

The Dalles Dam Fishway Status Report

8/4/2018

Inspection Period: 07/29/2018-8/04/2018

THE DALLES DAM



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

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21 conditions ok	Temperature: 72.2 °F	Secchi: 5.3 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')		10.7		
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 156 is not deploying properly causing low weir crest heights at W159 and W158.			
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'		1.4		
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')		13.1		
Entrance weir E3	0	depth (≥ 8')		13.1		
Collection channel velocity	0	1.5 - 4 fps	2.13 fps	Range: SS, 1.65 fps to FU 2, 2.53 fps		
Transportation channel velocity	0	1.5 - 4 fps	2.21 fps			
North channel velocity	0	1.5 - 4 fps	2.4 fps			
South channel velocity	0	1.5 - 4 fps	3.43fps			
West entrance differential	0	1.0' - 2.0'		1.4		
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'		1.3		
Entrance weir S1	0	depth (≥ 8')		8.6		
Entrance weir S2	0	depth (≥ 8')		8.6		
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	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 shore hazing continues, boat hazing finished. Lighter numbers of gulls and pelicans present and foraging. Juvenile gulls becoming the majority
USDA planning site visit 7/19 for installation of additional spillway avian lines
California Sea Lion hazed away from sluiceway discharge plume on 7/19 at 11am.

Fishway operations

North and east adult fishways in full operation
Night flow reduction at east fishway entrances for lamprey research continues. 15 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
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 8/30/19
MU15 OOS transformer replacement. RTS 10/01/2018
MU16 OOS transformer replacement. RTS 6/29/2019
MU19 OOS for overhaul. RTS 9/7/2018
MU20 OOS for annual. RTS 9/7/2018

Maintenance

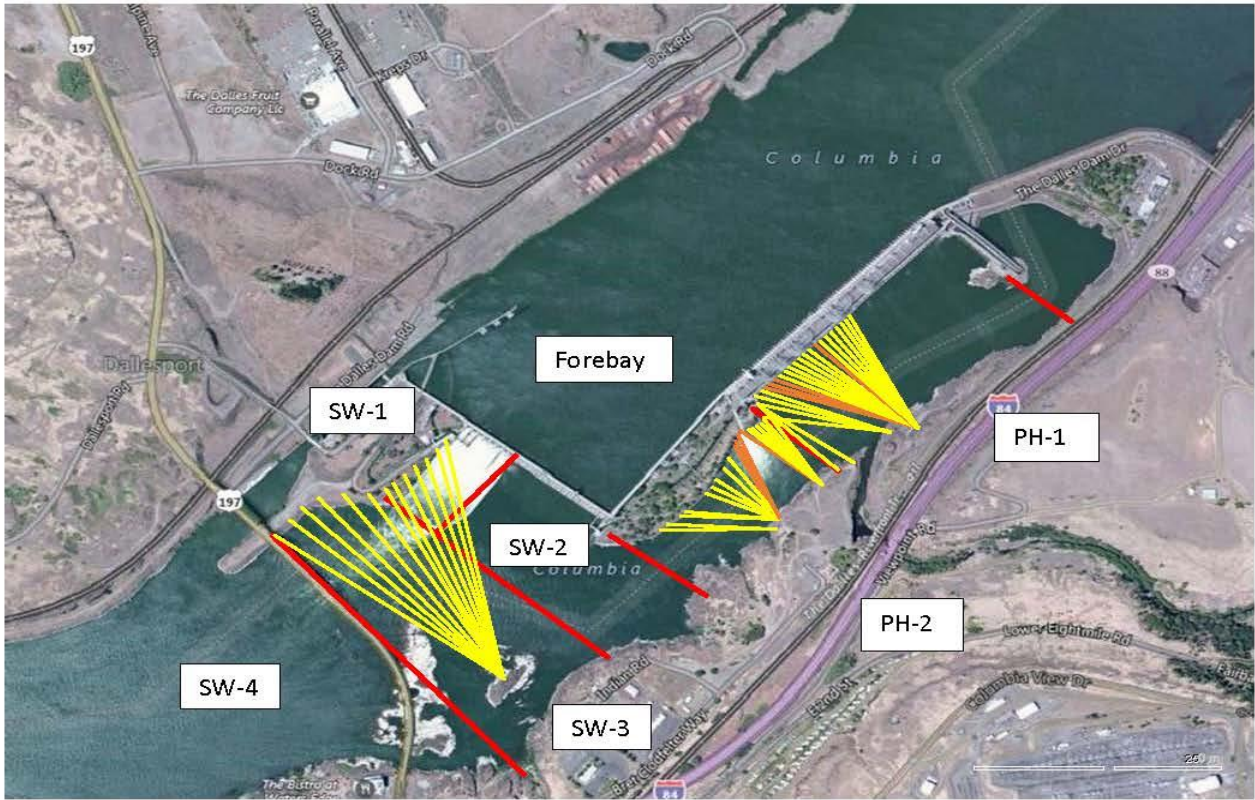
East count station brush out of service, TDE to repair. Hand brush in meantime
ROV inspected north ladder entrance grating on 7/30 during unplanned PUD outage, all grating found intact. East entrance grating scheduled ROV inspection 8/7
Rebuilding spare gearboxes for entrance and exit weirs.
East exit oil boom - Fabrication underway. Install Aug 7. Forebay level OK'd for 157.0' via RCC.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.
Wheel replacement on N1 spare weir completed.
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.
Diffuser valve rehab may be 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. Plan for comprehensive spillway assessment.

