

The Dalles Dam Fishway Status Report

7/15/2017

Inspection Period: 07/09/2017-07/15/2017

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: Secchi:	68.8 °F 4.6 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')	10.3			
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')	12.5			
East entrance differential	0	1.0' - 2.0'	1.6			
Entrance weir E1	0	No criteria	0.1			
Entrance weir E2	0	depth (≥ 8')	12.0			
Entrance weir E3	0	depth (≥ 8')	17.2			
Collection channel velocity	0	1.5 - 4 fps	2.58			
Transportation channel velocity	0	1.5 - 4 fps	2.32			
North channel velocity	0	1.5 - 4 fps	1.95			
South channel velocity	0	1.5 - 4 fps	2.52			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	10.0			
Entrance weir W2	0	depth (≥ 8')	10.0			
Entrance weir W3	0	depth (>8')	0.0	Closed		
South entrance differential	0	1.0' - 2.0'	1.5			
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	0	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 intermittantly 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 in progress before further installation.

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 7/17.

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:

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

Pikeminnow dam angling - 134 removed this week, 1011 through 7/16. 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)

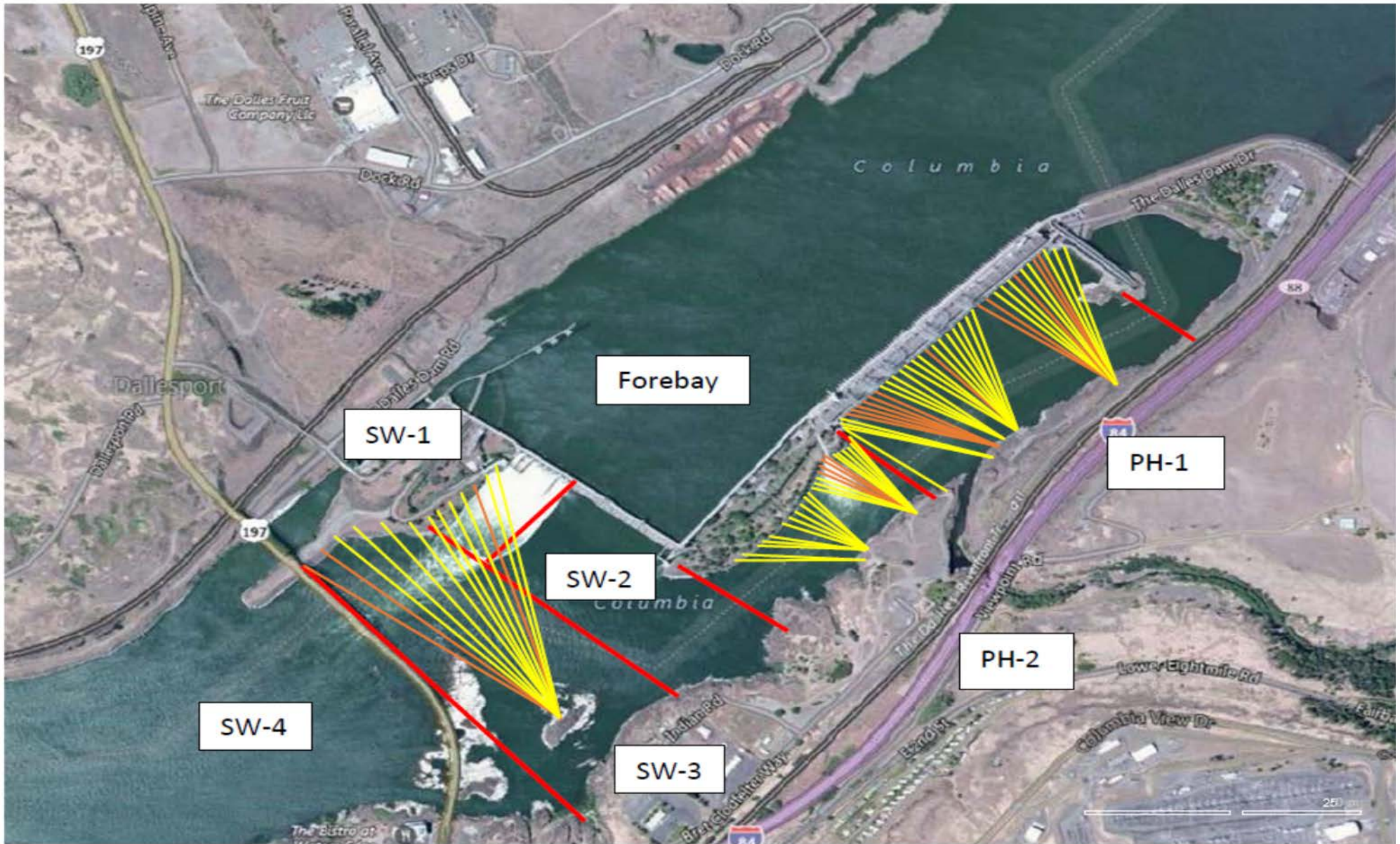
Fish unit breaker replace. - Manufacture this summer and install fall 2017. Switchover Jan 2018.

