

The Dalles Dam Fishway Status Report

5/20/2018

Inspection Period: 05/13/2018-05/19/2018

THE DALLES DAM



The Dalles Project-Fisheries
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:	21	Temperature:	54.5 °F
			Comments	Secchi: 3.0 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	156 breaker tripped 5/6, repaired			
Weir 158-159 differential	0	1.0' ± 0.1'	4 incidents below 0.9, 1 above 1.1			
Count station differential	0	≤ 0.3'				
153 Weir crest depth	0	1.1' ± 0.1'	exceeded 5/9 & 5/11, below 5/12; OOC incidents in overnight trend data; Range: 0.8-1.5			
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')	13.7			
Entrance weir E3	0	depth (≥ 8')	13.7			
Collection channel velocity	0	1.5 - 4 fps	1.82 fps	Range: Bay MU 16/SS, 1.34 fps to MU 22/18/7, 2.15 fps		
Transportation channel velocity	0	1.5 - 4 fps	NA due high tailwater			
North channel velocity	0	1.5 - 4 fps	1.98 fps			
South channel velocity	0	1.5 - 4 fps	NA due high tailwater			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	9.7			
Entrance weir W2	0	depth (≥ 8')	9.7			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.6	Lost automation due to high tailwater.		
Entrance weir S1	0	depth (≥ 8')	9.1			
Entrance weir S2	0	depth (≥ 8')	8.5	Raised to 6' to adjsut for percieved differential loss. Adjusted back.		
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', wkly	range: 0.1-0.8'			
Spill volume/pattern	0	None	Bays 1-8, + 12, 14-15, 17, 20-22 starting 5/7 Range: 45-64%			
Turbine Unit Priority	0	per FPP	5/7 am, 5/9 pm			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds and Sea lions:

Gulls foraging south fo spillwall and downstream of bridge.. USDA boat hazing in effect. USDA hazed sea lion from in east entrance.

Operations

Spillway open for fish passage. Tracking spill cap. Refer to spill tab.

North and east fishways in full operation.

Sluiceway open with 6 sluiceway operation

All east fishway entrances automation topped out due to extremely high tailwater. Manually measuring and adjusting as needed.

Current Outages;

MU10 OOS 0730 3/5/2018 - 1700 5/31/2018 for O/H

MU15 Forced OOS through 1700 8/6/2018 GSU transformer replacement

MU16 Forced OOS through 1700 6/29/2019 for GSU transformer, Exciter, Head Cover Upgrade & Strainer

Maintenance;

Rebuilding spare gearboxes for entrance and exit weirs.

East exit oil boom - new plan eliminating need for anchor placement. Will involve connection to new AWS peirnose. Install planned for Aug7.

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

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 outage.

Planning start of diffuser valve rehab next winter. Mutlibple 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. Charter in place for comprehensive spillway assessment.

Periodic assessment team evaluated spillway deficiencies and found trunnion pins highest on prioirity list.

Research/Construction/Contractors:

AWS construction - Commissioning full flow test failure in April. Reschedule test 5/31 for FPOM approval.

PSMFC weekly sampling completed for the North Wasco County PUD's. No concerns. Planning underway for new sample collection tank. Design in review.

PITAGS North and east fishladder data collection at count stations continues.

Fish Counters - Ongoing.

Pikeminnow dam angling starting first week in May. High walleye and bass by-catches 2017.

Non native bycatch released. Past research shows considerable potential salmon predation rates.COE plan to retain all by catch for diet analysis. FPOM review.

ODFW resumed monthly fishway inspections. No problems reported.

Lamprey minor mods - Rounded entrance weir caps installed south, west and north entrances. East weirs planned for next winter.

Lamprey trapping by tribes to continue at east count station within picket leads. Catch target 1056 lamprey per tribe.

