

The Dalles Dam Fishway Status Report

10/7/2017

Inspection Period: 10/01/2017-10/07/2017

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:	63.6 °F
			Comments	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')	9.2			
Entrance weir N2	0	Closed				
PUD Intake differential	2	≤ 0.5'	0.6'			
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	0.0	11.0			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	12.4			
Entrance weir E3	0	depth (≥ 8')	12.4			
Collection channel velocity	0	1.5 - 4 fps	2.49			
Transportation channel velocity	0	1.5 - 4 fps	2.30			
North channel velocity	0	1.5 - 4 fps	2.79			
South channel velocity	0	1.5 - 4 fps	3.28			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	8.3			
Entrance weir W2	0	depth (≥ 8')	8.3			
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						
Sluiceway 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	5	per FPP	MU 13-16 oos			
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Birds/Sea lions:

No sea lion sightings and very few foraging birds.

Operations

North and east fishladders in full operation.

Spillway closed.

Sluiceway open with 6 gates (units 1, 8 and 18)

Current Outages;

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

MU13 forced out of service for repairs

MU17 out for overhaul. Return Oct 26.

Maintenance;

East powerhouse avian line grid removed due to electrical shock hazard. FPOM approved.

East exit weir electrical panel FCQ7 partially installed. Engineering design and CADD drawings continues. Further installation during winter outage.

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.

W1 entrance weir sticking issue identified. Still maintaining criteria depth. Correction this winter.

Fishway dewatering schedule and work list draft reviewed. Items include; Diffuser valve rehab scope, dewater pump rehab, south weir rehab, Weir caps (lamprey)

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 - 2 removed this week, 1776 through 10/8. 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.

Vibration sensors installed on east ladder and each side of junction pool. Baseline data being collected for Oct 16 night work start.

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 - Tailrace deck start Nov nights (FPOM approved)

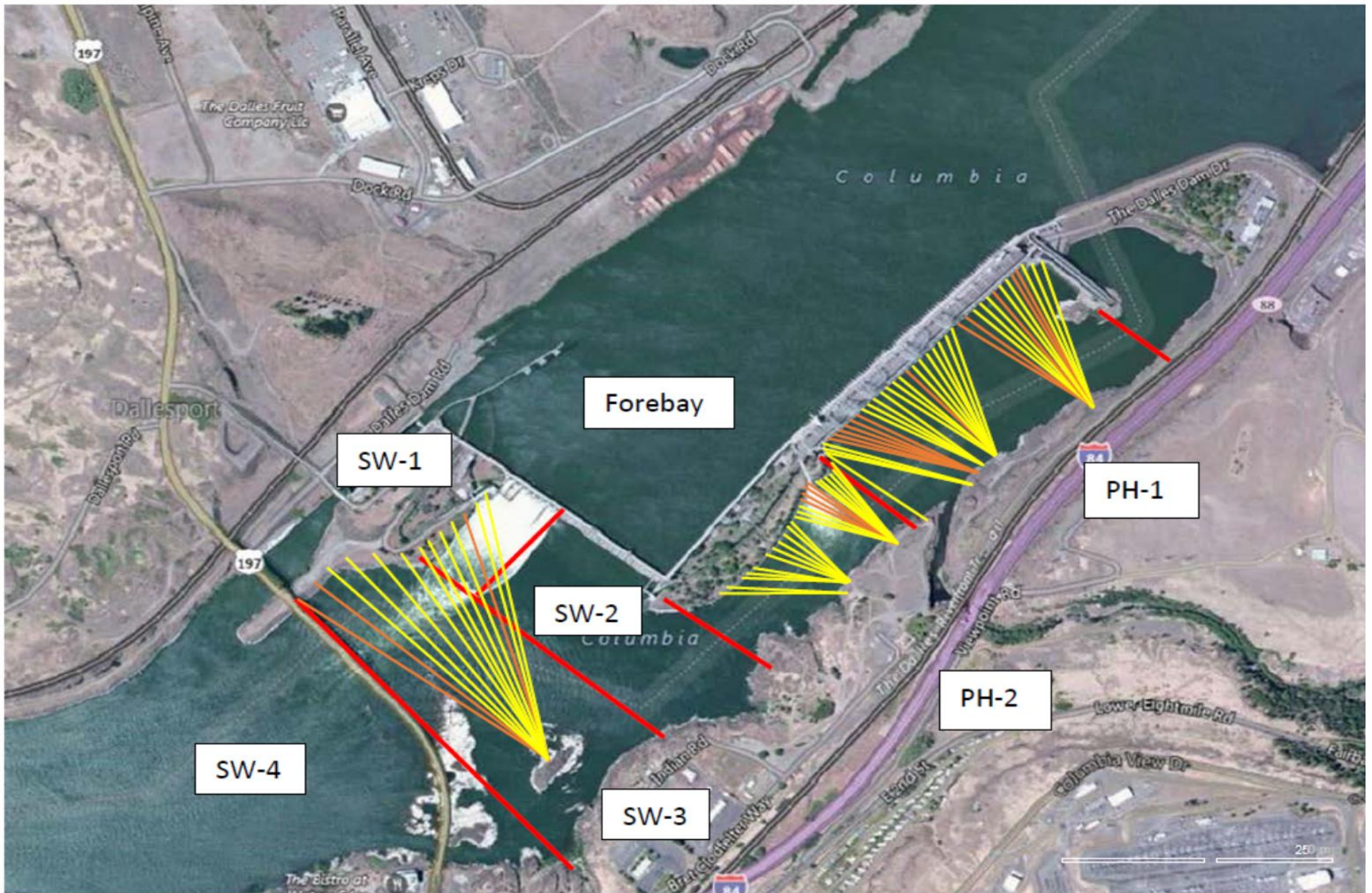
Fish unit breaker replace - Manufacture this summer and install winter 2017. Switchover Jan 2018.

