

The Dalles Dam Fishway Status Report

8/12/2018

Inspection Period: 08/05/2018-8/11/2018

THE DALLES DAM



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:	21	Temperature:	72.2 °F
			Comments	conditions ok-Very warm, smokey		
			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'		1.3		
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 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')		12.7		
Entrance weir E3	0	depth (≥ 8')		12.7		
Collection channel velocity	0	1.5 - 4 fps	2.24 fps	Range: SS, 1.65fps to MU 4, 10, 2.77fps		
Transportation channel velocity	0	1.5 - 4 fps	2.26 fps			
North channel velocity	0	1.5 - 4 fps	2.0 fps			
South channel velocity	0	1.5 - 4 fps	3.47fps			
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'		1.4		
Entrance weir S1	0	depth (≥ 8')		8.5		
Entrance weir S2	0	depth (≥ 8')		8.5		
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				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds and Sea lions:

USDA avian hazing ended 7/31. Lower numbers of pelicans and an increase in gulls w/ Juvenile gulls becoming the majority
USDA installation of additional spillway avian lines in approval process. Target date 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. 16 of 19 test nights completed.
Sluiceway open with 6 sluiceway operation (1, 8 & 18)

Current Outages;

MU3 and MU4 OOS for annual. RTS 8/23/2018
MU5 forced OOS blade seals. RTS 1/21/2018
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 8/30/2019
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. Manually brush in meantime
Rebuilding spare gearboxes for entrance and exit weirs.
East exit oil boom Installed Aug 7.
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. Plan for comprehensive spillway assessment.

Research/Construction/Contractors:

Lower Columbia River Forebay Temperature Monitoring – Underway
AWS construction - Full flow test completed 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 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 - 1/15/19.
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

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				
8/12	JWR	AM	FB	0	0	4	81	0	0	0	0	0	0	0	0	0	85		
			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	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
SW4	67	35	6	0	0	0	0	0	0	0	0	0	0	0	108				
8/13	JWR	PM	FB	0	0	4	87	0	0	0	0	0	0	0	0	0	91		
			PH1	0	0	0	2	0	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	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	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	
SW4	8	26	0	3	0	0	0	0	0	0	0	0	0	0	37				
8/14	JWR	AM	FB	0	0	5	42	0	0	0	0	0	0	0	0	0	47		
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
			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	2	0	1	3	0	0	0	0	0	0	0	0	0	0	6	
SW4	44	18	0	6	0	0	0	0	0	0	0	0	0	0	68				
8/15	JED	PM	FB	0	1	4	70	0	0	1	0	0	0	4	0	80	CO at east exit 1 observed eating salmon yearling.		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	all east	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1800 hr Hot, calm, smoky	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	13	14	0	0	0	0	0	0	0	0	0	0	0	27	
			SW3	0	1	3	3	0	0	0	0	0	0	0	0	0	1	8	BLHE
SW4	30	15	0	0	0	0	0	0	0	0	0	0	0	0	45				
8/16	CEA	AM	FB	0	0	3	83	0	0	0	0	0	0	0	0	0	86		
			PH1	0	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	0	0	windy, smoky, warm
			SW1	0	0	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	0	0	3	
			SW3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
SW4	15	25	0	0	0	0	0	0	0	0	8	0	0	0	48				
8/17	JED	PM	FB	2	0	8	42	0	0	0	0	0	0	2	0	54	osprey, 2DCCO at east exit		
			PH1	0	0	2	3	0	0	0	0	0	0	0	0	0	5		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	2	2	0	0	0	0	0	0	0	0	0	4		
			SW3	0	0	0	0	0	0	0	0	0	0	0	4	10	14	13 COME, 1BLHE	
SW4	35	15	0	15	0	0	0	0	0	0	0	0	0	0	65				
8/18	JED	AM	FB	1	0	6	98	0	0	0	0	0	2	0	107				
			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	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW3	10	0	0	0	0	0	0	0	3	3	0	2	0	18	COME	
SW4	35	15	0	15	0	0	0	0	0	0	0	0	0	0	65				

