

The Dalles Dam Fishway Status Report

9/17/2017

Inspection Period: 09/10/2017-09/16/2017

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: 70.6 °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'	1.3			
Entrance weir N1	0	depth (≥ 8')	9.3			
Entrance weir N2	0	Closed				
PUD Intake differential	14	≤ 0.5'	0.6'	PUD rake crane being repainted. Intake raked with mobile crane.		
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	0.0	10.6			
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	11.6			
Entrance weir E3	0	depth (≥ 8')	11.6			
Collection channel velocity	0	1.5 - 4 fps	2.61			
Transportation channel velocity	0	1.5 - 4 fps	2.31			
North channel velocity	0	1.5 - 4 fps	2.40			
South channel velocity	0	1.5 - 4 fps	3.37			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.8			
Entrance weir W2	0	depth (≥ 8')	8.8			
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.3			
Entrance weir S2	0	depth (≥ 8')	8.3			
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		Spillway closed midnight Aug31			
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

No sea lions observed this week. No foraging gulls. Moderate cormorant numbers. No USDA hazing. Spillway avian line replacement 9/14.

Operations

North and east fishladders in full operation.

Spillway open 40% river flow for fish passage through spillgates 1-8 through 8/31.

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 may 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 and CADD drawings continues.

PUD crane rake repainting underway ~70% complete. Progress delayed due to wildfire smoke.

Rebuilding entrance weir and east exit weir spare gearboxes.

Designing fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection.

Crane pad installation underway for north ladder dewatering access.

W1 entrance weir sticking in guide. Still maintaining criteria depth. Maintenance notified.

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. All 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 - 4 removed this week, 1677 through 9/10. 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 9/8. Tailrace deck start Nov nights (FPOM approved)

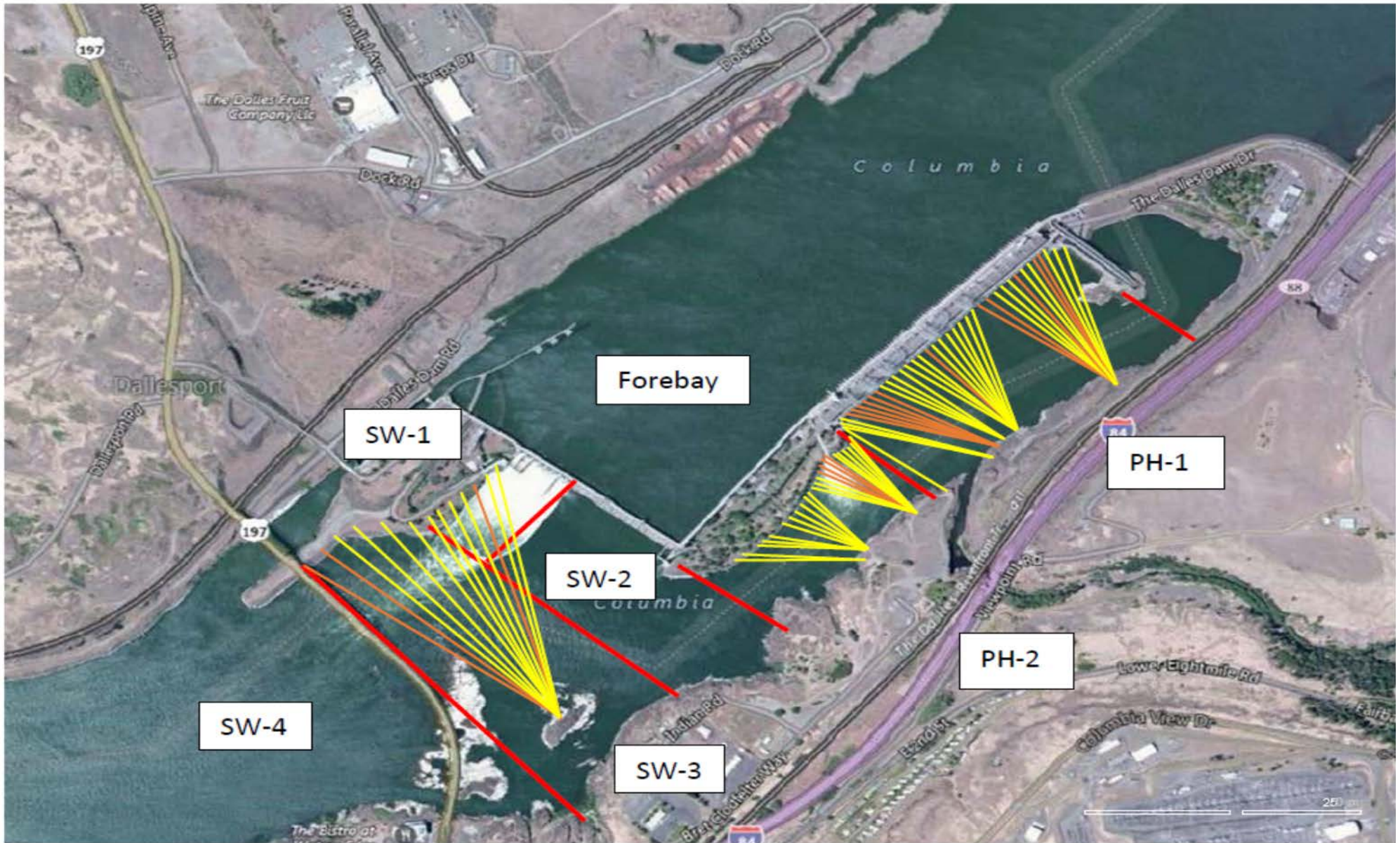
Fish unit breaker replace - Manufacture this summer and install fall 2017. Switchover Jan 2018.

Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022.

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						
9/10	GJF	PM	FB	0	10	3	19	0	0	0	0	0	0	0	0	32	COME				
			PH1	0	1	3	7	0	0	0	0	0	0	0	4	0		15			
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0		1			
			9/10	GJF	PM	SW1	0	0	1	0	0	0	0	0	0	0	0	0	1	COME	
						SW2	0	0	3	0	0	0	0	0	0	0	0	5	0		8
						SW3	1	2	0	30	0	0	0	0	0	0	0	0	0		33
						SW4	6	15	0	6	0	0	0	0	0	0	0	0	0		27
9/11	GJF	AM	FB	0	0	2	67	0	0	0	0	0	0	0	0	69	COME				
			PH1	0	0	2	2	0	0	0	0	0	0	0	6	0		10			
			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	0	5	0	14	0	0	0	0	0	0	0	0	0		19			
			SW4	0	0	0	2	0	0	0	0	0	0	0	0	0		2			
9/12	GJF	PM	FB	0	0	0	22	0	0	0	0	0	0	0	0	22					
			PH1	0	0	4	9	0	0	0	0	0	0	0	0	0		13			
			PH2	0	0	7	0	0	0	0	0	0	0	0	0	0		7			
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0		2			
			SW2	0	0	3	0	0	0	0	0	0	0	0	0	0		3			
			SW3	0	0	0	21	0	0	0	0	0	0	0	0	0		21			
			SW4	0	0	0	6	0	0	0	0	0	0	0	0	0		6			
9/13	JWR	AM	FB	0	0	0	35	0	0	0	0	0	0	0	0	35					
			PH1	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			
			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	0	0	0	32	0	0	0	0	0	0	0	0	0		32			
			SW4	0	0	0	5	0	0	0	0	0	0	0	0	0		5			
9/14	GJF	PM	FB	0	0	0	9	0	0	0	0	0	0	0	0	9					
			PH1	0	0	27	0	0	0	0	0	0	0	0	0	0		27			
			PH2	0	0	7	0	0	0	0	0	0	0	0	0	0		7			
			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	0	5	0	23	0	0	0	0	0	0	0	0	0		28			
			SW4	0	18	0	0	0	0	0	0	0	0	0	0	0		18			
9/15	JWR	AM	FB	0	0	2	46	0	0	0	0	0	0	0	0	48					
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		0			
			PH2	0	0	1	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	0	0	0	28	0	0	0	0	0	0	0	0	0		28			
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		0			
9/16	JWR	PM	FB	0	0	2	37	0	0	0	0	0	0	0	0	39					
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	0		6			
			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	0	0	0	18	0	0	0	0	0	0	0	0	0		18			
			SW4	0	0	0	9	0	0	0	0	0	0	0	0	0		9			

