

The Dalles Dam Fishway Status Report

8/6/2017

Inspection Period: 07/30/2017-08/05/2017

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: 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'	1.4			
Entrance weir N1	0	depth (≥ 8')	10.2			
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')	10.9			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	10.9			
Entrance weir E3	0	depth (≥ 8')	10.9			
Collection channel velocity	0	1.5 - 4 fps	2.56			
Transportation channel velocity	0	1.5 - 4 fps	2.43			
North channel velocity	0	1.5 - 4 fps	2.29			
South channel velocity	0	1.5 - 4 fps	3.18			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	9.3			
Entrance weir W2	0	depth (≥ 8')	9.3			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.4			
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,

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;

MU1 Returned 7/24/17. Open sluiceways returned from unit 2 to unit 1.

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 in progress before further installation. Starting CADD drawings.

PUD crane rake repainting starting.

Rebuilding spare entrance weir gearbox.

Removal of derelict fish lock weir gearboxes starts next week.

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.

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 for season

Planning for temperature profiling study by District Aug and Sept. Four temperature strings to be deployed near east exit.

Pikeminnow dam angling - 111 removed this week, 1371 through 7/30. All from west powerhouse tailrace.

AWS construction - Planning for season 2 schedule. Requesting extensions to work outside in water work period. Commissioning plan underway for 3/18.

CTUIR completed allotted number of lamprey trapped (600 fish) in 7 days, Trapping continues for Yakama and Nez Perce.

Lamprey minor mods - Rounded entrance weir cap parts for all entrances ordered. Tribal lamprey trap hoist design complete. Fab FY17 and install FY18.

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. Continuing data analysis for present conditions.

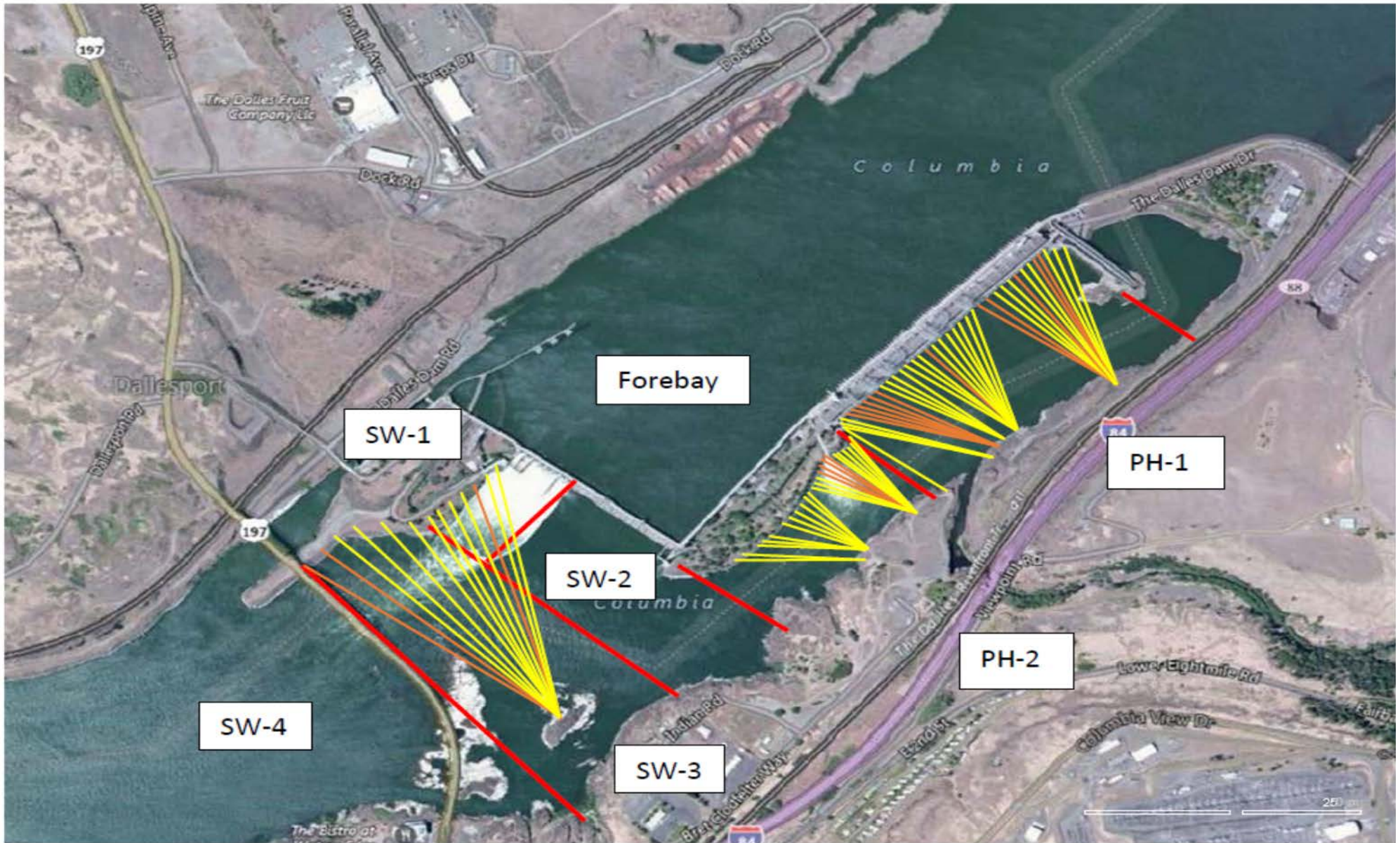
Transformer replacement - Install start May 2018.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

