

The Dalles Dam Fishway Status Report

7/9/2017

Inspection Period: 07/02/2017-07/08/2017

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: 21	Temperature: 66.8 °F
			Comments	Secchi: 4.0 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')	10.5	
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')	12.2	
East entrance differential	0	1.0' - 2.0'	1.3	
Entrance weir E1	0	No criteria	0.0	
Entrance weir E2	0	depth (≥ 8')	12.5	
Entrance weir E3	0	depth (≥ 8')	12.5	
Collection channel velocity	0	1.5 - 4 fps	2.76	
Transportation channel velocity	0	1.5 - 4 fps	2.51	
North channel velocity	0	1.5 - 4 fps	2.44	
South channel velocity	0	1.5 - 4 fps	2.92	
West entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir W1	0	depth (≥ 8')	9.8	
Entrance weir W2	0	depth (≥ 8')	9.8	
Entrance weir W3	0	depth (>8')	0.0	Closed
South entrance differential	0	1.0' - 2.0'	1.4	High TW causing transfer of south channal water to west entrance via bypass
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	0			
Turbine Unit Priority	2	per FPP	MU 1, 12, 15, 16, out of service	
Turbine 1% Efficiency	0	per FPP	FERC annual MU exercise	

OTHER ISSUES:

Birds/Sea lions:

Sea lion spotted in front of The Dalles Marina and intermittently by avian hazers. With spill below 100 kcfs, heavier predation by seagulls and pelicans

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 2, 8 and 18)

Current Outages;

MU1 out for 5 year overhaul. Return 7/14/17.

MU12 out for hydraulic diagnosis and overhaul. Return 7/5/17.

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

MU22 out for annual maintenance. Return 7/6/17.

Maintenance;

East exit weir electrical panel FCQ7 partially installed. Engineering design completion underway.

PUD crane rake repainting awaiting lead test confirmation before starting.

Rebuilding spare entrance weir gearbox.

Removal of unused redundant junction pool weirs and fish lock weir gearboxes to start soon.

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.

Designing sturgeon tank modifications 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:

Pikeminnow dam angling - 172 removed this week, 728 through 7/2. All from west powerhouse tailrace.

AWS construction - All work complete for season 1. Planning for season 2 schedule and commissioning procedures.

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 - Intake deck rail removal complete. Lower west powerhouse asphalt expected end of July (FPOM approved).