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
9/10	3418	3000	418	1309	1004	305	165	151	14	1	0	0	56
9/11	10244	9564	680	1984	1516	468	327	284	43	1	0	0	56
9/12	15104	13904	1200	1244	962	282	691	581	110	5	0	0	53
9/13	13174	11717	1457	2318	1852	466	922	790	132	0	0	1	62
9/14	9563	8303	1260	2435	1973	462	989	857	132	1	0	0	50
9/15	9691	8528	1163	3074	2428	646	1411	1286	125	2	0	0	108
9/16	11989	10999	990	3021	2336	685	1265	1156	109	0	0	0	88
total	73183	66015	7168	15385	12071	3314	5770	5105	665	10	0	1	473

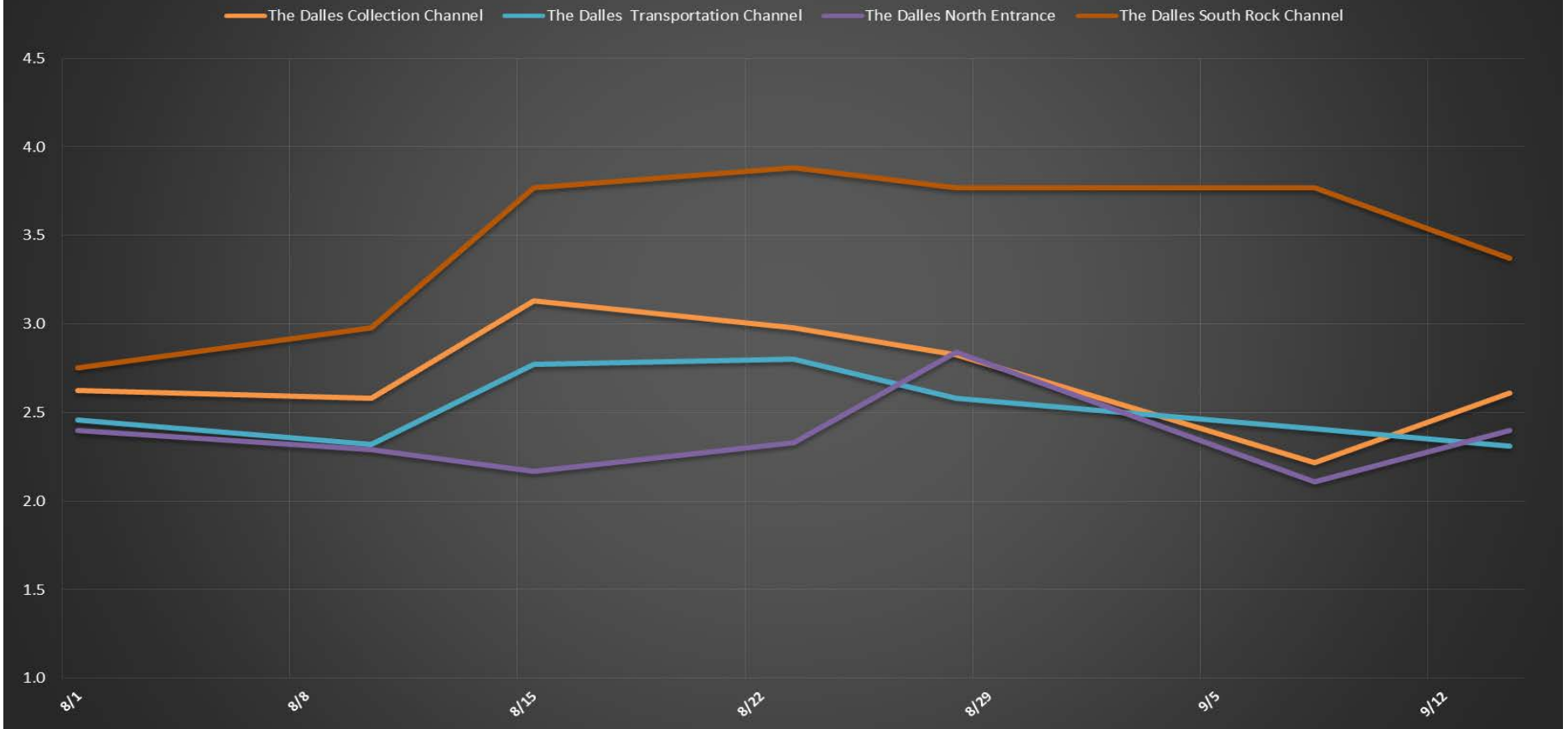
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/10	113	90	23	129	92	37	18	14	4	1	0	0	5
9/11	49	49	0	71	55	16	11	11	0	0	0	0	7
9/12	277	217	60	91	62	29	36	34	2	1	0	0	6
9/13	523	463	60	173	137	36	122	114	8	0	0	0	4
9/14	540	438	102	426	306	120	105	94	11	2	0	0	4
9/15	483	443	40	302	265	37	133	125	8	0	0	0	2
9/16	772	716	56	390	304	86	132	124	8	0	0	0	2
total	2757	2416	341	1582	1221	361	557	516	41	4	0	0	30
% North	3.6	3.5	4.5	9.3	9.2	9.8	8.8	9.2	5.8	28.6	0.0	0.0	6.0

