

The Dalles Dam Fishway Status Report

6/11/2017

Inspection Period: 06/04/2017-06/10/2017

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
P.O. Box 564
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 58.6 °F
			Comments		Secchi: 2.4 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')	10.8		
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 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	depth (≥ 7')	20.0		
East entrance differential	0	1.0' - 2.0'	1.6		
Entrance weir E1	0	No criteria	6.5		
Entrance weir E2	0	depth (≥ 8')	10.3		
Entrance weir E3	0	depth (≥ 8')	10.3		
Collection channel velocity	0	1.5 - 4 fps	2.51		
Transportation channel velocity	0	1.5 - 4 fps	2.35		
North channel velocity	0	1.5 - 4 fps	2.11		
South channel velocity	0	1.5 - 4 fps	2.73		
West entrance differential	0	1.0' - 2.0'	1.6		
Entrance weir W1	0	depth (≥ 8')	12.6		
Entrance weir W2	0	depth (≥ 8')	12.6		
Entrance weir W3	0	depth (>8')	0.0	Closed	
South entrance differential	0	1.0' - 2.0'	1.6	High TW causing transfer of south channel water to west entrance via bypass	
Entrance weir S1	0	depth (≥ 8')	8.6		
Entrance weir S2	0	depth (≥ 8')	8.6		
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'		
Spill volume/pattern	7		Exceeding 40% due to high flows		
Turbine Unit Priority	14	per FPP	MU 1, 12, 15, 16, out of service		
Turbine 1% Efficiency	1	per FPP	FERC annual MU exercise		

OTHER ISSUES:

Birds/Sea lions:

Sea Lion spotted intermittently by USDA hazers and project guard staff

Gull numbers have decreased significantly. USDA hazing by boat downstream of bridge. Refer to avian map and observations.

Operations:

North and east fishladders in full operation.

Spillway open with involuntary spill (beyond 40% fish spill).

Sluiceway open with 6 gates (units 3, 8 and 18)

Lost E3 HOB0 temperature monitor probe (South Entrance). Replacement on progress.

Current Outages;

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

MU12 out for hydraulic diagnosis and overhaul. Return 6/23/17.

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

Maintenance;

East exit weir electrical panel FCQ7 engineering design in progress.

PUD crane rake repainting to start soon.

Rebuilding spare entrance weir gearbox.

Planning crane pad for north ladder dewatering access and sturgeon tank modifications for improved fish salvage.

Other repair maintenance plans; 154 -157 rehab/weir wheel replace, diffuser valve overhaul (rehab and decommission).

Fish related /non-fish funded items; Spillway crane 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 - 92 removed this week, 270 through 6/11, mostly from west powerhouse tailrace.

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

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 underway at units 18-22. Lower west powerhouse asphalt next (FPOM approved).

