

The Dalles Dam Fishway Status Report

6/9/2018

Inspection Period: 06/03/2018-06/09/2018

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: 20		Temperature: 59.7 °F
			Comments	Tailwater levels normal	Secchi: 3.1 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')	10.2		
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	10	1.0' ± 0.1'	Weir 158 is currently at its lower limit. Maintenance adjusted limit.		
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'	1.4		
Entrance weir E1	0	No criteria			
Entrance weir E2	0	depth (≥ 8')	13.8		
Entrance weir E3	0	depth (≥ 8')	13.8		
Collection channel velocity	0	1.5 - 4 fps	2.13 fps	Range: Bay MU 13, 1.72 fps to MU 21/2, 2.53 fps	
Transportation channel velocity	0	1.5 - 4 fps	1.93 fps		
North channel velocity	0	1.5 - 4 fps	2.17 fps		
South channel velocity	0	1.5 - 4 fps	2.68 fps		
West entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir W1	0	depth (≥ 8')	10.2		
Entrance weir W2	0	depth (≥ 8')	10.2		
Entrance weir W3	0	No criteria			
South entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir S1	0	depth (≥ 8')	9.0		
Entrance weir S2	0	depth (≥ 8')	9.0		
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', wkly			
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. Last sea lion (an adult and juvenile) sighting May 28 near south fishway entrance.

Operations

Spillway open for juvenile fish passage. Refer to spill tab.

North and east adult fishways in full operation. East ladder adjusted to 1.3' for shad passage.

Night flow reduction at east fishway entrances for lamprey research started. June 4 and 5 completed. Fish unit flow reduced from 2500cfs to 2000cfs.

Sluiceway open with 6 sluiceway operation (1, 8 and 18)

Current Outages;

MU5 forced OOS for gov oil problem. RTS 6/21/2018

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 - new plan to connection to dam face with no anchor placement. Install planned Aug7. Low forebay requested.

Collection channel dewatering pumps 3 and 4 removed. Pump 4 requires pump/motor replacement. Plan to cycle through 2 pumps per year.

Wheels to be replaced on N1 spare weir, due to excessive wear. Closer guide inspection next winter.

Planning 154 -157 rehab/weir wheel replace next winter.

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 – Phase 1 on 5/22, Phase 2 boat work upcoming 6/19

AWS construction - Commissioning full flow test failure Aug7, 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 started first week of May. Fishing not good, 41 caught week of may 28. Total 261 caught YTD

Non native (bass and walleye) bycatch released by WDFW continues. COE request for lethal removal of these known invasive predators rejected by ODFW and WDFW.

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. Catch target 1056 lamprey per tribe.

