

The Dalles Dam Fishway Status Report

6/30/2018

Inspection Period: 06/24/2018-06/30/2018

THE DALLES DAM



US Army Corps
of Engineers
Portland District

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:	20	Temperature:	65.3 °F
			Comments	conditions ok	Secchi:	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'		1.3		
Entrance weir N1	0	depth (≥ 8')		10.4		
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')		13.2		
Entrance weir E3	0	depth (≥ 8')		13.2		
Collection channel velocity	0	1.5 - 4 fps	2.16 fps	Range: Bay MU 20, 1.62 fps to SS/8, 2.46 fps		
Transportation channel velocity	0	1.5 - 4 fps	2.34 fps			
North channel velocity	0	1.5 - 4 fps	2.5 fps			
South channel velocity	0	1.5 - 4 fps	3.3 fps			
West entrance differential	0	1.0' - 2.0'		1.5		
Entrance weir W1	0	depth (≥ 8')		9.0		
Entrance weir W2	0	depth (≥ 8')		9.0		
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'		1.4		
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	6	per FPP	6/26 am, pm; 6/27 am, pm; 6/28 am, pm			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds and Sea lions:

USDA boat and shore hazing continues. Moderate gull numbers and intermittent flocks of pelicans.
No sea lion sightings this week.

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 2500cfs to 2000cfs. Seven 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 8/6/2018
MU16 forced OOS transformer replacement. RTS 6/29/2018,

