

# The Dalles Dam Fishway Status Report

8/26/2017

Inspection Period: 08/20/2017-08/26/2017

## THE DALLES DAM



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	21	Temperature: 71.7 °F	Secchi: 5.0 feet
<b>NORTH FISHWAY</b>						
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')	9.8			
Entrance weir N2	0	Closed				
PUD Intake differential	5	≤ 0.5'				Debris needs raked. Rake crane is under maintenance.
<b>EAST FISHWAY</b>						
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')	9.2			
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	10.8			
Entrance weir E3	0	depth (≥ 8')	10.8			
Collection channel velocity	0	1.5 - 4 fps	2.98			
Transportation channel velocity	0	1.5 - 4 fps	2.80			
North channel velocity	0	1.5 - 4 fps	2.33			
South channel velocity	0	1.5 - 4 fps	3.88			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	8.7			
Entrance weir W2	0	depth (≥ 8')	8.7			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir S1	0	depth (≥ 8')	8.3			
Entrance weir S2	0	depth (≥ 8')	8.3			
<b>JUVENILE PASSAGE</b>						
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,

### **Inspection Period: 08/20/2017-08/26/2017**

North and east fishladders in full operation. Low tailwater challenging entrance automation.

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 Early Sept due to electrical shock hazard. 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 continues.

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. Cultural approval expected early Sept. Install mid Sept.

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:**

*Fish Counters* - Normandau counters on site through Oct.

*Pikeminnow dam angling* - 87 removed this week, 1617 through 8/20. All from west powerhouse tailrace.

*AWS construction* - Planning season 2 schedule. Extensions Oct/Nov night work and Nov day work FPOM approved. Commissioning plan underway for 3/31.

*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)

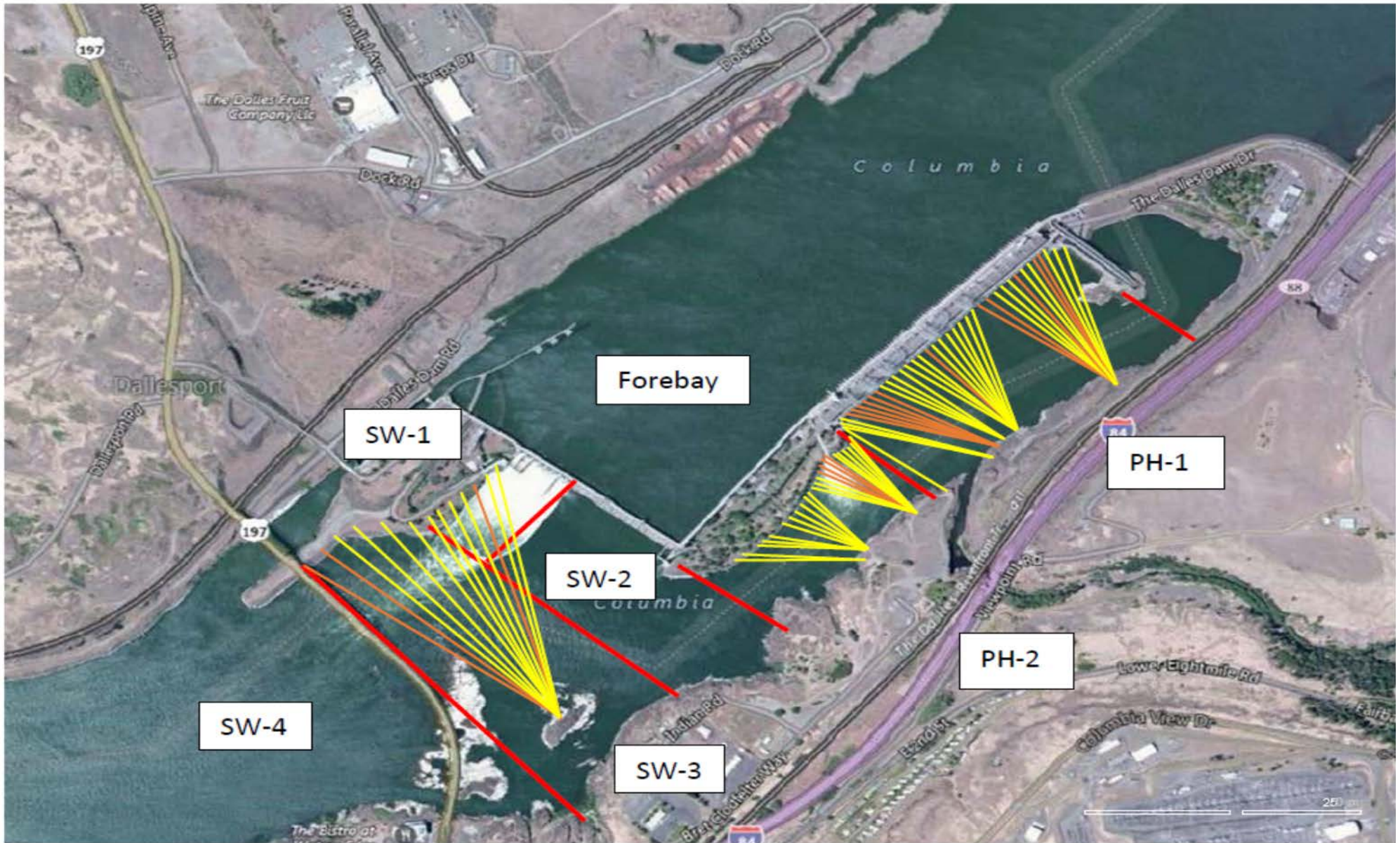
*Fish unit breaker replace*.- Manufacture this summer and install fall 2017. Switchover Jan 2018.

