

The Dalles Dam Fishway Status Report

5/6/2017

Inspection Period: 04/30/2017-05/06/2017

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: 51.9 °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	1	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	4	≤ 0.3'	Picket leads raked as needed.	
Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	depth (≥ 7')	15.7	
East entrance differential	0	1.0' - 2.0'	1.4	One fish unit operation to 5/2 - MFR provided to FPOM
Entrance weir E1	0	No criteria	4.3	
Entrance weir E2	9	depth (≥ 8')	9.9	
Entrance weir E3	1	depth (≥ 8')	10.2	
Collection channel velocity	0	1.5 - 4 fps	2.59	
Transportation channel velocity	0	1.5 - 4 fps	2.34	
North channel velocity	0	1.5 - 4 fps	2.23	
South channel velocity	0	1.5 - 4 fps	3.10	
West entrance differential	0	1.0' - 2.0'	1.6	
Entrance weir W1	0	depth (≥ 8')	0.0	
Entrance weir W2	9	depth (≥ 8')	8.2	
Entrance weir W3	0	depth (>8')	1.0	
South entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir S1	9	depth (≥ 8')	9.2	
Entrance weir S2	0	depth (≥ 8')	9.6	
JUVENILE PASSAGE				
Sluicgate operation	0	Units 1, 8, 18		
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'	
Spill volume/pattern	13		Exceeding 40% due to high flows	
Turbine Unit Priority	14	per FPP	MU 2, 3, 6, 9, 12, 15, 16, 21 out of service	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds/Sea lions:

Sea lions (C014, 1-31, and 1 with ID yet to be confirmed) observed daily near east and west entrance. USDA hazing attempted.
Gulls increasing downstream of spillway. USDA hazing by boat. Bird observation data collected once daily. Refer to Avian Zone map and bird count.

Operations:

North in full operation. East fishway in 1 fish unit operation until 5/2. Crowbar thyristor (control box) replaced.
Spillway open with involuntary spill.

Current Outages;

F2 forced out for exciter problems. Repaired and returned 5/2.
MU2 out for hydraulic diagnosis. Return 6/1/17
MU12 out for hydraulic diagnosis. Return 6/23/17.
T8 (MU15 & MU16) out for transformer failure. Transformer replacement spring 2018.
MU21 out for exciter failure. Return 6/8/17
MU3 out for governor oil level. Return 5/14/17.
MU9 out for oil leak. Return 5/11/17.
MU11 out for annual maint. Return 5/11/17
MU19 out for annual maint. Return 5/18/17