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		
10/1	JWR	AM	FB	0	0	3	62	0	0	0	0	0	0	0	0	65	GBHE
			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	26	0	0	0	0	0	0	0	1	27	
10/2	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	
10/3		AM	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	
10/4		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	
10/5		AM	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	
10/6	GJF	PM	FB	0	0	0	9	0	0	0	29	0	0	0	0	38	
			PH1	0	0	4	5	0	0	0	0	0	0	0	0	9	
			PH2	5	0	4	0	0	0	0	0	0	0	0	0	9	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	3	2	0	0	0	0	0	0	0	0	5	
			SW3	0	0	0	59	0	0	0	0	0	0	0	0	59	
10/7	GJF	AM	FB	0	0	0	44	0	0	0	0	0	0	0	44		
			PH1	0	0	2	9	0	0	0	0	0	0	0	0		11
			PH2	2	0	3	0	0	0	0	0	0	0	0	0		5
			SW1	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		2
			SW3	0	0	0	41	0	0	0	0	0	0	0	0		41

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

The Dalles East

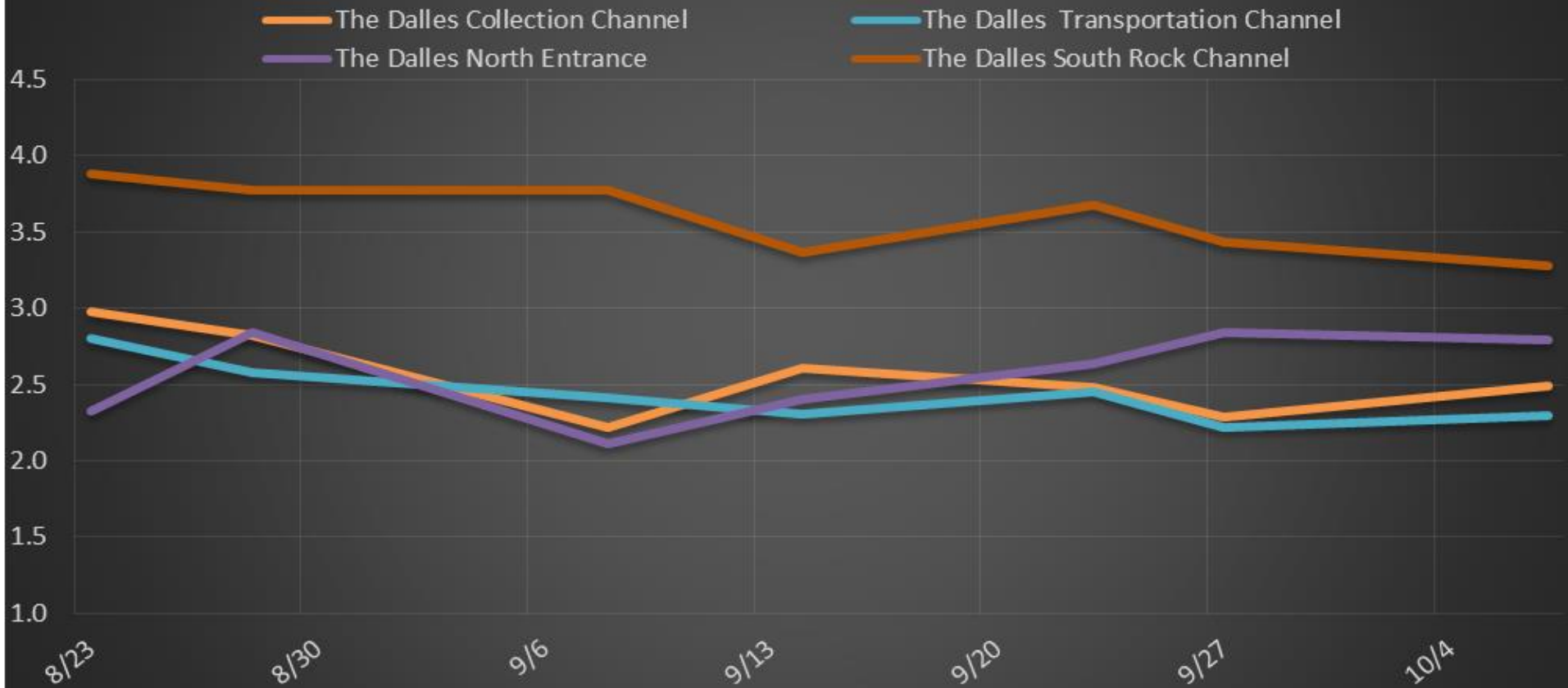
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/1	2635	2315	320	1127	899	228	733	674	59	0	0	0	6
10/2	1975	1729	246	738	547	191	461	426	35	0	0	0	2
10/3	1485	1256	229	652	484	168	338	319	19	0	0	0	1
10/4	4651	4064	587	735	574	161	600	560	40	0	0	0	0
10/5	3165	2662	503	917	745	172	591	542	49	0	0	0	1
10/6	2502	2196	306	679	504	175	464	439	25	0	0	0	0
10/7	1729	1562	167	692	472	220	526	498	28	4	0	0	4
total	18142	15784	2358	5540	4225	1315	3713	3458	255	4	0	0	14

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
10/1	219	199	20	120	92	28	55	53	2	0	0	0	0
10/2	137	113	24	138	113	25	44	43	1	0	0	0	0
10/3	64	52	12	59	48	11	30	28	2	0	0	0	1
10/4	56	36	20	53	41	12	18	17	1	0	0	0	0
10/5	110	84	26	58	48	10	23	23	0	0	0	0	0
10/6	60	47	13	50	38	12	18	17	1	0	0	0	1
10/7	130	118	12	61	47	14	35	35	0	0	0	0	0
total	776	649	127	539	427	112	223	216	7	0	0	0	2
% North	4.1	3.9	5.1	8.9	9.2	7.8	5.7	5.9	2.7	0.0	0.0	#DIV/0!	12.5