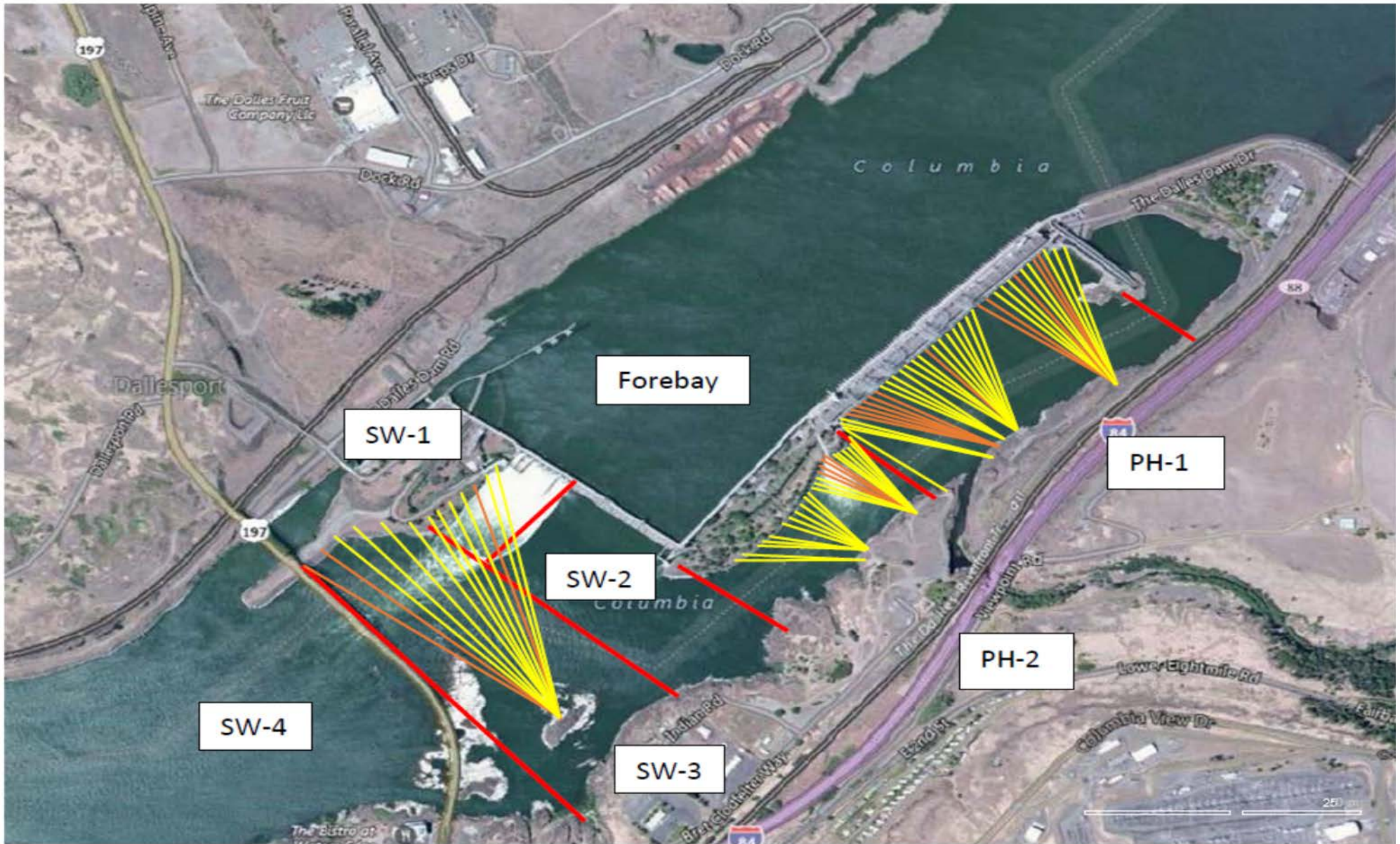
Fish unit breaker replace.- Manufacture this summer and install fall 2017. Switchover Jan 2018.

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



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		
7/2	GJF	PM	FB	0	0	1	14	0	0	0	0	0	0	0	0	15	
			PH1	0	0	5	11	0	0	0	0	5	3	0	0	24	
			PH2	10	0	2	0	0	0	0	0	0	0	0	0	12	
			SW1	3	0	0	0	0	0	0	0	0	0	0	0	3	
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	59	0	1	0	0	0	0	0	11	0	0	0	71	
			SW4	41	0	0	0	0	0	0	0	37	0	0	0	78	
7/3	GJF	AM	FB	0	0	1	19	0	0	0	0	0	0	0	0	20	
			PH1	1	1	4	8	0	0	0	0	7	5	0	0	26	
			PH2	8	0	0	0	0	0	0	0	0	0	0	0	8	
			SW1	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW2	0	0	1	0	0	0	0	0	1	0	0	0	2	
			SW3	41	34	0	0	0	0	0	0	14	0	0	0	89	
			SW4	24	0	0	0	0	0	0	0	35	0	0	0	59	
7/4		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	
7/5	GJF	AM	FB	0	0	0	27	0	0	0	0	0	0	0	0	27	
			PH1	0	0	5	4	0	0	0	0	4	5	0	0	18	
			PH2	14	0	0	0	0	0	0	0	0	0	0	0	14	
			SW1	2	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	1	
			SW3	54	88	0	0	0	0	0	0	0	0	0	0	142	
			SW4	19	7	0	9	0	0	0	0	42	7	0	0	84	
7/6	GJF	PM	FB	0	0	1	7	0	0	0	0	0	0	0	0	8	
			PH1	0	0	3	3	0	0	0	0	0	0	0	0	6	
			PH2	1	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	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	5	0	0	0	0	0	0	0	7	0	0	0	12	
			SW4	14	0	0	0	0	0	0	0	3	0	0	0	17	
7/7	JWR	AM	FB	1	0	0	85	0	0	0	0	0	0	0	0	86	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	1	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	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	23	68	0	0	0	0	0	0	11	0	0	0	102	
			SW4	10	0	0	0	0	0	0	0	52	22	0	0	84	
7/8	JWR	PM	FB	0	35	0	52	0	0	0	0	0	0	0	0	87	
			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	15	266	0	0	0	0	0	0	0	0	0	0	281	
			SW4	34	0	0	0	0	0	0	0	43	27	0	0	104	

