

The Dalles Dam Fishway Status Report

7/15/2018

Inspection Period: 7/8/2018-7/14/2018

THE DALLES DAM



The Dalles Project-Fisheries
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	Temperature: Secchi:
			21 conditions ok	67.5 °F 4.9 feet
NORTH FISHWAY				
Exit differential	0	≤ 0.5'		
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.3' ± 0.1'		Increased from 1' to 1.3' to allow shad passage.
Entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir N1	0	depth (≥ 8')	10.6	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'	0	
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	1.3' ± 0.1'		Water depth over ladder weirs
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')	12.7	
Entrance weir E3	0	depth (≥ 8')	12.7	
Collection channel velocity	0	1.5 - 4 fps	2.3 fps	Range: MU 7, 2.77 fps to MU9, 1.72 fps
Transportation channel velocity	0	1.5 - 4 fps	2.49 fps	
North channel velocity	0	1.5 - 4 fps	2.52 fps	
South channel velocity	0	1.5 - 4 fps	3.62 fps	
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'	1.4	
Entrance weir S1	0	depth (≥ 8')	8.4	briefly OOC 7/10 am: 7.9 ft
Entrance weir S2	0	depth (≥ 8')	8.4	briefly OOC 7/10 am: 7.9 ft
JUVENILE PASSAGE				
Sluicgate 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	Small numbers of juvenile salmon and mature shad present in gatewells.	
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP		
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds and Sea lions:

USDA boat and shore hazing continues. Approx 250 gulls on islands downstream with small numbers feeding, Over 200 pelicans appear to outcompete gulls. Two sea lions have been spotted foraging on north end of spill by USDA hazers. No sightings near fishway entrances.

Operations

North and east adult fishways in full operation. North and east ladder adjusted to 1.3' for shad passage. Night flow reduction at east fishway entrances for lamprey research continues. Fish unit flow reduced from 2400cfs to 2200cfs. Ten of 19 test nights completed. Sluiceway open with 6 sluiceway operation (1, 8 and 18)

Current Outages;

MU5 forced OOS for gov oil problem. RTS 1/21/2018
MU15 forced OOS transformer replacement. RTS 8/30/2018
MU16 forced OOS transformer replacement. RTS 6/29/2019