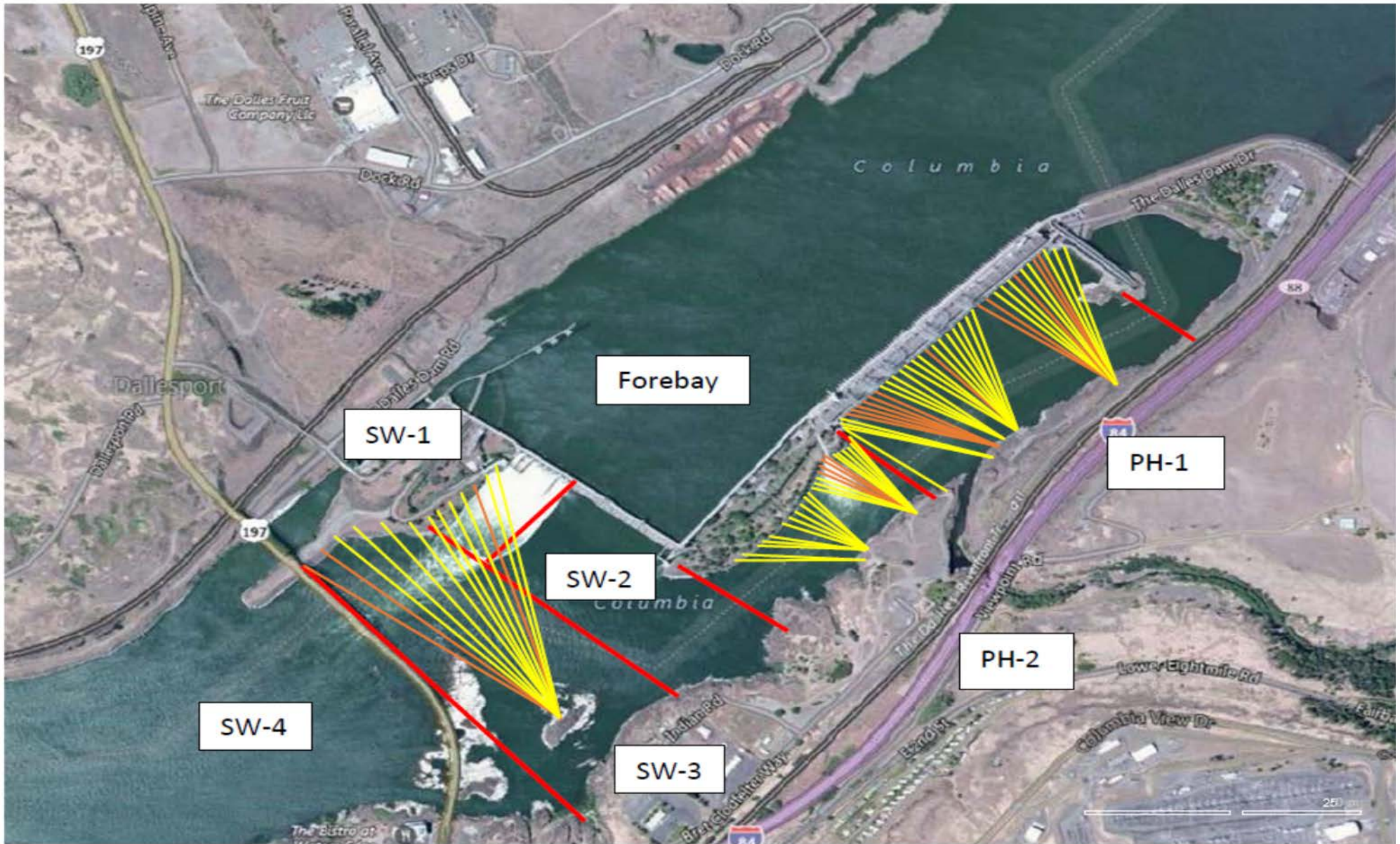
Maintenance;

Weir W1 installed with new wheels and in service. W3 closed.
East exit weir electrical panel FCQ7 installation/design resuming design completion.
PUD crane rake repainting to start this month.
Rebuilding spare entrance weir gearbox.
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 list.

Research/Construction/Contractors:

AWS construction - all work complete for season 1.
Lamprey minor mods - Rounded entrance weir cap parts for all entrances on order. Tribal lamprey trap hoist design 90%. Fab FY17 and install FY18.
Railroad track removal - Remaining tailrace deck next winter. Intake deck rail removal at units 9-12.
Fish unit breaker replace.- Manufacture this summer. Install fall 2017. Switchover Jan 2018. Schedule approved through FPOM.
Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022. Possible increase flow capacity for redundancy. Data collection continues.
Transformer replacement - Install start May 2018. Coordinated through FPOM.