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



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			
7/9	JWR	AM	FB	4	13	3	58	0	0	0	0	0	0	0	0	78		
			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	40	342	1	0	0	0	0	0	0	0	0	0	0	383	
			SW4	26	0	0	0	0	0	0	0	0	31	58	0	0	115	
7/10	Trisha	PM	FB	0	4	0	43	0	0	0	0	0	0	0	0	47		
			PH1	0	0	0	19	0	0	0	0	0	0	0	0	19		
			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	17	80	0	0	0	0	0	0	0	0	0	0	0	97	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7/11	GJF	AM	FB	0	0	0	37	0	0	0	0	0	0	0	0	37		
			PH1	0	1	5	4	0	0	0	0	0	2	0	0	12		
			PH2	2	0	2	0	0	0	0	0	0	0	0	0	4		
			SW1	3	0	0	0	0	0	0	0	0	0	0	0	3		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	20	102	0	0	0	0	0	0	7	1	0	0	130		
			SW4	14	0	0	0	0	0	0	0	0	0	0	0	14		
7/12	GJF	PM	FB	0	0	0	21	0	0	0	0	0	0	0	21			
			PH1	0	1	2	7	0	0	0	0	0	1	0	0	11		
			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	13	84	0	0	0	0	0	0	5	4	0	0	106		
			SW4	7	0	0	0	0	0	0	0	0	0	0	0	7		
7/13	GJF	AM	FB	0	0	2	16	0	0	0	0	0	0	0	18			
			PH1	0	1	4	5	0	0	0	0	1	1	0	0	12		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW1	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW3	74	87	0	0	0	0	0	0	5	0	0	0	166		
			SW4	35	0	0	0	0	0	0	0	3	0	0	0	38		
7/14	GJF	PM	FB	0	0	0	9	0	0	0	0	0	0	0	9			
			PH1	0	1	7	5	0	0	0	0	0	1	0	0	14		
			PH2	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW1	4	0	0	0	0	0	0	0	0	0	0	0	4		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW3	64	101	0	0	0	0	0	0	2	0	0	0	167		
			SW4	14	0	0	0	0	0	0	0	7	0	0	0	21		
7/15	GJF	AM	FB	0	1	2	22	0	0	0	0	0	0	0	25			
			PH1	1	0	4	7	0	0	0	0	0	0	0	0	12		
			PH2	7	0	1	0	0	0	0	0	0	0	0	0	8		
			SW1	5	0	0	0	0	0	0	0	0	0	0	0	5		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1		
			SW3	41	122	0	4	0	0	0	0	2	0	0	0	169		
			SW4	13	0	0	0	0	0	0	0	4	0	0	0	17		

