

The Dalles Dam Fishway Status Report

6/17/2017

Inspection Period: 06/11/2017-06/17/2017

THE DALLES DAM



US Army Corps
of Engineers
Portland District

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: 59.0 °F
			Comments		Secchi: 3.0 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'	1.4		
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')	18.4		
East entrance differential	0	1.0' - 2.0'	1.6		
Entrance weir E1	0	No criteria	5.2		
Entrance weir E2	0	depth (≥ 8')	10.8		
Entrance weir E3	0	depth (≥ 8')	10.8		
Collection channel velocity	0	1.5 - 4 fps	2.51		
Transportation channel velocity	0	1.5 - 4 fps	2.28		
North channel velocity	0	1.5 - 4 fps	2.26		
South channel velocity	0	1.5 - 4 fps	2.38		
West entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir W1	0	depth (≥ 8')	13.0		
Entrance weir W2	0	depth (≥ 8')	13.0		
Entrance weir W3	0	depth (>8')	0.0	Closed	
South entrance differential	0	1.0' - 2.0'	1.5	High TW causing transfer of south channel water to west entrance via bypass	
Entrance weir S1	0	depth (≥ 8')	9.1		
Entrance weir S2	0	depth (≥ 8')	9.1		
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'		
Spill volume/pattern	2		Exceeding 40% due to high flows		
Turbine Unit Priority	14	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:

No sea lions observed

Gull numbers have decreased significantly. USDA hazing continues. Refer to avian map and observations.

Operations:

North and east fishladders in full operation.

Spillway open 40% river flow for fish passage.

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 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 awaiting lead test before starting.

Rebuilding spare entrance weir gearbox.

Removal of unused redundant junction pool weirs and fish lock weir gearboxes to start soon.

Planning design for fish lock upper and lower bulkhead replacement with concrete for improved isolation.

Planning crane pad for north ladder dewatering access. Awaiting cultural approval.

Designing 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 - 132 removed this week, 402 through 6/18. All from west powerhouse tailrace.

AWS construction - All work complete for season 1. Planning for season 2 schedule and 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).

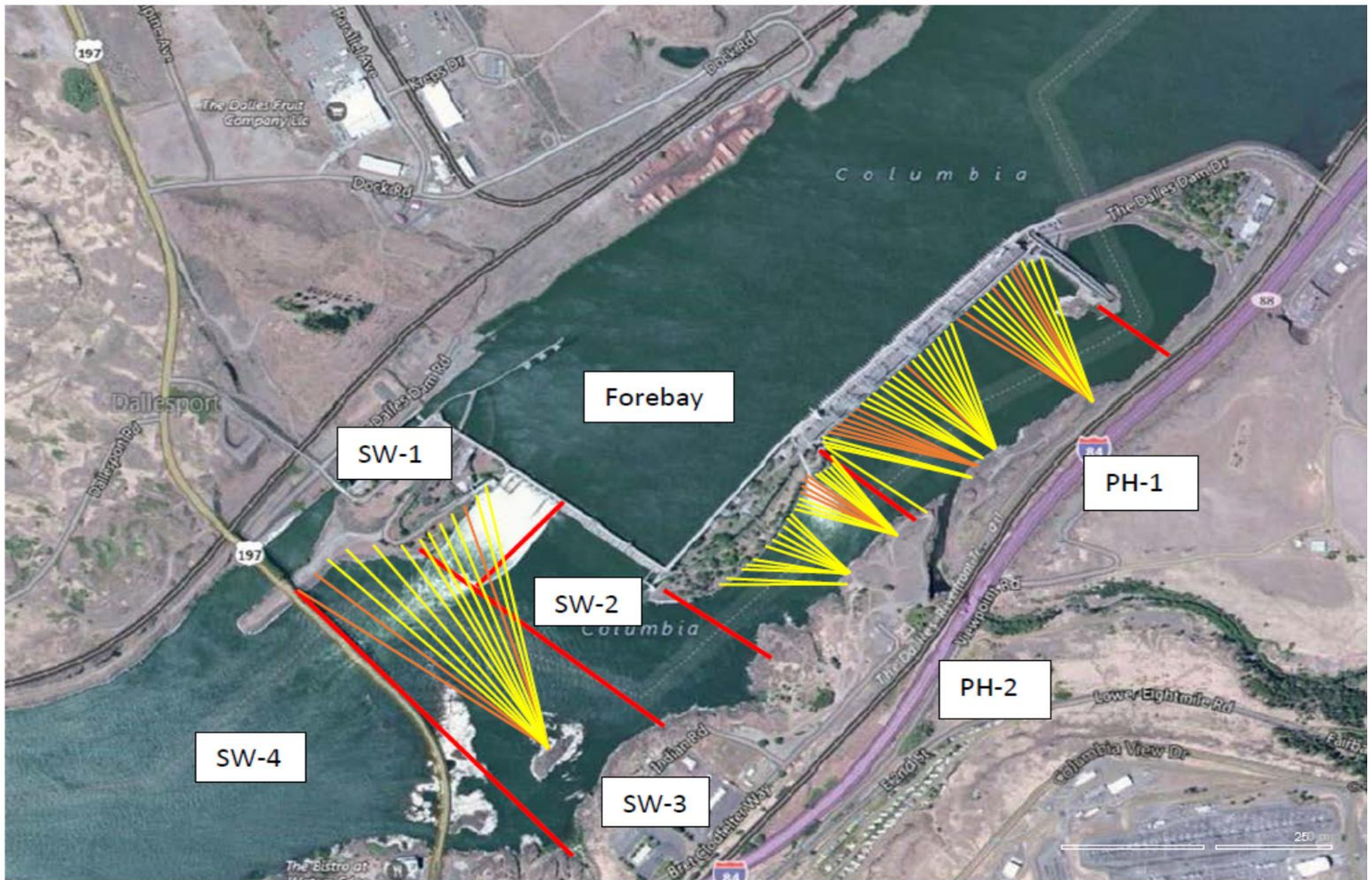
Fish unit breaker replace.- Manufacture this summer and install fall 2017. Switchover Jan 2018.

