

The Dalles Dam Fishway Status Report

12/24/2017

Inspection Period: 12/17/2017-12/23/2017

THE DALLES DAM



The Dalles Project-Fisheries
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 The Dalles, OR 97058-9998
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	6	Temperature: Secchi:	43.5 °F 5.0 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')	9.0			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY Out of service Dec1						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Gearbox rehab start on 155 and 156			
Weir 158-159 differential	0	1.0' ± 0.1'	Gearbox rehab start on 158			
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	0.0				
East entrance differential	0	1.0' - 2.0'				
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')				
Entrance weir E3	0	depth (≥ 8')				
Collection channel velocity	0	1.5 - 4 fps				
Transportation channel velocity	0	1.5 - 4 fps				
North channel velocity	0	1.5 - 4 fps				
South channel velocity	0	1.5 - 4 fps				
West entrance differential	0	1.0' - 2.0'				
Entrance weir W1	0	depth (≥ 8')	Weir removed for caps and rehab			
Entrance weir W2	0	depth (≥ 8')	Weir removed for caps and rehab			
Entrance weir W3	0	No criteria	Weir removed for caps and rehab			
South entrance differential	0	1.0' - 2.0'				
Entrance weir S1	0	depth (≥ 8')				
Entrance weir S2	0	depth (≥ 8')				
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'			
Spill volume/pattern	0					Spillway closed midnight Aug31
Turbine Unit Priority	0	per FPP	MU 13-16 oos 13 RTS 12/20			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

Sea Lion seen in culdesac eating salmonid. Gulls, mergansers, and cormorants numbers decreasing, several more eagles observed in westrick park. Investigating increasing boat hazing option for next season.

Operations

North fishway in full operation.
Sluiceway endgate closed Dec18. Sluiceways open at unit 1 and 18 to equalize with forebay.

Current Outages;

T8 (MU15 & MU16) out for transformer failure. Transformer replacement 7/5/18.
MU17 out for overhaul. Returned 3/8/18.
Fish unit 1 and 2 off 0001 Dec 1 for annual fishway outage. East fishladder dewatered Dec 1.

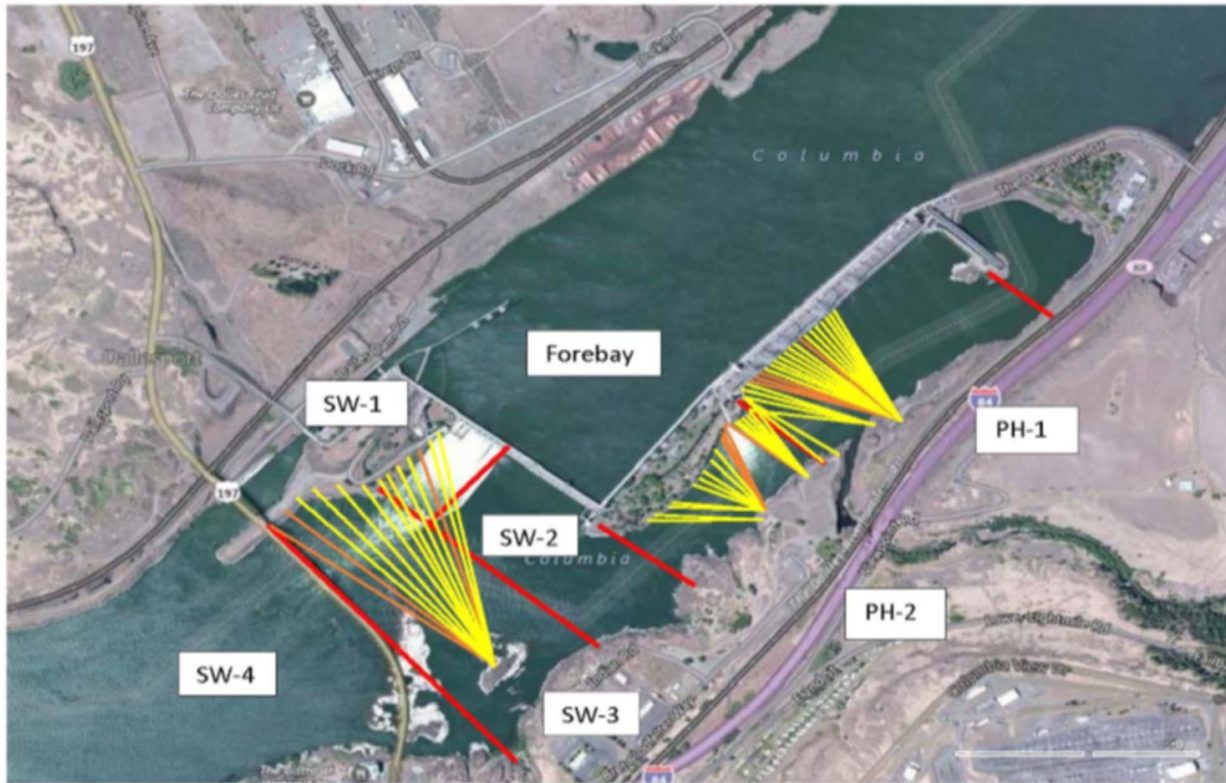
Maintenance;