Research/Construction/Contractors:

Lower Columbia River Forebay Temperature Monitoring – Underway
AWS construction - Full flow test night of Aug 6. 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 31 7/23-7/29 58 caught, 1,511 YTD
Non native (bass and walleye) bycatch release by WDFW dam anglers. Remains FPOM agenda item for resolution.
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 for research on improved lamprey passage.
Lamprey trapping by tribes to continue at east count station within picket leads. 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. Exploring potential use of AWS backup 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		
7/29	CEA	AM	FB	0	3	3	96	0	0	0	0	0	0	0	0	102	GBHE sunny warm, breezy
			PH1	0	0	0	0	0	0	0	0	0	0	0	1	1	
			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	
			SW4	12	27	0	0	0	0	0	0	22	52	0	0	113	
7/30	JWR	PM	FB	0	35	30	37	0	0	0	0	0	0	0	0	102	
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2	
			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	
			SW4	10	41	1	8	0	0	0	0	11	8	0	0	79	
7/31	JWR	AM	FB	0	18	12	25	0	0	0	0	0	0	0	0	55	
			PH1	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	
			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	
			SW4	11	23	3	6	0	0	0	0	0	15	0	0	58	
8/1	JED	PM	FB	0	0	12	145	0	0	0	0	0	0	0	0	157	sunny, warm, breezy no pelicans at 1830
			PH1	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	
			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	
			SW4	13	50	0	0	0	0	0	0	0	0	0	0	63	
8/2	JWR	AM	FB	0	1	1	55	0	0	0	0	0	0	0	0	57	sunny, warm, breezy no pelicans at 1830
			PH1	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	
			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	
			SW4	13	0	0	0	0	0	0	0	1	0	0	0	14	
8/3	JED	PM	FB	0	0	2	47	0	0	0	0	0	0	0	0	49	Diving at north ladder exit. Diving south of MU 6 sunny, warm, breezy no pelicans at 1830
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	1	
			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	
			SW4	4	4	0	4	0	0	0	0	0	0	0	0	12	
8/4	JED	AM	FB	2	0	6	88	0	0	0	0	0	0	0	0	96	Calm, sunny, cool. 8 COME F
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2	
			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	
			SW4	18	70	0	0	0	0	0	0	0	0	0	0	88	