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

Date	observer	Time (24 hr)	Zone	F=foraging, NF=non-foraging												Total birds in zone	Notes
				Gull		Cormorant		Caspian tern		Grebe		Pelican		Other			
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF		
4/30	JWR	AM	FB	0	0	0	21	0	0	0	0	0	0	0	0	21	
			PH1	0	0	0	7	0	0	0	0	0	0	0	0	7	
			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	11	0	0	0	0	0	0	0	0	0	0	0	11	
5/1	JWR	PM	SW4	44	0	0	0	0	0	0	0	0	0	0	44		
			FB	0	0	1	24	0	0	0	2	0	0	0	0	27	
			PH1	0	0	0	10	0	0	0	0	0	0	0	0	10	
			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	
5/2	GJF	AM	SW3	3	22	0	0	0	0	0	0	0	0	0	25		
			SW4	32	0	0	0	0	0	0	0	0	0	0	0	32	
			FB	0	0	3	25	0	0	0	0	0	0	0	0	28	
			PH1	0	0	1	7	0	0	0	0	0	0	0	0	8	
			PH2	2	1	1	0	0	0	0	0	0	0	0	0	4	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/3	GJF	PM	SW2	0	0	1	0	0	0	0	0	0	0	0	1		
			SW3	5	0	0	0	0	0	0	0	0	0	0	5		
			SW4	29	0	0	0	0	0	0	0	0	0	0	0	29	
			FB	0	0	0	9	0	0	0	8	0	0	0	0	17	
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	2	
			PH2	0	1	0	0	0	0	0	0	0	0	0	0	1	
5/4	GJF	AM	SW1	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		
			SW3	4	0	0	0	0	0	0	0	0	0	0	0	4	
			SW4	16	0	0	0	0	0	0	0	0	0	0	0	16	
			FB	0	0	0	22	0	0	0	0	0	0	0	0	22	
			PH1	0	2	0	3	0	0	0	0	0	0	0	0	5	
5/5	GJF	PM	PH2	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		
			SW2	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW3	6	0	0	0	0	0	0	0	0	0	0	0	6	
			SW4	57	0	0	0	0	0	0	0	0	0	0	0	57	
			FB	0	0	2	21	0	0	0	7	0	0	0	0	30	
5/6	GJF	AM	PH1	0	1	0	8	0	0	0	0	0	0	0	9		
			PH2	3	0	0	2	0	0	0	0	0	0	0	5		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	0	0	0	0	0	0	0	1	0	0	1	
			SW3	7	0	0	2	0	0	0	0	0	0	0	0	9	
			SW4	101	0	0	0	0	0	0	0	0	0	0	0	101	
5/6	GJF	AM	FB	0	1	2	27	0	0	0	0	0	0	0	30		
			PH1	0	0	2	1	0	0	0	0	0	0	0	0	3	
			PH2	2	0	1	0	0	0	0	0	0	0	0	0	3	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	1	0	1	0	0	0	0	0	0	0	0	0	2	
			SW3	11	0	0	0	0	0	0	0	0	0	0	0	11	
SW4	110	0	0	0	0	0	0	0	0	0	0	0	110				

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

The Dalles East

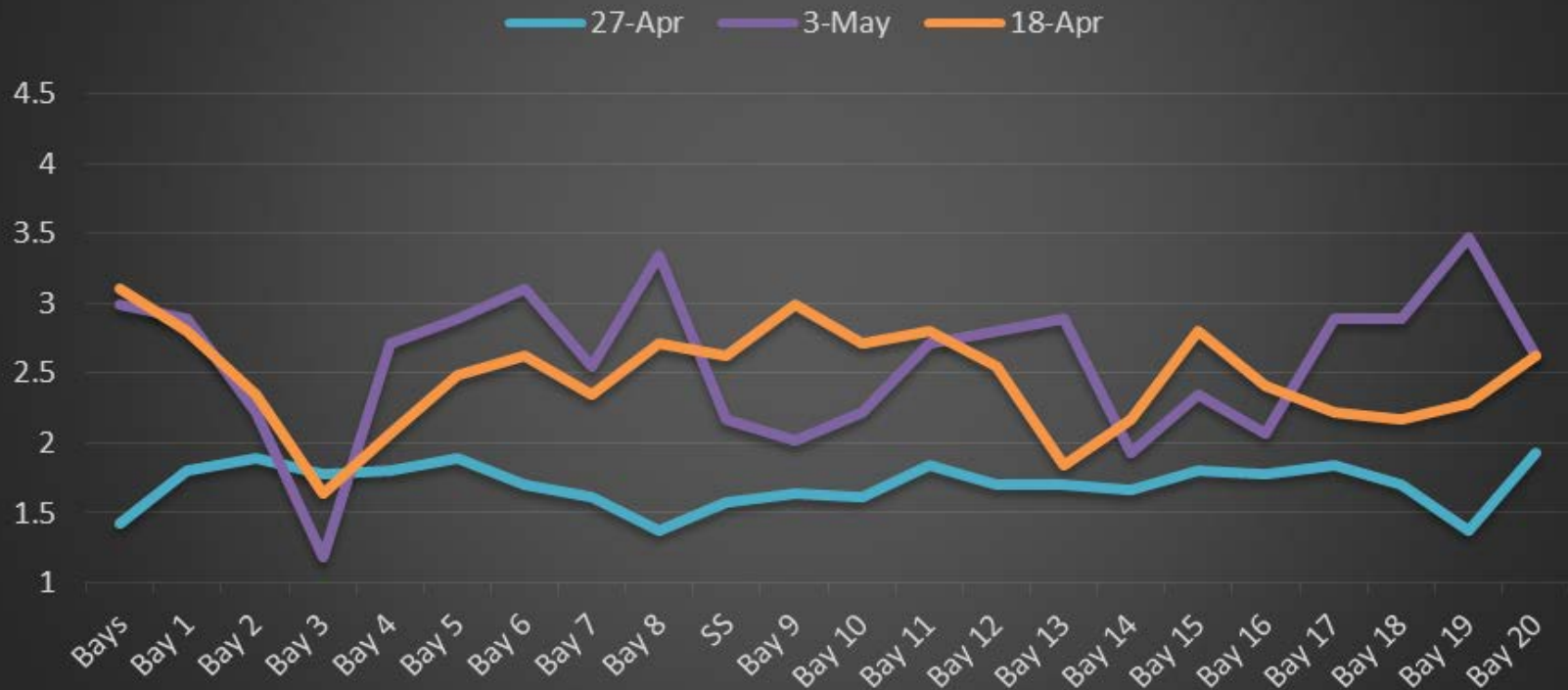
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
4/30	104	102	2	1	0	1	0	0	0	0	0	0
5/1	86	84	2	2	1	1	0	0	0	0	0	0
5/2	89	85	4	0	0	0	0	0	0	0	0	0
5/3	249	245	4	3	2	1	0	0	0	0	0	0
5/4	356	349	7	0	0	0	0	0	0	0	0	0
5/5	328	318	10	2	2	0	0	0	0	0	0	0
5/6	1062	1001	61	2	1	1	0	0	0	0	0	0
total	2274	2184	90	10	6	4	0	0	0	0	0	0

