

The Dalles Dam Fishway Status Report

10/15/2017

Inspection Period: 10/08/2017-10/14/2017

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: 61.1 °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	0	≤ 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	10.7	
East entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')	12.5	
Entrance weir E3	0	depth (≥ 8')	12.5	
Collection channel velocity	0	1.5 - 4 fps	2.64	
Transportation channel velocity	0	1.5 - 4 fps	2.49	
North channel velocity	0	1.5 - 4 fps	2.64	
South channel velocity	0	1.5 - 4 fps	3.54	
West entrance differential	0	1.0' - 2.0'	1.5	
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	4	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.

MU17 out for overhaul. Return Oct 26.

Maintenance;

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.

PUD intake trashrack rake repainting complete. Returned to service.

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 31.

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 collection underway.

Lamprey minor mods - Rounded entrance weir cap parts for all entrances recieved. Moorings to assist in assembling. Tribal lamprey trap hoist design pending.

Railroad track removal - Tailrace deck start Nov nights (FPOM approved)

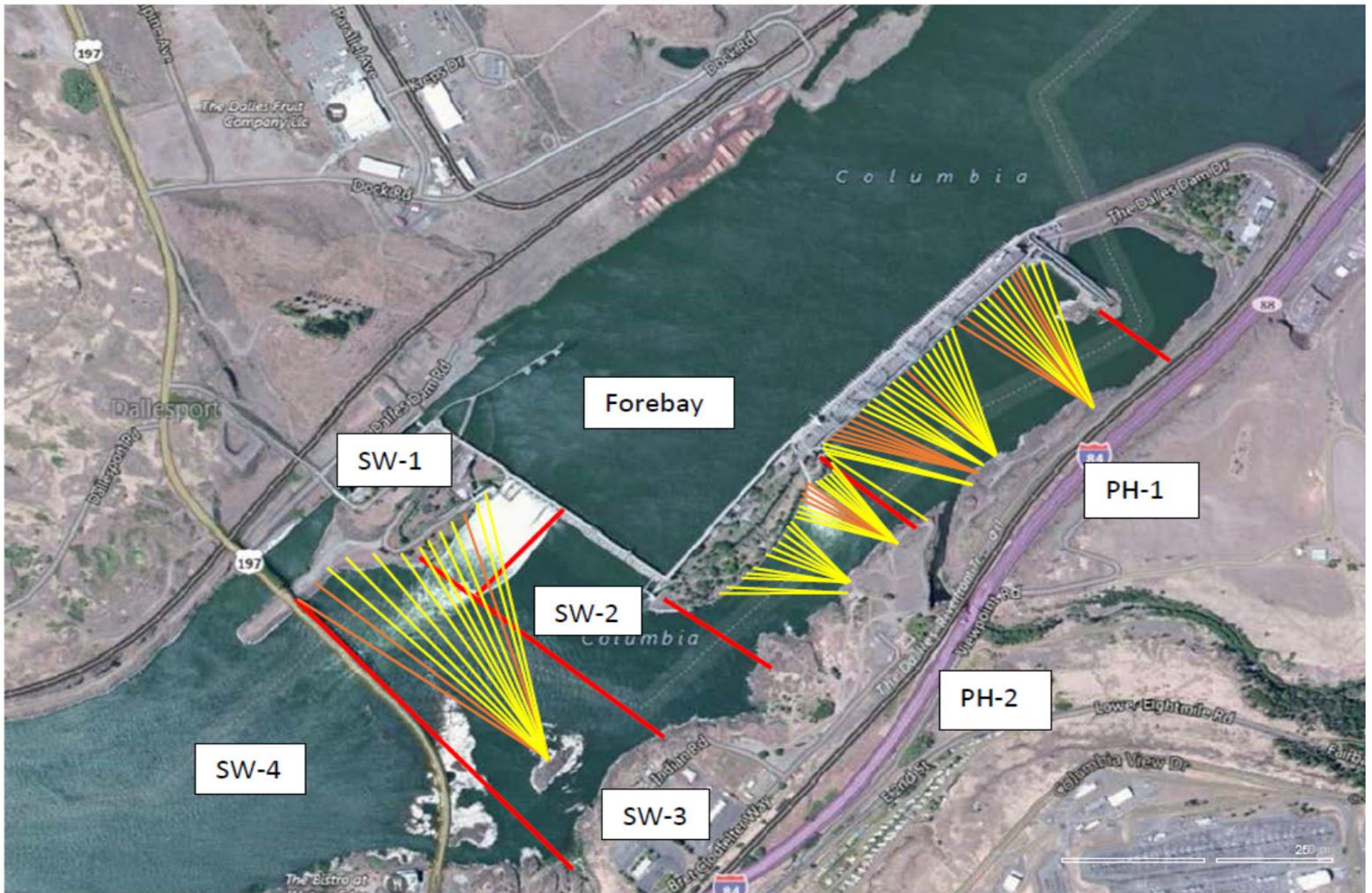
Fish unit breaker replace.- Manufacture this summer and install winter 2017. Switchover Jan 2018.