*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			
8/20	JWR	AM	FB	0	0	1	25	0	0	0	0	0	0	0	0	0	26	GBH
			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	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW3	0	16	2	0	0	0	0	0	0	0	0	0	0	18	
			SW4	1	24	0	0	0	0	0	0	0	0	0	0	0	25	
8/21	JWR	PM	FB	0	3	1	47	0	0	0	0	0	0	0	0	0	51	
			PH1	0	0	0	8	0	0	0	0	0	0	0	0	0	8	
			PH2	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	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW3	5	16	1	0	0	0	0	0	0	0	0	0	0	22	
			SW4	11	14	0	0	0	0	0	0	0	0	0	0	0	25	
8/22	JWR	AM	FB	0	0	0	37	0	0	0	0	0	0	0	0	0	37	
			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	
			SW1	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	
			SW3	1	12	0	0	0	0	0	0	0	0	0	0	0	13	
			SW4	13	18	0	0	0	0	0	0	0	0	0	0	0	31	
8/23	GJF	PM	FB	0	0	2	20	0	0	0	0	0	0	0	0	0	22	
			PH1	0	0	3	2	0	0	0	0	0	0	0	0	0	5	
			PH2	1	1	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	0	
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW3	4	0	0	2	0	0	0	0	0	0	0	0	0	6	
			SW4	46	21	0	16	0	0	0	0	0	0	0	0	0	83	
8/24	JWR	AM	FB	0	0	2	29	0	0	0	0	0	0	0	0	0	31	
			PH1	0	0	0	8	0	0	0	0	0	0	0	0	0	8	
			PH2	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	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW3	4	9	0	3	0	0	0	0	0	0	0	0	0	16	
			SW4	6	36	0	7	0	0	0	0	0	0	0	0	0	49	
8/25	GJF	PM	FB	0	0	0	17	0	0	0	0	0	0	0	0	0	17	
			PH1	0	0	4	6	0	0	0	0	0	0	0	0	0	10	
			PH2	1	0	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	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	12	0	0	0	0	0	0	0	0	0	0	0	0	12	
			SW4	37	19	0	8	0	0	0	0	0	0	0	0	0	64	
8/26	GJF	AM	FB	0	0	2	45	0	0	0	0	0	0	0	0	0	47	
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW3	11	50	0	4	0	0	0	0	0	0	0	0	0	65	
			SW4	14	9	0	8	0	0	0	0	0	0	0	0	0	31	

