

The Dalles Dam Fishway Status Report

8/19/2017

Inspection Period: 08/13/2017-08/19/2017

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

Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	19	Temperature: 72.3 °F	Secchi: 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'	1.2			
Entrance weir N1	0	depth (≥ 8')	10.0			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments	Work cleaning circuit boxes performed.		
Weir 158-159 differential	0	1.0' ± 0.1'	158 calibrated and adjusted.			
Count station differential	0	≤ 0.3'	Picket leads raked as needed.	Debris load light.		
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	9.0			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	11.1			
Entrance weir E3	0	depth (≥ 8')	11.1			
Collection channel velocity	0	1.5 - 4 fps	3.13			
Transportation channel velocity	0	1.5 - 4 fps	2.77			
North channel velocity	0	1.5 - 4 fps	2.17			
South channel velocity	0	1.5 - 4 fps	3.77			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	8.6			
Entrance weir W2	0	depth (≥ 8')	8.6			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.3			
Entrance weir S1	0	depth (≥ 8')	8.4			
Entrance weir S2	0	depth (≥ 8')	8.4			
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					
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

No sea lions observed this week. Overall bird numbers down from last week, but juvenile gull numbers increasing, Work continues exploring better gull abatement options with recent PIT tag recovery data from Miller Island gull colony.

Operations:

North and east fishladders in full operation.
Spillway open 40% river flow for fish passage through spillgates 1-8.
Sluiceway open with 6 gates (units 1, 8 and 18)

Current Outages;

T8 (MU15 & MU16) out for transformer failure. Transformer replacement 7/5/18.

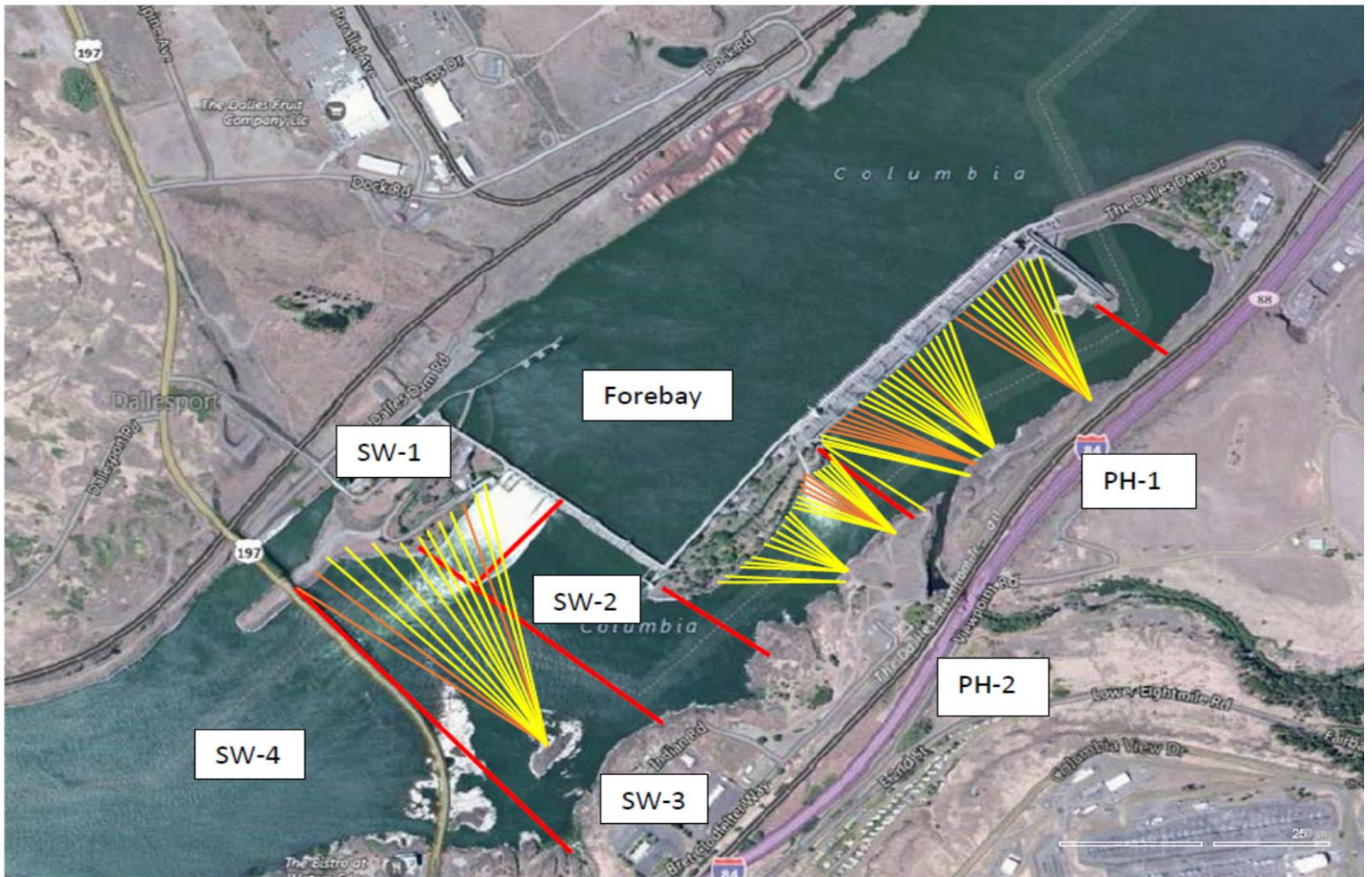
Maintenance;