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				
6/11	JWR	AM	FB	0	0	0	26	0	0	0	0	0	0	0	0	0	26		
			PH1	0	0	4	18	0	0	0	0	0	0	0	0	0	0	22	
			PH2	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21	
			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	3	6	0	0	0	0	0	0	0	0	0	0	0	0	9	
6/12	JWR	PM	SW4	13	0	0	0	0	0	0	0	0	0	0	0	0	13		
			FB	0	0	0	38	0	0	0	0	0	0	0	0	0	0	38	
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			PH2	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
			SW1	0	0	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	0	0	1	
6/13	GJF	AM	SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW4	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
			FB	0	0	1	22	0	0	0	1	0	0	0	0	0	0	24	
			PH1	0	0	1	7	0	0	0	0	0	0	0	0	0	0	8	
			PH2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/14	GJF	PM	SW2	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
			SW3	15	0	0	0	0	0	0	0	0	0	0	0	0	15		
			SW4	7	0	0	0	0	0	0	0	0	0	0	0	0	7		
			FB	0	1	2	11	0	0	0	0	0	0	0	0	0	0	14	
			PH1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4	
			PH2	8	0	1	0	0	0	0	0	0	0	0	0	0	0	9	
6/15	GJF	AM	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	1	0	2	0	0	0	0	0	0	0	0	0	0	3		
			SW3	2	0	1	0	0	0	0	0	0	0	0	0	0	3		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			FB	0	0	1	10	0	0	0	0	0	0	0	0	0	0	11	
			PH1	0	0	4	2	0	0	0	0	0	0	1	0	0	0	7	
6/16	GJF	PM	PH2	7	0	2	0	0	0	0	0	0	0	0	0	9			
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	1	0	3	0	0	0	0	0	0	0	0	0	0	4		
			SW3	6	0	0	0	0	0	0	0	0	0	0	0	0	6		
			SW4	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
			FB	0	0	3	22	0	0	0	0	0	0	0	0	0	0	25	
6/17	GJF	AM	PH1	2	5	4	18	0	0	0	0	0	1	0	0	30			
			PH2	8	0	2	0	0	0	0	0	0	0	0	0	0	10		
			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	37	0	1	0	0	0	0	0	0	0	0	0	0	38		
			SW4	11	0	0	0	0	0	0	0	0	0	0	0	0	11		