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
7/2	1629	1414	215	34	20	14	0	0	0	2030	0	0	544
7/3	1309	1188	121	12	6	6	0	0	0	1214	0	0	762
7/4	1019	918	101	18	6	12	0	0	0	956	0	0	706
7/5	1124	1015	109	44	14	30	0	0	0	1151	0	0	490
7/6	1204	1096	108	31	13	18	0	0	0	952	0	0	872
7/7	1202	1056	146	48	14	34	0	0	0	977	0	0	341
7/8	928	828	100	54	20	34	0	0	0	815	0	0	575
total	8415	7515	900	241	93	148	0	0	0	8095	0	0	4290

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
7/2	348	329	19	7	2	5	0	0	0	349	0	0	48
7/3	399	359	40	8	6	2	0	0	0	630	0	0	407
7/4	257	252	5	12	5	7	0	0	0	418	0	0	226
7/5	341	316	25	7	0	7	0	0	0	768	0	0	341
7/6	393	380	13	9	1	8	0	0	0	938	0	0	254
7/7	302	276	26	12	1	11	0	0	0	403	0	0	270
7/8	373	319	54	14	8	6	0	0	0	374	0	0	280
total	2413	2231	182	69	23	46	0	0	0	3880	0	0	1826
% North	22.3	22.9	16.8	22.3	19.8	23.7	0.0	0.0	0.0	32.4	0.0	0.0	29.9

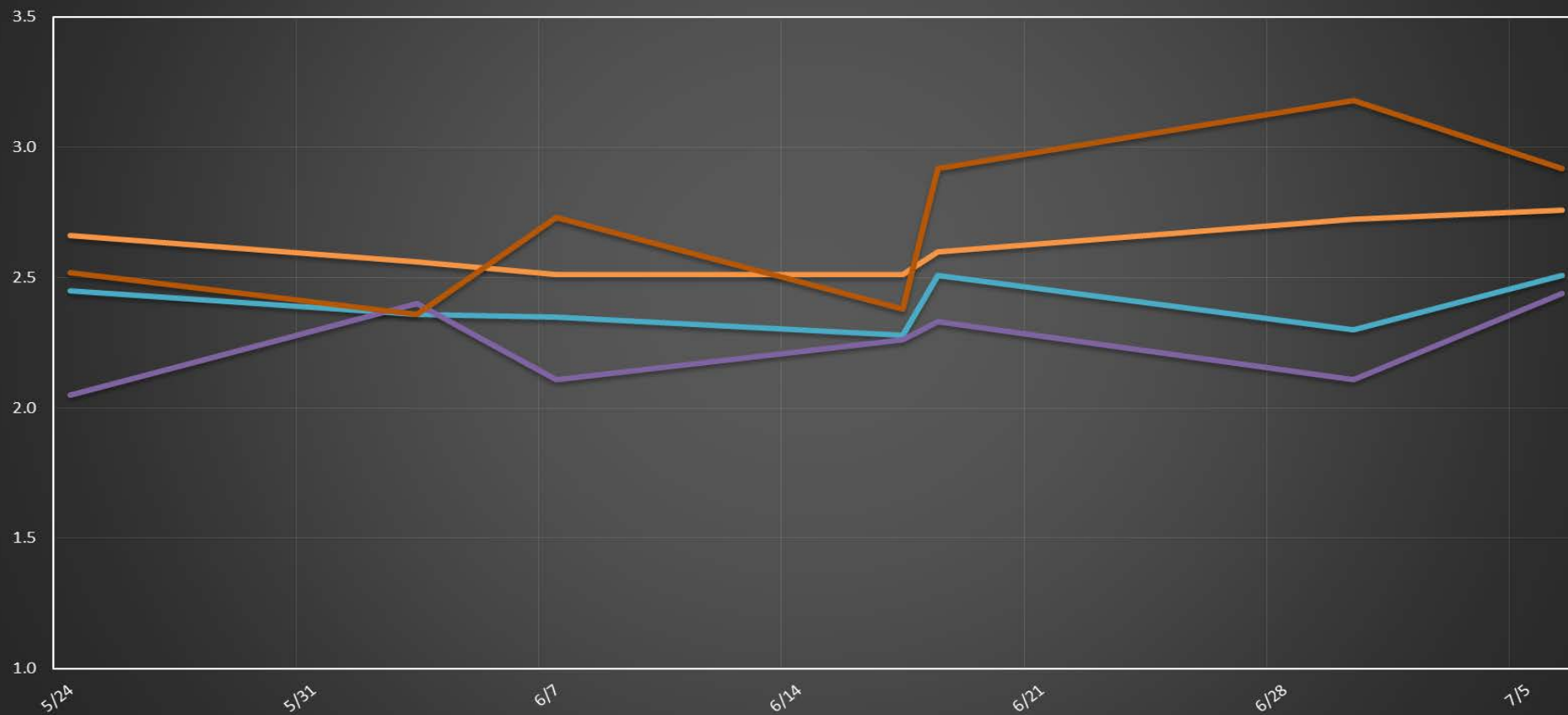
The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

