

The Dalles Dam Fishway Status Report

7/29/2017

Inspection Period: 07/23/2017-07/29/2017

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	20	Temperature: 71.0 °F	Secchi: 4.4 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')	10.3			
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 callibrated 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')	12.1			
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria	0.0			
Entrance weir E2	0	depth (≥ 8')	13.7			
Entrance weir E3	0	depth (≥ 8')	13.7			
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')	9.7			
Entrance weir W2	0	depth (≥ 8')	9.7			
Entrance weir W3	0	depth (>8')	0.0	Closed		
South entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir S1	0	depth (≥ 8')	8.5			
Entrance weir S2	0	depth (≥ 8')	8.5			
JUVENILE PASSAGE						
Sluicgate operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'			
Spill volume/pattern	1		exercising spill gate 1			
Turbine Unit Priority	3	per FPP	MU maintenance suring sudden influx of waterflow			
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:

Lost HOBO® probe at north ladder entrance, suspect zip-tie gave out, another probe deployed

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.

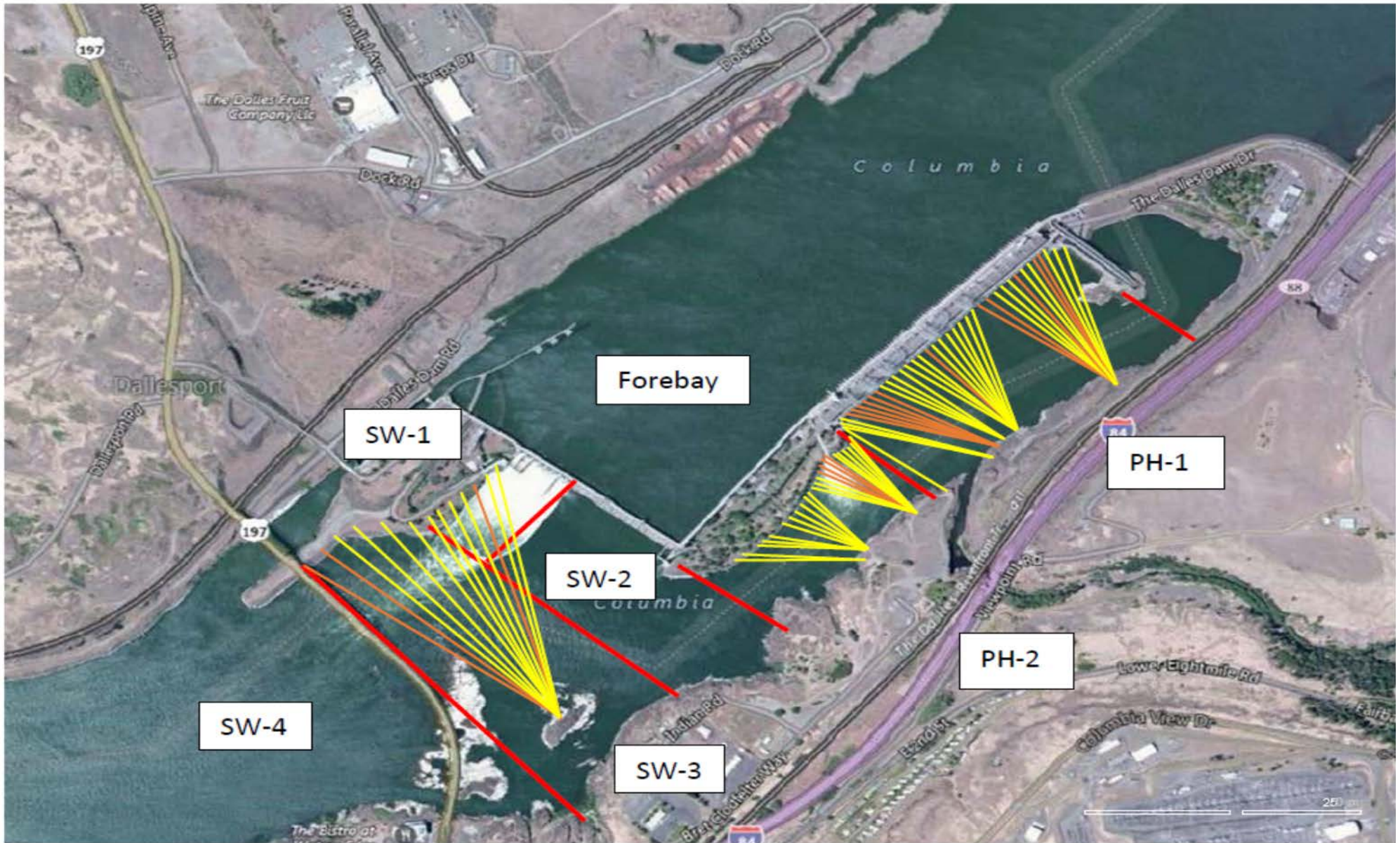
Transformer replacement - Install start May 2018.