East powerhouse avian line grid to be removed due to electrical shock hazard from induced voltage. FPOM approved. Avian predation monitoring to continue.
East exit weir electrical panel FCQ7 partially installed. Engineering design continues before further installation. Starting CADD drawings.
PUD crane rake repainting prep work and part dismantling underway.
Rebuilding entrance weir and east exit weir spare gearboxes.
Removal of derelict fish lock weir gearboxes near complete.
Designing fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection.
Planning crane pad for north ladder dewatering access. Awaiting cultural approval. Material purchased. Install September.
Modifying sturgeon tank for improved fish salvage.
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, both awaiting funding.
All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022.

Research/Construction/Contractors:

USDA completed avian hazing concluded July 31.
Pikeminnow dam angling - 73 removed this week, 1530 through 8/13. All from west powerhouse tailrace.
AWS construction - Planning for season 2 schedule. Extensions for Oct night and Nov work FPOM approved. Commissioning plan underway for 3/18.
Adult Lamprey translocation project completed trapping at project for season
Lamprey minor mods - Rounded entrance weir cap parts for all entrances ordered. Moorings to assist in assembling. Tribal lamprey trap hoist design pending.
Railroad track removal - Lower west powerhouse asphalt expected end of July. Tailrace deck start Nov nights (FPOM approved)
Fish unit breaker replace.- Manufacture this summer and install fall 2017. Switchover Jan 2018.
Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022. ROV inspection of fish unit discharge to AWS. Minimal concrete damage.
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		
8/13	PM	PM	FB	0	0	2	103	0	0	0	0	0	0	0	0	105	GBH
			PH1	0	0	0	0	0	0	0	0	0	0	0	1	1	
			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	0	3	0	0	0	0	0	0	0	0	0	0	3	
			SW3	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW4	55	0	0	0	0	0	0	0	0	0	0	0	55	
8/14	GJF	AM	FB	0	0	1	56	0	0	0	0	0	0	0	0	57	
			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	
			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	10	0	0	0	0	0	0	0	0	0	0	0	10	
			SW4	76	0	0	0	0	0	0	0	0	0	0	0	76	
8/15	GJF	PM	FB	0	0	3	22	0	0	0	0	0	0	0	0	25	
			PH1	0	0	2	1	0	0	0	0	0	0	0	0	3	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	5	0	0	0	0	0	0	0	0	0	0	0	5	
			SW4	34	2	0	6	0	0	0	0	0	0	0	0	42	
8/16	GJF	AM	FB	0	0	2	48	0	0	0	0	0	0	0	0	50	
			PH1	0	0	2	0	0	0	0	0	0	0	0	0	2	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	1	1	0	0	0	0	0	0	0	0	2	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	4	4	0	0	0	0	0	0	0	0	0	0	8	
			SW4	17	0	0	4	0	0	0	0	0	0	0	0	21	
8/17	JWR	PM	FB	0	0	1	23	0	0	0	0	0	0	0	0	24	
			PH1	0	0	2	8	0	0	0	0	0	0	0	0	10	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	16	0	0	0	0	0	0	0	0	0	0	0	16	
			SW4	32	0	0	0	0	0	0	0	0	0	0	0	32	
8/18	JWR	AM	FB	0	0	2	47	0	0	0	0	0	0	0	0	49	
			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	
			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	1	0	0	0	0	0	0	0	0	0	1	
			SW4	4	0	0	0	0	0	0	0	0	0	0	0	4	
8/19	JWR	PM	FB	0	0	3	23	0	0	0	0	0	0	0	0	26	
			PH1	0	0	0	12	0	0	0	0	0	0	0	0	12	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	4	2	1	2	0	0	0	0	0	0	0	0	9	
			SW4	45	36	0	0	0	0	0	0	0	0	0	0	81	