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
8/12/18	139	107	32	134	84	50	0	0	0	4	0	0	55
8/13/18	209	184	25	83	42	41	1	1	0	4	0	0	28
8/14/18	234	203	31	71	46	25	0	0	0	1	0	0	30
8/15/18	251	229	22	81	47	34	0	0	0	2	0	0	7
8/16/18	205	174	31	50	31	19	1	1	0	1	0	0	40
8/17/18	333	299	34	39	22	17	5	4	1	4	0	0	34
8/18/18	458	414	44	119	77	42	20	18	2	5	0	0	17
total	1829	1610	219	577	349	228	27	24	3	21	0	0	211

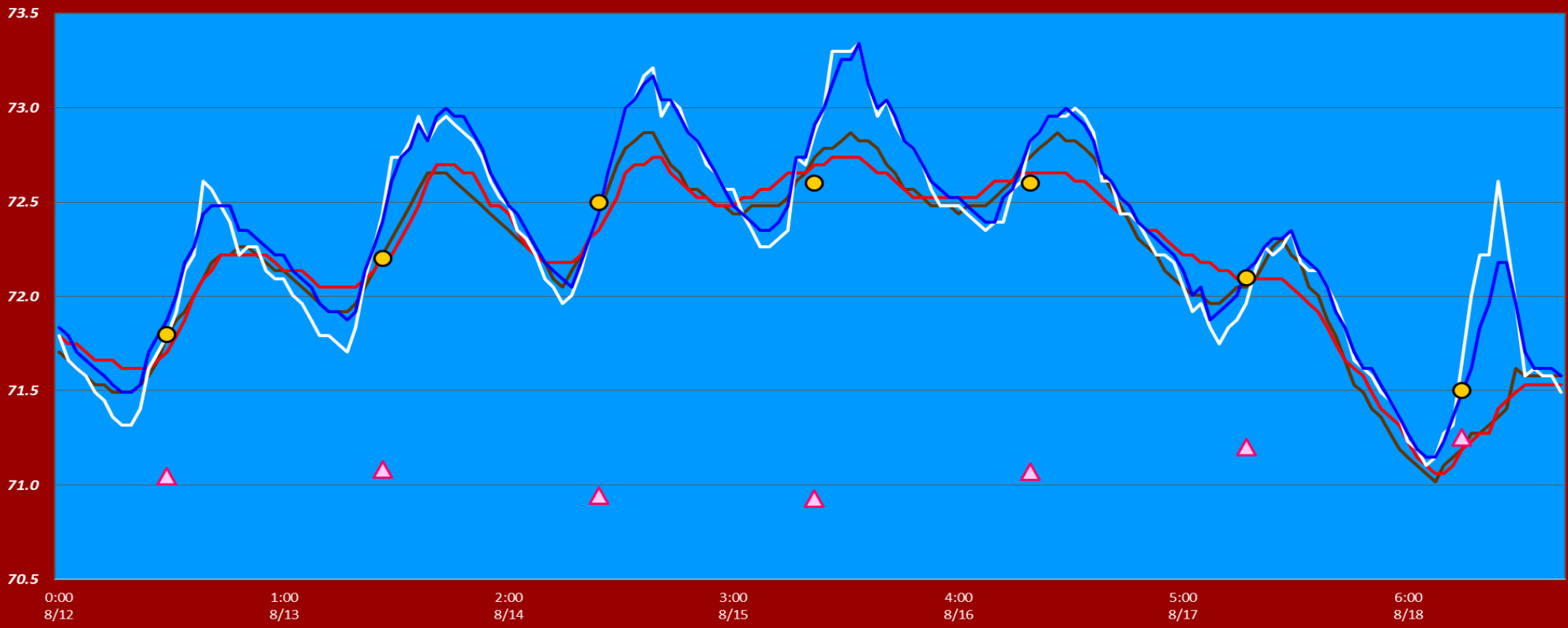
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/12/18	36	32	4	44	22	22	1	1	0	2	0	0	12
8/13/18	39	37	2	50	30	20	0	0	0	1	0	0	14
8/14/18	90	80	10	41	19	22	0	0	0	0	0	0	13
8/15/18	102	91	11	54	32	22	0	0	0	1	0	0	20
8/16/18	179	169	10	38	22	16	1	1	0	2	0	0	18
8/17/18	130	118	12	39	23	16	0	0	0	11	0	0	18
8/18/18	97	90	7	37	24	13	4	4	0	0	0	0	4
total	673	617	56	303	172	131	6	6	0	17	0	0	99
% North	26.9	27.7	20.4	34.4	33.0	36.5	0.0	0.0	0.0	44.7	0.0	0.0	31.9