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				
10/8	GJF	PM	FB	0	0	0	6	0	0	0	0	0	0	0	0	0	6		
			PH1	0	0	3	4	0	0	0	0	0	0	0	0	0	0	7	
			PH2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW1	0	20	1	0	0	0	0	0	0	0	0	0	0	0	21	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	35	0	0	0	0	0	0	0	0	0	0	35	
10/9	GJF	AM	FB	0	0	0	67	0	0	0	0	0	0	0	0	0	67		
			PH1	0	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	0	
			SW1	0	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	0	
			SW3	0	0	0	24	0	0	0	0	0	0	0	0	0	0	24	
10/10	GJF	PM	FB	0	0	4	3	0	0	0	20	0	0	0	0	0	27		
			PH1	0	0	18	1	0	0	0	0	0	0	0	0	0	19		
			PH2	7	0	0	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	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	34	0	0	0	0	0	0	0	0	0	0	34	
10/11	JWR	AM	FB	0	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	0	0	
			PH2	0	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	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	55	0	0	0	0	0	0	0	0	0	0	55	
10/12	GJF	PM	FB	0	0	3	9	0	0	0	10	0	0	0	0	0	22		
			PH1	0	0	0	13	0	0	0	0	0	0	0	0	0	13		
			PH2	0	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	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	38	0	0	0	0	0	0	0	0	0	0	38	
10/13	GJF	AM	FB	0	0	12	0	0	0	0	37	0	0	0	0	0	49		
			PH1	0	0	26	3	0	0	0	0	0	0	0	0	0	29		
			PH2	16	0	0	0	0	0	0	0	0	0	0	0	0	16		
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	20	0	0	0	0	0	0	0	0	0	20		
			SW3	0	0	0	29	0	0	0	0	0	0	0	0	0	29		
10/14	JWR	PM	FB	0	0	0	0	0	0	0	23	0	0	0	0	0	23		
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	0	3		
			PH2	0	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	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9	