111.00

1371.00



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				
7/30	GJF	PM	FB	0	6	3	21	0	0	0	2	0	0	0	0	0	32		
			PH1	0	1	3	14	0	0	0	0	0	0	0	0	0	0	18	
			PH2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6	
			SW1	1	0	0	0	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	0	1	
			SW3	10	37	0	0	0	0	0	0	0	1	1	0	0	0	49	
			SW4	4	7	0	0	0	0	0	0	0	14	11	0	0	0	36	
7/31	GJF	AM	FB	0	0	2	8	0	0	0	0	0	0	0	0	0	10		
			PH1	0	1	1	5	0	0	0	0	0	0	0	0	0	0	7	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	2	0	0	0	0	0	0	0	0	0	1	0	0	0	3	
			SW4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	
8/1	JWR	PM	FB	0	0	2	118	0	0	0	0	0	0	0	0	0	120		
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	
			SW2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	
			SW3	9	44	0	0	0	0	0	0	0	0	6	0	0	0	59	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8/2	JWR	AM	FB	0	3	0	76	0	0	0	0	0	0	0	0	0	79		
			PH1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7	
			SW2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	
			SW3	16	31	0	0	0	0	0	0	0	0	0	0	0	0	47	
			SW4	1	1	0	0	0	0	0	0	0	1	2	0	0	0	5	
8/3	JWR	PM	FB	0	4	2	65	0	0	0	1	0	0	0	0	0	72		
			PH1	0	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	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	30	14	1	0	0	0	0	0	0	0	0	0	0	4	49	COME
			SW4	0	1	0	1	0	0	0	0	0	0	2	0	0	0	4	
8/4	JWR	AM	FB	0	3	1	41	0	0	0	0	0	0	0	0	0	45		
			PH1	0	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	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19	
			SW4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
8/5	JWR	PM	FB	0	6	3	72	0	0	0	0	0	0	0	0	0	81		
			PH1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	19	34	0	0	0	0	0	0	0	0	0	0	0	4	57	COME
			SW4	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	