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 (24 hr)	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			
7/23	PLM	AM	FB	0	29	5	36	0	0	0	0	0	0	0	0	70		
			PH1	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	
			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	28	72	0	0	0	0	0	0	0	0	0	0	0	100	
			SW4	9	0	0	0	0	0	0	0	0	0	9	0	0	18	
7/24	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	0	0	0	0	0	0	0	0	0	0	0		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		
7/25	GJF	AM	FB	0	14	4	48	0	0	0	0	0	0	0	0	66		
			PH1	0	1	2	0	0	0	0	0	0	0	0	0	3		
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW1	1	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		
			SW3	7	34	0	0	0	0	0	0	1	0	0	0	42		
			SW4	14	9	0	0	0	0	0	0	26	16	0	0	65		
7/26	JWR	PM	FB	0	9	0	43	0	0	0	0	0	0	0	0	52		
			PH1	0	0	0	11	0	0	0	0	0	0	0	0	11		
			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	7	30	0	0	0	0	0	0	0	0	0	0	37		
			SW4	0	0	0	0	0	0	0	0	1	18	0	0	19		
7/27	GJF	AM	FB	2	55	0	0	0	0	0	4	0	0	0	0	61		
			PH1	3	3	0	0	0	0	0	0	0	0	0	0	6		
			PH2	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	2		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	16	45	0	0	0	0	0	0	2	1	0	0	64		
			SW4	4	5	0	0	0	0	0	0	15	14	0	0	38		
7/28	GJF	PM	FB	0	21	2	18	0	0	1	0	0	0	0	0	42		
			PH1	0	1	1	3	0	0	0	0	0	0	0	0	5		
			PH2	2	0	2	0	0	0	0	0	0	0	0	0	4		
			SW1	1	0	0	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	1	2	0	0	0	0	0	0	0	0	3		
			SW3	7	6	0	0	0	0	0	0	0	1	0	0	14		
			SW4	14	9	0	0	0	0	0	0	16	7	0	0	46		
7/29	GJF	AM	FB	0	5	0	35	0	0	0	0	0	0	0	0	40		
			PH1	0	0	1	9	0	0	0	0	0	0	0	0	10		
			PH2	0	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	7	38	0	0	0	0	0	0	1	2	0	0	48		
			SW4	3	7	0	0	0	0	0	0	34	17	0	0	61		