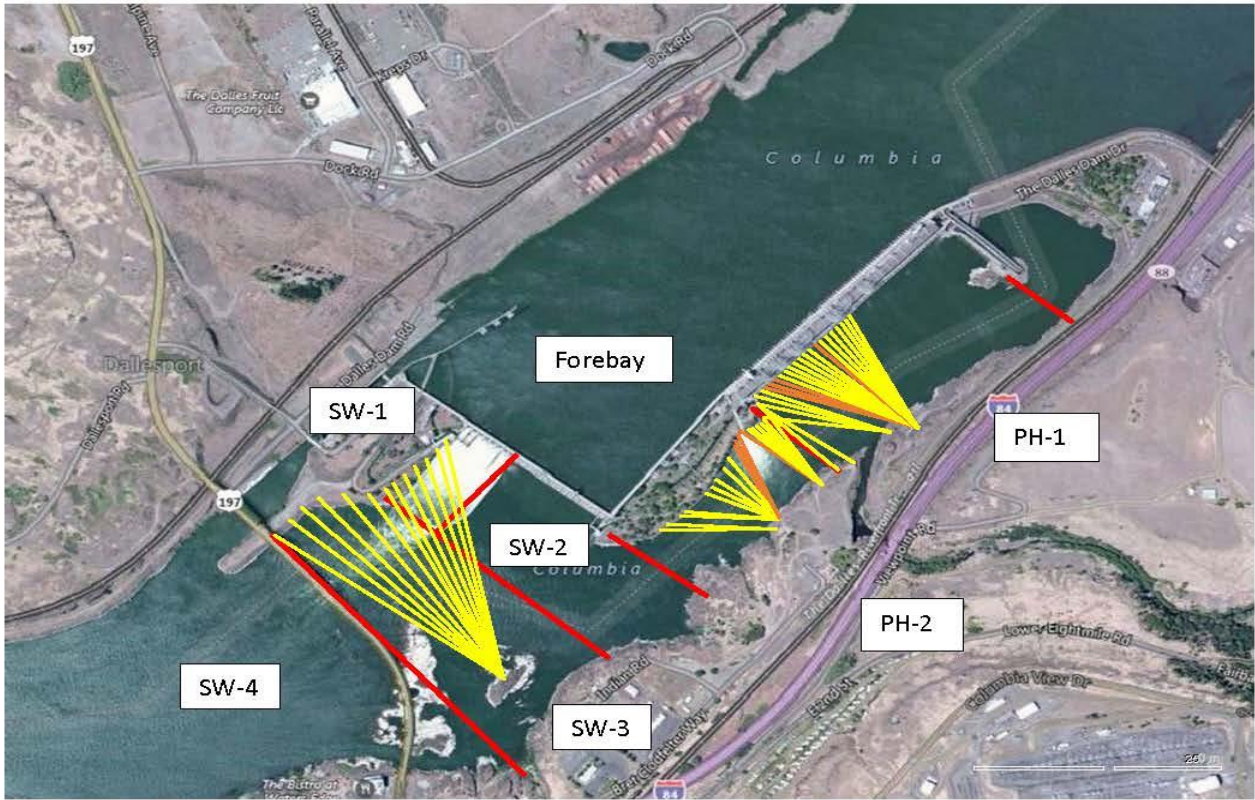
Maintenance

Rebuilding spare gearboxes for entrance and exit weirs.
East exit oil boom - Fab in July. Install Aug7. Low forebay requested.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement. Maintenance plan to cycle through 2 pumps per year.
Wheel replacement on N1 spare weir in progress.
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.
Planning start of 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 - Commissioning full flow test night of Aug6/7, FPOM approved.
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 released by WDFW continues. FPOM discussion ongoing.
ODFW resumed monthly fishway inspections. 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

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		
6/24	JED	PM	FB	0	0	2	71	0	0	0	0	0	0	1	0	74	osprey, 1530hrs
			PH1	0	0	2	7	0	0	0	0	0	0	0	0	9	
			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	1	0	1	0	0	0	0	0	0	0	0	0	2	
6/24	JED	PM	SW3	4	0	0	0	0	0	0	0	0	2	0	6	osprey, BLHE	
			SW4	6	0	0	0	0	0	0	1	35	0	0	42		
			FB	0	0	0	45	0	0	0	0	0	1	0	0		46
			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
6/25	JWR	AM	SW1	6	0	0	0	0	0	0	0	0	0	0	6		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	9	43	0	0	0	0	0	0	17	0	0	69		
			SW4	0	0	0	0	0	0	0	5	48	0	0	53		
			FB	0	0	2	39	0	0	0	0	0	0	0	0		41
6/26	JWR	PM	PH1	0	0	2	3	0	0	0	0	0	0	0	5		
			PH2	0	0	1	0	0	0	0	0	0	0	0	1		
			SW1	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		
			SW3	6	26	2	0	0	0	0	0	0	0	0	34		
6/26	JWR	PM	SW4	11	82	0	0	0	0	0	0	0	0	0	93		
			FB	0	0	0	18	0	0	0	0	0	0	0	18		
			PH1	0	0	0	0	0	0	0	0	4	0	0	4		
			PH2	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		
6/27	JWR	AM	SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	13	31	0	0	0	0	0	0	0	0	0	44		
			SW4	0	286	0	0	0	0	0	0	44	0	0	330		
			FB	1	0	1	46	0	0	0	0	0	0	0	0	48	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/28	JED	PM	PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	10	0	0	0	0	0	0	0	0	0	0	10		
			SW4	15	80	0	0	0	0	0	0	20	0	0	115		
6/29	JWR	AM	FB	0	2	0	87	0	0	0	0	0	0	0	89	gulls scavenging	
			PH1	0	0	0	2	0	0	0	0	0	0	0	2		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		
6/29	JWR	AM	SW3	28	26	0	0	0	0	0	15	17	0	0	86		
			SW4	34	56	0	0	0	0	0	40	80	0	0	210		
			FB	1	0	1	47	0	0	0	0	0	0	0	0	49	windy, partly cloudy
			PH1	1	0	3	0	0	0	0	0	1	0	0	0	5	
			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	2	0	1	0	0	0	0	0	0	0	1	4					
6/30	CEA	PM	SW3	27	0	0	0	0	0	0	2	0	0	29	OSPR		
			SW4	9	25	0	0	0	0	0	0	45	0	0		79	

