

The Dalles Dam Fishway Status Report

5/27/2018

Inspection Period: 05/20/2018-05/26/2018

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:		Temperature:	
			Comments	HIGH TAILWATER	°F	Secchi: 2.5 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')	10.8			
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	1.1' ± 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')	13.7			
Entrance weir E3	0	depth (≥ 8')	13.7			
Collection channel velocity	0	1.5 - 4 fps	1.92 fps	Range: Bay MU 12, 1.59 fps to MU 20/14/3, 2.15 fps		
Transportation channel velocity	0	1.5 - 4 fps	2.27fps			
North channel velocity	0	1.5 - 4 fps	1.58 fps			
South channel velocity	0	1.5 - 4 fps	2.25fps			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	9.6			
Entrance weir W2	0	depth (≥ 8')	9.6			
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')	9.3			
Entrance weir S2	0	depth (≥ 8')	9.3			
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	5/23-24 forced out due to maintenance.			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds and Sea lions:

Large numbers of gulls foraging south of spillwall and downstream of bridge. USDA boat and shore hazing in effect.
5/26 USDA hazed sea lion from in west entrance. Adult seen in same area feeding on shad.

Operations

Spillway open for fish passage. Tracking spill cap. Refer to spill tab.
North and east fishways in full operation. East ladder adjusted to 1.3' for shad passage.
Sluiceway open with 6 sluiceway operation
All east fishway entrances automation topped out several days 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

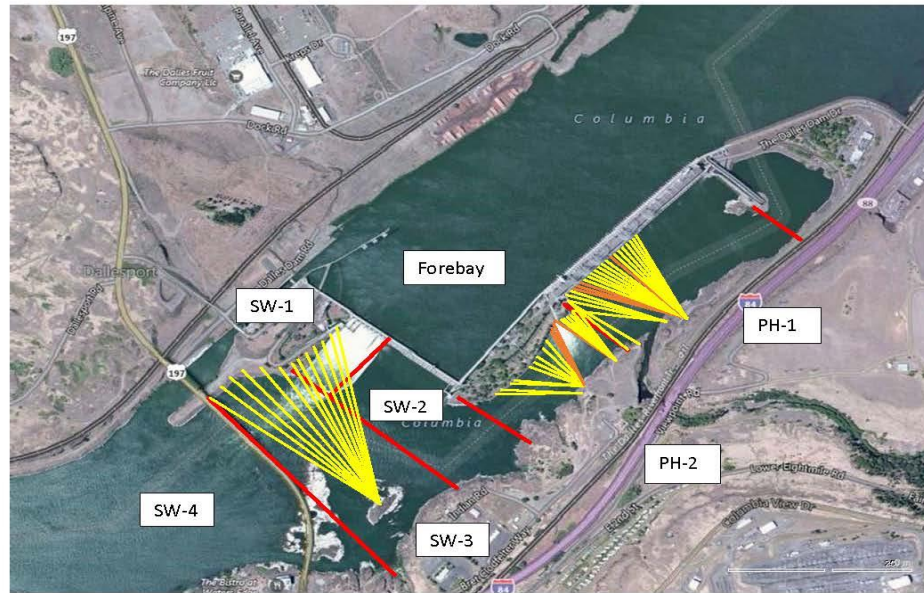
Maintenance

Requesting modification of incremental rate of change for weir 159 automation due to abnormally rapid forebay changes
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. 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. Charter in place for comprehensive spillway assessment.
Periodic assessment team evaluated spillway deficiencies and found trunnion pins highest on priority list.

Research/Construction/Contractors:

Tina Lundell and crew completed installation of forebay temperature strings for the "Lower Columbia River Forebay Temperature Monitoring – Phase 1 on 5/22
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. 83 caught YTD
Non native bycatch released by WDFW crew. COE looking into retaining 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