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

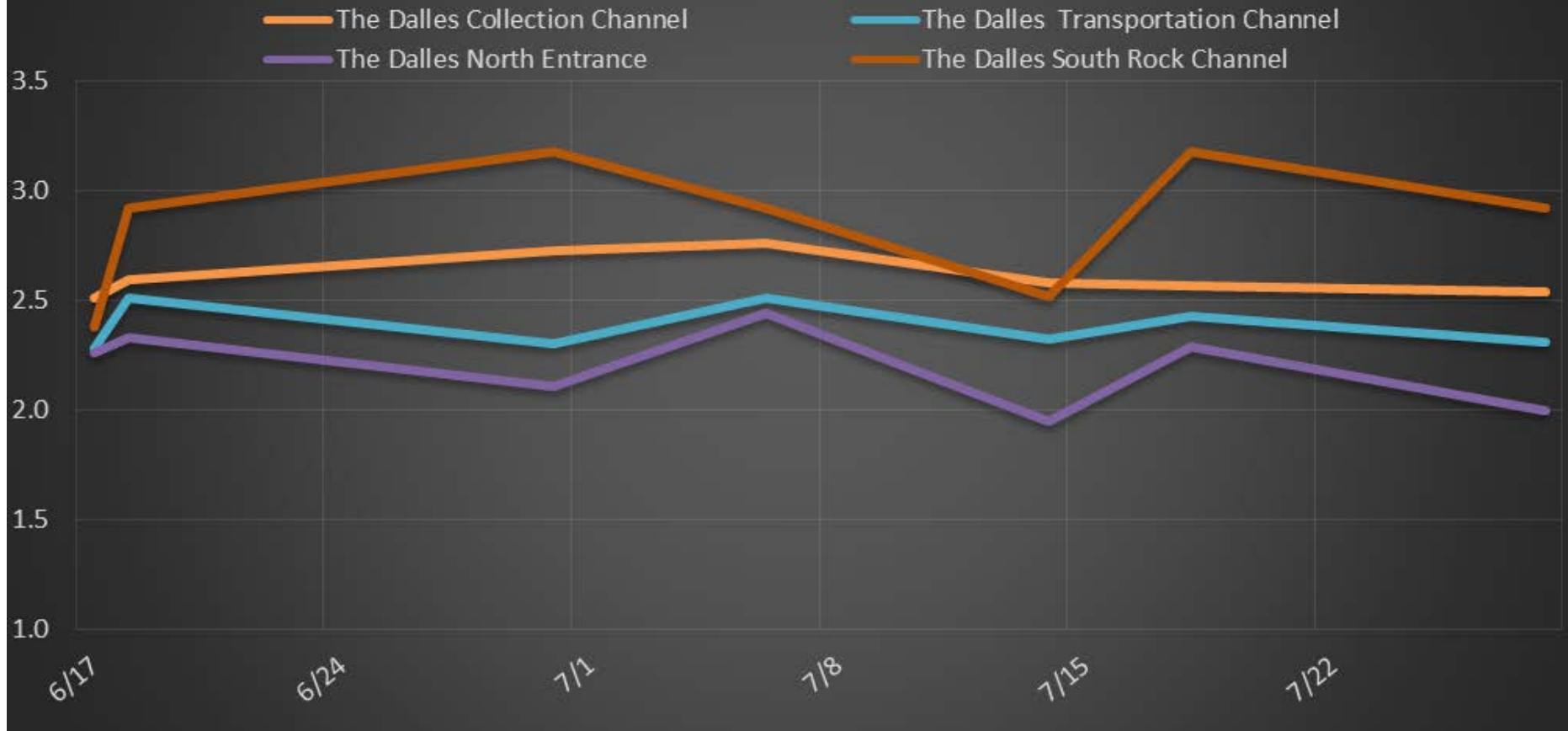
The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/23	343	282	61	162	74	88	0	0	0	48	0	0	132
7/24	289	242	47	230	86	144	0	0	0	44	0	0	304
7/25	243	191	52	106	58	48	0	0	0	29	0	0	94
7/26	209	168	41	160	65	95	0	0	0	28	0	0	90
7/27	248	211	37	141	80	61	0	0	0	19	0	0	126
7/28	186	158	28	154	50	104	0	0	0	26	0	0	175
7/29	344	294	50	280	114	166	0	0	0	11	0	0	144
total	1862	1546	316	1233	527	706	0	0	0	205	0	0	1065