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

The Dalles East

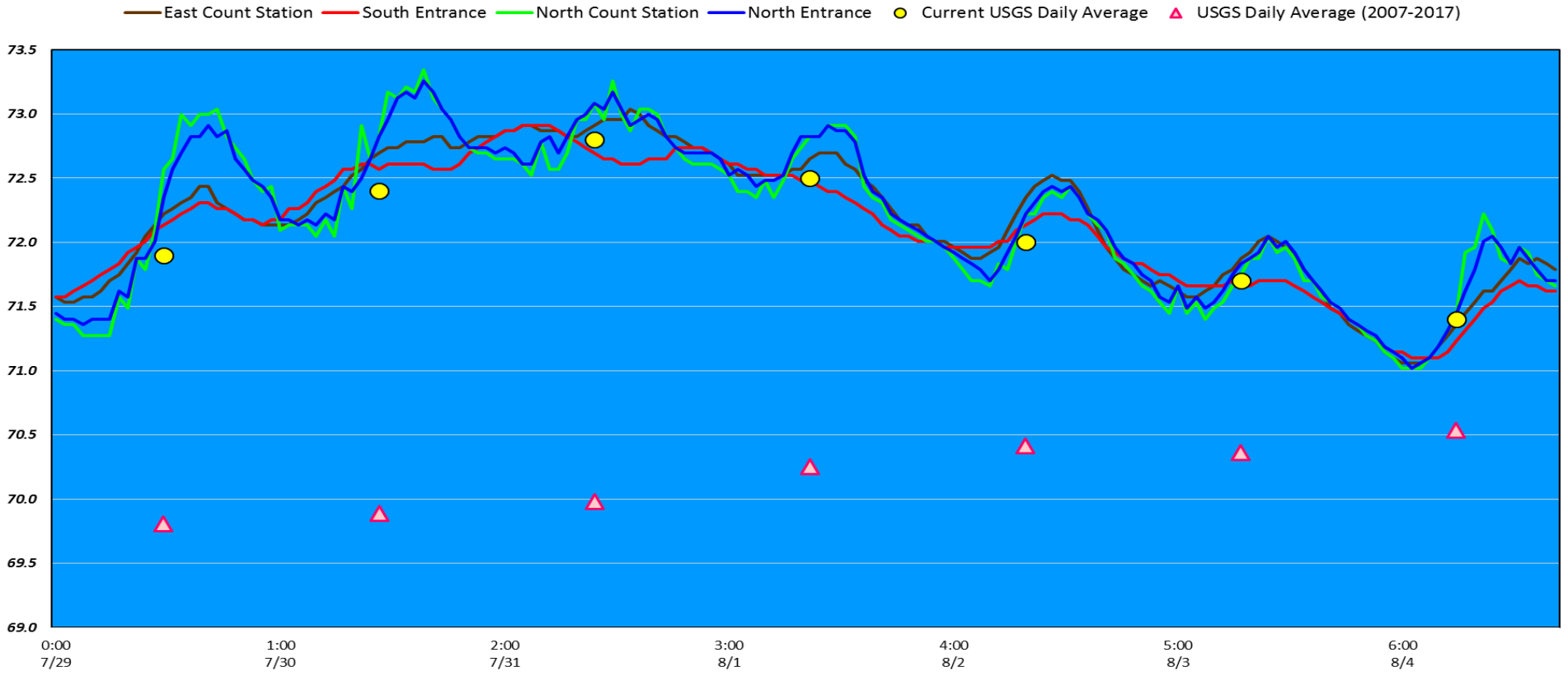
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/29/18	174	146	28	277	143	134	0	0	0	66	0	0	48
7/30/18	162	140	22	218	133	85	0	0	0	61	0	0	76
7/31/18	111	101	10	154	88	66	0	0	0	41	0	0	150
8/1/18	122	103	19	136	78	58	0	0	0	18	0	0	200
8/2/18	105	86	19	126	64	62	0	0	0	28	0	0	59
8/3/18	99	80	19	81	50	31	0	0	0	10	0	0	92
8/4/18	109	86	23	108	50	58	0	0	0	12	0	0	134
total	882	742	140	1100	606	494	0	0	0	236	0	0	759