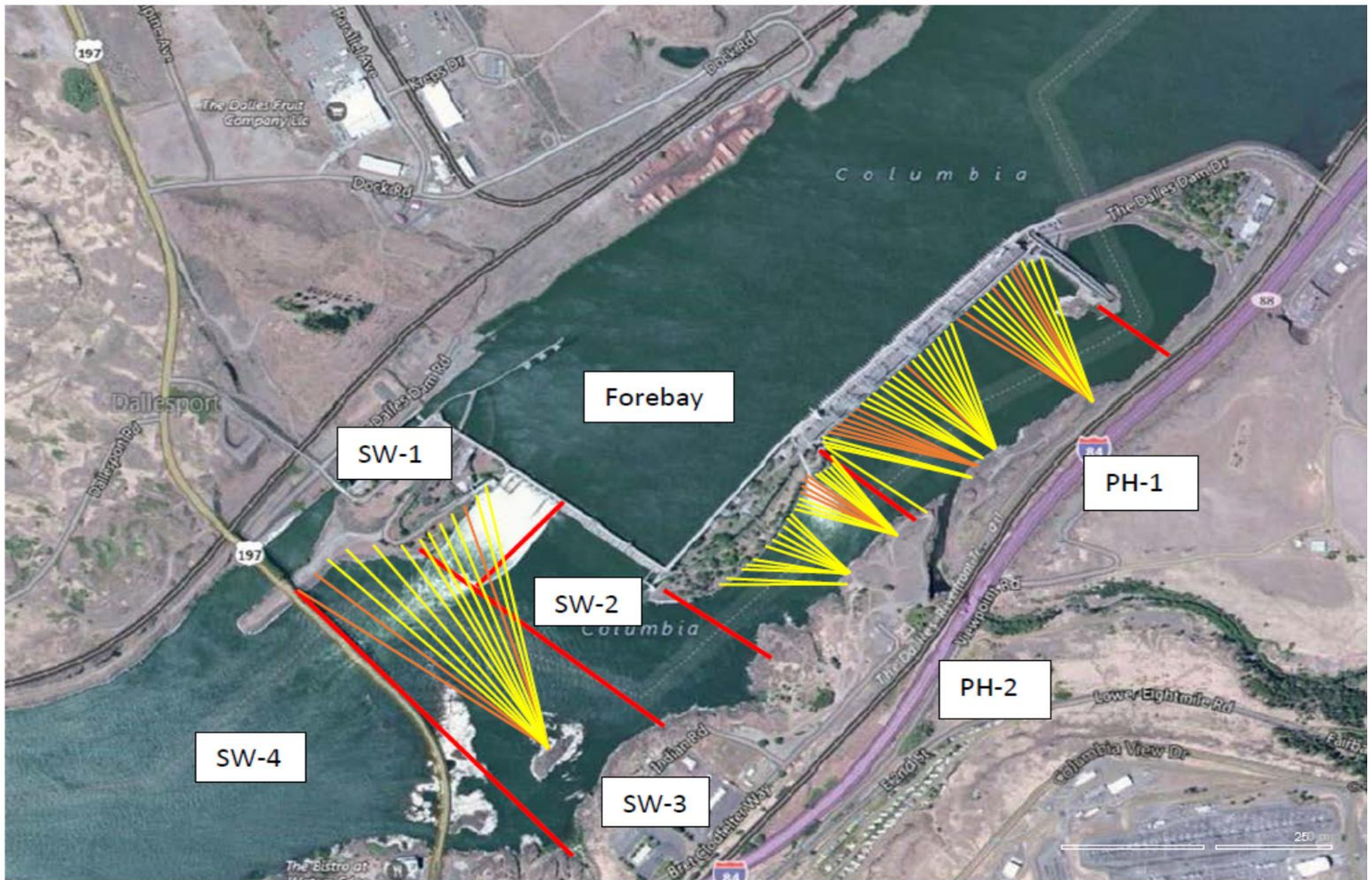
Fish unit breaker replace.- Manufacture this summer and install fall 2017. Switchover Jan 2018.

Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022. Calculating minimum flow. Data collection continues.