The Dalles North

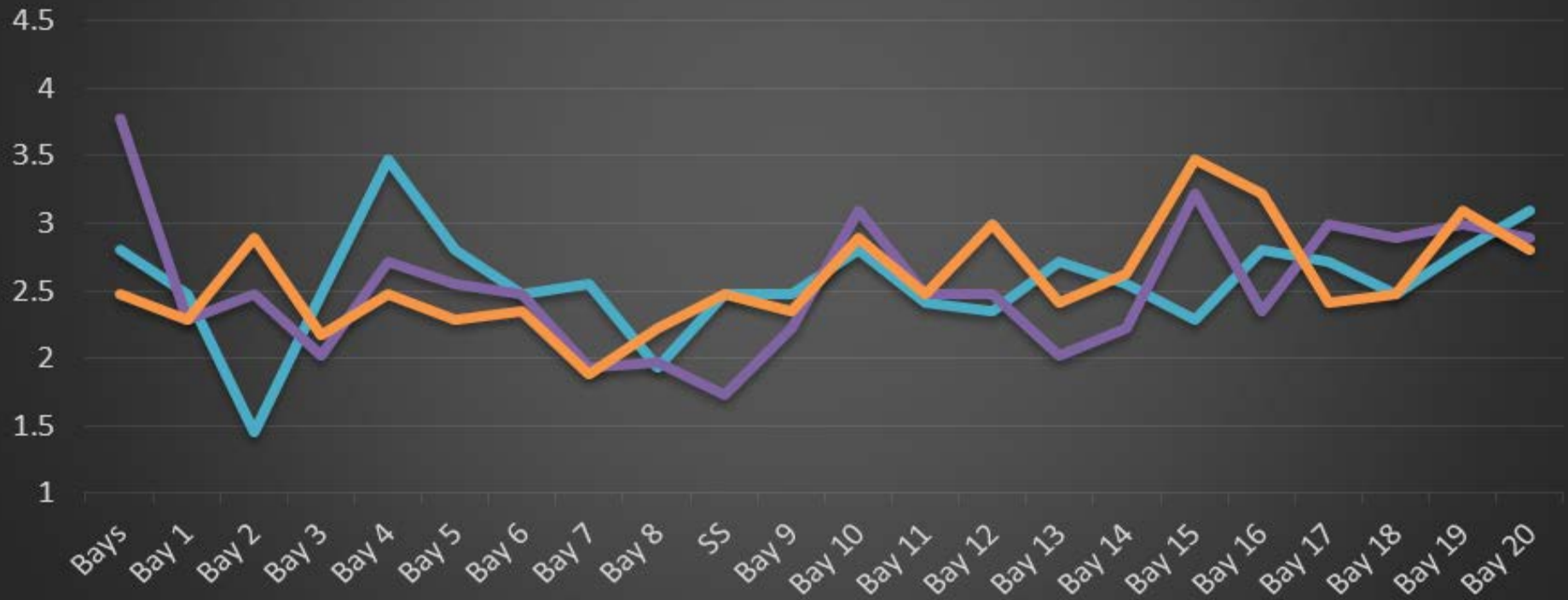
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/23	241	211	30	120	42	78	0	0	0	58	0	0	205
7/24	141	125	16	86	31	55	0	0	0	35	0	0	66
7/25	115	107	8	65	22	43	0	0	0	28	0	0	214
7/26	120	103	17	67	24	43	0	0	0	37	0	0	80
7/27	116	94	22	49	19	30	0	0	0	24	0	0	172
7/28	101	85	16	82	28	54	0	0	0	20	0	0	106
7/29	97	86	11	89	30	59	0	0	0	14	0	0	157
total	931	811	120	558	196	362	0	0	0	216	0	0	1000
% North	33.3	34.4	27.5	31.2	27.1	33.9	0.0	0.0	0.0	51.3	0.0	0.0	48.4