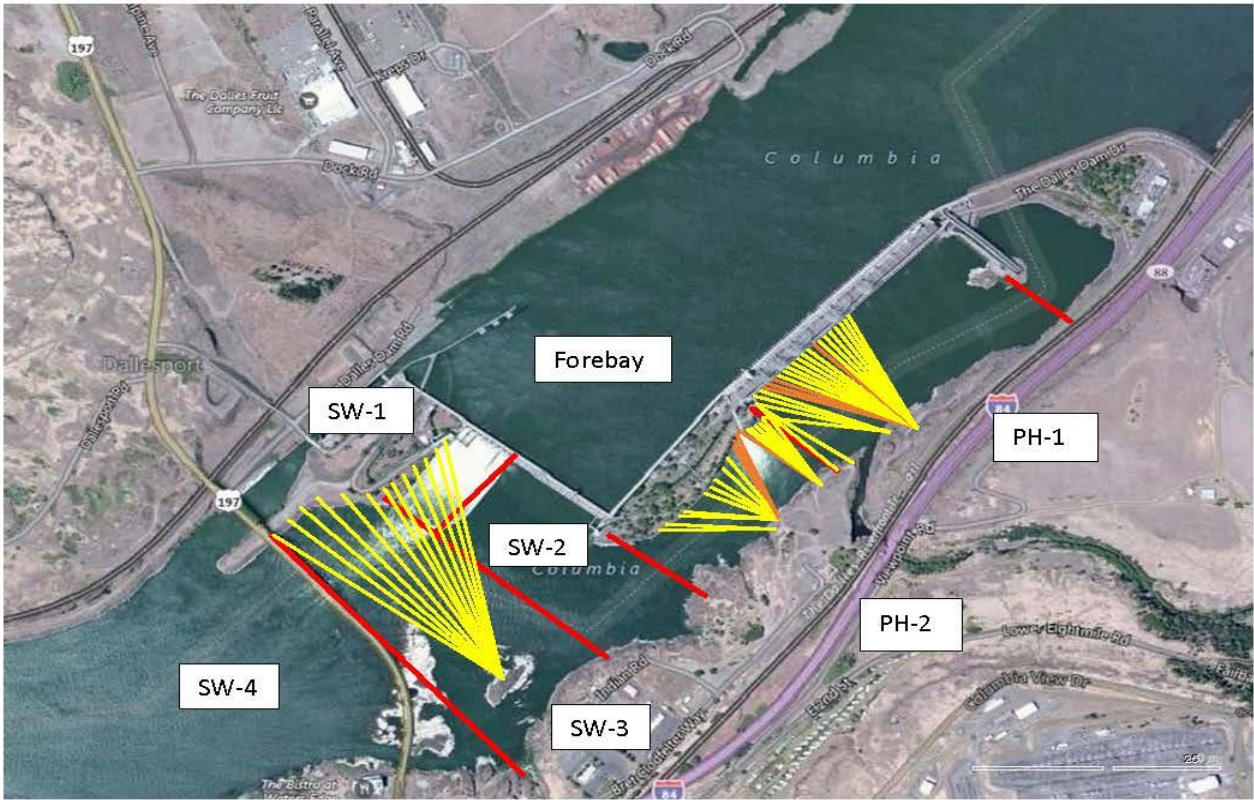
Maintenance

Rebuilding spare gearboxes for entrance and exit weirs.
East exit oil boom - Fabrication underway. Install Aug7. Low forebay requested.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.
Wheel replacement on N1 spare weir in progress.
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.
Planning start on diffuser valve rehab next winter. Multiple year job.
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. Plan for comprehensive spillway assessment.

Research/Construction/Contractors:

Lower Columbia River Forebay Temperature Monitoring – Underway
AWS construction - Full flow test night of Aug6. Commissioning test date TBD.
PSMFC weekly sampling completed for the North Wasco County PUD's. No concerns. New sample collection tank design in review.
PITAGS North and east fishladder data collection at count stations continues.
Fish Counters - Ongoing.
Pikeminnow dam angling- Week 25: 6/18-6/24 219 caught, 602 YTD
Non native (bass and walleye) bycatch release by WDFW continues. FPOM discussion continues.
ODFW monthly fishway inspections continue. No problems reported.
Lamprey minor mods - Rounded entrance weir caps installed south, west, north entrances. Spare weir to be completed this FY. East weir complete next winter.
Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction done on 6/4 and 6/5 as part of research for improved lamprey passage.
Lamprey trapping by tribes to continue at east count station within picket leads end of June. Catch target 1056 lamprey per tribe.
Fish unit breaker replace .- Prep work in progress. Installation delayed to next winter outage.
Fish unit rehab - Development plan continues. Alternatives in review.
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				
7/8	JED	PM	FB	20	0	6	67	0	0	0	0	0	0	0	0	0	93	sunny, calm, hot. East end	
			PH1	0	0	5	1	0	0	0	0	0	0	0	0	0	0		6
			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	5	20	0	0	0	0	0	0	0	0	5	0	0	0		30
			SW4	5	0	0	0	0	0	0	0	0	0	4	0	0	0		9
7/9	JWR	AM	FB	0	18	0	82	0	0	0	0	0	2	0	0	0	102		
			PH1	0	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		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	4	65	0	0	0	0	0	0	0	11	0	0	0	0		80
			SW4	16	52	0	0	0	0	0	0	0	37	39	0	0	0		144
7/10	CEA	PM	FB	0	2	0	48	0	0	0	0	0	0	0	0	0	50	Osprey, all Ph1a	
			PH1	0	0	2	4	0	0	0	0	0	0	0	1	1	0		8
			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	1	0	0	0	0	0	0	0	0	0	0	0		1
			SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	0		5
			SW4	7	45	0	0	0	0	0	0	0	4	72	0	0	0		128
7/11	JWR	AM	FB	0	21	0	0	0	0	0	0	0	0	0	0	0	21		
			PH1	0	0	0	0	0	0	0	0	0	1	0	0	0	0		1
			PH2	0	0	1	0	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		0
			SW2	0	0	0	0	0	0	0	0	0	1	0	0	0	0		1
			SW3	0	20	0	0	0	0	0	0	0	9	54	0	0	0		83
			SW4	0	20	0	0	0	0	0	0	0	36	157	0	0	0		213
7/12	JED	PM	FB	0	245	12	100	0	0	0	0	0	0	0	0	0	357	California gulls feeding on insects?	
			PH1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	sunny, calm, hot.
			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	12	0	0	0	0	0	0	0	0	0	0	0	12	
			SW3	6	0	0	0	4	0	0	0	0	6	0	0	0	0	16	
			SW4	0	0	0	0	0	0	0	0	0	45	0	0	0	0	45	
7/13	JWR	AM	FB	0	4	1	65	0	0	0	0	0	0	0	0	0	70		
			PH1	0	0	0	0	0	0	0	0	0	0	1	0	0	0		1
			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	1	6	0	0	0	0	0	0	0	24	15	0	0	0		46
			SW4	2	30	0	0	0	0	0	0	0	38	140	0	0	0		210
7/14	CEA	AM	FB	5	0	6	101	0	0	0	0	0	0	1	0	0	113	Osprey	
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	sunny, warm, calm
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	52	28	0	0	0	0	0	0	0	1	0	0	0	0	81	
			SW4	67	7	0	0	0	0	0	0	0	103	0	0	0	0	177	