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		
5/20	JWR	AM	FB	0	2	3	55	0	0	0	3	0	0	2	0	65	osprey
			PH1	16	0	2	0	0	0	0	0	0	0	0	0	18	
			PH2	24	0	1	0	0	0	0	0	0	0	0	0	25	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	81	0	1	0	0	0	0	0	0	0	0	0	82	
			SW3	75	0	0	0	0	0	0	0	0	0	0	0	75	
5/21	JWR	PM	FB	0	0	7	26	0	0	0	1	0	0	0	0	34	GBHE, Osprey
			PH1	0	0	0	0	0	0	0	0	0	0	0	2	2	
			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	8	0	0	0	0	0	0	0	0	0	0	0	8	
			SW3	7	0	0	0	0	0	0	0	0	0	0	0	7	
5/22	CEA	AM	FB	0	0	5	38	0	0	3	0	0	0	0	0	46	calm, sunny
			PH1	18	0	5	7	0	0	0	0	0	0	0	0	30	
			PH2	7	0	0	0	0	0	0	0	0	0	0	0	7	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	17	0	0	0	0	0	0	0	0	0	0	0	17	
			SW3	6	3	0	0	0	0	0	0	0	0	0	0	9	
5/23	JED	PM	FB	0	0	0	45	0	0	0	0	0	0	0	0	45	All in east half, sunny warm, calm
			PH1	0	0	6	11	0	0	0	0	0	0	0	0	17	
			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	28	15	1	0	0	0	0	0	0	0	0	0	44	
			SW3	8	12	1	0	0	0	0	0	0	0	0	0	21	
5/24	CEA	AM	FB	0	0	5	39	0	0	1	0	0	0	0	0	45	GBHE, all in PHa windy, sunny
			PH1	1	0	4	13	0	0	0	0	0	0	0	1	19	
			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	19	0	0	0	0	0	0	0	0	0	0	0	19	
			SW3	34	3	0	0	0	0	0	0	0	0	0	0	37	
5/25	CEA	PM	FB	0	0	1	59	0	0	0	0	0	0	0	0	60	GBHE, osprey (PH1a) recent hazing windy, rainy
			PH1	0	0	0	0	0	0	0	0	0	0	0	2	2	
			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	8	0	0	0	0	0	0	0	0	0	0	0	8	
			SW3	3	10	0	0	0	0	0	0	0	0	0	0	13	
5/26	JED	AM	FB	0	0	1	44	0	0	0	0	0	0	0	0	45	All in east half, high wind, sunny, warm. recent hazing recent hazing
			PH1	0	1	8	12	0	0	0	0	0	0	0	0	21	
			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	40	0	0	0	0	0	0	0	0	0	0	0	40	
			SW3	25	0	0	0	0	0	0	0	0	0	0	0	25	

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
5/20	1529	1264	265	1	0	1	0	0	0	0	0	0	0
5/21	1432	1228	204	1	1	0	0	0	0	0	0	0	0
5/22	1899	1619	280	1	1	0	0	0	0	0	0	0	0
5/23	1975	1766	209	1	1	0	0	0	0	0	0	0	0
5/24	2929	2610	319	2	0	2	0	0	0	0	0	0	0
5/25	3628	3416	212	0	0	0	0	0	0	0	0	0	0
5/26	2305	2160	145	0	0	0	0	0	0	0	0	0	0
total	15697	14063	1634	6	3	3	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
5/20	53	53	0	0	0	0	0	0	0	0	0	0	0
5/21	58	58	0	0	0	0	0	0	0	0	0	0	0
5/22	109	109	0	0	0	0	0	0	0	0	0	0	0
5/23	72	72	0	0	0	0	0	0	0	0	0	0	0
5/24	76	76	0	0	0	0	0	0	0	0	0	0	1
5/25	102	102	0	0	0	0	0	0	0	0	0	0	0
5/26	79	79	0	0	0	0	0	0	0	0	0	0	0
total	549	549	0	0	0	0	0	0	0	0	0	0	1
% North	3.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

FISH COUNT

USGS: USGS river temp May

	Secchi:		Temperatures
5/20	2.0	Sun	56.5
5/21	2.5	Mon	56.6
5/22	2.5	Tue	56.9
5/23	2.5	Wed	57.5
5/24	2.5	Thurs	58.1
5/25	3.0	Fri	58.1
5/26	2.5	Sat	58.0
	2.5	AVG	57.4