The Dalles North

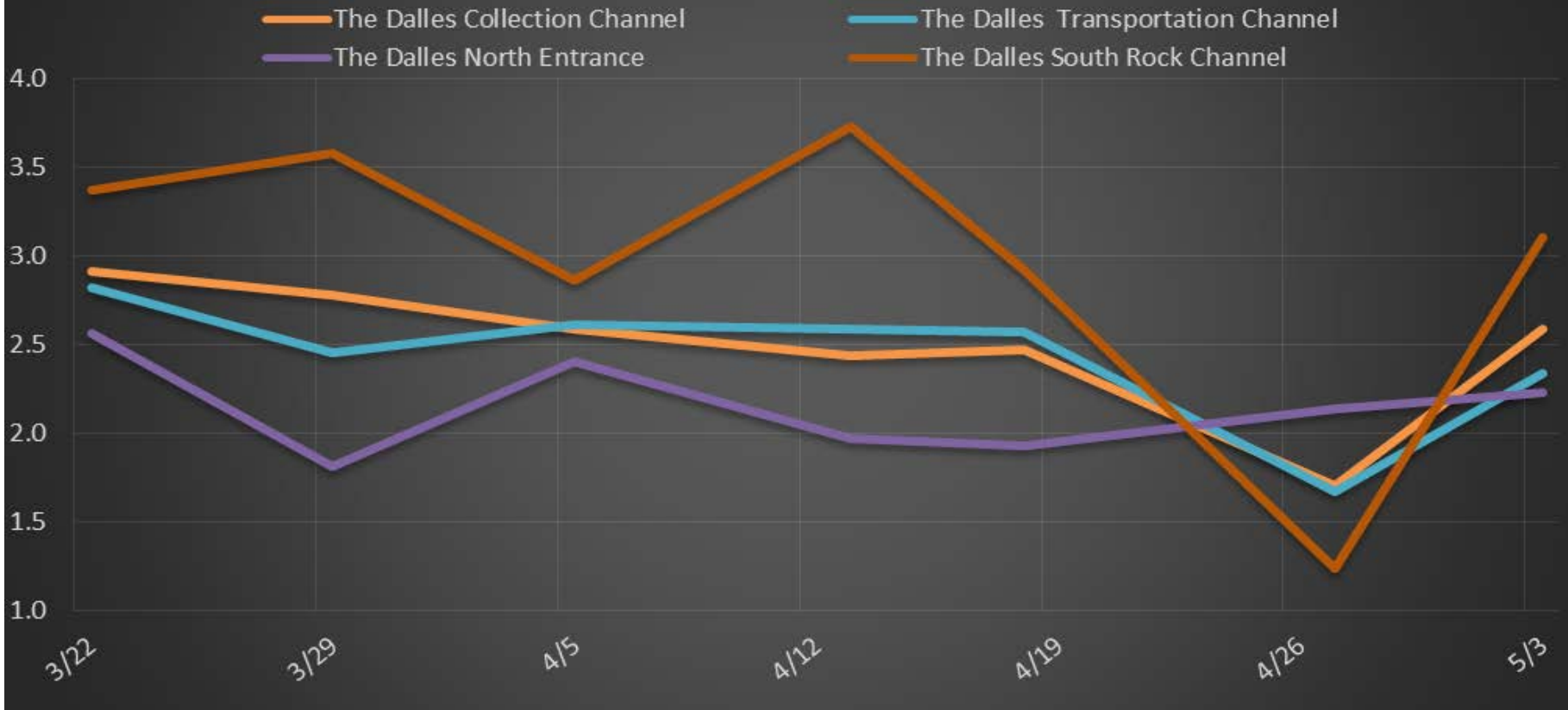
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
4/30	0	0	0	0	0	0	0	0	0	0	0	0
5/1	0	0	0	0	0	0	0	0	0	0	0	0
5/2	0	0	0	0	0	0	0	0	0	0	0	0
5/3	0	0	0	0	0	0	0	0	0	0	0	0
5/4	2	2	0	0	0	0	0	0	0	0	0	0
5/5	1	1	0	0	0	0	0	0	0	0	0	0
5/6	1	1	0	0	0	0	0	0	0	0	0	0
total	4	4	0	0	0	0	0	0	0	0	0	0
% North	0	0	0	0	0	0	0	0	0	0	0	0