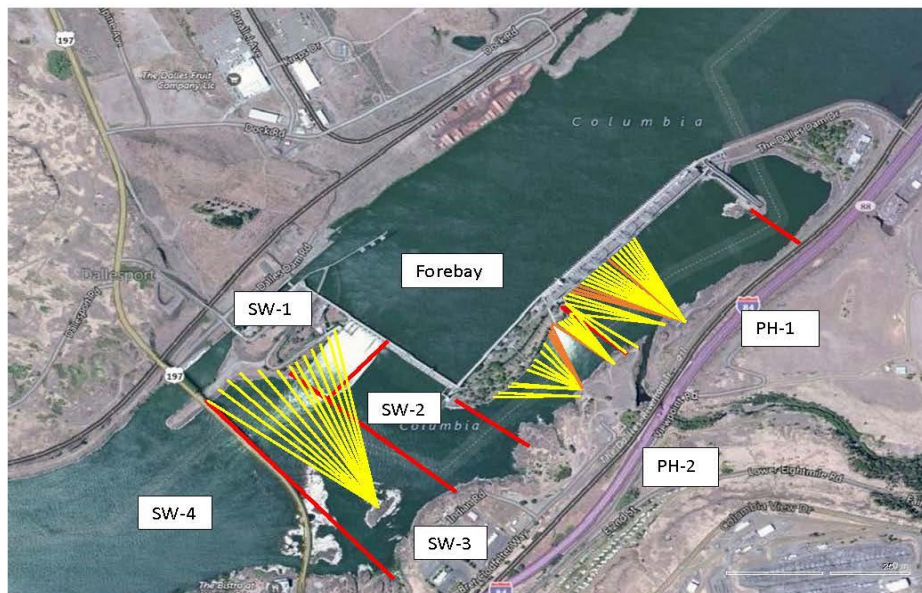
Fish unit breaker replace - Prep work in progress. Installation delayed to next winter outage.

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

Transformer replacement - Install start delayed. Date to be determined.

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				
5/13	CEA	PM	FB	0	0	2	40	0	0	0	0	0	0	0	0	0	42	Osprey, GBHE CSLion Calm, sunny	
			PH1	0	0	4	0	0	0	0	0	0	0	0	2	2	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	8	0	0	0	0	0	0	0	0	0	0	0	0	0		8
			SW3	15	40	0	0	0	0	0	0	0	0	0	0	0	0		55
5/14	BC	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	calm, sunny	
			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		0
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	0	0		1
			SW3	7	0	0	0	0	0	0	0	0	0	0	0	0	0		7
5/15	JWR	PM	FB	0	0	1	40	0	0	0	0	0	0	0	0	0	41	osprey	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	0	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	0		0
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	3	50	0	0	0	0	0	0	0	0	0	0	0	0		53
5/16	JED	AM	FB	0	1	0	1	0	0	0	0	0	0	0	0	0	2	osprey	
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	0	6		
			PH2	0	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	0		0
			SW2	10	0	1	0	0	0	0	0	0	0	0	0	0	0		11
			SW3	20	0	1	0	0	0	0	0	0	0	0	0	0	0		21
5/17	JED	PM	FB	0	1	1	47	0	0	0	0	0	0	0	0	0	49	sunny windy osprey	
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	0	6		
			PH2	5	0	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	0		0
			SW2	10	0	1	0	0	0	0	0	0	0	0	0	0	0		11
			SW3	20	0	1	0	0	0	0	0	0	0	0	0	0	0		21
5/18	JED	AM	FB	0	5	3	54	0	0	0	0	0	0	0	0	62	Overcast, calm cool.		
			PH1	5	0	2	6	0	0	0	0	0	0	0	0	0		13	
			PH2	6	0	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		0	0
			SW2	15	0	1	0	0	0	0	0	0	0	0	0	0		0	16
			SW3	25	12	0	0	0	0	0	0	0	0	0	0	0		0	37
5/19	JWR	PM	FB	0	5	3	54	0	0	0	3	0	0	0	0	65	osprey		
			PH1	1	0	4	0	0	0	0	0	0	0	0	0	0		5	
			PH2	13	0	0	0	0	0	0	0	0	0	0	0	0		13	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			SW2	64	0	0	0	0	0	0	0	0	0	0	0	0		0	64
			SW3	21	0	0	0	0	0	0	0	0	0	0	0	0		0	21
SW4	286	105	0	0	0	0	0	0	0	0	0	0	0	0	391				