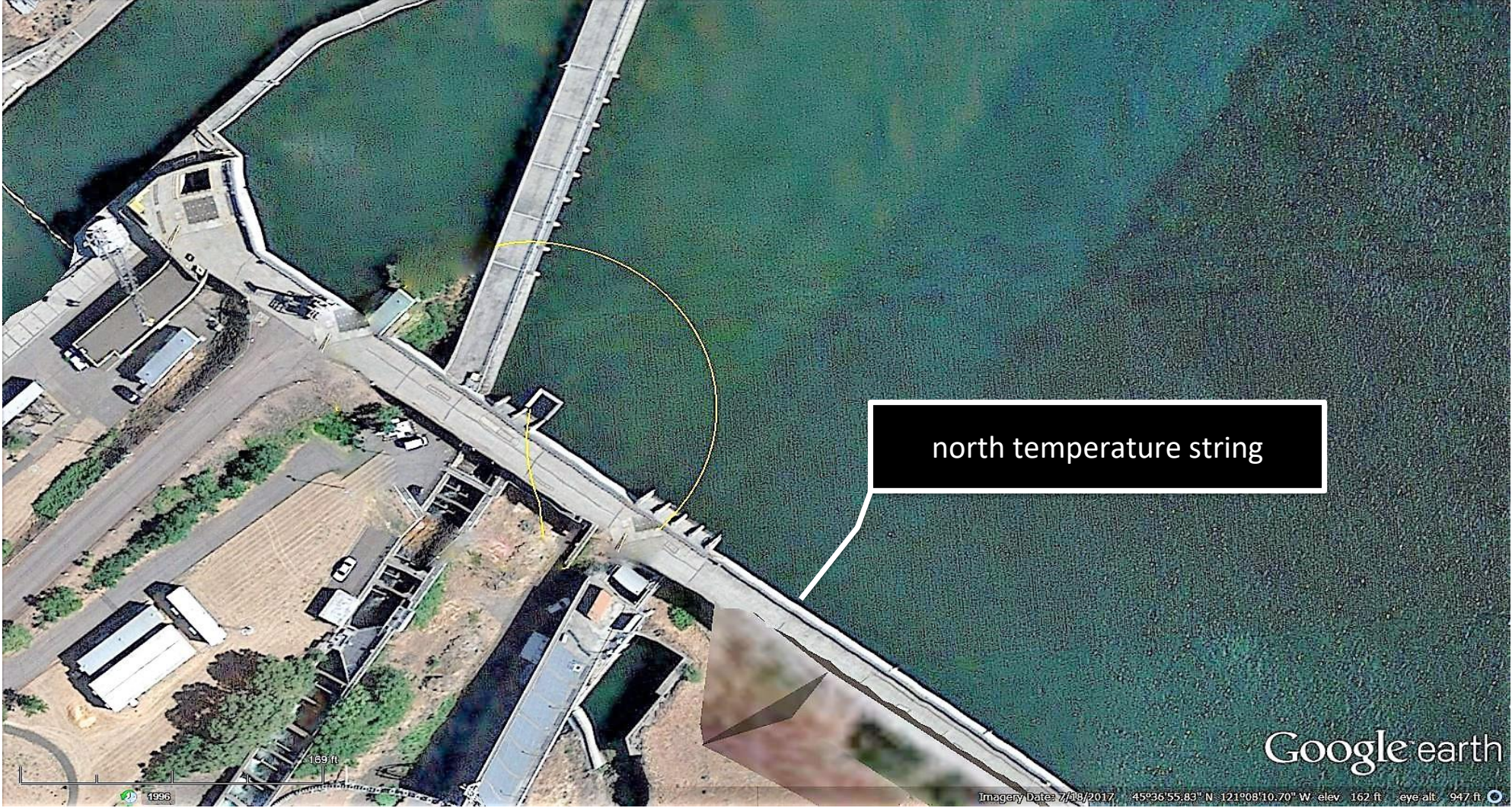
High water=no scada readings

**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	
5/20	SCADA														
	1.3	10.9	1.4		13.6	13.5	22.4	1.5	9.4	9.4	1.5	9.6	9.6		
	1.3	10.9	1.2		13.7	13.6	22.5	1.4	9.5	9.5	1.5	9.6	9.6		
5/21	SCADA														
	1.4	10.9	1.5		13.3	13.3	22.0	1.4	9.4	9.4	1.5	9.5	9.5		
	1.4	10.9	1.4		13.6	13.6	22.4	1.5	9.5	9.5	1.5	9.5	9.5		
5/22	SCADA														
	1.3	10.7	1.2		13.8	13.9	22.6		9.7	9.6	1.6	9.5	9.5		
	1.5	10.9	1.4		13.8	13.9	22.8	1.5	9.6	9.6	1.6	9.6	9.6		
5/23	SCADA														
	1.3	11.0	1.5		13.1	13.1	21.6	1.2	9.9	9.9	1.6	9.0	9.0		
	1.7	9.1	1.4		13.5	13.5	21.6	1.3	9.6	9.6	1.6	9.0	9.0		
5/24	SCADA				1.3	14.1	14.1	22.2	1.5	9.4	9.4				
	1.4	11.1	1.5		13.8	13.6	21.8	1.4	9.7	9.6	1.6	9.2	9.2		
	1.4	10.9	1.5		13.8	13.7	21.6	1.5	9.6	9.6	1.5	9.1	9.1		
5/25	SCADA			1.3	14.1	14.1	21.8	1.4	9.6	9.6					
	1.3	10.9	1.5	13.6	13.6	21.3	1.5	9.5	9.5	1.6	8.7	8.7			
	1.3	10.9	1.4	13.7	13.7	21.8	1.4	9.5	9.5	1.6	9.0	9.0			
5/26	SCADA														
	1.3	10.9	1.8	13.9	13.9	21.1	1.5	9.8	9.9	1.6	9.6	9.6			
	1.2	11.1	1.4	14.3	14.2	22.3	1.3	10.1	10.1	1.5	9.5	9.5			
AVG:	1.4	10.8	1.4		13.7	13.7	22.0	1.4	9.6	9.6	1.6	9.3	9.3		

Fishways are inspected twice daily plus one SCADA inspection.



north temperature string

Google earth



The Dalles Dam April 2013 Bathymetry East Fish Ladder