http://www.fpc.org/environment/fcounts.asp?fr_cdy=2017&fr_cdm=4&fr_cdd=30&to_cdm=5&to_cdd=6&subbtn=salmon&op=sdaily

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

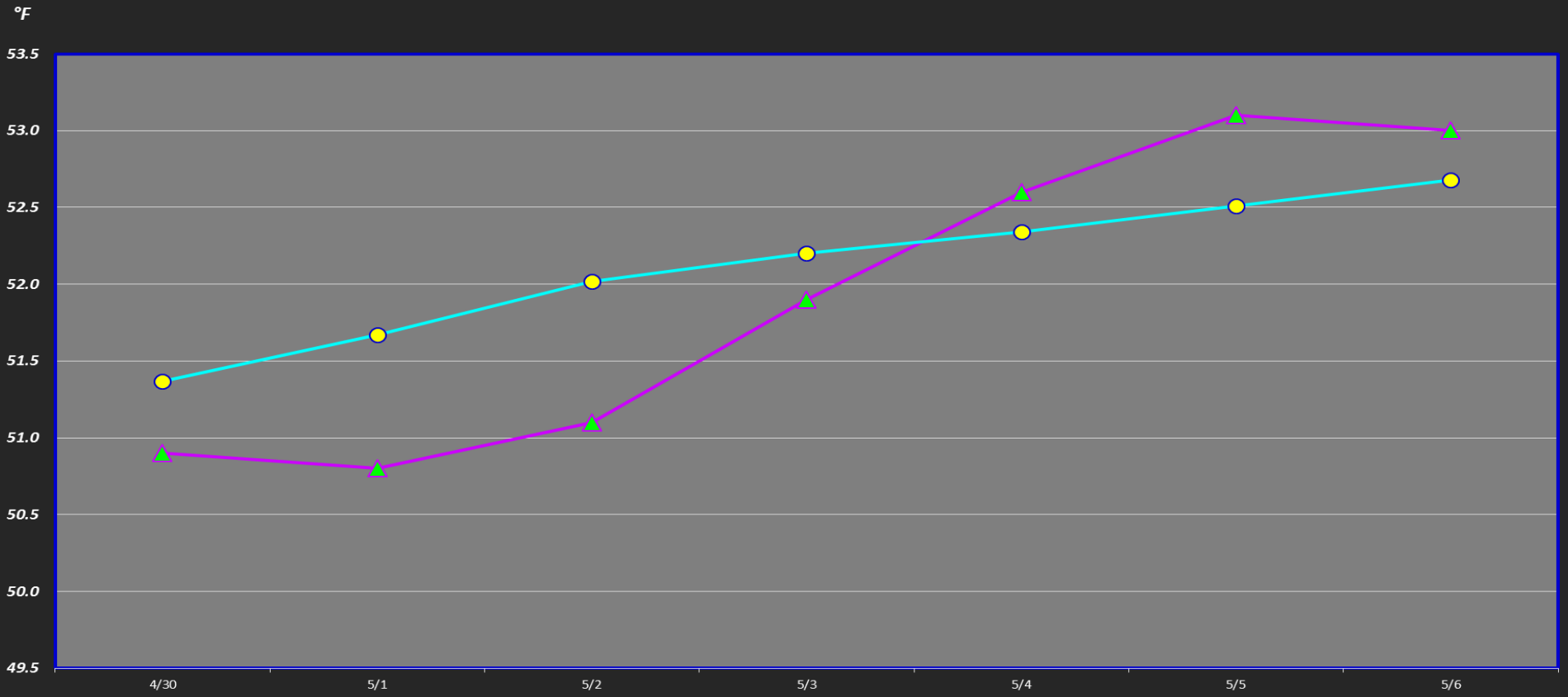


The Dalles Dam Average Velocities (In criteria 1.5 - 4.0 fps)



▲ Current USGS Daily Tailwater Average

● USGS Daily Tailwater Average (2007-2017)



Secchi:		Temperatures
3.0	Sun	50.9
3.0	Mon	50.8
3.0	Tue	51.1
3.0	Wed	51.9
3.0	Thurs	52.6
3.0	Fri	53.1
3.0	Sat	53.0
3.0	AVG	51.9

USGS: http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201704_lcol.html

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

= Out of criteria

Spill link
http://www.nwd-wc.usace.army.mil/dd/nwdp/project_hourly/webexec/rep?r=tda&ago=0

North Ladder		East Ladder											24 hr avg		
North Entrance		East Entrance					West Entrance			South Entrance					
Date:	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
4/30			1.3	0.0	Closed	8.2	14.1	1.7	8.3	5.5	0.0	1.7	Closed	10.1	
	1.4	10.7	1.3	0.0		8.1	14.4	1.7	8.5	5.7	0.0	1.6		10.2	
	1.4	10.9	1.2	0.0		8.1	14.8	1.7	8.2	5.5	0.0	1.7		10.0	
5/1			1.2	0.0	Closed	8.1	13.7	1.6	8.3	5.6	0.0	1.7	Closed	10.2	