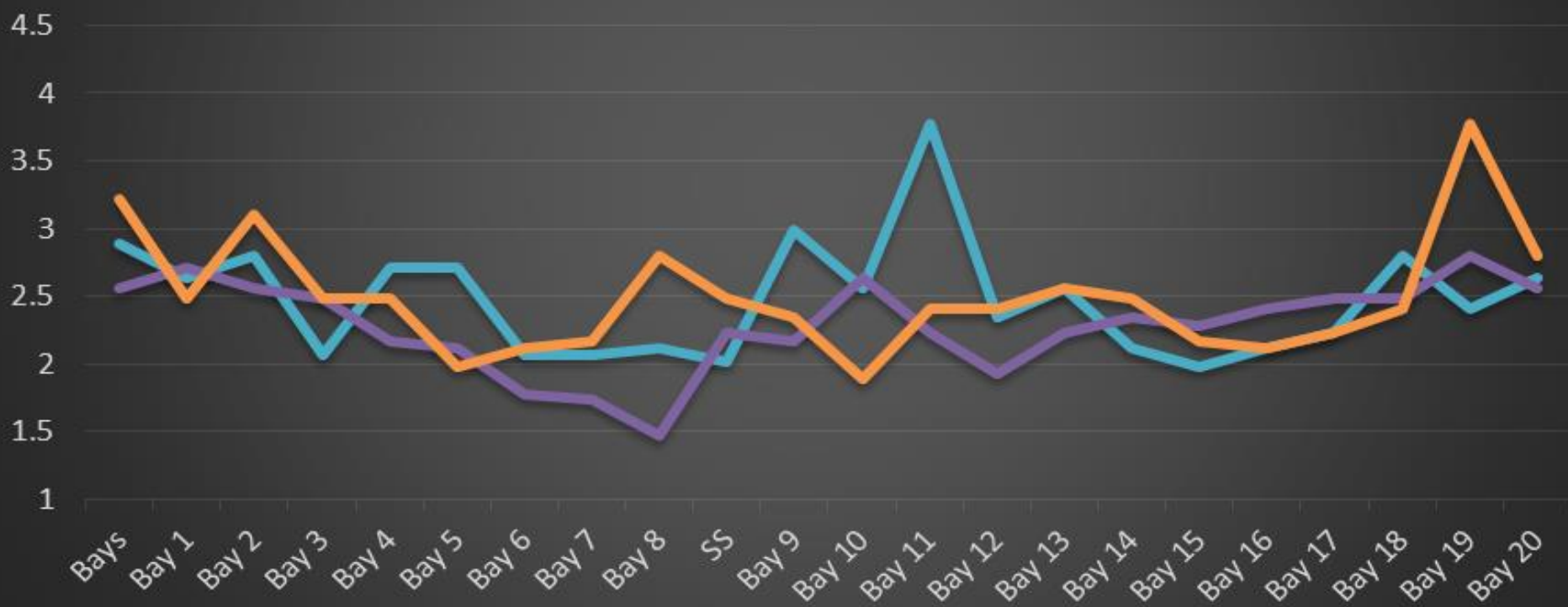
Salmon
Lamprey

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

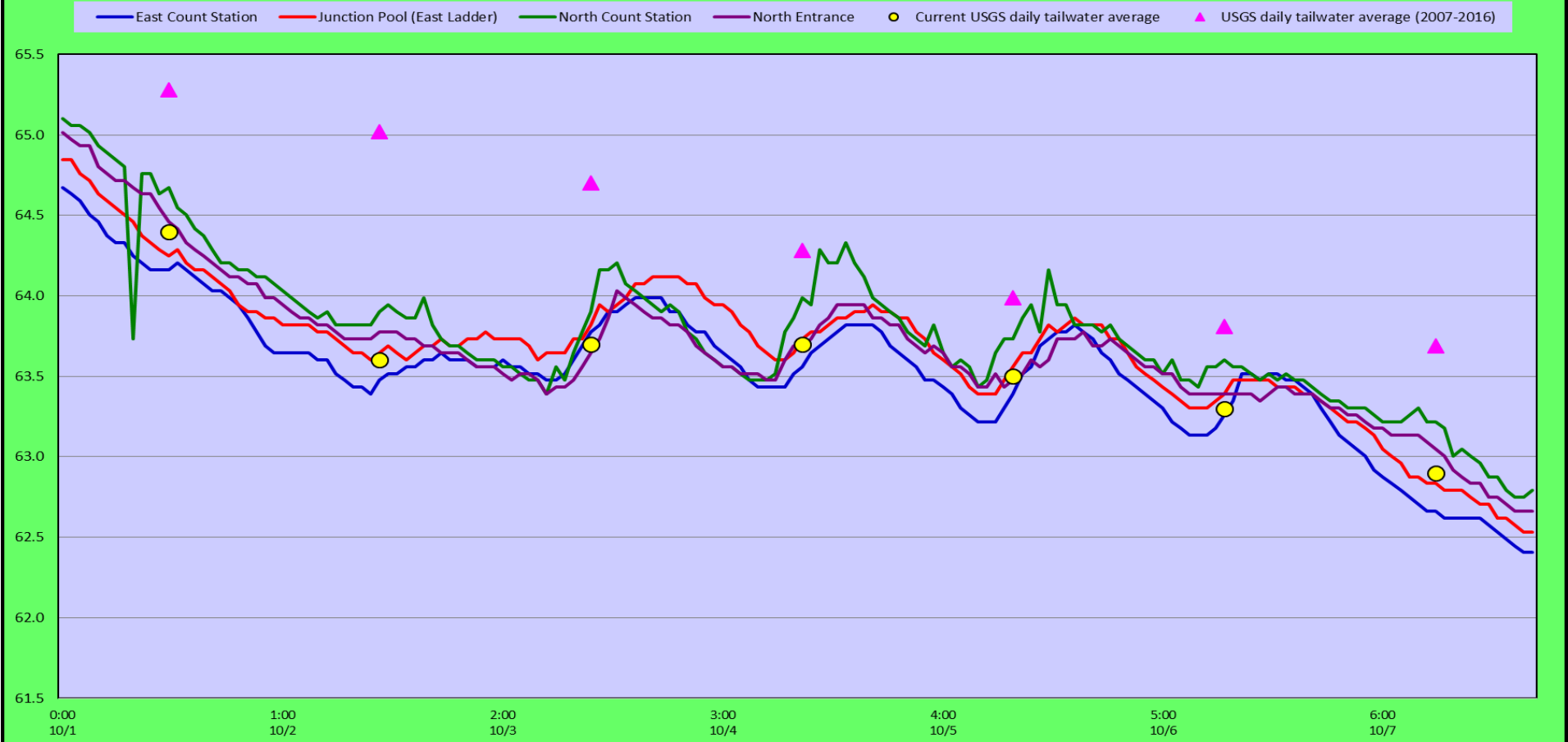


The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

23-Sep 27-Sep 7-Oct



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



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

Secchi:		Temperatures
10/1	5.0	Sun 64.4
10/2	5.0	Mon 63.6
10/3	5.0	Tue 63.7
10/4	5.0	Wed 63.7
10/5	5.0	Thurs 63.5
10/6	5.0	Fri 63.3
10/7	5.0	Sat 62.9
	5.0	AVG 63.6

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

= Out of criteria

Date:	North Ladder		East Ladder										South Entrance		
	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	