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
8/20	951	860	91	393	232	161	1	1	0	4	0	0	40
8/21	577	530	47	317	173	144	5	5	0	13	0	0	60
8/22	450	404	46	421	277	144	0	0	0	0	0	0	80
8/23	291	235	56	435	331	104	5	4	1	2	0	0	95
8/24	514	458	56	433	301	132	2	2	0	1	0	0	54
8/25	798	665	133	331	245	86	12	11	1	5	0	0	40
8/26	992	880	112	432	287	145	12	10	2	1	0	0	58
<b>total</b>	<b>4573</b>	<b>4032</b>	<b>541</b>	<b>2762</b>	<b>1846</b>	<b>916</b>	<b>37</b>	<b>33</b>	<b>4</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>427</b>

### 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
8/20	169	161	8	161	101	60	0	0	0	0	0	0	20
8/21	151	134	17	178	107	71	0	0	0	1	0	0	28
8/22	146	134	12	267	179	88	2	1	1	0	0	0	26
8/23	130	116	14	264	185	79	2	1	1	0	0	0	29
8/24	207	191	16	290	205	85	3	2	1	1	0	0	34
8/25	274	250	24	246	152	94	1	0	1	0	0	0	26
8/26	450	396	54	464	319	145	7	5	2	1	0	0	19
<b>total</b>	<b>1527</b>	<b>1382</b>	<b>145</b>	<b>1870</b>	<b>1248</b>	<b>622</b>	<b>15</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>182</b>
<b>% North</b>	<b>25.0</b>	<b>25.5</b>	<b>21.1</b>	<b>40.4</b>	<b>40.3</b>	<b>40.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>10.3</b>	<b>0.0</b>	<b>0.0</b>	<b>29.9</b>

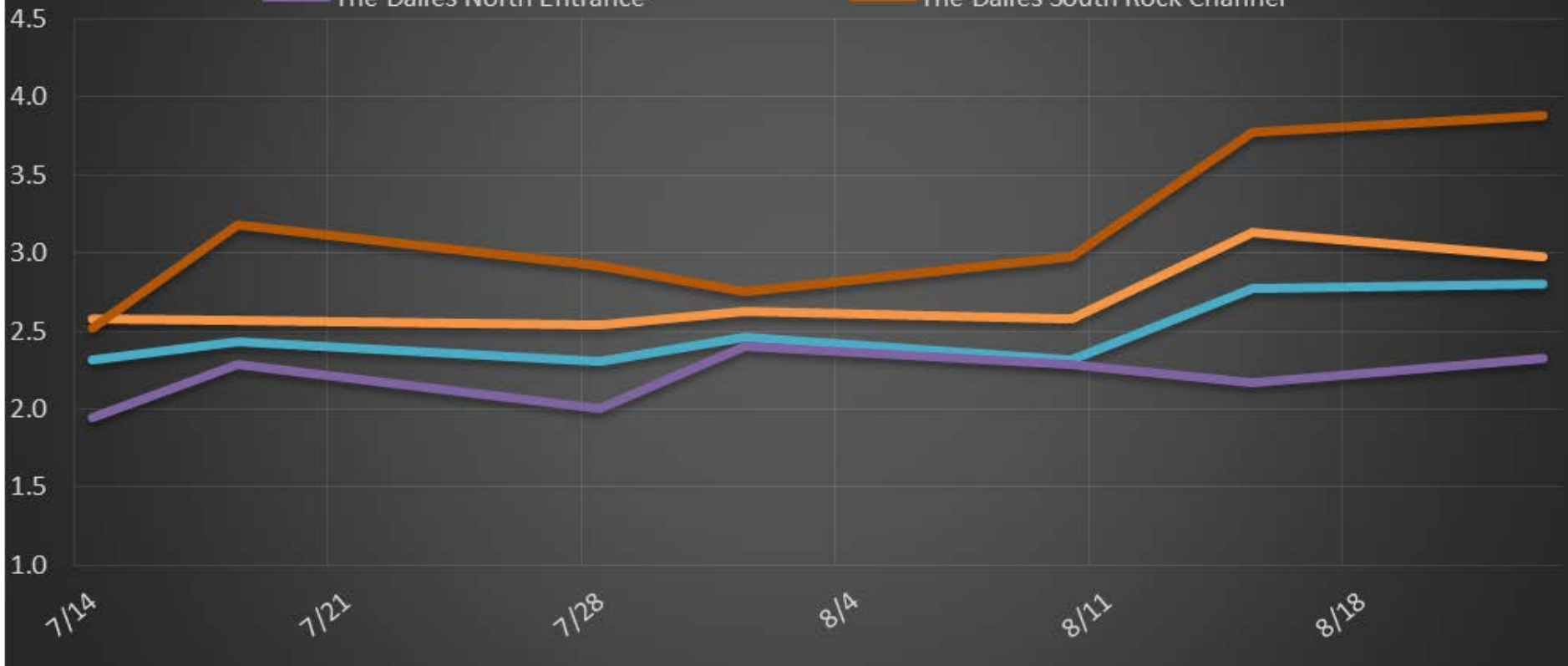
[Salmon](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=20&to_cdm=8&to_cdd=26&subbtn=salmon&op=sdaily) [http://www.fpc.org/environment/fcounts.asp?fr\\_cdy=2017&fr\\_cdm=8&fr\\_cdd=20&to\\_cdm=8&to\\_cdd=26&subbtn=salmon&op=sdaily](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=20&to_cdm=8&to_cdd=26&subbtn=salmon&op=sdaily)