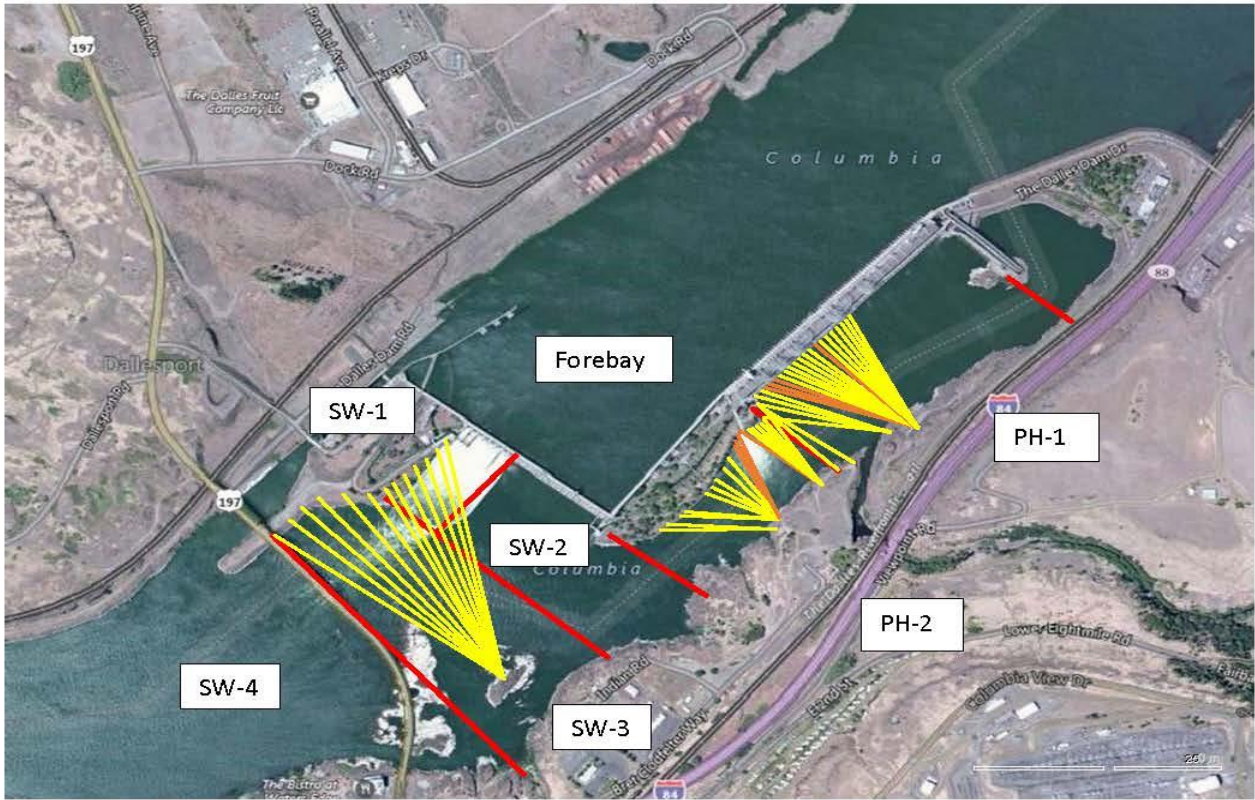
Fish unit breaker replace .- Prep work in progress. Installation delayed to next winter outage.

Fish unit rehab - Development plan continues. Alternatives reviewed. Likely selection of increased flow Kaplan units.

Transformer replacement - Install started with T8 (units 15 and 16).

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			
6/3	JED	AM	FB	0	3	0	49	0	0	0	0	0	0	0	0	0	52	osprey. All sightings in east, no bird lines areas. Gulls clearly avoiding avian lined area. sunny, calm and hot. Boat hazing occurring.
			PH1	6	0	4	4	0	0	0	0	0	0	0	1	15		
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	2		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	8	2	0	0	0	0	0	0	0	0	0	0	10		
			SW3	9	10	0	0	0	0	0	0	0	0	0	0	19		
6/4	JED	PM	FB	0	0	2	40	0	0	0	0	0	0	0	0	0	42	sunny, warm, moderate winds.
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	1		
			PH2	5	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		
			SW2	0	2	0	0	0	0	0	0	0	0	0	0	2		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0		
6/5	JWR	AM	FB	0	0	3	36	0	0	0	0	0	0	0	0	0	39	
			PH1	16	0	0	0	0	0	0	0	1	0	0	0	17		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0		
6/6	JED	PM	FB	0	6	9	41	0	0	4	0	0	0	0	0	0	60	all PH1a sunny warm, calm
			PH1	4	0	2	0	0	0	0	0	0	0	0	0	6		
			PH2	6	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		
			SW2	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW3	1	30	0	0	0	0	0	0	0	0	0	0	31		
6/7	JWR	AM	FB	0	0	44	0	0	0	0	0	1	0	0	0	45		
			PH1	24	0	0	0	0	0	0	0	0	0	0	0	24		
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	3		
			SW1	2	0	0	0	0	0	0	0	0	0	0	0	2		
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW3	19	25	0	0	0	0	0	0	0	0	0	0	44		
6/8	CEA	PM	FB	0	0	2	48	0	0	0	0	0	0	0	0	50	GBHE, all in PH1a partly cloudy, windy	
			PH1	2	0	0	0	0	0	0	0	0	0	0	1	3		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	3	0	0	0	0	0	0	0	0	0	0	0	3		
			SW3	9	0	0	0	0	0	0	0	0	0	0	0	9		
6/9	CEA	AM	FB	0	0	3	41	0	0	0	0	0	0	1	0	45	Osprey GBHE, all in PH1a partly cloudy, breezy	
			PH1	1	0	0	0	0	0	0	0	0	0	0	2	3		
			PH2	8	0	0	0	0	0	0	0	0	0	0	0	8		
			SW1	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	0	0	0	0	0	2	0	0	0	2		
			SW3	47	52	0	0	0	0	0	0	0	0	0	0	99		