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
7/30	246	204	42	231	88	143	0	0	0	17	0	0	150
7/31	229	206	23	275	131	144	0	0	0	16	0	0	239
8/1	211	186	25	213	104	109	0	0	0	18	0	0	95
8/2	190	170	20	210	118	92	0	0	0	18	0	0	217
8/3	174	145	29	155	77	78	0	0	0	22	0	0	73
8/4	150	116	34	130	64	66	0	0	0	8	0	0	97
8/5	126	106	20	133	79	54	0	0	0	10	0	0	82
total	1326	1133	193	1347	661	686	0	0	0	109	0	0	953

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
7/30	99	94	5	125	55	70	0	0	0	12	0	0	217
7/31	74	66	8	97	47	50	0	0	0	10	0	0	128
8/1	98	82	16	71	28	43	0	0	0	17	0	0	118
8/2	61	56	5	78	37	41	0	0	0	7	0	0	38
8/3	61	53	8	69	34	35	0	0	0	11	0	0	68
8/4	44	40	4	65	30	35	0	0	0	6	0	0	36
8/5	32	24	8	47	23	24	0	0	0	8	0	0	53
total	469	415	54	552	254	298	0	0	0	71	0	0	658
% North	26.1	26.8	21.9	29.1	27.8	30.3	0.0	0.0	0.0	39.4	0.0	0.0	40.8

http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=7&fr_cdd=30&to_cdm=8&to_cdd=5&subbtn=salmon&op=sdaily