[Lamprey](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=20&to_cdm=8&to_cdd=26&subbtn=shad+lamprey&op=sdaily) [http://www.fpc.org/environment/fcounts.asp?fr\\_cdy=2017&fr\\_cdm=8&fr\\_cdd=20&to\\_cdm=8&to\\_cdd=26&subbtn=shad+lamprey&op=sdaily](http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=8&fr_cdd=20&to_cdm=8&to_cdd=26&subbtn=shad+lamprey&op=sdaily)



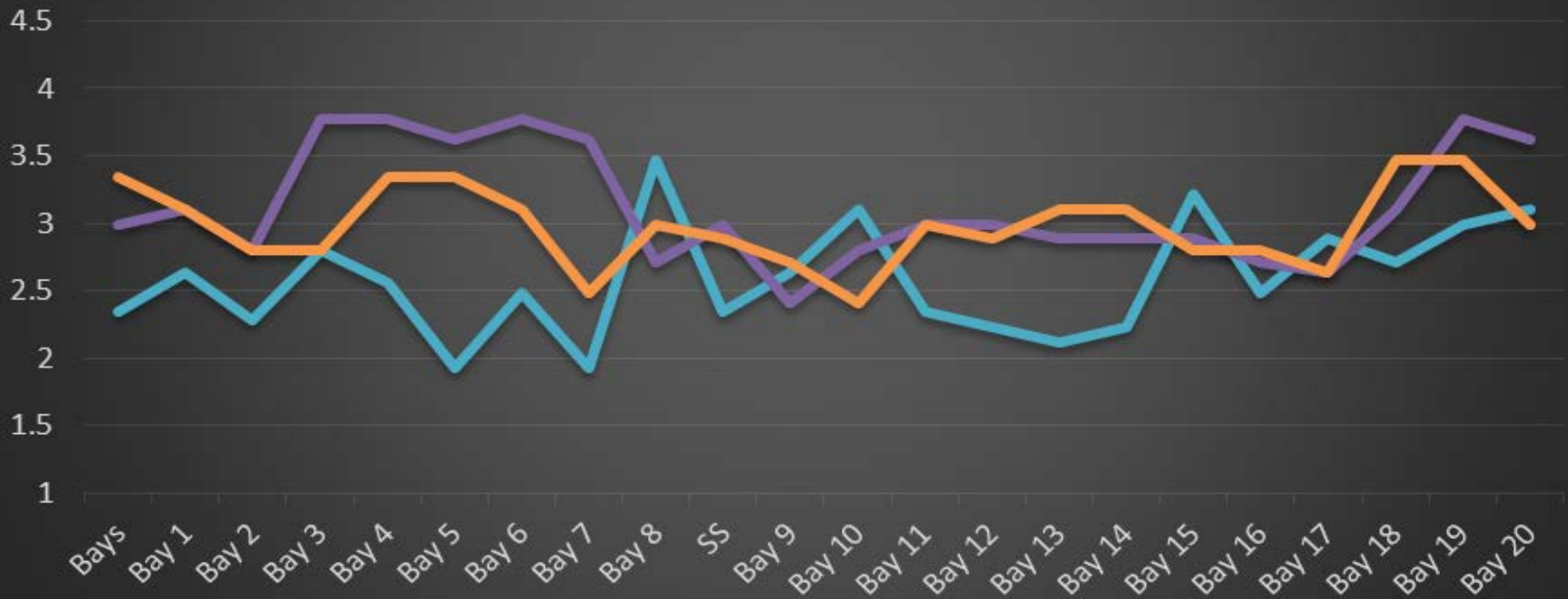
# The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)