Salmon http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=9&fr_cdd=3&to_cdm=9&to_cdd=9&subbtn=salmon&op=sdaily

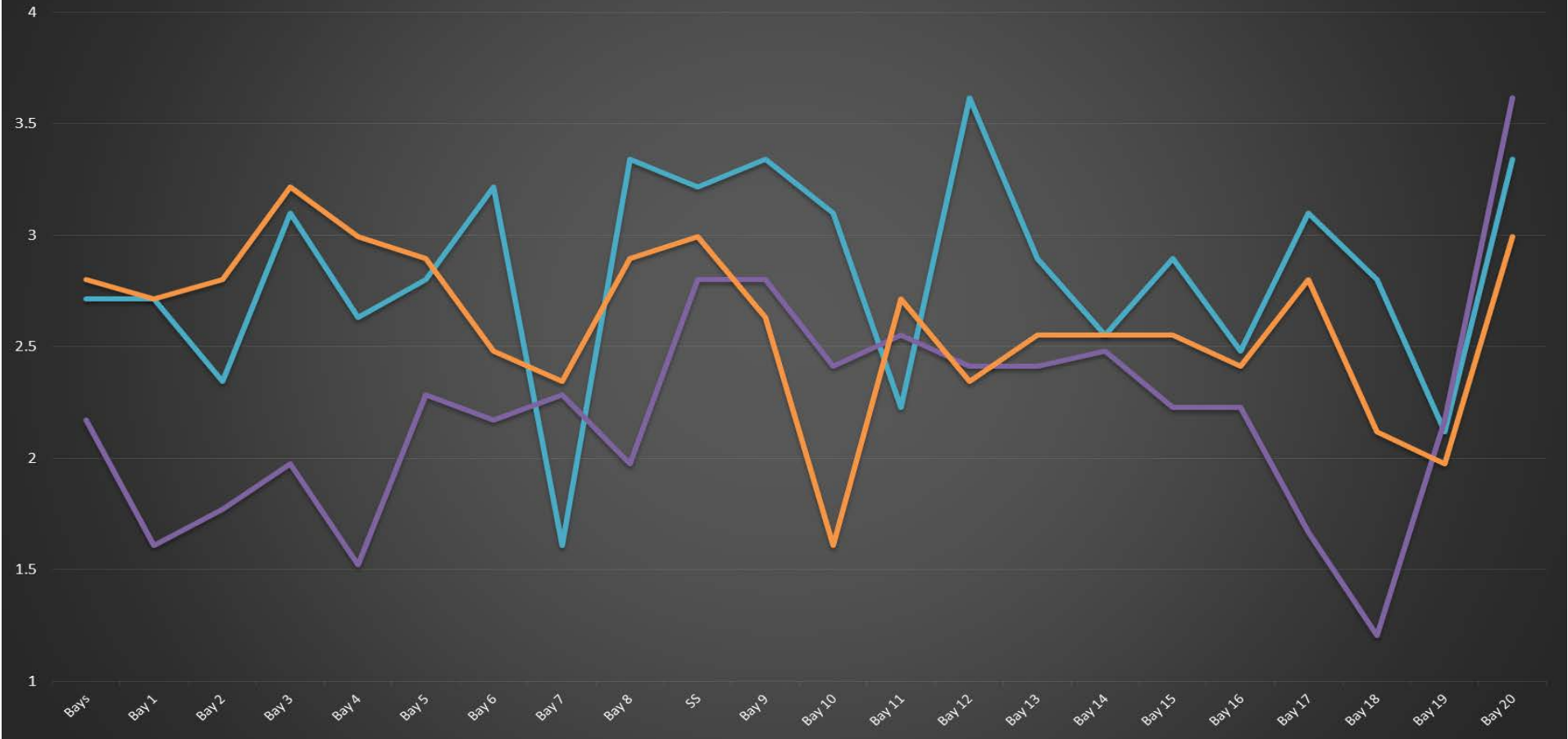
Lamprey http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=9&fr_cdd=3&to_cdm=9&to_cdd=9&subbtn=shad+lamprey&op=sdaily