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

The Dalles East

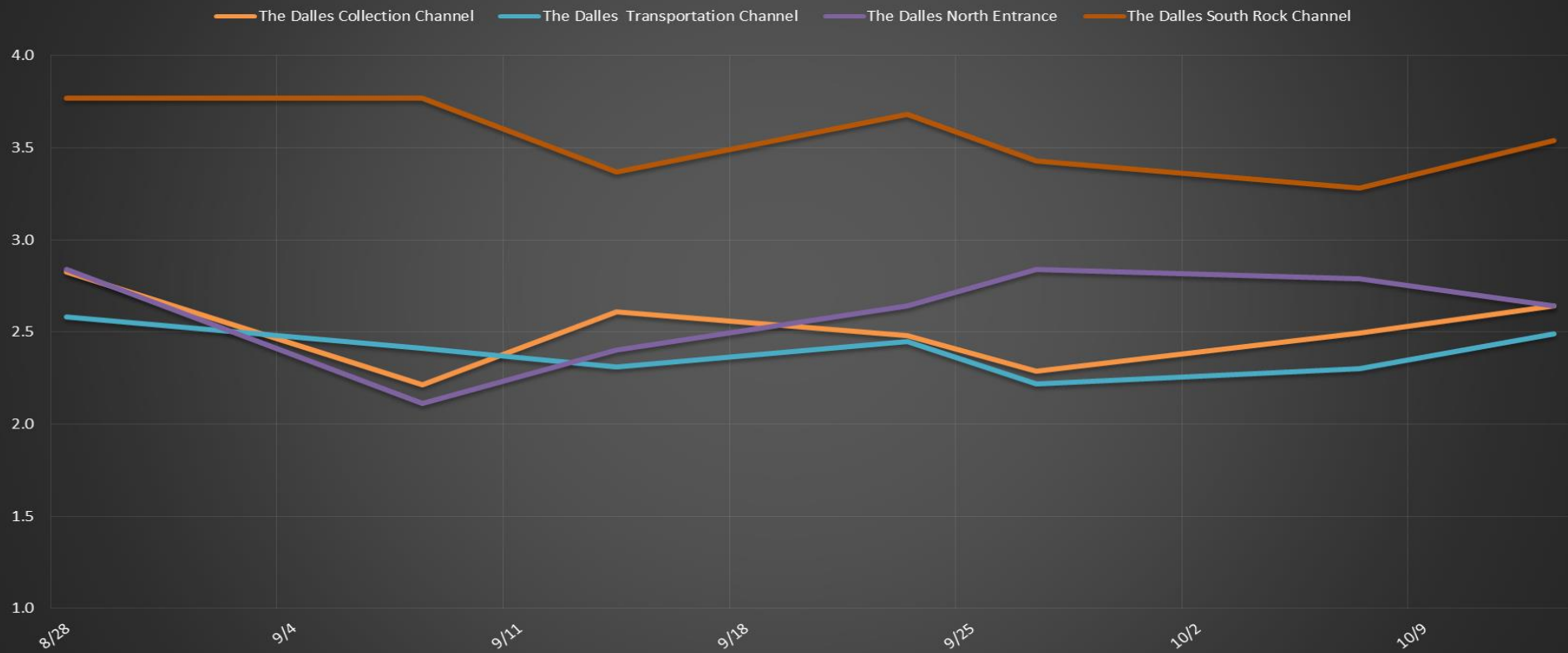
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/8	1297	1147	150	660	450	210	344	334	10	1	0	0	0
10/9	1673	1537	136	577	413	164	333	316	17	0	0	0	0
10/10	1861	1619	242	461	342	119	291	265	26	0	0	0	0
10/11	2388	2228	160	344	253	91	269	239	30	0	0	0	-1
10/12	1012	868	144	304	230	74	144	134	10	0	0	0	0
10/13	1080	984	96	261	173	88	150	144	6	0	0	0	0
10/14	1638	1470	168	613	426	187	406	353	53	0	0	0	0
total	10949	9853	1096	3220	2287	933	1937	1785	152	1	0	0	-1

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
10/8	54	41	13	66	46	20	40	40	0	0	0	0	0
10/9	102	91	11	35	28	7	17	17	0	0	0	0	0
10/10	66	56	10	47	36	11	34	34	0	0	0	0	0
10/11	65	43	22	40	26	14	13	12	1	0	0	0	0
10/12	37	29	8	32	18	14	13	13	0	0	0	0	0
10/13	97	84	13	41	29	12	12	12	0	0	0	0	0
10/14	144	126	18	49	38	11	78	77	1	0	0	0	0
total	565	470	95	310	221	89	207	205	2	0	0	0	0
% North	4.9	4.6	8.0	8.8	8.8	8.7	9.7	10.3	1.3	0.0	0.0	#DIV/0!	0.0