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
5/13	1130	1012	118	2	2	0	0	0	0	0	0	0	0
5/14	1325	1229	96	0	0	0	0	0	0	0	0	0	0
5/15	1400	1290	110	5	1	4	0	0	0	0	0	0	0
5/16	1625	1441	184	0	0	0	0	0	0	0	0	0	0
5/17	1777	1531	246	2	0	2	0	0	0	0	0	0	0
5/18	2161	1878	283	0	0	0	0	0	0	0	0	0	0
5/19	1884	1630	254	1	0	1	0	0	0	0	0	0	0
total	11302	10011	1291	10	3	7	0	0	0	0	0	0	0

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
5/13	7	7	0	0	0	0	0	0	0	0	0	0	0
5/14	5	5	0	0	0	0	0	0	0	0	0	0	0
5/15	26	24	2	0	0	0	0	0	0	0	0	0	0
5/16	31	31	0	0	0	0	0	0	0	0	0	0	0
5/17	60	60	0	0	0	0	0	0	0	0	0	0	0
5/18	34	34	0	0	0	0	0	0	0	0	0	0	0
5/19	44	44	0	0	0	0	0	0	0	0	0	0	0
total	207	205	2	0	0	0	0	0	0	0	0	0	0
% North	1.8	2.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FISH COUNT



High spill turbulence continues at north entrance

USGS: USGS river temp May

	Secchi:		Temperatures
5/13	3.0	Sun	54.5
5/14	3.0	Mon	55.2
5/15	3.0	Tue	55.8
5/16	2.5	Wed	55.9
5/17	2.5	Thurs	56.0
5/18	2.5	Fri	56.2
5/19	2.5	Sat	56.4
	2.7	AVG	55.7

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
5/13	SCADA		1.5		12.4	12.5	22.0	1.7	9.4	9.4			8.0	6.1
	1.4	10.9	1.4		12.5	12.4	22.1	1.6	9.4	9.4		8.0	6.1	
	1.4	10.1	1.7		14.4	14.4	21.7	1.7	10.1	10.1		8.0	6.1	
5/14	SCADA		1.8		14.0	14.0	20.5	1.5	10.1	10.1		8.2	6.2	
	1.3	11.0	1.7		14.0	13.9	20.6	1.6	9.9	10.1		7.9	5.9	
	1.4	11.0	1.7		14.0	14.0	21.3	1.6	10.0	10.0		11.5	11.5	
5/15	SCADA		1.3		14.3	14.3	21.7	1.6	9.9	9.9		1.7	8.9	8.9
	1.3	8.9	1.6		13.2	13.2	20.7	1.6	9.9	9.9		1.7	8.9	8.9
	1.4	10.9	1.5		14.1	14.1	22.1	1.6	10.2	10.2		1.6	9.1	9.1
5/16	SCADA		1.1		14.0	14.1	22.5	1.3	10.0	10.0			8.3	8.3
	1.3	11.0	1.5		13.7	13.7	22.2	1.7	9.4	9.4		1.6	9.5	9.5
	1.3	10.9	1.4		13.7	13.7	22.4	1.4	9.7	9.7		1.3	10.1	10.1
5/17	SCADA		1.4		14.1	14.1	22.4	1.4	9.5	9.5		1.4	9.6	9.6
	1.3	11.1	1.4		13.7	13.7	22.3	1.4	9.3	9.3		1.5	9.6	9.6
	1.3	10.9	1.4		13.8	13.8	22.4	1.2	9.7	9.7		1.5	9.4	9.4
5/18	SCADA													
	1.3	10.1	1.4	13.6	13.7	22.5	1.4	9.4	9.3	1.6	9.7	9.7		
	1.2	11.2	1.3	13.6	13.6	22.2	1.4	9.6	9.6	1.7	9.4	9.4		
5/19	SCADA													
	1.3	11.0	1.3	14.0	14.0	22.2	1.6	9.7	9.7	1.7	8.9	8.9		
	1.3	11.0	1.3	13.9	14.0	22.2	1.7	9.7	9.7	1.6	9.1	9.1		
AVG:	1.3	10.7	1.5		13.7	13.7	21.9	1.5	9.7	9.7		1.6	9.1	8.5

Fishways are inspected twice daily plus one SCADA inspection.