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



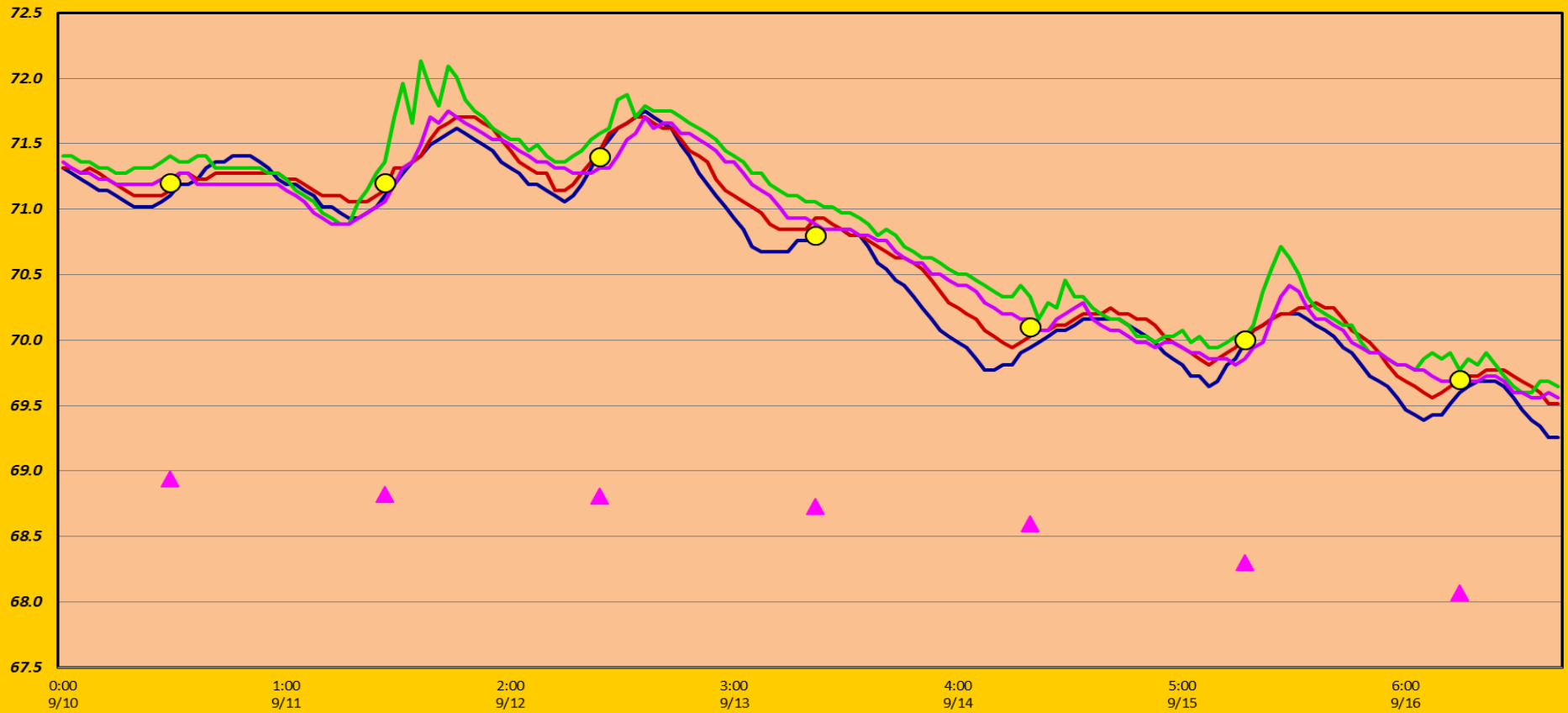
The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