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

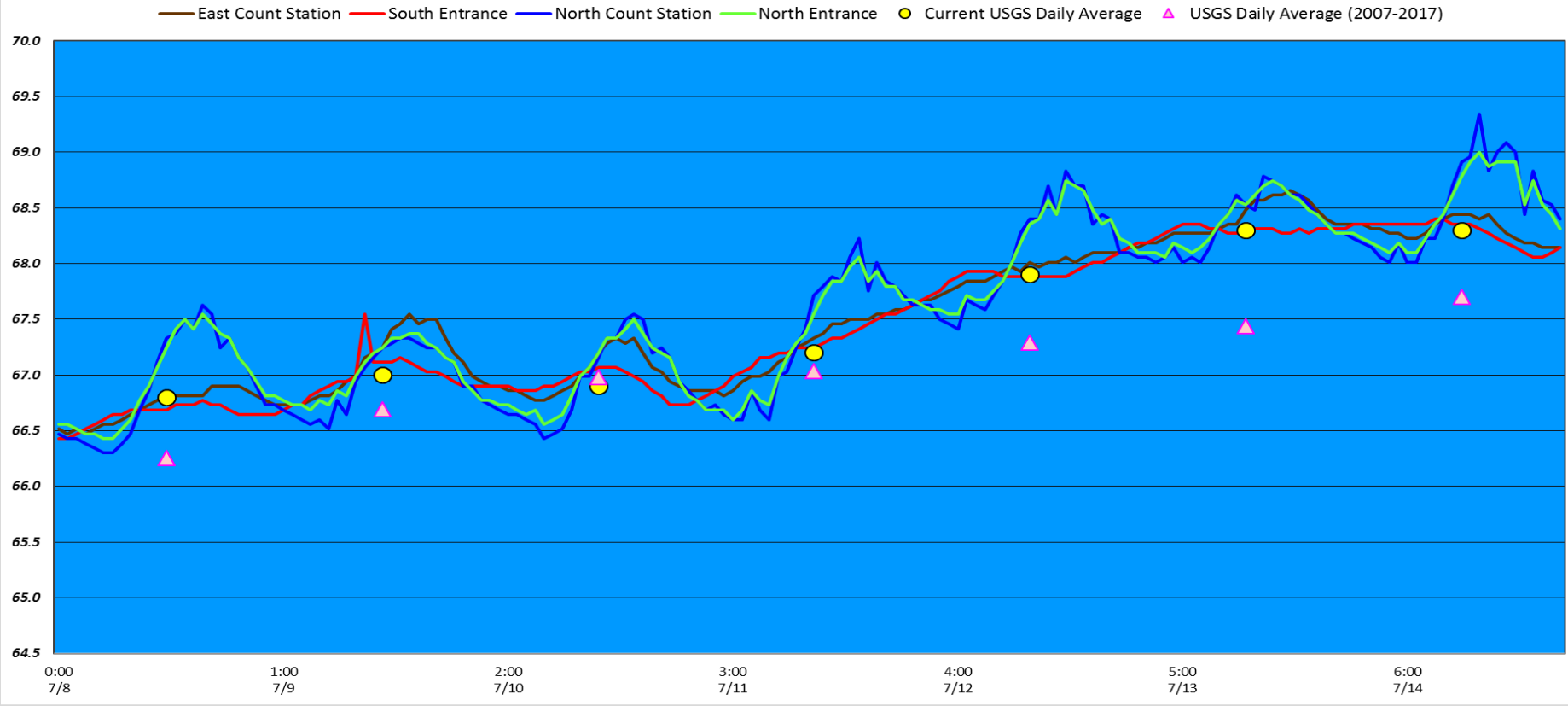
The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/8/18	631	575	56	195	91	104	0	0	0	1817	0	0	56
7/9/18	440	409	31	230	112	118	0	0	0	1013	0	0	66
7/10/18	496	450	46	271	157	114	0	0	0	1000	0	0	90
7/11/18	432	402	30	232	125	107	0	0	0	593	0	0	66
7/12/18	307	254	53	263	150	113	0	0	0	474	0	0	174
7/13/18	276	240	36	223	119	104	0	0	0	350	0	0	86
7/14/18	368	338	30	317	172	145	0	0	0	474	0	0	88
total	2950	2668	282	1731	926	805	0	0	0	5721	0	0	626