- The Dalles Collection Channel
- The Dalles North Entrance
- The Dalles Transportation Channel
- The Dalles South Rock Channel

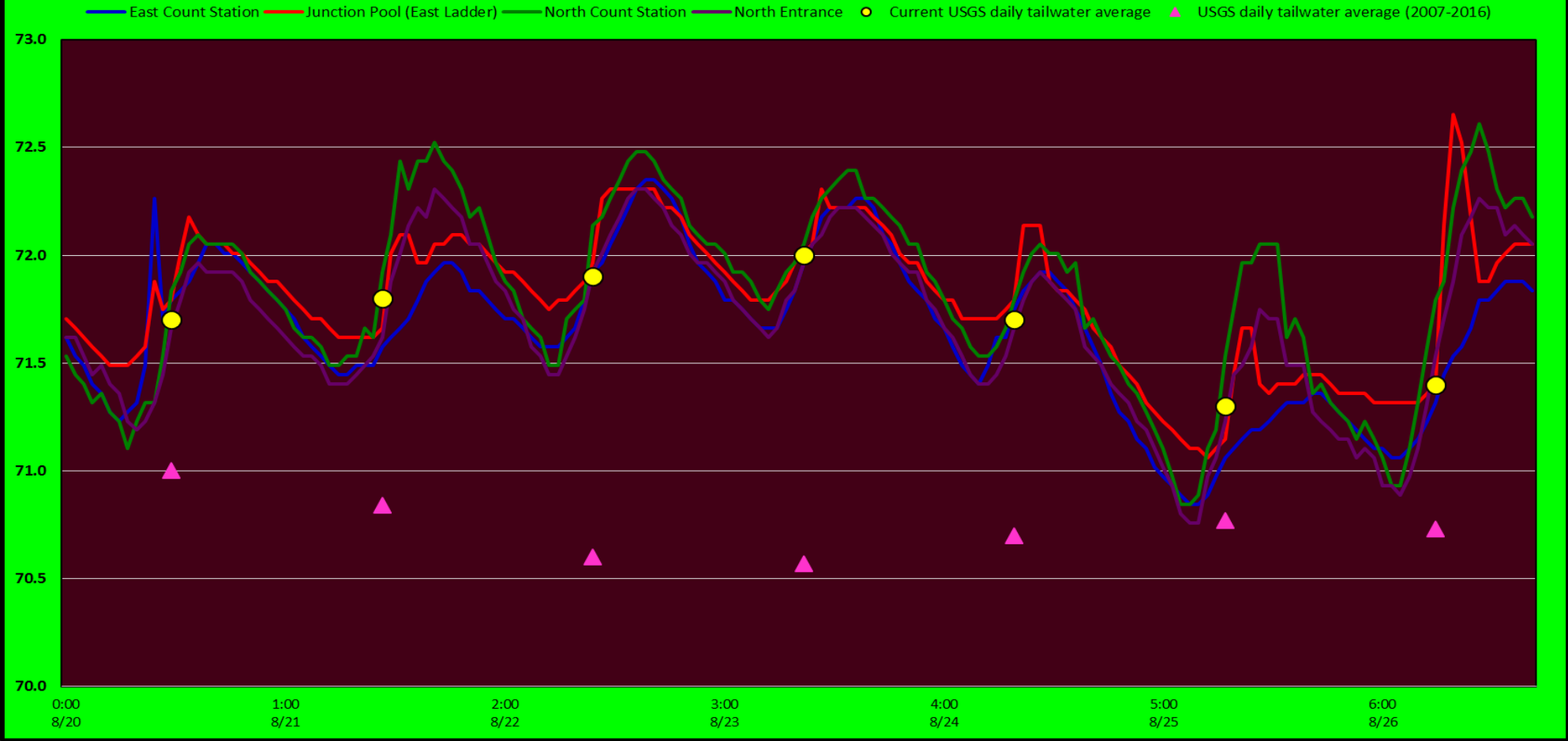


# The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

10-Aug 15-Aug 23-Aug



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





USGS: [http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201708\\_lcdl.htm](http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201708_lcdl.htm)

