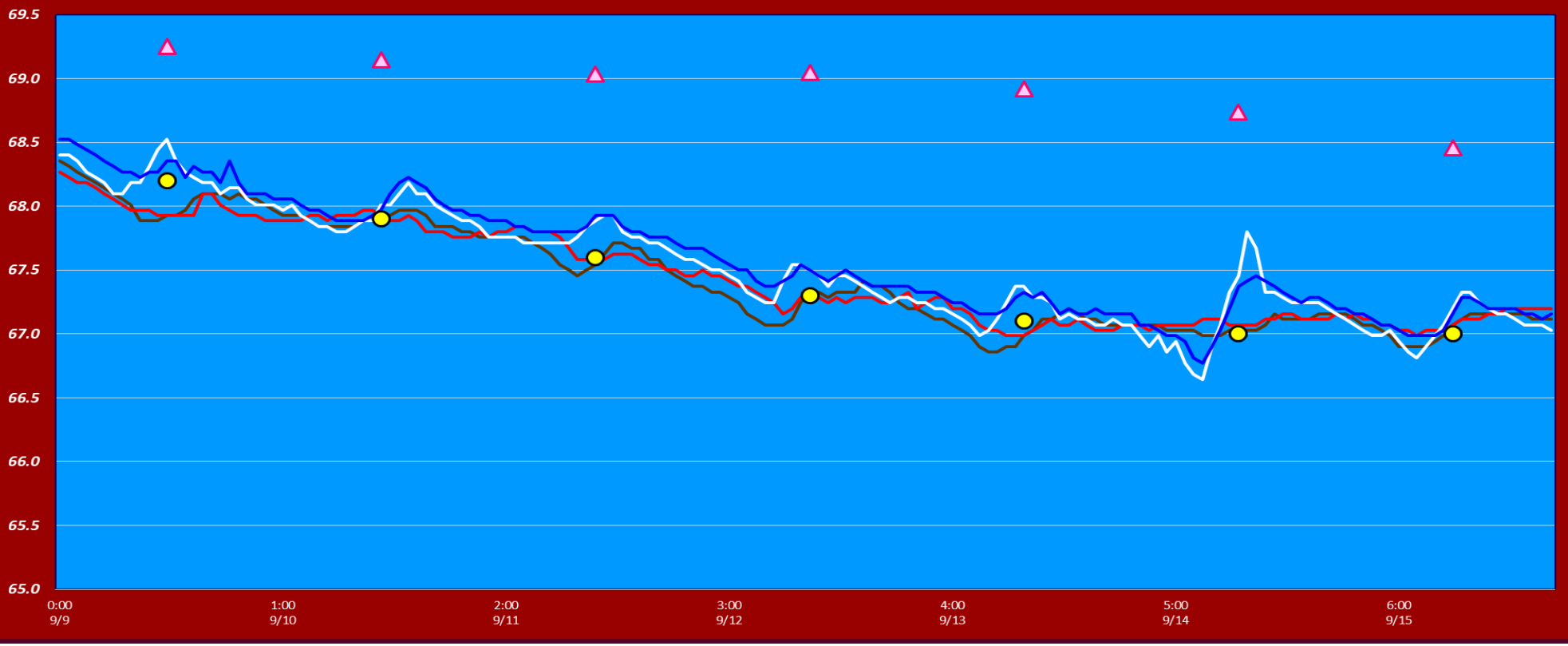
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/9	3984	3491	493	1255	966	289	642	594	48	0	0	0	50
9/10	4758	4464	294	993	731	262	435	391	44	0	0	0	11
9/11	2294	1896	398	666	521	145	511	469	42	4	0	0	18
9/12	3069	2605	464	938	750	188	548	432	116	0	0	0	17
9/13	3987	3491	496	1282	1031	251	511	485	26	0	0	0	17
9/14	3440	2868	572	1734	1417	317	479	438	41	1	0	0	16
9/15	2720	2341	379	1464	1102	362	353	311	42	1	0	0	7
total	24252	21156	3096	8332	6518	1814	3479	3120	359	6	0	0	136