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

The Dalles Collection Channel

The Dalles Transportation Channel

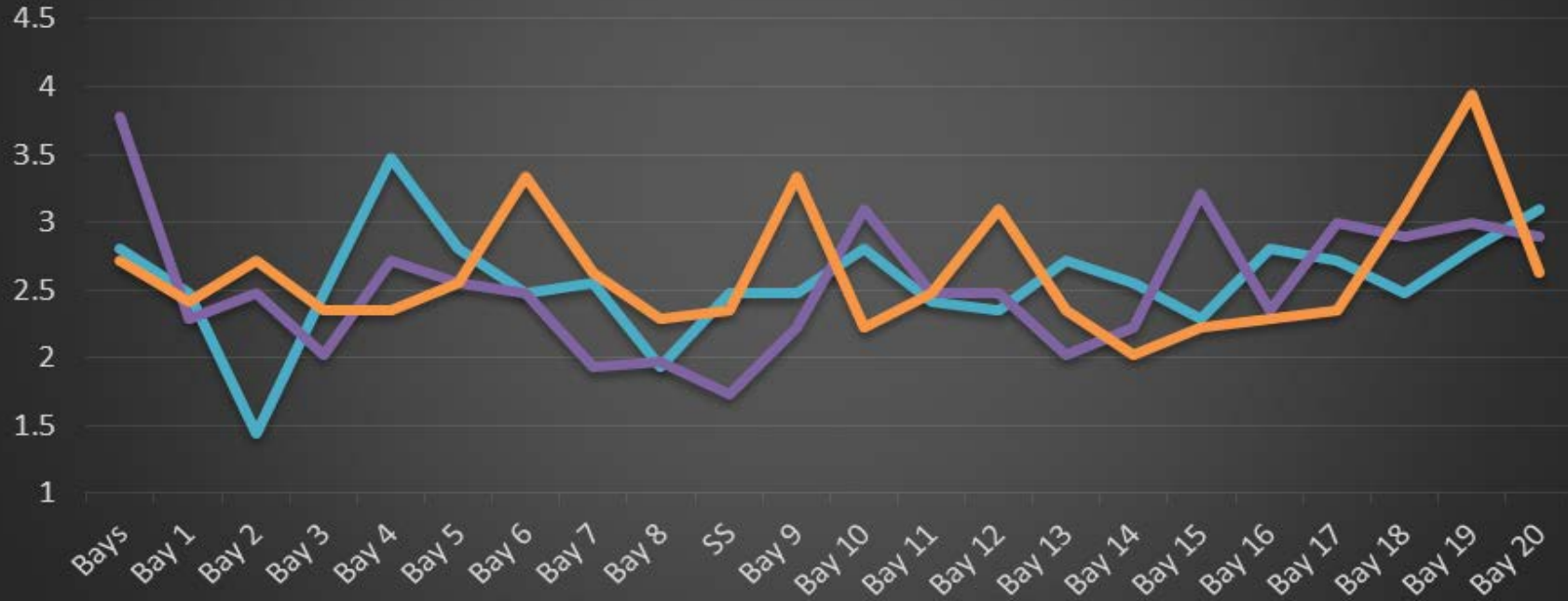
The Dalles North Entrance

The Dalles South Rock Channel

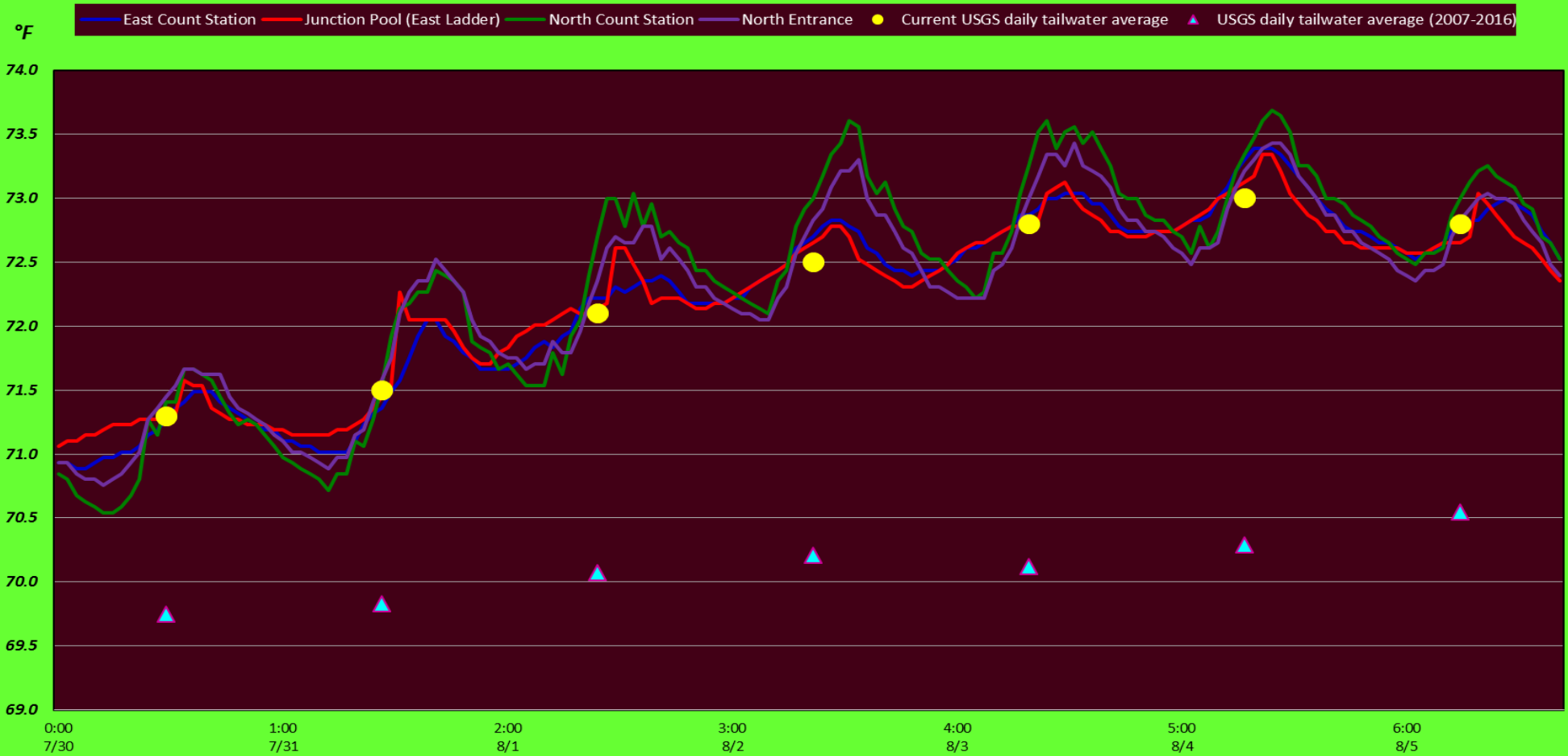


The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

18-Jul 28-Jul 1-Aug



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



Secchi:		Temperatures
5.0	Sun	71.3
5.0	Mon	71.5
5.0	Tue	72.1
5.0	Wed	72.5
5.0	Thurs	72.8
5.0	Fri	73.0
5.0	Sat	72.8
5.0	AVG	72.3

USGS: <http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201707.lcol.htm>
<http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201708.lcol.htm>

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		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		
7/30			1.5	NO CRITERIA	10.5	10.5	12.7	1.5	9.5	9.5	NO CRITERIA	1.4	8.5	8.6	40.1		
	1.5	10.4	1.4		10.5	10.5	11.6	1.5	9.5	9.5		1.5	8.3	8.4			
	1.4	10.4	1.5		10.4	10.4	11.5	1.4	9.5	9.5		1.4	8.6	8.4			
7/31			1.3			10.4	10.4	10.2	1.2	9.4		9.4		1.2	8.6	8.6	40.2
	1.3	10.1	1.1		10.4	10.4	9.4	1.0	9.5	9.5		1.3	8.5	8.5			