Key: BAEA = Bald Eagle; GBH = 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
8/13	238	210	28	77	43	34	0	0	0	2	0	0	132
8/14	324	281	43	85	47	38	0	0	0	2	0	0	30
8/15	319	294	25	49	23	26	0	0	0	4	0	0	32
8/16	500	457	43	79	44	35	0	0	0	8	0	0	26
8/17	507	455	52	125	65	60	0	0	0	6	0	0	86
8/18	615	562	53	255	142	113	0	0	0	4	0	0	70
8/19	692	610	82	324	155	169	0	0	0	6	0	0	32
total	3195	2869	326	994	519	475	0	0	0	32	0	0	408

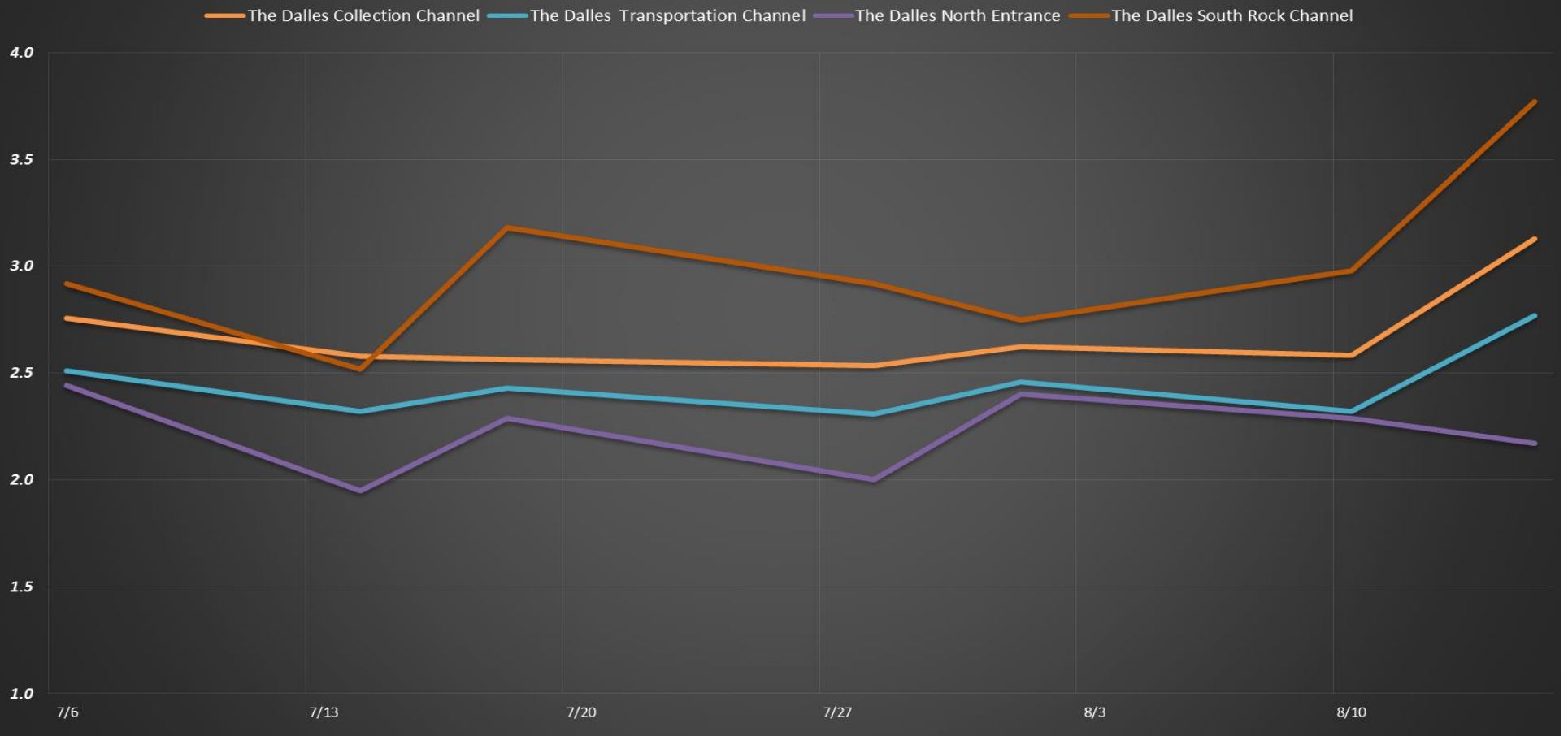
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/13	30	24	6	38	18	20	0	0	0	2	0	0	73
8/14	34	30	4	26	10	16	0	0	0	4	0	0	78
8/15	98	88	10	22	12	10	0	0	0	0	0	0	31
8/16	136	126	10	37	14	23	0	0	0	1	0	0	44
8/17	79	73	6	66	28	38	0	0	0	5	0	0	36
8/18	143	133	10	73	26	47	0	0	0	1	0	0	28
8/19	224	206	18	195	107	88	0	0	0	0	0	0	11
total	744	680	64	457	215	242	0	0	0	13	0	0	301
% North	18.9	19.2	16.4	31.5	29.3	33.8	0.0	0.0	0.0	28.9	0.0	0.0	42.5