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

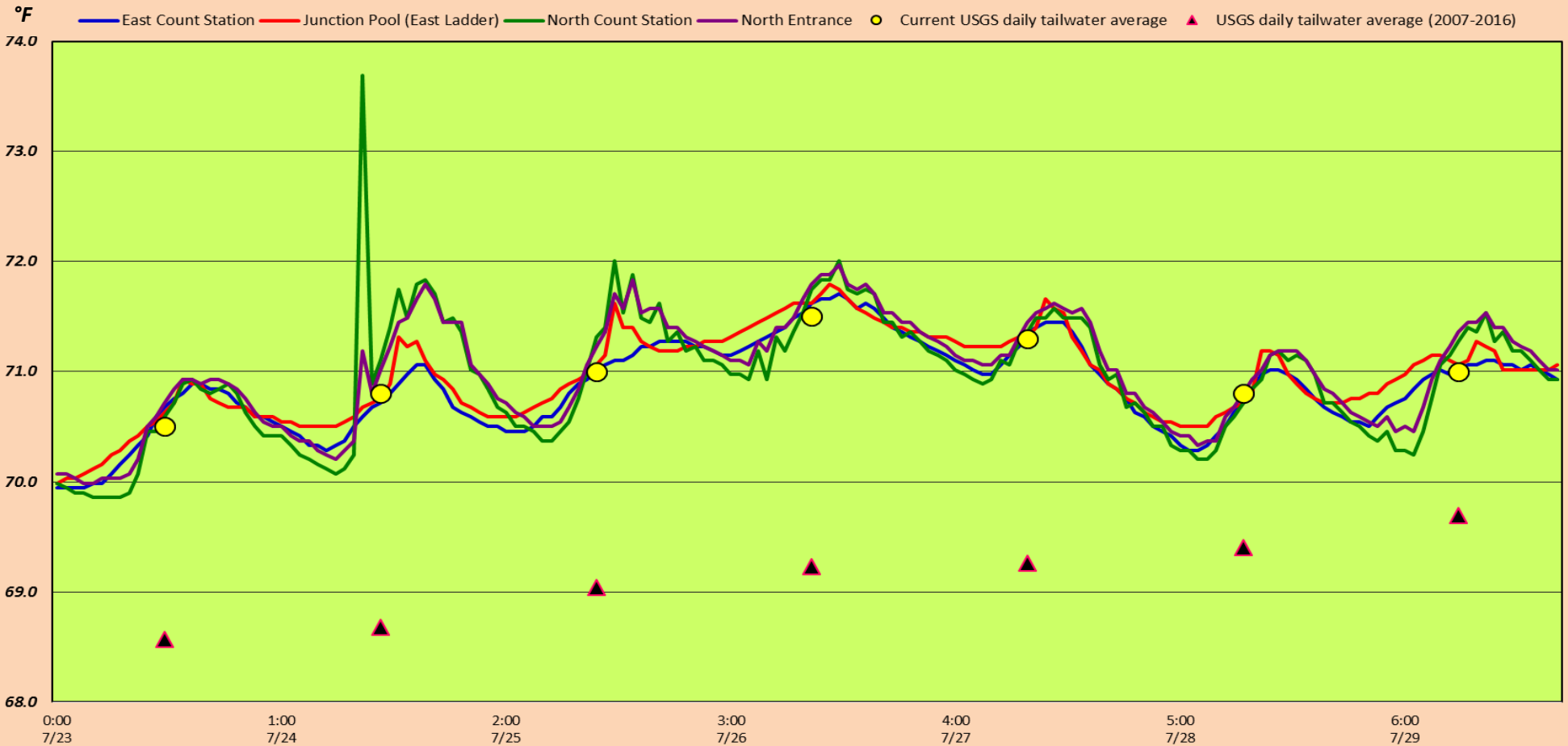


The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

18-Jul 28-Jul 14-Jul



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



Secchi:		USGS: Temperatures
5.0	Sun	70.5
4.5	Mon	70.8
4.0	Tue	71.0
4.0	Wed	71.5
4.0	Thurs	71.3
4.0	Fri	70.8
5.0	Sat	71.0
4.4	AVG	71.0

http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201707_lcdl.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		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	
7/23	1.2	10.3	1.4		65.8	65.8	11.8	1.3	10.1	10.1		1.4	8.5	8.6	40.0
	1.3	10.3	1.4		12.1	12.0	11.9	1.4	9.9	9.9		1.4	8.5	8.4	
7/24			1.5		12.1	12.0	11.4	1.3	10.2	10.2		1.3	8.6	8.6	40.0
	1.2	10.4	1.5		12.1	12.1	11.5	1.4	9.5	9.5		1.4	8.5	8.5	
	1.0	10.4	1.5		12.0	12.0	11.8	1.3	11.5	11.5		1.4	8.4	8.4	
7/25			1.5		11.9	11.9	11.4	1.4	9.5	9.5		1.4	8.4	8.5	40.0
	1.3	10.3	1.0		11.8	12.0	11.4	1.2	9.5	9.5		1.2	8.6	8.6	
7/26			1.6		10.0	10.0	12.1	1.6	9.0	9.0		1.5	8.4	8.4	39.7
	1.3	10.2	1.9		9.7	9.7	13.9	1.6	9.7	9.6		1.5	8.4	8.4	
7/27			1.6		9.7	9.7	13.0	1.6	9.7	9.7		1.4	8.5	8.5	39.9
			1.5		10.4	10.5	12.2	1.5	9.6	9.6		1.4	8.5	8.4	
	1.3	10.3	1.5		10.6	10.4	12.4	1.5	9.6	9.6		1.4	8.6	8.5	
7/28			1.5		10.4	10.5	12.0	1.4	9.6	9.5		1.4	8.4	8.4	39.8
			1.4		10.5	10.4	10.8	1.3	9.5	9.5		1.2	8.7	8.7	
	1.2	10.3	1.5		10.6	10.6	11.8	1.4	9.6	9.6	1.4	8.5	8.5		
7/29			1.6		10.5	10.5	13.2	1.6	9.6	9.6	1.4	8.5	8.5	39.9	
			1.5		10.5	10.5	12.7	1.5	9.5	9.5	1.4	8.5	8.6		
	1.3	10.3	1.8		10.5	10.5	13.1	1.6	9.4	9.4	1.2	8.7	8.1		
AVG:	1.3	10.3	1.5		13.7	13.7	12.1	1.4	9.7	9.7		1.4	8.5	8.5	39.9

Fishways are inspected twice daily plus one SCADA inspection.