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
7/9	1163	1019	144	69	38	31	0	0	0	782	0	0	457
7/10	977	857	120	81	28	53	0	0	0	437	0	0	1456
7/11	866	730	136	103	47	56	0	0	0	480	0	0	584
7/12	636	553	83	78	30	48	0	0	0	562	0	0	494
7/13	492	402	90	82	38	44	0	0	0	344	0	0	445
7/14	561	460	101	84	40	44	0	0	0	462	0	0	563
7/15	375	305	70	102	42	60	0	0	0	174	0	0	4441
total	5070	4326	744	599	263	336	0	0	0	3241	0	0	8440

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
7/9	326	307	19	13	7	6	0	0	0	497	0	0	245
7/10	292	262	30	27	14	13	0	0	0	529	0	0	84
7/11	143	133	10	13	6	7	0	0	0	205	0	0	187
7/12	246	214	32	29	13	16	0	0	0	344	0	0	196
7/13	98	90	8	23	10	13	0	0	0	143	0	0	316
7/14	146	132	14	29	4	25	0	0	0	145	0	0	378
7/15	144	124	20	34	12	22	0	0	0	224	0	0	1723
total	1395	1262	133	168	66	102	0	0	0	2087	0	0	3129
% North	21.6	22.6	15.2	21.9	20.1	23.3	0.0	0.0	0.0	39.2	0.0	0.0	27.0

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



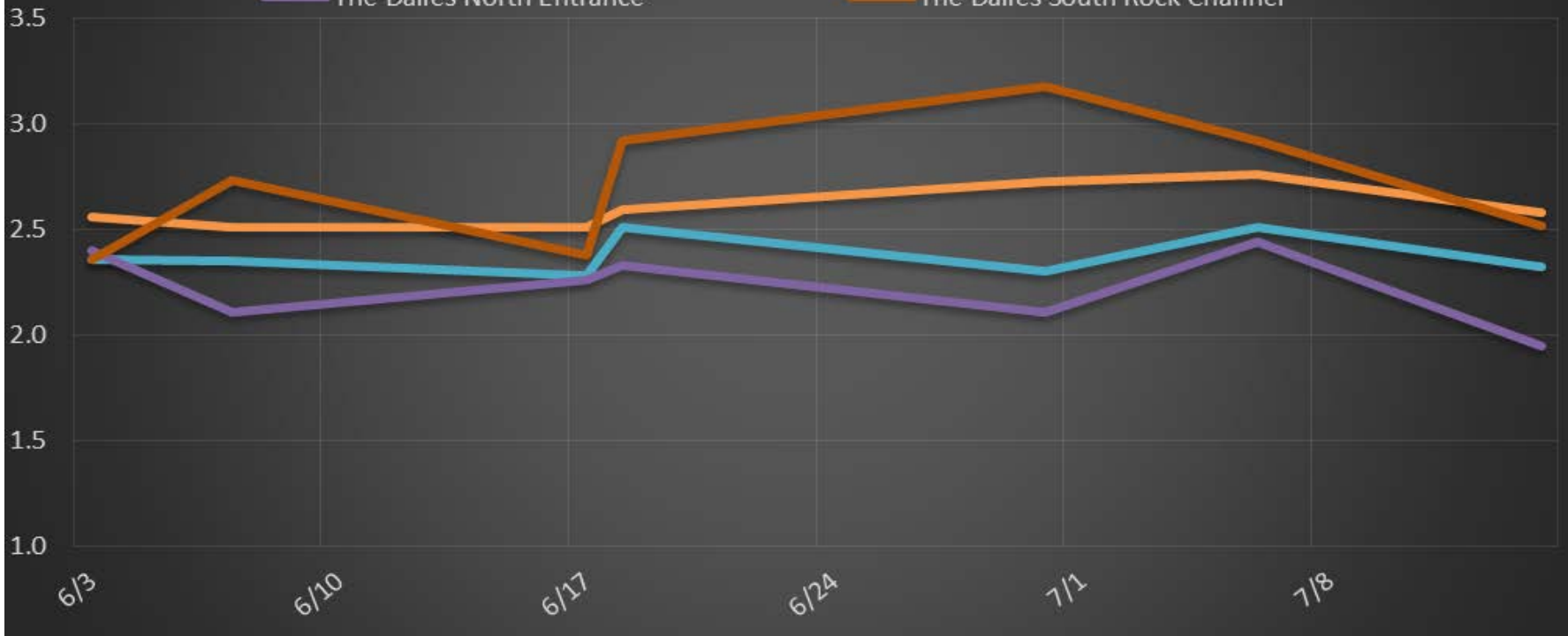
The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)