	1.4	10.9	1.2	0.0		8.0	13.5	1.7	8.3	5.4	0.0	1.7		10.0	
	1.4	10.9	1.4	0.0		4.0	8.0	13.3	1.5	8.2	5.5	0.0		1.3	10.1
5/2			1.3	0.0	4.0	8.2	14.0	1.6	8.3	5.6	0.0	1.5	Closed	10.0	
	1.4	10.8	1.7	0.0	4.0	7.1	15.8	1.5	8.2	4.9	1.4	1.4		10.1	
	1.4	10.9	1.4	0.0	5.1	8.2	16.0	1.3	8.3	6.1	1.7	1.4		10.0	
5/3			1.3	7.9	12.0	12.0	16.6	1.6	9.9	9.9	1.2	1.3	9.9	10.0	
	1.4	10.7	1.3	7.9	12.0	12.0	16.6	1.6	10.4	10.4	1.8	1.4	8.6	8.6	
	1.4	10.7	1.3	7.9	11.9	12.0	15.7	1.5	10.5	10.6	0.5	1.4	9.1	9.1	
5/4															
	1.4	10.6	1.4	6.0	12.0	12.1	17.6	1.6	10.4	10.6	0.8	1.5	9.1	9.1	
	1.4	10.7	1.5	6.9	12.0	11.9	16.0	1.7	10.5	10.5	0.7	1.5	9.0	9.0	
5/5			1.5	7.3	12.0	12.0	16.4	1.6	10.6	10.6	1.1	1.3	9.3	9.3	
	1.2	10.7	1.4	6.6	12.1	12.0	16.7	1.6	10.6	10.6	1.3	1.4	9.2	9.2	
	1.3	10.7	1.4	7.6	12.1	12.0	16.7	1.6	10.6	10.6	1.3	1.5	9.2	9.1	
5/6			1.4	8.5	11.9	12.0	17.6	1.7	10.4	10.4	2.3	1.5	9.3	9.2	
	1.5	10.7	1.4	8.7	11.9	12.0	15.8	1.6	10.6	10.6	2.5	1.6	9.2	9.1	
	1.4	10.8	1.5	10.4	12.0	12.0	18.5	1.7	8.6	8.6	3.3	1.6	9.1	9.1	
AVG:	1.4	10.8	1.4	4.3	9.9	10.2	15.7	1.6		8.2	1.0	1.5	9.2	9.6	45.7

Fishways are inspected twice daily plus one SCADA inspection.