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
7/8/18	316	302	14	131	55	76	0	0	0	2161	0	0	67
7/9/18	248	236	12	114	58	56	0	0	0	1865	0	0	34
7/10/18	113	109	4	110	44	66	0	0	0	690	0	0	49
7/11/18	139	131	8	78	36	42	0	0	0	644	0	0	66
7/12/18	80	79	1	74	36	38	0	0	0	239	0	0	48
7/13/18	143	119	24	102	43	59	0	0	0	728	0	0	68
7/14/18	129	121	8	102	47	55	0	0	0	490	0	0	35
total	1168	1097	71	711	319	392	0	0	0	6817	0	0	367
% North	28.4	29.1	20.1	29.1	25.6	32.7	0.0	0.0	0.0	54.4	0.0	0.0	37.0

The Dalles Dam Adult Fish Ladder(s) River Temperatures



USGS:

[USGS river temp July](#)

Secchi:		Temperatures
7/8	4.5	Sun 66.8
7/9	5.0	Mon 67.0
7/10	5.0	Tue 66.9
7/11	5.0	Wed 67.2
7/12	5.0	Thurs 67.9
7/13	5.0	Fri 68.3
7/14	5.0	Sat 68.3
	4.9	AVG 67.5

Lamprey study= reduced velocity overnight

SCADA INSPECTION

= Out of criteria

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

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
7/8			1.4		13.0	13.0	10.7	1.6	8.3	8.3		1.5	8.1	8.1
	1.4	10.6	1.6		12.5	12.5	10.3	1.5	8.3	8.3		1.5	8.0	8.0
	1.4	10.5	1.6		12.5	12.5	10.4	1.5	8.4	8.4		1.5	8.0	8.0
7/9			1.5		13.0	13.0	11.4	1.5	8.9	8.9		1.6	7.9	7.9
	1.3	10.6	1.5		13.0	13.0	11.4	1.5	8.9	8.9		1.4	8.2	8.2
	1.3	10.6	1.5		13.0	13.0	10.3	1.4	8.5	8.5		1.3	8.2	8.2
7/10			1.6		10.0	10.0	9.5	1.4	8.4	8.4		1.4	8.3	8.3
	1.4	10.5	1.4		13.1	13.1	9.8	1.3	8.5	8.5		1.4	8.3	8.3
	1.4	10.6	1.7		13.0	13.0	11.0	1.5	8.5	8.5		1.4	8.2	8.1
7/11			1.6		12.5	12.5	11.5	1.6	8.4	8.4		1.5	8.4	8.4
	1.4	10.5	1.6		12.6	12.6	12.0	1.6	8.4	8.4		1.5	8.4	8.4
	1.5	10.6	1.6		12.6	12.6	12.9	1.5	8.4	8.4		1.4	8.5	8.5
7/12			1.5		12.5	12.5	11.8	1.5	8.5	8.5		1.4	8.5	8.5
	1.4	10.5	1.5		12.5	12.5	11.6	1.5	8.5	8.5		1.4	8.4	8.4
	1.6	10.8	1.5	12.6	12.6	12.8	1.5	8.5	8.5	1.4	8.6	8.6		
7/13			0.7	13.5	13.5	11.2	0.5	10.9	10.9	0.6	11.3	11.3		
	1.3	10.8	1.6	12.6	12.6	11.5	1.6	8.6	8.6	1.4	8.4	8.4		
	1.3	10.8	1.6	12.5	12.5	11.2	1.6	8.2	8.2	1.4	8.3	8.3		
7/14			1.4	12.9	13.0	11.4	1.5	8.3	8.3	1.4	8.3	8.3		
	1.4	10.8	1.5	12.9	13.1	11.6	1.5	8.3	8.3	1.4	8.4	8.4		
	1.5	10.8	1.6	12.9	13.0	12.3	1.6	8.3	8.3	1.5	8.2	8.2		
AVG:	1.4	10.6	1.5		12.65	12.67	11.3	1.5	8.6	8.6		1.4	8.4	8.4

Fishways are inspected twice daily plus one SCADA inspection.

Sockeye passage ytd

■ East Ladder ■ North Ladder