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

The Dalles East

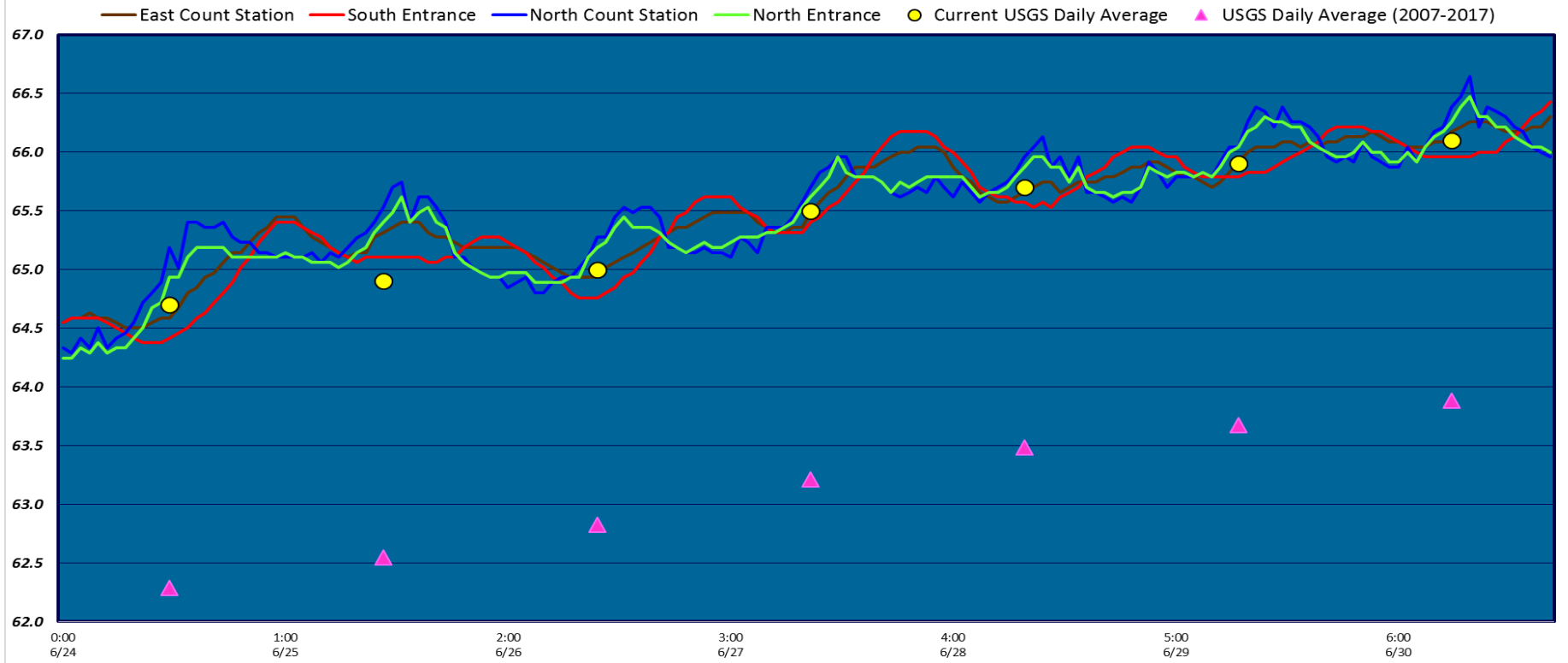
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/24	1358	1261	97	78	40	38	0	0	0	5330	0	0	140
6/25	1415	1308	107	77	49	28	0	0	0	7184	0	0	269
6/26	873	797	76	87	37	50	0	0	0	6809	0	0	190
6/27	1101	1007	94	97	42	55	0	0	0	7998	0	0	451
6/28	940	863	77	104	58	46	0	0	0	5492	0	0	283
6/29	807	691	116	108	71	37	0	0	0	5072	0	0	528
6/30	1047	967	80	174	73	101	0	0	0	5003	0	0	226
total	7541	6894	647	725	370	355	0	0	0	42888	0	0	2087