Secchi:		Temperatures
5.0	Sun	71.7
5.0	Mon	71.8
5.0	Tue	71.9
5.0	Wed	72.0
5.0	Thurs	71.7
5.0	Fri	71.3
5.0	Sat	71.4
5.0	AVG	71.7

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

21-Jan-00

= Out of criteria

Spill link  
[http://www.nwd-wc.usace.army.mil/dd/nwdp/project\\_hourly/webexec/rep?r=tda&ago=0](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		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
8/20			1.7	NO CRITERIA	10.8	10.8	10.1	1.7	8.4	8.4	NO CRITERIA	1.4	8.4	8.4	40.0
	1.2	9.8	1.5		11.2	11.2	9.9	1.6	8.7	8.7		1.4	8.3	8.3	
	1.3	9.8	1.7		10.8	10.8	9.7	1.6	8.9	8.9		1.5	8.2	8.2	
8/21			1.3		10.9	10.9	8.8	1.3	8.8	8.8		1.3	8.4	8.4	40.1
	1.3	9.8	1.4		10.9	10.9	8.8	1.4	8.8	8.8		1.4	8.4	8.4	
	1.3	9.9	1.5		10.7	10.7	8.2	1.4	8.3	8.3		1.3	8.3	8.3	
8/22			1.5		10.8	10.8	9.0	1.4	8.7	8.7		1.3	8.2	8.2	40.0
	1.3	9.7	1.4		10.8	10.8	9.1	1.4	8.3	8.3		1.4	8.2	8.2	
	1.3	9.8	1.6		10.8	10.8	9.7	1.7	8.4	8.3		1.5	8.2	8.2	
8/23			1.7		10.7	10.7	9.6	1.5	9.0	9.0		1.4	8.3	8.3	39.8
	1.3	9.8	1.5		10.9	10.9	9.6	1.5	8.8	8.8		1.3	8.4	8.4	
	1.2	9.8	1.5		10.9	10.9	9.8	1.4	8.8	8.8		1.4	8.3	8.3	
8/24			1.2		11.2	11.2	9.4	1.4	8.8	8.8		1.3	8.3	8.3	40.1
	1.2	9.8	1.5		10.8	10.8	9.4	1.4	8.7	8.7		1.4	8.3	8.3	
	1.2	9.8	1.6		10.7	10.7	9.5	1.5	8.7	8.7		1.4	8.4	8.2	
8/25			1.5	10.6	10.6	9.0	1.3	8.8	8.8	1.3	8.4	8.4	39.9		
	1.2	9.8	1.5	10.6	10.6	9.0	1.4	8.7	8.7	1.4	8.3	8.6			
	1.3	9.8	1.3	10.8	10.8	9.0	1.3	8.8	8.8	1.3	8.4	8.4			
8/26			1.3	10.7	10.8	8.3	1.2	8.8	8.8	1.3	8.2	8.2	40.2		
	1.2	9.8	1.3	10.7	10.6	8.5	1.3	8.7	8.7	1.4	8.2	8.3			
	1.3	9.8	1.3	9.6	9.7	8.2	1.1	8.8	8.8	1.3	8.2	8.2			
<b>AVG:</b>	<b>1.3</b>	<b>9.8</b>	<b>1.5</b>	NO CRITERIA	<b>10.8</b>	<b>10.8</b>	<b>9.2</b>	<b>1.4</b>	<b>8.7</b>	<b>8.7</b>	NO CRITERIA	<b>1.4</b>	<b>8.3</b>	<b>8.3</b>	<b>40.0</b>

Fishways are inspected twice daily plus one SCADA inspection.