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
6/3	1360	1322	38	4	2	2	0	0	0	28	0	0	8
6/4	848	798	50	2	1	1	0	0	0	67	0	0	2
6/5	1070	1024	46	2	0	2	0	0	0	72	0	0	0
6/6	1229	1169	60	5	4	1	0	0	0	217	0	0	4
6/7	926	860	66	11	7	4	0	0	0	294	0	0	8
6/8	838	779	59	6	0	6	0	0	0	319	0	0	11
6/9	1042	953	89	16	11	5	0	0	0	452	0	0	20
total	7313	6905	408	46	25	21	0	0	0	1449	0	0	53

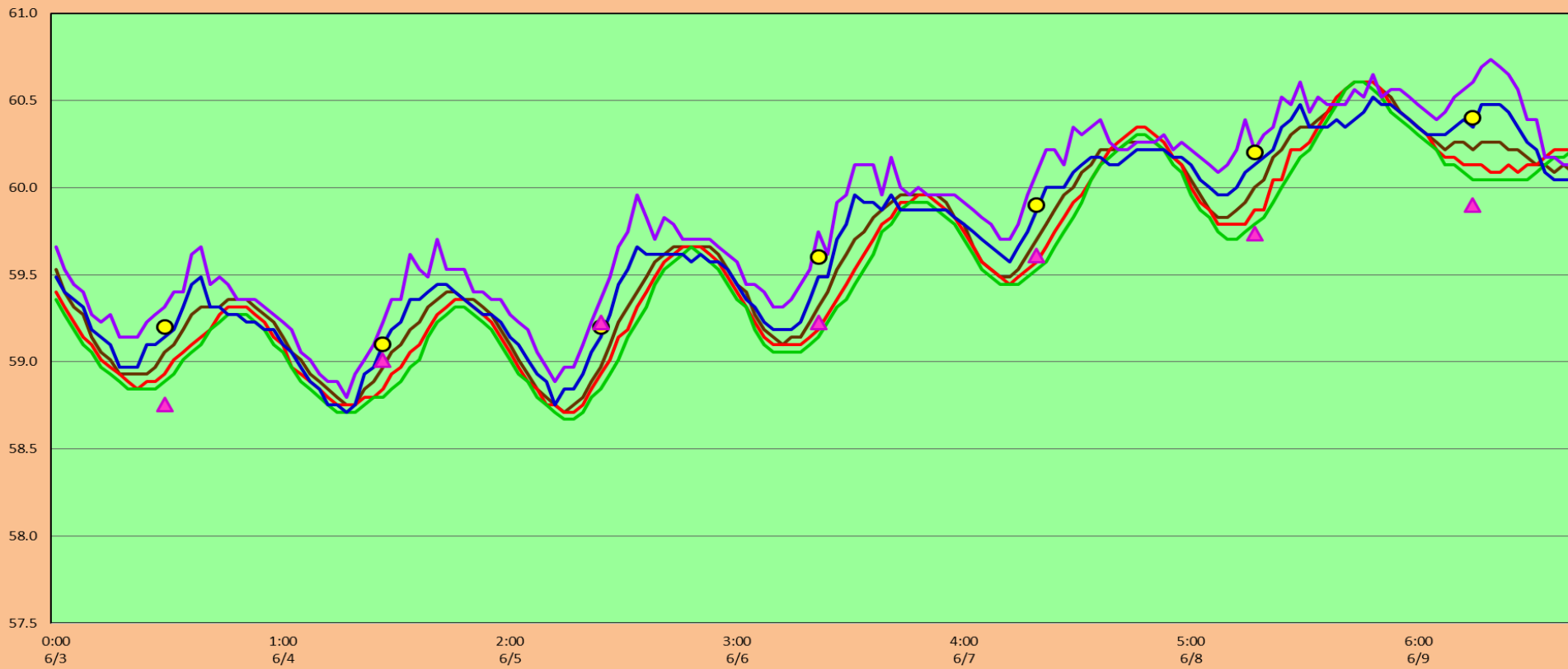
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/3	255	247	8	0	0	0	0	0	0	0	0	0	1
6/4	196	194	2	1	0	1	0	0	0	1	0	0	0
6/5	189	185	4	0	0	0	0	0	0	0	0	0	0
6/6	194	193	1	0	0	0	0	0	0	2	0	0	2
6/7	213	209	4	0	0	0	0	0	0	8	0	0	2
6/8	224	216	8	4	2	2	0	0	0	35	0	0	2
6/9	209	204	5	0	0	0	0	0	0	7	0	0	10
total	1480	1448	32	5	2	3	0	0	0	53	0	0	17
% North	16.8	17.3	7.3	9.8	7.4	12.5	0.0	0.0	0.0	0.0	0.0	0.0	24.3