[Salmon](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=13&to_cdm=8&to_cdd=19&subbtn=salmon&op=sdaily) http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=13&to_cdm=8&to_cdd=19&subbtn=salmon&op=sdaily

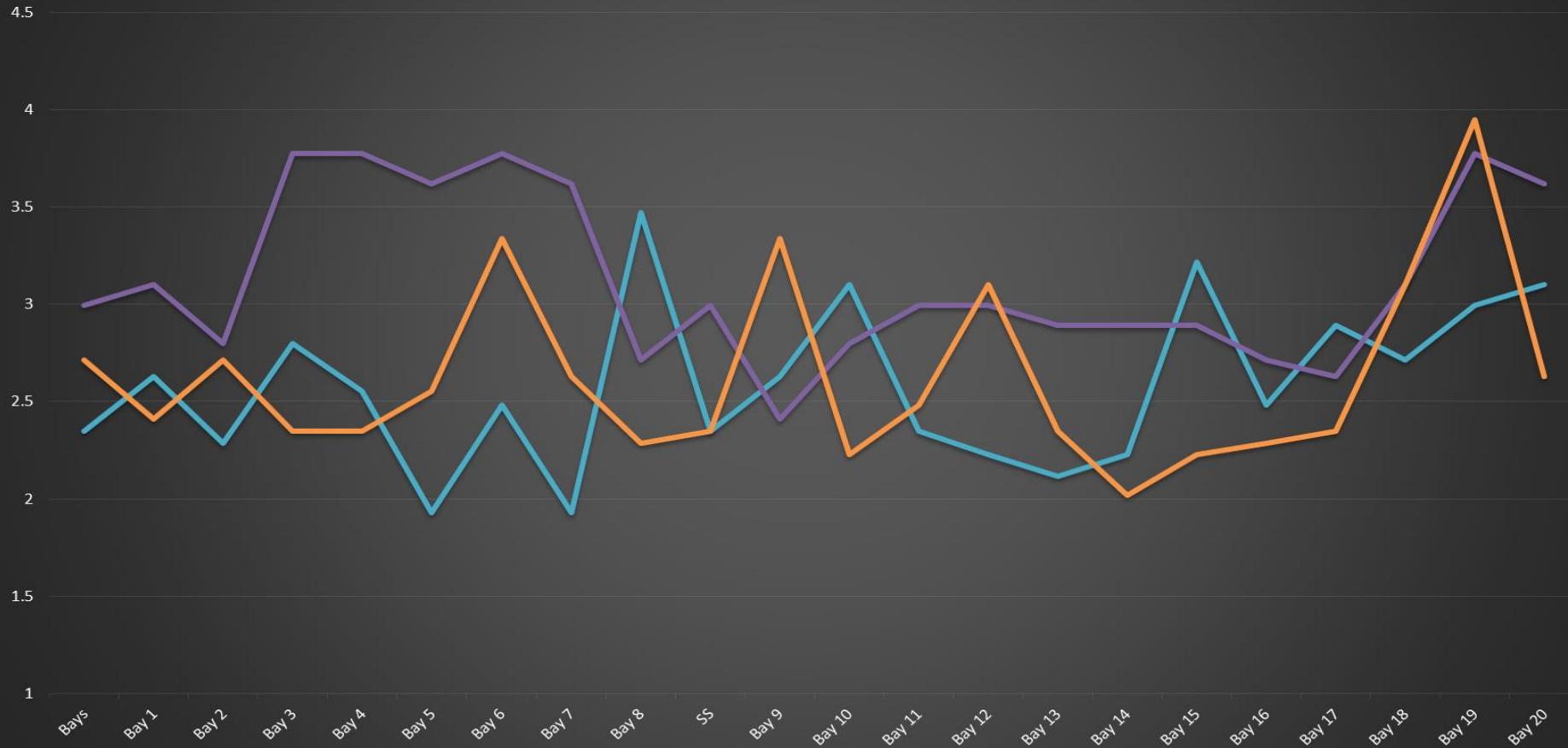
[Lamprey](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=6&to_cdm=8&to_cdd=12&subbtn=salmon&op=sdaily) http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=6&to_cdm=8&to_cdd=12&subbtn=salmon&op=sdaily