— 28-Aug — 8-Sep — 14-Sep



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

— East Count Station — Junction Pool (East Ladder) — North Count Station — North Entrance ○ Current USGS daily tailwater average ▲ USGS daily tailwater average (2007-2016)



USGS: http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201709_icol.html

Secchi:		Temperatures
5.0	Sun	71.2
5.0	Mon	71.2
5.0	Tue	71.4
5.0	Wed	70.8
5.0	Thurs	70.1
5.0	Fri	70.0
5.0	Sat	69.7
5.0	AVG	70.6

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

= Out of criteria

Date:	North Ladder		East Ladder											
	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
9/10			1.6	8.5	11.4	11.5	10.0	1.7	9.0	9.0		1.5	8.3	8.3
	1.1	8.8	1.6	8.5	11.5	11.5	10.2	1.6	9.0	9.0		1.5	8.2	8.2
	1.4	9.0	1.6	8.4	11.4	11.4	10.1	1.6	8.9	8.9		1.5	8.2	8.3
9/11			1.5	8.4	11.6	11.6	10.0	1.6	9.0	9.0		1.6	8.1	8.1
	1.4	9.9	1.5	8.4	11.6	11.6	10.0	1.6	9.1	8.9		1.6	8.1	8.0
	1.4	9.9	1.8	8.5	11.6	11.5	11.7	1.4	9.0	9.0		1.5	8.4	8.3
9/12			1.2	8.5	12.0	12.0	9.7	1.2	9.0	8.8		1.5	8.2	8.2
	1.3	10.1	1.7	8.5	11.5	11.5	11.1	1.3	9.0	9.3		1.5	8.3	8.4
	1.3	9.0	1.6	8.5	11.5	11.5	11.3	1.3	8.9	8.9		1.5	8.4	8.4
9/13			1.5	8.5	11.5	11.5	9.7	1.4	9.1	9.1		1.5	8.4	8.3
	1.3	9.0	1.5	8.5	11.5	11.5	10.2	1.3	9.0	9.0		1.5	8.3	8.3
	1.3	9.0	1.7	8.4	11.4	11.4	10.9	1.3	8.9	8.9		1.6	8.2	8.2
9/14			1.5	8.6	11.5	11.5	10.2	1.4	8.9	8.9		1.5	8.4	8.4
	1.3	9.2	1.7	8.4	11.4	11.3	10.5	1.4	9.0	9.0		1.5	8.3	8.3
	1.3	9.4	1.7	8.4	11.4	11.3	10.5	1.4	9.0	9.0		1.5	8.3	8.3
9/15			1.6	8.4	11.4	11.4	10.2	1.4	8.9	8.9	1.5	8.3	8.3	
	1.3	9.1	1.4	8.4	12.0	12.0	10.8	1.5	8.3	8.3	1.5	8.2	8.2	
	1.2	9.1	1.4	8.6	12.0	12.0	10.8	1.5	8.3	8.3	1.5	8.3	8.3	
9/16			1.5	8.4	12.0	12.0	11.4	1.5	8.3	8.3	1.6	8.3	8.3	
	1.4	9.0	1.4	8.4	12.0	12.0	11.4	1.6	8.2	8.2	1.5	8.3	8.3	
	1.4	9.0	1.5	8.5	12.1	12.1	11.9	1.5	8.3	8.3	1.5	8.3	8.3	
AVG:	1.3	9.3	1.5	NO CRITERIA	11.6	11.6	10.6	1.5	8.8	8.8	NO CRITERIA	1.5	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.

Two furthest downstream
lines replace





3rd line installed