	1.6	10.1	1.5		10.5	10.4	11.2	1.5	9.6	9.5		1.3	8.4	8.4			
8/1			1.2			10.4	10.3	10.1	1.2	9.4		9.4		1.3	8.4	8.4	40.0
	1.3	10.2	1.1		10.5	10.4	9.9	1.1	9.5	9.5		1.2	8.5	8.5			
	1.2	10.3	1.4		10.5	10.5	12.8	1.5	10.6	10.6		1.3	8.5	8.5			
8/2			1.5			11.0	11.0	10.1	1.3	9.4		9.4		1.4	8.4	8.1	40.0
	1.3	10.2	1.6		10.9	10.9	9.6	1.3	9.1	9.1		1.3	8.5	8.5			
	1.5	10.1	1.5		11.0	11.0	10.2	1.6	8.6	8.6		1.3	8.4	8.3			
8/3			1.3			11.5	11.5	9.6	1.3	9.1		9.1		1.3	8.4	8.4	39.9
	1.3	10.1	1.4		11.0	11.0	9.8	1.4	8.8	8.8		1.3	8.4	8.4			
	1.3	10.2	1.6		9.2	9.2	10.7	1.6	8.8	8.9		1.4	8.3	8.2			
8/4			1.7		11.0	11.0	11.3	1.7	8.9	8.9		1.5	8.3	8.3	40.0		
	1.4	10.2	1.4	11.9	12.0	11.6	1.5	9.3	9.3	1.5	8.3	8.4					
	1.4	10.2	1.4	11.8	11.9	11.7	1.5	9.4	9.4	1.4	8.2	8.3					
8/5			1.5		11.6	11.6	11.2	1.5	9.4	9.4		1.4	8.2	8.3	39.9		
	1.3	10.5	1.5	11.8	11.8	11.4	1.6	9.3	9.3	1.4	8.4	8.4					
	1.4	10.4	1.4	11.7	11.7	11.6	1.4	9.2	9.2	1.4	8.3	8.3					
AVG:	1.4	10.2	1.4	NO CRITERIA	10.9	10.9	10.9	1.4	9.3	9.3	NO CRITERIA	1.4	8.4	8.4	40.0		

Fishways are inspected twice daily plus one SCADA inspection.