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

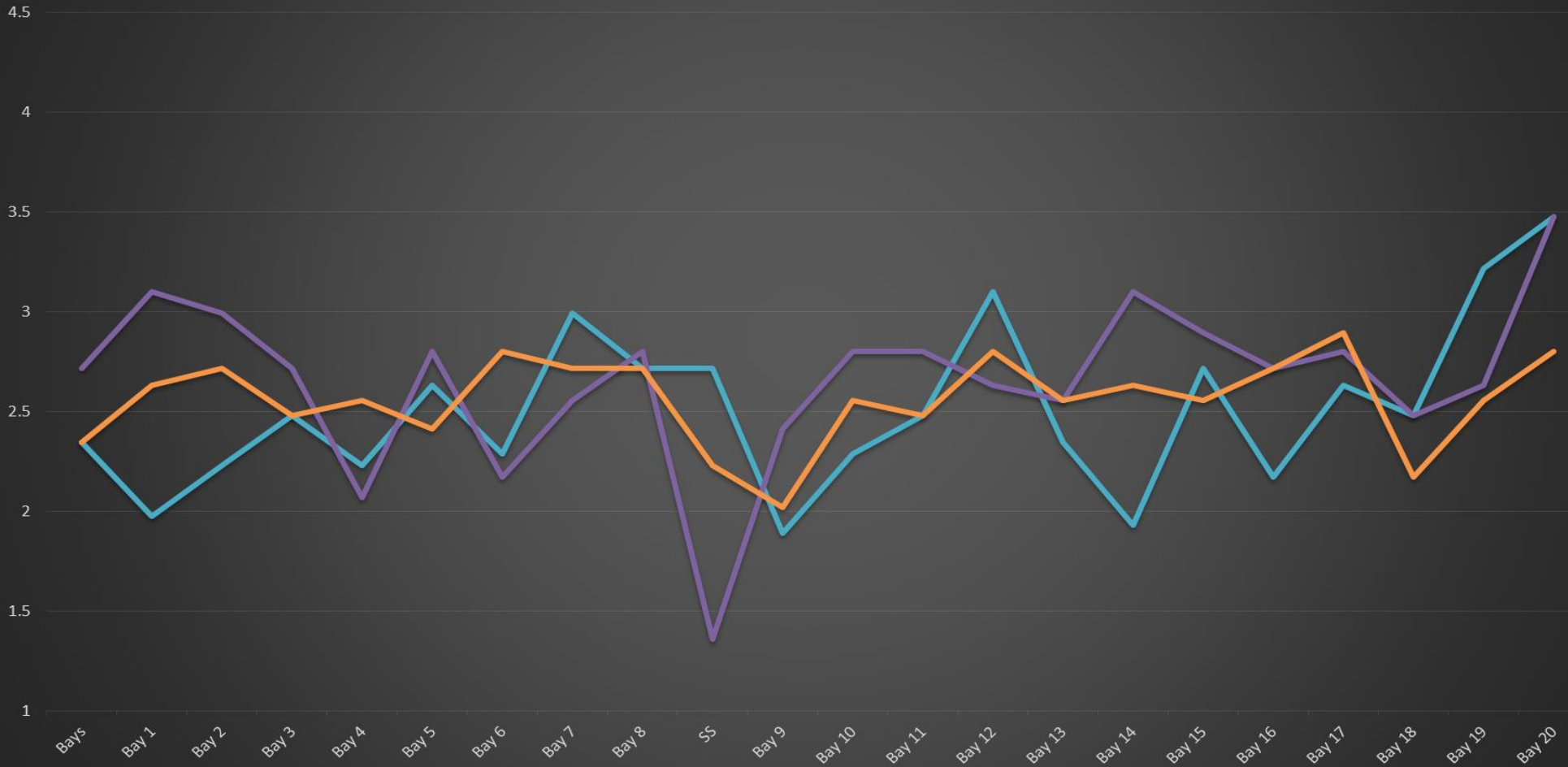
F=foraging, NF=non-foraging

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		
6/4	GJF	PM	FB	0	0	4	21	0	0	0	0	0	0	0	0	25	
			PH1	0	0	4	7	0	0	0	0	0	0	0	0	11	
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	34	0	0	0	0	0	0	0	0	0	0	0	34	
			SW3	14	0	0	0	0	0	0	0	0	0	0	0	14	
			SW4	27	0	0	0	0	0	0	0	0	0	0	0	27	
6/5	GJF	AM	FB	0	0	3	38	0	0	0	0	0	0	0	41		
			PH1	0	0	3	11	0	0	0	0	0	0	0	0	14	
			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	39	0	0	0	0	0	0	0	2	0	0	0	41	
			SW3	20	0	0	0	0	0	0	0	0	0	0	0	20	
			SW4	15	0	0	0	0	0	0	0	0	0	0	0	15	
6/6	GJF	PM	FB	0	0	0	24	0	0	0	0	0	0	0	24		
			PH1	0	0	2	3	0	0	0	0	0	0	0	0	5	
			PH2	1	0	1	0	0	0	0	0	0	0	0	0	2	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW4	27	0	0	0	0	0	0	0	0	0	0	0	27	
6/7	GJF	AM	FB	0	0	3	17	0	0	0	0	0	0	0	20		
			PH1	0	0	2	7	0	0	0	0	0	0	0	0	9	
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	33	0	0	0	0	0	0	0	0	0	0	0	33	
			SW3	14	0	0	0	0	0	0	0	0	0	0	0	14	
			SW4	7	0	0	0	0	0	0	0	0	0	0	0	7	
6/8	GJF	PM	FB	0	0	5	11	0	0	0	0	0	0	0	16		
			PH1	0	0	3	1	0	0	0	0	0	0	0	0	4	
			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	18	0	0	0	0	0	0	0	0	0	0	0	18	
			SW3	7	0	0	0	0	0	0	0	0	0	0	0	7	
			SW4	2	0	0	0	0	0	0	0	0	0	0	0	2	
6/9	JWR	AM	FB	0	12	0	45	0	0	1	1	0	0	0	59		
			PH1	0	0	0	8	0	0	0	0	0	0	0	0	8	
			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	7	0	0	0	0	0	0	0	0	0	0	0	7	
			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	
6/10	JWR	PM	FB	0	0	0	22	0	0	0	0	0	0	0	22		
			PH1	0	0	3	17	0	0	0	0	0	0	0	0	20	
			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	13	0	0	0	0	0	0	0	0	0	0	0	13	
			SW3	34	11	0	0	0	0	0	0	0	0	0	0	45	
			SW4	18	0	0	0	0	0	0	0	0	0	0	0	18	