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
9/9	602	559	43	100	78	22	73	50	23	1	0	0	1
9/10	182	169	13	104	80	24	55	47	8	2	0	0	2
9/11	110	80	30	62	46	16	20	12	8	0	0	0	7
9/12	55	37	18	68	50	18	23	16	7	2	0	0	1
9/13	172	120	52	182	154	28	39	35	4	1	0	0	1
9/14	213	179	34	181	151	30	45	34	11	0	0	0	1
9/15	189	143	46	325	265	60	48	46	2	0	0	0	1
total	1523	1287	236	1022	824	198	303	240	63	6	0	0	14
% North	5.9	5.7	7.1	10.9	11.2	9.8	0.0	0.0	0.0	50.0	0.0	0.0	9.3

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
9/9	5.0	Sun	68.2
9/10	6.0	Mon	67.9
9/11	5.0	Tue	67.6
9/12	5.0	Wed	67.3
9/13	5.0	Thurs	67.1
9/14	5.0	Fri	67.0
9/15	5.0	Sat	67.0
	5.1	AVG	67.4

**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			W3 Depth	South Entrance		
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth		Differential	S1 Depth	S2 Depth
9/9			1.3		13.0	13.0	11.0	1.4	8.6	8.6		1.3	8.4	8.4
	1.3	10.5	1.3		13.1	12.9	10.7	1.3	8.6	8.6		1.4	8.2	8.3
	1.2	10.5	1.5		12.7	12.8	10.3	1.4	8.6	8.6		1.4	8.3	8.2
9/10			1.5		12.9	12.9	10.7	1.4	8.8	8.8		1.4	8.4	8.3
	1.3	10.5	1.5		13.0	13.0	10.8	1.4	8.7	8.7		1.4	8.2	8.3
	1.3	10.6	1.5		12.8	12.8	11.6	1.5	8.8	8.8		1.5	8.3	8.3
9/11			1.5		13.6	13.5	11.9	1.5	8.6	8.6		1.5	8.2	8.2
	1.3	10.5	1.5		13.5	13.5	11.5	1.5	8.7	8.7		1.4	8.3	8.3
	1.3	10.4	1.5		13.5	13.6	11.7	1.5	8.8	8.8		1.4	8.4	8.4
9/12			1.4		13.5	13.6	11.2	1.5	8.6	8.6		1.5	8.2	8.2
	1.3	10.6	1.4		13.5	13.5	10.9	1.4	8.7	8.7		1.4	8.2	8.2
	1.3	10.6	1.6		13.6	13.5	11.6	1.6	8.5	8.5		1.5	8.3	8.3
9/13			1.3		13.4	13.5	11.2	1.4	8.8	8.8		1.4	8.2	8.2
	1.3	10.6	1.5		13.5	13.5	10.8	1.3	8.8	8.8		1.4	8.3	8.3
	1.2	10.7	1.6		13.1	13.1	10.8	1.5	8.4	8.4		1.4	8.4	8.4
9/14			1.8	13.0	13.0	11.9	1.7	8.4	8.4	1.6	8.3	8.3		
	1.4	10.6	1.4	13.6	13.6	12.5	1.4	9.0	9.0	1.5	8.3	8.3		
	1.3	10.6	1.5	13.5	13.5	12.4	1.5	9.0	9.0	1.5	8.3	8.3		
9/15			1.2	13.6	13.6	10.8	1.2	9.1	9.1	1.3	8.3	8.3		
	1.2	10.0	1.6	13.5	13.5	11.3	1.6	8.7	8.7	1.5	8.3	8.3		
	1.3	10.5	1.5	13.5	13.5	11.6	1.6	8.6	8.6	1.4	8.4	8.4		
AVG:	1.3	10.5	1.5		13.3	13.3	11.3	1.5	8.7	8.7		1.4	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.

New avian dissuasion wire to be installed shown in red