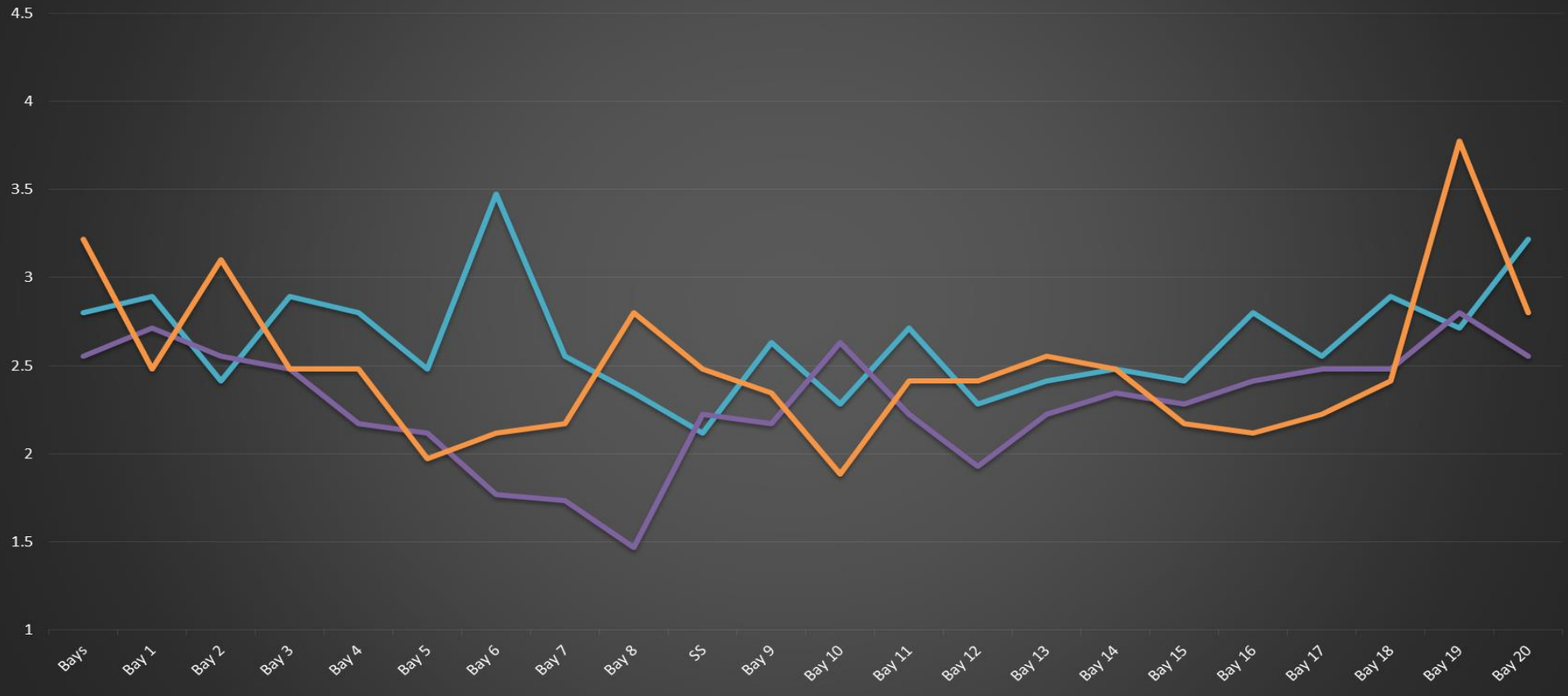
Salmon
Lamprey

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

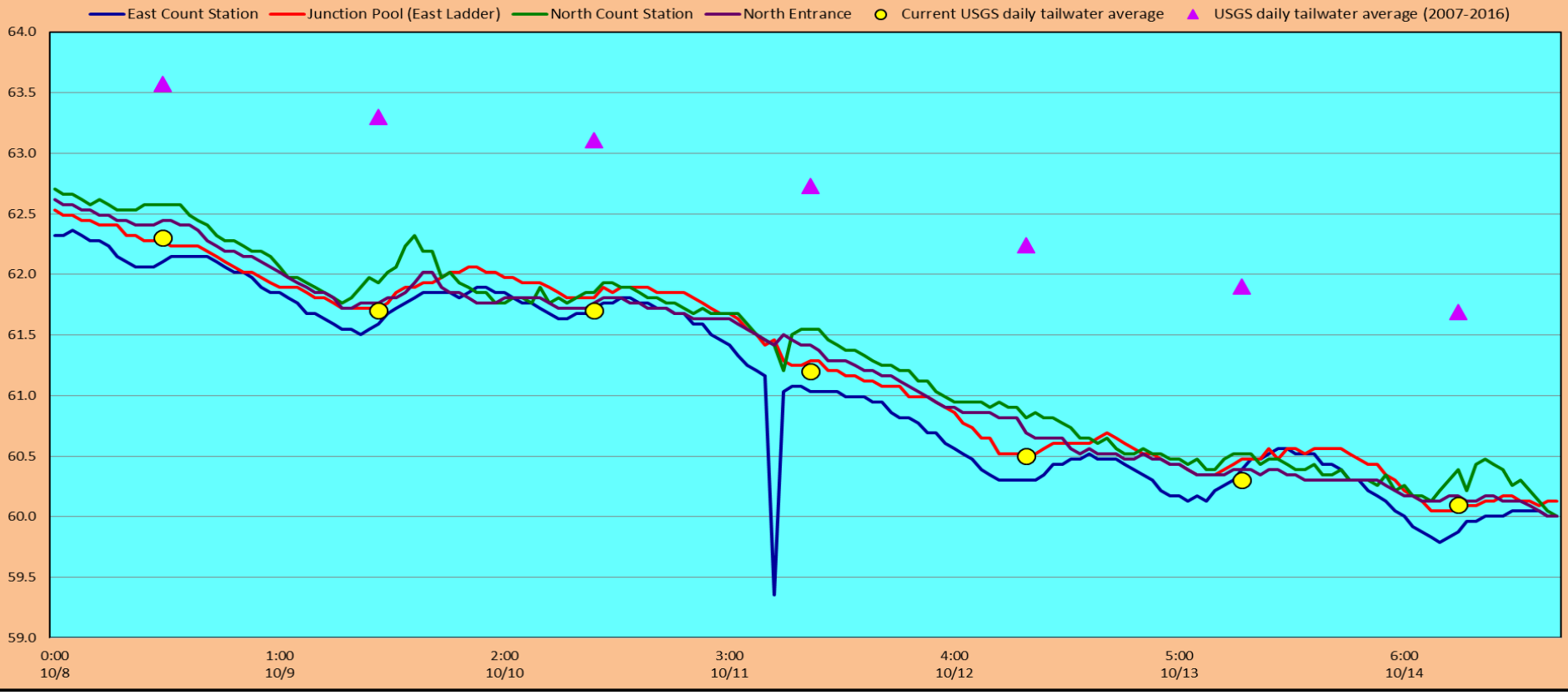


The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)

13-Oct 27-Sep 7-Oct



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



Secchi:		Temperatures
5.0	Sun	62.3
5.0	Mon	61.7
5.0	Tue	61.7
5.0	Wed	61.2
5.0	Thurs	60.5
5.0	Fri	60.3
5.0	Sat	60.1
5.0	AVG	61.1

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

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
10/8			1.3	9.9	12.5	12.4	10.6	1.4	8.3	8.3	NO CRITERIA	1.4	8.4	8.3
	1.3	9.1	1.2	9.9	12.5	12.4	10.6	1.4	8.3	8.3		1.4	8.3	8.2
	1.4	9.2	1.5	10.2	12.5	12.4	10.6	1.5	8.2	8.4		1.4	8.3	8.2
10/9			1.2	9.9	12.5	12.4	10.3	1.4	8.2	8.2		1.5	8.2	8.3
	1.3	9.3	1.5	10.0	12.6	12.6	11.5	1.4	8.3	8.3		1.4	8.3	8.4
	1.3	9.1	1.4	10.0	12.6	12.6	11.7	1.5	8.4	8.4		1.5	8.2	8.3
10/10			1.1	10.1	12.6	12.5	9.5	1.4	8.4	8.4		1.3	8.5	8.5