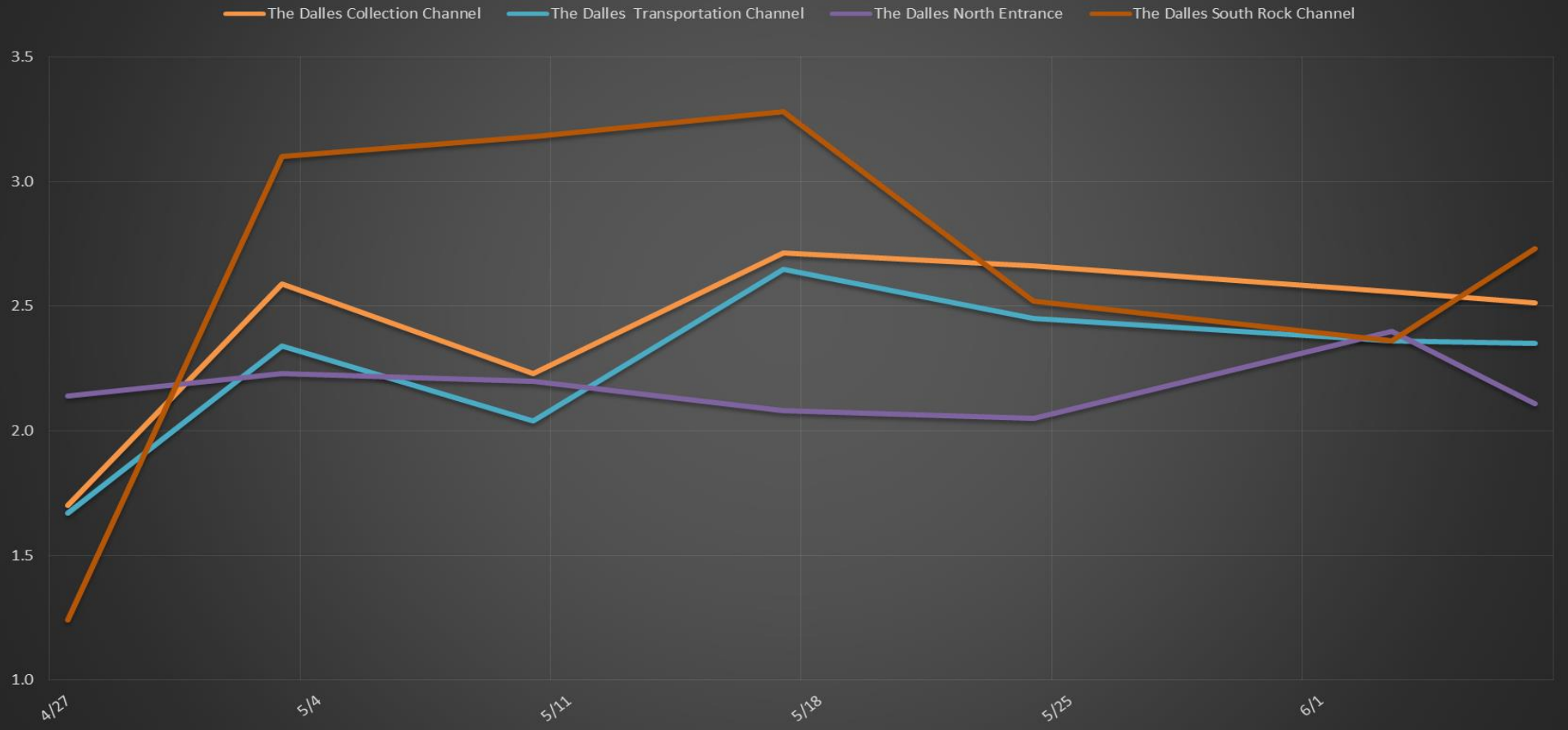
Key: BAEA = Bald Eagle; GBH = Great Blue Heron; COME = Common Merganser

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

7-Jun 24-May 3-Jun



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



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

°F

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