10/1			1.4	9.0	12.1	12.1	10.7	1.4	8.3	8.3		1.5	8.3	8.3	
	1.3	9.0	1.4	9.1	12.2	12.2	10.8	1.5	8.3	8.3		1.4	8.3	8.3	
	1.3	9.3	1.4	9.0	12.1	12.1	10.7	1.5	8.3	8.3		1.5	8.2	8.2	
10/2			1.8	9.2	12.1	12.1	11.0	1.5	8.4	8.4		1.4	8.4	8.4	
	1.4	9.1	1.4	9.9	12.5	12.5	11.2	1.4	8.2	8.2		1.5	8.3	8.3	
	1.4	9.2	1.4	10.1	12.5	12.4	11.4	1.4	8.3	8.3		1.5	8.3	8.3	
10/3			1.4	9.9	12.5	12.5	11.2	1.4	8.2	8.2		1.5	8.3	8.3	
	1.4	9.1	1.3	10.0	12.5	12.5	10.8	1.5	8.5	8.4		1.4	8.3	8.4	
	1.4	9.2	1.3	10.0	12.6	12.5	11.2	1.4	8.3	8.3		1.5	8.3	8.3	
10/4			1.4	10.0	12.5	12.6	11.1	1.4	8.3	8.3		1.5	8.3	8.3	
	1.4	9.2	1.4	10.0	12.6	12.6	11.1	1.4	8.2	8.2		1.4	8.3	8.3	
	1.4	9.0	1.6	10.1	12.4	12.4	11.0	1.5	8.2	8.2		1.4	8.3	8.3	