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
7/29/18	41	41	0	144	64	80	0	0	0	25	0	0	12
7/30/18	43	41	2	102	50	52	0	0	0	28	0	0	12
7/31/18	58	48	10	70	44	26	0	0	0	20	0	0	38
8/1/18	52	47	5	61	36	25	0	0	0	19	0	0	25
8/2/18	55	42	13	68	34	34	0	0	0	16	0	0	24
8/3/18	46	36	10	61	29	32	0	0	0	10	0	0	16
8/4/18	57	53	4	71	34	37	0	0	0	13	0	0	28
total	352	308	44	577	291	286	0	0	0	131	0	0	155
% North	28.5	29.3	23.9	34.4	32.4	36.7	0.0	0.0	0.0	35.7	0.0	0.0	17.0

Fish Count

The Dalles Dam Adult Fish Ladder(s) River Temperatures



	Secchi:		USGS: Temperatures
7/29	6.0	Sun	71.9
7/30	5.0	Mon	72.4
7/31	5.0	Tue	72.8
8/1	5.0	Wed	72.5
8/2	5.0	Thurs	72.0
8/3	5.0	Fri	71.7
8/4	6.0	Sat	71.4
	5.3	AVG	72.1

[USGS river temp July](#) [USGS river temp August](#)

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
7/29			1.3		12.9	12.9	10.2	1.3	8.4	8.4		1.3	8.3	8.4
	1.3	10.9	1.3		13.0	13.0	10.1	1.4	8.3	8.3		1.5	8.1	8.2
	1.4	11.0	1.4		13.0	13.1	10.8	1.4	8.3	8.3		1.4	8.3	8.3
7/30			1.2		13.0	13.0	10.0	1.4	8.3	8.3		1.4	8.3	8.3
			1.4		13.0	13.0	10.0	1.4	8.2	8.2		1.5	8.2	8.2
	1.4	10.6	1.5		13.0	13.0	10.2	1.5	8.4	8.4		1.4	8.3	8.3
7/31			1.5		12.9	12.9	10.7	1.5	8.2	8.2		1.4	8.4	8.4
	1.4	10.6	1.0		13.0	13.0	10.7	1.4	8.6	8.6		1.5	8.3	8.3
	1.4	10.6	1.6		13.0	13.0	11.7	1.6	8.8	8.8		1.5	8.5	8.5
8/1			1.6		12.9	12.9	11.6	1.5	8.8	8.8		1.5	8.2	8.2
	1.2	10.8	1.6		13.0	13.0	12.2	1.5	8.8	8.8		1.4	8.4	8.4
	1.4	10.7	1.6		13.0	13.0	12.4	1.5	8.8	8.8		1.6	8.2	8.2
8/2			0.9	13.4	13.4	11.6	0.7	10.5	10.5	0.8	11.0	11.0		
	1.3	10.8	1.5	13.1	13.1	12.0	1.6	8.3	8.3	1.4	8.4	8.4		
	1.4	10.8	1.6	13.1	13.1	12.2	1.6	8.4	8.4	1.4	8.3	8.3		
8/3			0.8	13.5	13.5	11.5	0.5	10.6	10.6	0.6	11.6	11.6		
	1.3	10.8	1.5	13.0	13.0	11.0	1.4	8.2	8.2	1.3	8.3	8.3		
	1.4	10.7	1.5	13.1	13.1	11.3	1.3	8.3	8.3	1.4	8.3	8.3		
8/4			1.6	13.0	13.0	12.0	1.5	8.2	8.2	1.3	8.3	8.3		
	1.4	10.8	1.6	13.0	13.0	12.0	1.4	8.2	8.2	1.4	8.3	8.3		
	1.4	10.6	1.7	13.6	13.5	12.1	1.4	8.4	8.4	1.3	8.3	8.3		
AVG:	1.4	10.7	1.4	13.1	13.1	11.3	1.4	8.6	8.6	1.3	8.6	8.6		

Fishways are inspected twice daily plus one SCADA inspection.