30-Jun 6-Jul 18-Jun

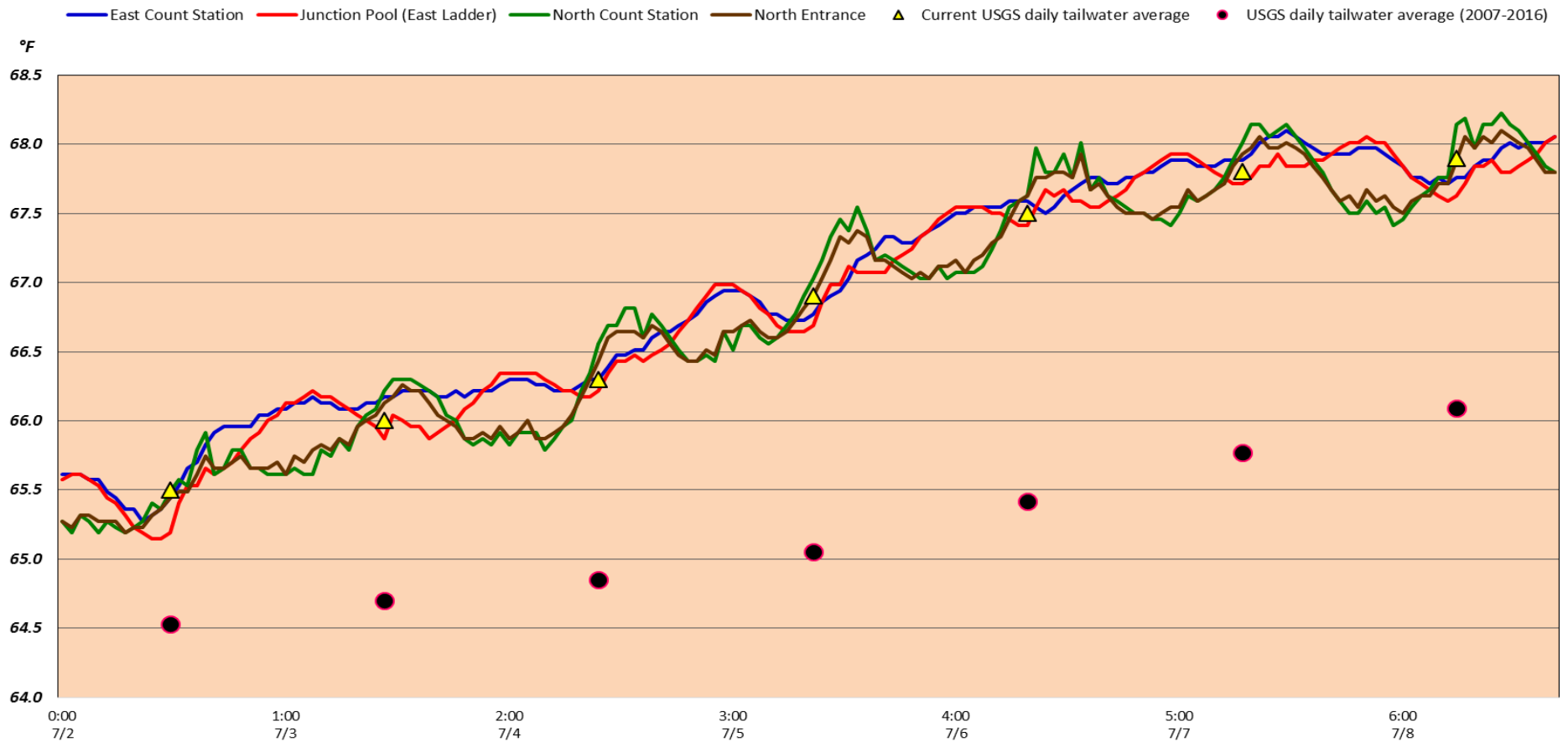


The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)

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



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



Secchi:		USGS: Temperatures
4.0	Sun	65.5
4.0	Mon	66.0
4.5	Tue	66.3
4.0	Wed	66.9
4.0	Thurs	67.5
4.0	Fri	67.8
3.5	Sat	67.9
4.0	AVG	66.8

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	
7/2			1.7	0.0	12.7	11.6	13.2	1.6	9.8	9.8		1.6	8.6	8.6	40.2
	1.3	10.4	1.2	0.0	12.8	12.7	13.0	1.4	9.7	9.8		1.5	8.6	8.5	
	1.3	10.7	1.2	0.0	12.9	12.8	12.9	1.4	9.9	9.8		1.4	8.7	8.6	
7/3			1.2	0.0	12.9	12.8	12.4	1.3	9.8	9.8		1.4	8.6	8.5	40.1
	1.3	10.2	1.3	0.0	12.9	12.8	12.0	1.4	9.9	9.8		1.4	8.5	8.4	
	1.3	10.7	1.3	0.0	12.9	12.9	12.7	1.4	9.9	9.9		1.4	8.7	8.6	
7/4			1.5	0.0	11.9	11.9	11.5	1.5	9.3	9.2		1.5	8.6	8.4	40.2
	1.4	10.6	1.3	0.0	12.9	12.9	12.6	1.5	9.7	9.7		1.4	8.6	8.5	