The Dalles Collection Channel

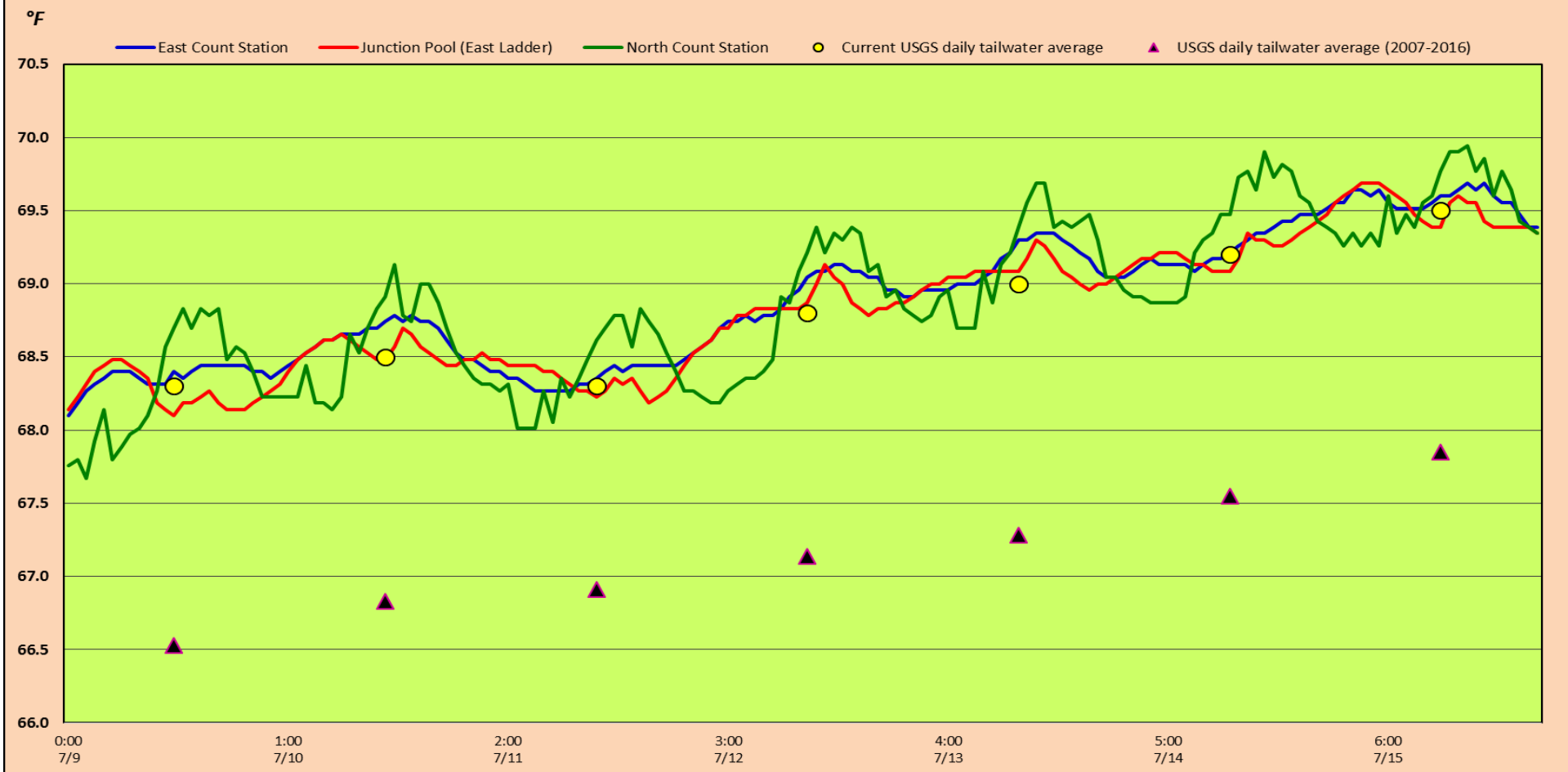
The Dalles Transportation Channel

The Dalles North Entrance

The Dalles South Rock Channel



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



Secchi:		USGS: http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201707_lcdl.htm	Temperatures
7/9	3.5	Sun	68.3
7/10	4.0	Mon	68.5
7/11	5.0	Tue	68.3
7/12	5.0	Wed	68.8
7/13	4.5	Thurs	69.0
7/14	5.0	Fri	69.2
7/15	5.0	Sat	69.5
	4.6	AVG	68.8

**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	
7/9			1.6	0.0	11.9	11.9	12.8	1.6	9.2	9.2		1.5	8.5	8.5	39.7
	1.4	10.3	1.5	0.0	12.0	12.0	13.0	1.5	10.0	10.0		1.5	8.5	8.5	
	1.4	10.2	1.5	0.0	12.0	12.0	13.0	1.5	10.0	10.0		1.5	8.4	8.4	
7/10			1.3	0.0	12.4	12.4	12.9	1.5	10.1	10.1		1.5	8.5	8.5	40.0
	1.4	10.3	1.7	0.0	12.0	12.0	12.2	1.3	10.0	10.0		1.5	8.5	8.5	
	1.4	10.3	1.7	0.0	12.0	12.0	12.2	1.3	10.0	10.0		1.5	8.5	8.5	
7/11			1.6	0.0	12.2	12.0	11.6	1.4	10.0	10.0		1.2	8.7	8.6	39.9