The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)



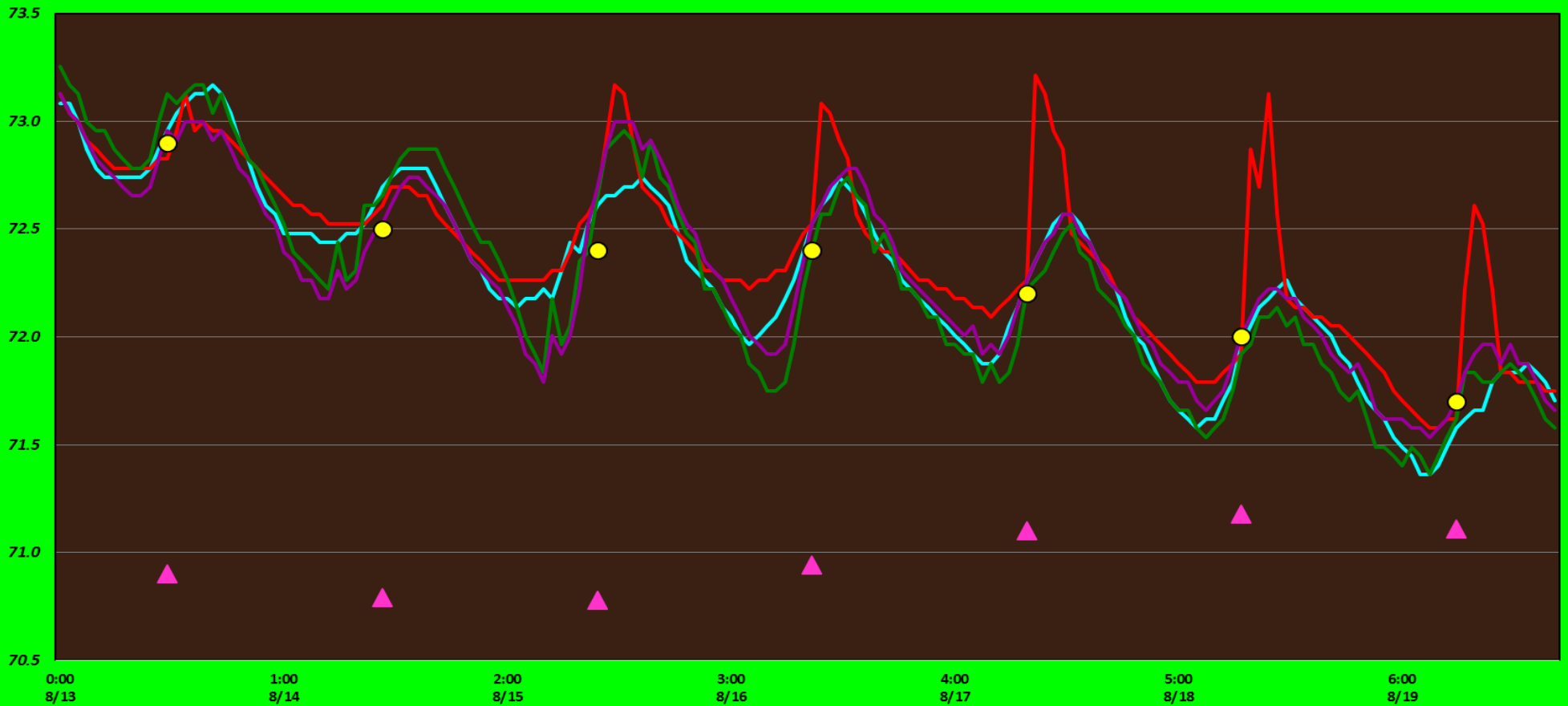
The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