	1.2	10.7	1.0	0.0	13.8	13.7	12.2	1.3	11.0	11.0		1.4	8.6	8.5	
7/5			1.3	0.0	12.7	12.7	12.7	1.5	9.9	9.9		1.5	8.6	8.5	40.1
	1.3	10.6	1.2	0.0	12.8	12.8	12.0	1.3	9.7	9.7		1.4	8.5	8.4	
	1.4	10.4	1.3	0.0	12.8	12.7	12.3	1.3	9.8	9.8		1.4	8.5	8.4	
7/6			1.1	0.0	12.9	12.7	11.0	1.3	9.9	9.9		1.3	8.6	8.4	40.2
	1.4	10.4	1.3	0.0	12.8	12.8	12.2	1.3	9.8	9.8		1.4	8.5	8.4	
	1.4	10.7	1.5	0.0	11.9	11.9	11.3	1.5	9.2	9.2		1.4	8.7	8.5	
7/7			1.4	0.0	12.1	12.1	12.2	1.6	9.4	9.4		1.4	8.6	8.6	39.9
	1.3	10.3	1.5	0.0	12.0	12.0	11.9	1.6	9.2	9.2		1.5	8.5	8.5	
	1.5	10.2	1.5	0.0	11.9	12.2	13.1	1.7	9.6	9.6		1.6	8.3	8.5	
7/8			1.5	0.0	11.9	12.1	12.2	1.5	9.9	9.9		1.5	8.5	8.6	40.4
			1.4	0.0	11.9	12.2	12.0	1.5	9.8	9.8		1.5	8.3	8.7	
	1.4	10.3	1.5	0.0	11.9	12.2	11.8	1.3	9.9	9.9		1.4	8.3	8.7	
AVG:	1.3	10.5	1.3	0.0	12.5	12.5	12.2	1.4	9.8	9.8		1.4	8.5	8.5	40.2

Fishways are inspected twice daily plus one SCADA inspection.