	1.2	9.1	1.2	9.0	13.5	13.5	9.9	1.4	8.3	8.3		1.4	8.3	8.3
	1.3	9.2	1.2	10.0	12.6	12.6	10.7	1.4	8.4	8.4		1.4	8.5	8.5
10/11			1.2	9.1	12.5	12.5	10.2	1.4	8.3	8.3		1.5	8.2	8.2
	1.3	9.6	1.1	7.1	12.1	12.1	9.7	1.4	8.3	8.3		1.4	8.3	8.3
	1.3	9.2	1.3	7.0	12.6	12.5	10.4	1.4	8.3	8.3		1.4	8.3	8.3
10/12			1.6	7.0	12.6	12.5	10.9	1.4	8.4	8.4		1.4	8.5	8.4
	1.3	9.2	1.6	7.0	12.4	12.4	11.1	1.6	8.2	8.2		1.5	8.5	8.4
	1.2	9.3	1.5	7.1	12.5	12.6	11.6	1.5	8.4	8.4	1.6	8.3	8.3	
10/13			1.6	7.0	12.6	12.5	10.9	1.5	8.3	8.3	1.4	8.3	8.3	
	1.2	9.3	1.4	7.0	12.1	12.5	11.2	1.5	8.2	8.3	1.6	8.1	8.1	
	1.4	9.2	1.6	7.0	12.5	11.9	11.2	1.5	8.3	8.3	1.6	8.2	8.2	
10/14			1.6	7.0	12.6	12.0	10.9	1.5	8.3	8.3	1.5	8.3	8.3	
	1.3	9.2	1.4	6.8	12.0	12.5	10.5	1.5	8.3	8.3	1.5	8.3	8.3	
	1.3	9.2	1.3	5.5	12.5	12.5	10.2	1.5	8.4	8.4	1.5	8.3	8.3	
AVG:	1.3	9.2	1.4	NO CRITERIA	12.5	12.5	10.7	1.5	8.3	8.3	NO CRITERIA	1.5	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.