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

The Dalles East

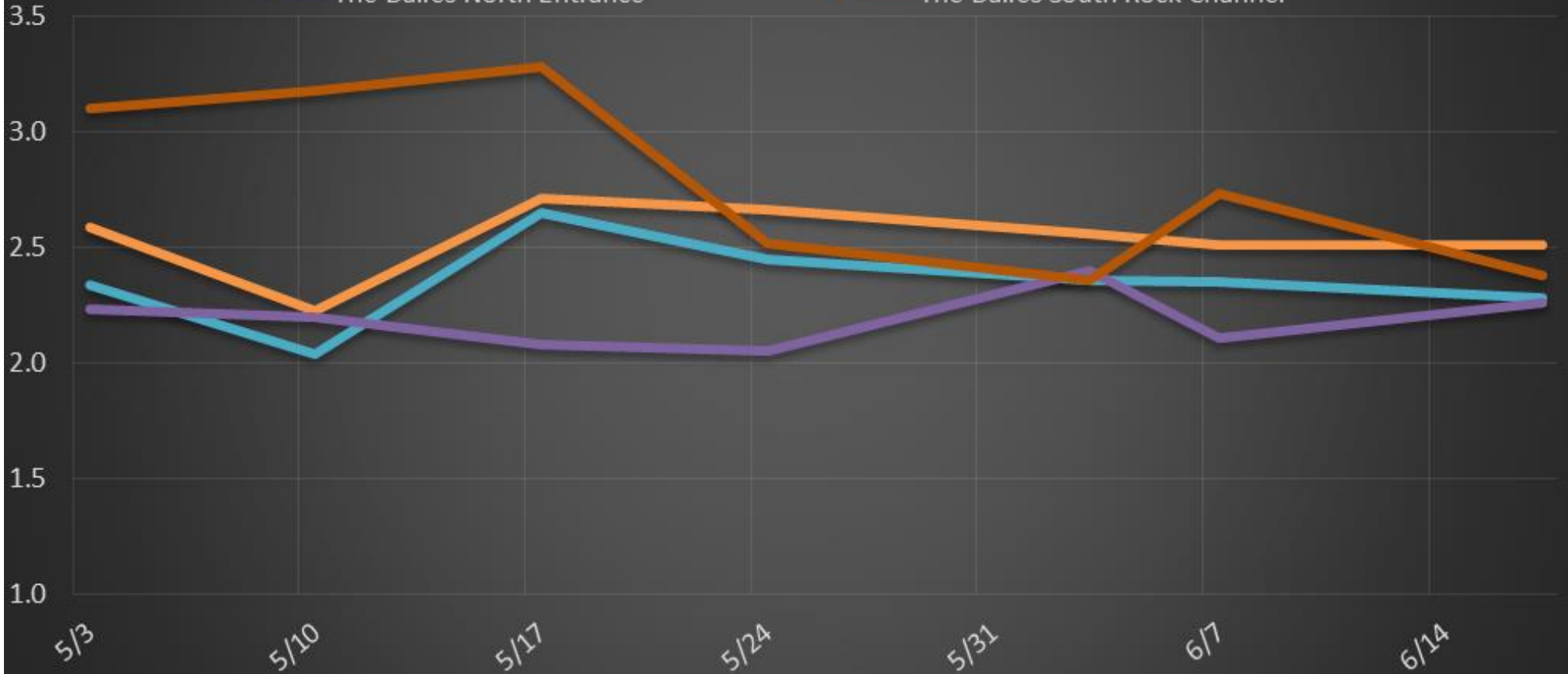
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/11	1613	1438	175	13	12	1	0	0	0	198	0	0	6
6/12	1808	1506	302	6	2	4	0	0	0	695	0	0	5
6/13	1691	1492	199	5	4	1	0	0	0	445	0	0	4
6/14	1246	1142	104	3	1	2	0	0	0	475	0	0	2
6/15	1506	1286	220	0	0	0	0	0	0	922	0	0	17
6/16	2003	1753	250	6	1	5	0	0	0	1024	0	0	16
6/17	1801	1518	283	6	4	2	0	0	0	1212	0	0	20
total	11668	10135	1533	39	24	15	0	0	0	4971	0	0	70