	1.5	10.3	1.6	0.0	12.7	12.7	13.7	1.6	10.0	10.0		1.4	8.6	8.6	
	1.5	10.3	1.7	1.5	11.8	11.9	14.7	1.8	9.8	9.8		1.6	8.4	8.4	
7/12			1.5	0.0	12.0	12.0	11.9	1.3	10.1	10.1		1.4	8.6	8.6	40.2
	1.3	10.3	1.6	0.0	12.1	12.0	12.2	1.4	10.0	10.0		1.4	8.6	8.5	
	1.4	10.3	1.6	0.0	12.0	12.0	12.6	1.4	10.0	10.0		1.5	8.4	8.5	
7/13			1.5	0.0	11.9	11.9	11.3	1.3	9.9	9.9		1.5	8.5	8.5	40.1
	1.2	10.2	1.4	0.0	11.9	11.9	11.4	1.3	10.0	10.0		1.5	8.4	8.4	
			1.7	0.0	11.9	11.9	13.0	1.5	10.0	10.0		1.5	8.4	8.4	
7/14			1.7	0.0	12.0	12.0	12.4	1.4	10.1	10.1		1.4	9.6	9.7	39.9
	1.3	10.3	1.6	0.0	12.0	11.9	12.3	1.4	10.0	10.0		1.4	8.5	8.6	
	1.3	10.3	1.8	0.0	12.0	12.0	13.5	1.5	10.0	10.0		1.5	8.5	8.5	
7/15			1.5	0.0	12.0	11.9	12.4	1.5	10.0	10.0		1.5	8.4	8.5	40.1
	1.4	10.3	1.5	0.0	12.0	11.9	12.2	1.3	10.1	10.1		1.5	8.4	8.4	
	1.4	10.3	1.5	0.0	12.0	11.9	12.2	1.3	10.1	10.1		1.5	8.4	8.4	
AVG:	1.4	10.3	1.6	0.1	12.0	17.2	12.5	1.4	10.0	10.0		1.5	8.5	8.5	40.0

Fishways are inspected twice daily plus one SCADA inspection.