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
6/24	629	616	13	15	5	10	0	0	0	1649	0	0	31
6/25	626	604	22	35	16	19	0	0	0	2851	0	0	40
6/26	175	169	6	6	1	5	0	0	0	725	0	0	25
6/27	189	188	1	11	6	5	0	0	0	718	0	0	19
6/28	190	185	5	20	7	13	0	0	0	953	0	0	58
6/29	172	168	4	13	7	6	0	0	0	716	0	0	55
6/30	319	308	11	21	7	14	0	0	0	1981	0	0	112
total	2300	2238	62	121	49	72	0	0	0	9593	0	0	340
% North	23.4	24.5	8.7	14.3	11.7	16.9	0.0	0.0	0.0	18.3	0.0	0.0	14.0

[Fish Counts](#)

The Dalles Dam Adult Fish Ladder(s) River Temperatures



		USGS:	USGS river temp June
Secchi:		Temperatures	
6/24	4.5	Sun	64.7
6/25	5.0	Mon	64.9
6/26	5.0	Tue	65.0
6/27	5.0	Wed	65.5
6/28	5.0	Thurs	65.7
6/29	5.0	Fri	65.9
6/30	4.5	Sat	66.1
	4.9	AVG	65.4

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

Lamprey study= reduced velocity overnight
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
6/24			1.5		12.4	12.5	12.1	1.5	8.4	8.4		1.4	8.5	8.5
	1.3	10.0	1.5		12.5	12.6	12.0	1.5	8.5	8.5		1.4	8.4	8.4
	1.4	10.0	1.7		12.6	12.5	13.6	1.6	8.5	8.5		1.5	8.4	8.4
6/25			1.5		13.1	13.1	13.0	1.6	8.6	8.6		1.4	8.5	8.5
	1.3	10.9	1.4		12.9	12.9	12.8	1.5	8.5	8.5		1.5	8.4	8.4
	1.4	10.9	1.5		13.0	13.0	12.7	1.5	8.5	8.5		1.4	8.5	8.5
6/26			1.7		13.1	13.0	13.5	1.7	8.5	8.5		1.5	8.6	8.5
	1.6	10.9	1.6		13.4	13.4	14.1	1.7	9.0	9.0		1.5	8.5	8.5
	1.5	10.9	1.6		13.5	13.5	14.3	1.5	9.0	9.0		1.4	8.5	8.5
6/27			1.5		13.5	13.5	13.8	1.5	9.0	9.0		1.5	8.5	8.5
	1.3	10.9	1.4		13.4	13.4	14.5	1.6	8.9	8.9		1.5	8.4	8.4
	1.3	10.8	1.5		13.5	13.5	14.8	1.6	9.1	9.1		1.4	8.6	8.6
6/28			0.6		14.0	14.5	13.7	0.5	10.9	10.9		0.6	11.0	11.0
	1.3	10.9	1.6		13.4	13.4	13.6	1.5	9.2	9.2		1.4	8.6	8.6
	1.2	9.4	1.6		13.6	13.6	14.6	1.6	9.5	9.5		1.4	8.6	8.6
6/29			1.5	13.4	13.4	13.1	1.4	9.4	9.4	1.4	8.5	8.5		
	1.3	10.9	1.7	13.6	13.6	13.7	1.6	8.9	8.9	1.4	8.5	8.5		
	1.4	9.8	1.7	13.5	13.5	14.2	1.5	9.2	9.2	1.4	8.5	8.5		
6/30			1.0	13.5	13.5	11.3	1.2	9.1	9.1	1.3	8.4	8.4		
	1.3	9.7	1.4	12.7	12.7	12.2	1.5	8.8	8.8	1.4	8.6	8.6		
	1.2	9.7	1.4	12.9	12.9	12.8	1.5	8.8	8.8	1.4	8.5	8.5		
AVG:	1.3	10.4	1.5		13	13	13.4	1.5	9.0	9.0		1.4	8.6	8.6

Fishways are inspected twice daily plus one SCADA inspection.

Floating temperature profile strings in the BRZ-East Exit
Temperature profile data to be analyzed for thermal stratification.