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
6/11	11	11	0	0	0	0	0	0	0	0	0	0	0
6/12	12	12	0	0	0	0	0	0	0	0	0	0	0
6/13	39	38	1	0	0	0	0	0	0	2	0	0	0
6/14	12	10	2	0	0	0	0	0	0	0	0	0	0
6/15	8	8	0	0	0	0	0	0	0	0	0	0	0
6/16	36	35	1	0	0	0	0	0	0	0	0	0	0
6/17	61	61	0	0	0	0	0	0	0	2	0	0	1
total	179	175	4	0	0	0	0	0	0	4	0	0	1
% North	0.46	0.53	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.4

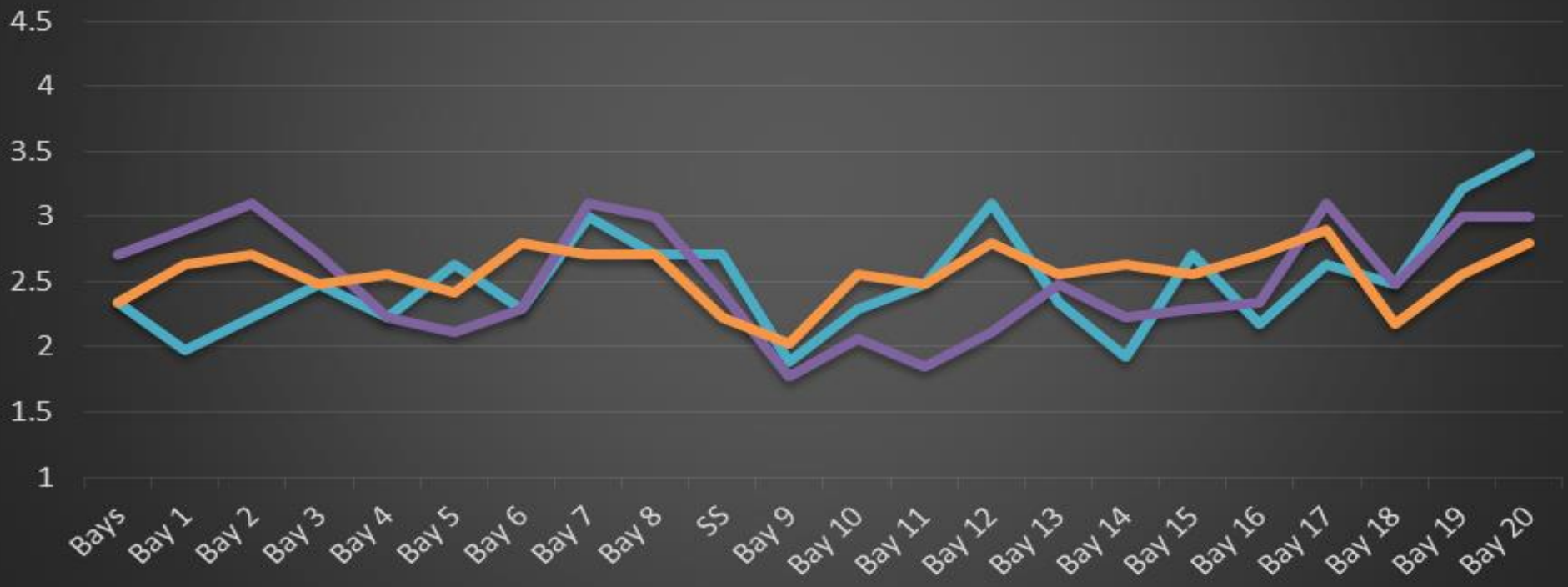
The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)

- The Dalles Collection Channel
- The Dalles North Entrance
- The Dalles Transportation Channel
- The Dalles South Rock Channel



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

7-Jun 17-Jun 3-Jun



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