Fish Count

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: [USGS river temp August](#)

	Secchi:		Temperatures
8/12	5.0	Sun	71.8
8/13	5.0	Mon	72.2
8/14	5.0	Tue	72.5
8/15	5.0	Wed	72.6
8/16	5.0	Thurs	72.6
8/17	6.0	Fri	72.1
8/18	6.0	Sat	71.5
	5.3	AVG	72.2

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
8/12			1.3		12.5	12.4	10.3	1.4	8.5	8.5		1.4	8.3	8.3
	1.3	10.7	1.6		12.5	12.5	10.4	1.5	8.5	8.5		1.4	8.3	8.3
	1.3	10.5	1.6		12.6	12.6	10.7	1.5	8.5	8.5		1.4	8.4	8.4
8/13			1.4		12.5	12.5	9.7	1.4	8.5	8.5		1.4	8.2	8.2
	1.3	10.7	1.4		12.5	12.5	9.6	1.3	8.5	8.5		1.3	8.4	8.4
	1.3	10.6	1.5		12.4	12.4	9.5	1.1	8.4	8.4		1.4	8.2	8.2
8/14			1.4		12.5	12.5	9.6	1.4	8.3	8.3		1.4	8.2	8.2
	1.3	10.9	1.5		12.5	12.5	9.7	1.4	8.4	8.4		1.3	8.3	8.3
	1.3	11.0	1.7		12.4	12.4	10.6	1.5	8.4	8.4		1.4	8.4	8.4
8/15			1.5		12.5	12.5	11.8	1.4	8.8	8.8		1.5	8.3	8.3
	1.3	10.8	1.5		12.5	12.5	11.8	1.5	8.8	8.8		1.5	8.2	8.2
	1.4	10.7	1.7		12.6	12.6	12.2	1.6	8.7	8.7		1.4	8.5	8.5
8/16			0.9	13.5	13.5	12.2	0.8	10.2	10.2	0.6	11.6	11.6		
	1.3	10.7	1.6	12.4	12.4	12.5	1.5	8.2	8.2	1.3	8.3	8.3		
	1.4	10.7	1.5	13.0	13.1	12.6	1.5	8.2	8.2	1.4	8.3	8.3		
8/17			1.5	13.0	13.0	12.1	1.4	8.6	8.6	1.5	8.3	8.3		
	1.4	10.7	1.5	13.0	13.0	12.3	1.4	8.7	8.7	1.5	8.3	8.3		
	1.4	10.8	1.4	13.1	13.1	12.4	1.5	8.7	8.7	1.5	8.3	8.3		
8/18			1.5	12.9	12.9	10.8	1.5	8.4	8.4	1.5	8.3	8.3		
	1.3	10.7	1.4	13.0	13.1	11.9	1.4	8.7	8.7	1.5	8.5	8.5		
	1.3	10.8	1.5	13.0	13.1	11.7	1.5	8.7	8.8	1.4	8.4	8.3		
AVG:	1.3	10.7	1.5	12.7	12.7	11.2	1.4	8.6	8.6	1.4	8.5	8.5		

Fishways are inspected twice daily plus one SCADA inspection.

MEDIAN USGS tailwater temperatures (June 1- Aug 20)