East exit weir electrical panel FCQ7 partially installed. Further install awaiting final design.
West entrance weirs removed. Entrance weir cap install started.
East exit oil boom installation by AWS contract this winter. Scope reviewed.
Fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection. Scope in review.
Fishway dewater work list; Diffuser valve rehab scope, dewater pump rehab, south weir rehab, weir caps (lamprey) install, east exit weir 155,156,158 gearbox rehab
Other repair maintenance plans for upcoming fiscal years; 154 -157 rehab/weir wheel replace, diffuser valve overhaul (rehab and decommission).
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.

Research/Construction/Contractors:

Fish Counters - Normandau counters on site through Oct 31. Video review counting through the winter.
Pikeminnow dam angling - Done for season with a total catch at 1776. Highest invasive walleye by-catches do date being released. Concern brought to FPOM.
AWS construction - Extensions Oct/Nov night work and mid Nov day work FPOM approved. Dive day Nov 13 per FPOM approval. Commissioning testing Mar 31.
Lamprey minor mods - Rounded entrance weir cap parts for all entrances recieved. Moorings fabricating. Tribal lamprey trap hoist design pending.
Railroad track removal - Tailrace deck start Nov nights (FPOM approved)
Fish unit breaker replace - Start behind schedule. Demo start Dec4. Completion Feb18, 2018. Two weeks commission testing required.
Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022.
Transformer replacement - Install start May 2018.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

2017 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	observer	time	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		
12/17	kg	PM	FB	2	0	9	0	0	0	28	0	0	0	0	92	131	COME COME BAEA COME
			PH1	5	0	0	10	0	0	0	0	0	0	0	18	33	
			PH2	0	0	0	0	0	0	0	0	0	0	0	3	3	
			SW1	0	0	0	0	0	0	0	0	0	0	0	5	5	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	6	0	93	0	0	0	0	0	0	0	0	99	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	
12/18	bc	AM	FB	0	0	2	0	0	0	21	0	0	0	0	0	23	COME BAEA
			PH1	3	0	2	8	0	0	0	0	0	0	0	18	31	
			PH2	0	0	0	0	0	0	0	0	0	0	0	3	3	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	12	0	0	0	0	0	0	0	0	12	
			SW3	0	0	0	18	0	0	0	0	0	0	0	0	18	
			SW4	0	65	0	0	0	0	0	0	0	0	0	0	65	
12/19	JWR	PM	FB	0	3	9	0	0	0	16	0	0	0	0	28	BAEA	
			PH1	1	0	0	4	0	0	0	0	0	0	0	5		
			PH2	0	0	0	0	0	0	0	0	0	0	0	3		3
			SW1	0	0	2	0	0	0	0	0	0	0	0	0		2
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	22	0	0	0	0	0	0	0	0		22
			SW4	0	43	0	0	0	0	0	0	0	0	0	0		43
12/20	JWR	AM	FB	0	2	0	4	0	0	19	0	0	1	0	26	BAEA BAEA	
			PH1	4	0	1	2	0	0	0	0	0	0	0	7		
			PH2	0	0	0	0	0	0	0	0	0	0	0	1		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	19	0	29	0	0	0	0	0	0	0	0		48
			SW4	0	86	0	1	0	0	0	0	0	0	0	0		87
12/21	JWR	PM	FB	0	0	5	0	0	0	8	0	0	1	0	14	BAEA GBHE	
			PH1	3	0	0	0	0	0	0	0	0	0	0	3		
			PH2	0	0	0	0	0	0	0	0	0	0	0	8		8
			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	47	0	0	0	0	0	0	0	0		47
			SW4	0	14	0	0	0	0	0	0	0	0	0	0		14
12/22	JWR	AM	FB	0	0	7	1	0	0	18	0	0	0	0	26	BAEA	
			PH1	5	0	0	0	0	0	0	0	0	0	0	5		
			PH2	0	0	0	0	0	0	0	0	0	0	0	3		3
			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	16	0	52	0	0	0	0	0	0	0	0		68
			SW4	0	0	0	0	0	0	0	0	0	0	0	0		0
12/23	JWR	PM	FB	0	1	10	0	0	0	5	0	0	1	0	17	BAEA BAEA BAEA	
			PH1	2	0	0	0	0	0	0	0	0	0	0	2		2
			PH2	0	0	0	0	0	0	0	0	0	0	0	8		8
			SW1	0	0	0	0	0	0	0	0	0	0	0	2		2
			SW2	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	26	2	46	0	0	0	0	0	0	0	0		74
			SW4	0	72	0	0	0	0	0	0	0	0	0	0		72