10/5			1.3	10.0	12.6	12.6	11.6	1.5	8.4	8.4		1.5	8.3	8.3	
	1.3	9.1	1.5	10.0	12.5	12.5	12.1	1.5	8.4	8.4	1.5	8.4	8.3		
	1.3	9.2	1.5	10.0	12.6	12.5	11.4	1.4	8.3	8.3	1.4	8.4	8.4		
10/6			1.3	10.0	12.5	12.5	11.6	1.5	8.4	8.4	1.7	8.1	8.2		
	1.3	9.2	1.1	10.1	12.6	12.5	10.3	1.4	8.3	8.3	1.4	8.4	8.4		
	1.4	9.1	1.2	10.1	12.5	12.4	10.4	1.5	8.3	8.3	1.4	8.4	8.3		
10/7			1.2	10.1	12.5	12.6	10.6	1.3	8.3	8.3	1.4	8.4	8.3		
	1.2	9.3	1.2	10.1	12.5	12.4	10.4	1.5	8.3	8.3	1.4	8.4	8.3		
	1.3	9.1	1.4	10.0	12.5	12.6	10.6	1.4	8.2	8.2	1.4	8.3	8.2		
AVG:	1.3	9.2	1.4	NO CRITERIA	12.4	12.4	11.0	1.4	8.3	8.3	NO CRITERIA	1.5	8.3	8.3	

Fishways are inspected twice daily plus one SCADA inspection.



Vibration sensor on east fish ladder.