10-Aug 15-Aug 1-Aug



The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures

°F East Count Station Junction Pool (East Ladder) North Count Station North Entrance Current USGS daily tailwater average USGS daily tailwater average (2007-2016)



USGS: http://www.nwd-wc.usace.army.mil/tml/documents/ops/temp/201708_lcol.html

Secchi:		Temperatures
8/13	5.0	Sun 72.9
8/14	5.0	Mon 72.5
8/15	5.0	Tue 72.4
8/16	5.0	Wed 72.4
8/17	5.0	Thurs 72.2
8/18	5.0	Fri 72.0
8/19	5.0	Sat 71.7
	5.0	AVG 72.3

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

= Out of criteria

Spill link
http://www.nwd-wc.usace.army.mil/dd/nwdp/project_hourly/webexec/rep?r=tda&ago=0

Date:	North Ladder			East Ladder										24 hr avg	
	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	
8/13			1.3	NO CRITERIA	11.5	11.6	8.7	1.4	8.7	8.7	NO CRITERIA	1.3	8.4	8.4	
	1.2	10.2	1.3		11.5	11.3	9.3	1.4	8.7	8.7		1.3	8.5	8.4	
	1.1	10.2	1.4		11.5	11.4	8.7	1.4	8.6	8.6		1.2	8.6	8.5	
8/14			1.2		11.6	11.5	8.9	1.4	8.8	8.8		1.2	8.5	8.5	
	1.1	10.1	1.1		11.6	11.5	9.2	1.4	8.7	8.8		1.2	9.0	8.7	
	1.2	10.1	1.7		10.6	10.6	9.6	1.5	8.8	8.8		1.3	8.5	8.5	
8/15			1.3		11.5	11.4	9.6	1.5	8.6	8.6		1.3	8.5	8.4	
			1.4		11.2	11.2	9.6	1.5	8.8	8.8		1.3	8.5	8.5	
	1.2	10.2	1.4		11.5	11.6	10.3	1.5	8.7	8.7		1.3	8.5	8.5	
8/16			1.9		10.5	10.5	10.4	1.7	8.6	8.6		1.5	8.3	8.3	
	1.2	10.0	1.4		11.3	11.3	10.0	1.6	8.6	8.5		1.3	8.6	8.6	
	1.3	10.0	1.5		11.4	11.4	10.1	1.5	8.6	8.6		1.4	8.3	8.3	
8/17			1.4		11.3	11.3	8.6	1.3	8.8	8.8		1.3	8.2	8.2	
			1.4		10.8	10.8	8.5	1.3	8.3	8.3		1.3	8.3	8.3	
	1.2	10.1	1.3		10.7	10.7	8.8	1.4	8.6	8.5		1.3	8.3	8.3	
8/18			1.5	10.7	10.8	8.0	1.4	8.4	8.4	1.3	8.2	8.4			
	1.2	9.7	1.5	10.7	10.8	8.0	1.4	8.4	8.4	1.3	8.4	8.6			
	1.3	9.9	1.4	10.8	10.9	8.3	1.4	8.3	8.3	1.3	8.3	8.4			
8/19			1.5	10.7	10.8	8.1	1.4	8.2	8.3	1.3	8.2	8.3			
	1.2	9.8	1.5	10.8	10.8	8.1	1.5	8.2	8.2	1.3	8.3	8.3			
	1.3	9.9	1.5	10.7	10.7	8.2	1.4	8.3	8.3	1.3	8.3	8.3			
AVG:	1.2	10.0	1.4	NO CRITERIA	11.1	11.1	9.0	1.4	8.6	8.6	NO CRITERIA	1.3	8.4	8.4	#DIV/0!

Fishways are inspected twice daily plus one SCADA inspection.