FISH COUNT

The Dalles Dam Adult Fish Ladder(s) River Temperatures

— East Count Station — Junction Pool — South Entrance — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2017)



		USGS:	USGS river temp June
Secchi:		Temperatures	
6/3	3.0	Sun	59.2
6/4	3.0	Mon	59.1
6/5	3.0	Tue	59.2
6/6	3.0	Wed	59.6
6/7	3.0	Thurs	59.9
6/8	3.0	Fri	60.2
6/9	3.5	Sat	60.4
	3.1	AVG	59.7

Lamprey study= reduced velocity overnight

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

= 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
6/3	SCADA		1.5		13.9	13.9	17.7	1.5	9.8	9.8		1.6	8.7	8.7
	1.2	11.0	1.4		14.0	14.0	18.7	1.6	9.7	9.7		1.7	8.6	8.6
	1.2	11.0	1.4		14.1	14.1	18.6	1.5	9.9	9.9		1.6	8.7	8.5
6/4	SCADA		1.4		14.0	14.0	18.8	1.6	9.6	9.6		1.6	8.7	8.7
	1.2	10.8	1.6		13.1	13.1	18.9	1.7	9.8	9.8		1.6	9.0	9.0
	1.2	10.9	1.5		13.0	13.1	19.0	1.5	10.4	10.4		1.4	9.1	9.7
6/5	SCADA		0.6		14.5	14.5	17.3	0.4	13.9	13.9		0.6	12.9	12.9
	1.4	10.0	1.4		13.5	13.5	17.8	1.6	9.8	9.8		1.6	8.7	8.7
	1.4	10.1	1.6		13.5	13.6	17.6	1.6	9.9	9.9		1.5	8.8	8.8
6/6	SCADA		0.7		14.1	14.1	17.7	0.5	14.0	14.0		0.6	13.0	13.0
	1.5	10.0	1.5		14.1	14.1	17.9	1.6	9.8	9.8		1.6	8.5	8.5
	1.6	9.9	1.5		14.2	14.2	17.6	1.5	9.8	9.8		1.5	8.5	8.5
6/7	SCADA		1.5		13.9	13.9	16.9	1.4	9.7	9.7		1.6	8.5	8.5
	1.4	10.0	1.4		14.1	14.1	17.1	1.5	9.8	9.8		1.5	8.5	8.5
	1.4	9.9	1.5		14.0	14.0	16.8	1.5	9.7	9.7		1.6	8.5	8.5
6/8	SCADA		1.4	13.9	14.0	14.8	1.3	9.9	9.9	1.4	8.5	8.4		
	1.4	9.9	1.4	13.4	13.4	14.5	1.3	9.9	9.9	1.4	8.5	8.5		
	1.4	10.0	1.4	13.5	13.5	15.0	1.4	9.9	9.9	1.4	8.5	8.5		
6/9	SCADA		1.4	13.6	13.5	13.3	1.3	9.8	9.8	1.5	8.4	8.4		
	1.4	9.9	1.3	13.5	13.5	14.9	1.5	9.4	9.4	1.5	8.4	8.4		
	1.4	9.9	1.4	13.5	13.6	14.7	1.4	9.5	9.5	1.5	8.5	8.5		
AVG:	1.4	10.2	1.4	13.8	13.8	16.9	1.4	10.2	10.2	1.4	9.0	9.0		

Fishways are inspected twice daily plus one SCADA inspection.