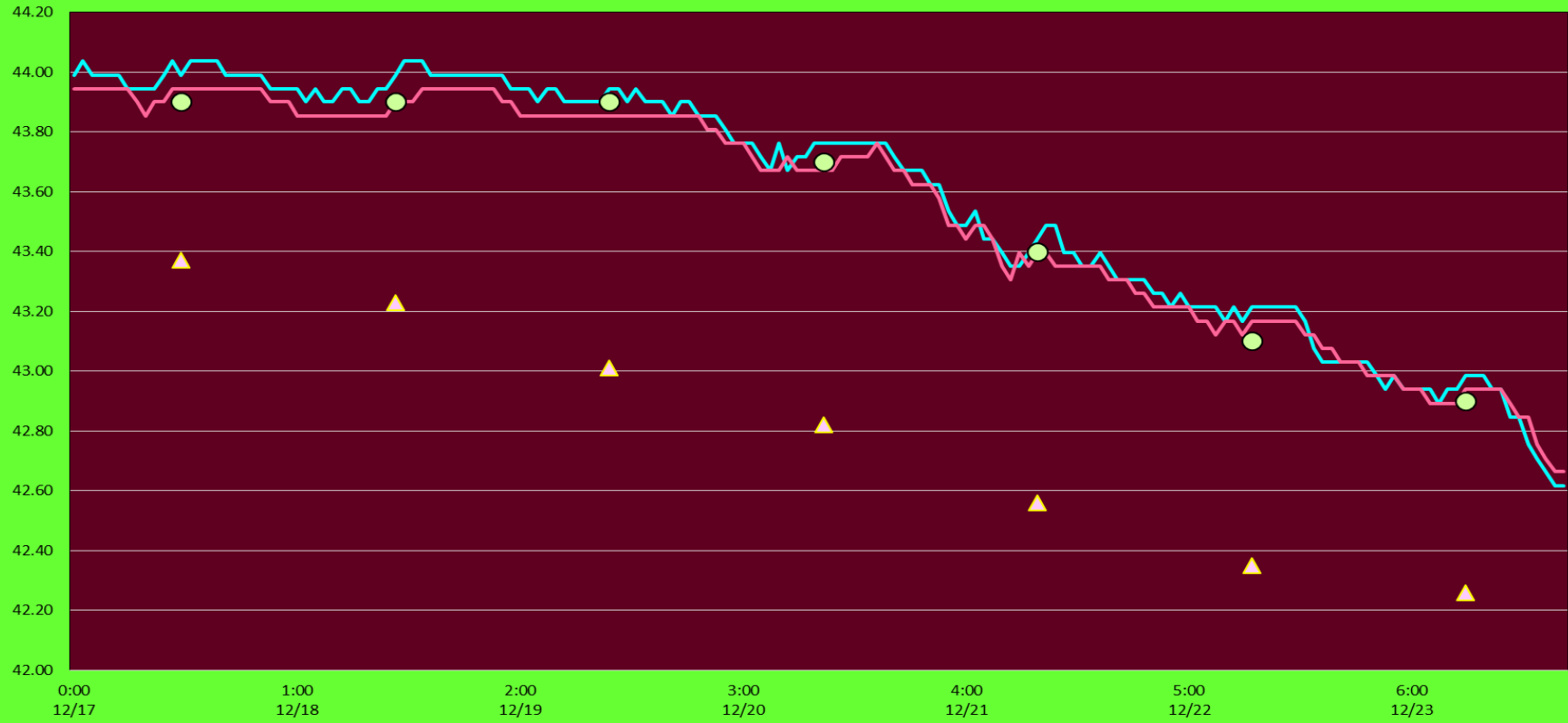
Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

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
12/17	0	0	0	3	2	1	1	1	0	0	0	0	0
12/18	0	0	0	1	0	1	-1	-1	0	0	0	0	0
12/19	1	1	0	4	0	0	1	1	0	0	0	0	0
													0
													0
													0
													0
total	1	1	0	8	2	2	1	1	0	0	0	0	0

The Dalles Dam North Fish Ladder River/Water Temperatures

North Count Station North Entrance ○ Current USGS daily tailwater average ▲ USGS daily tailwater average (2007-2016)



USGS: http://pweb.crohms.org/tmt/documents/ops/temp/201712_lcol.html

Secchi:		Temperatures
12/17	5.0	Sun 43.9
12/18	5.0	Mon 43.9
12/19	5.0	Tue 43.9
12/20	5.0	Wed 43.7
12/21	5.0	Thurs 43.4
12/22	5.0	Fri 43.1
12/23	5.0	Sat 42.9
	5.0	AVG 43.5

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

= Out of criteria

Date:	North Ladder		East Ladder											
	North Entrance		East Entrance				West Entrance				South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
12/17	1.3	8.8	<i>East Ladder dewatered for winter</i>											
12/18	1.3	9.0												
12/19	1.3	9.0												
12/20	1.4	9.1												
12/21	1.3	9.1												
12/22	1.3	9.1												
12/23	1.4	9.0												
AVG:	1.3	9.0												

Fishways are inspected twice daily plus one SCADA inspection.



Half done with powerhouse deck rail removal.