

The Dalles Dam Fishway Status Report

10/16/2016

Inspection Period: 10/09/2016 - 10/15/2016

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: 62.3 °F	
			Comments: Fall like conditions on project		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'	1.5			
Entrance weir N1	0	depth (≥ 8')	9.2			
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				
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Picket leads raked as needed.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	12.0			
East entrance differential	0	1.0' - 2.0'	1.6			
Entrance weir E1	0	No criteria	6.0			
Entrance weir E2	0	depth (≥ 8')	13.0			
Entrance weir E3	0	depth (≥ 8')	13.0			
Collection channel velocity	0	1.5 - 4 fps	2.75			
Transportation channel velocity	0	1.5 - 4 fps	2.38			
North channel velocity	0	1.5 - 4 fps	3.06			
South channel velocity	0	1.5 - 4 fps	3.08			
West entrance differential	0	1.0' - 2.0'	1.6			
Entrance weir W1	0	depth (≥ 8')	9.8			
Entrance weir W2	0	depth (≥ 8')	9.8			
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	1.4			
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					
spill off						
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

Birds/Sea lions:

No sea lions observed. Primarily non-foraging cormorants on site.

Bird observation data collected once daily. Refer to Avian Zone map and bird count.

Two of 13 spillway avian lines broke closest to bridge. In-house installation attempted, but not successful. USDA will be contacted.

Operations:

Calibration 10/01, all readings within criteria

Gatewell drawdown completed 10/01, all readings within criteria

Full powerhouse outage occurred 10/13 ~1240PM to 10/14 ~12:20AM for BPA maintenance. Spillway opened. Coordinated through FPOM. Refer to fish count tab.

Current Outages:

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.

MU3 forced out of service through 8/4/2016 due to loss of governor sump oil level

MU21 OOS for exciter failure RTS unknown

Maintenance:

New east exit weir electrical panel FCQ7 installation ~50% complete. Planning for FY17 work pending funding.

Planning underway for winter dewater season, East ladder out Dec 1 through end Feb for AWS backup construction. North ladder out 2 weeks mid Jan.

Long Term repair maintenance plans; 154 -157 weir wheel replace, collection channel diffusers decommission, repair failed diffusers - all awaiting funding

Fish related /non-fish funded items; Spillway crane rehab priority over spillgate 9, both awaiting funding.

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Studies/Construction:

Environmental acceptable grease testing on unit 1 in progress. Short outage planned for 10/19.

North fishladder rehab/rock wall stabilizing - No new development.

East fishladder emergency backup - Mobilization and prefab continues. Night work start in November. Day work start December.

Crane rail replacement - Start in water work period 2016/17.

Transformer replacement - Install start Oct 2017.

N Wasco Co PUD Memo of Agreement - PUD comments to be incorporated.

Fish unit rehab - No new development.

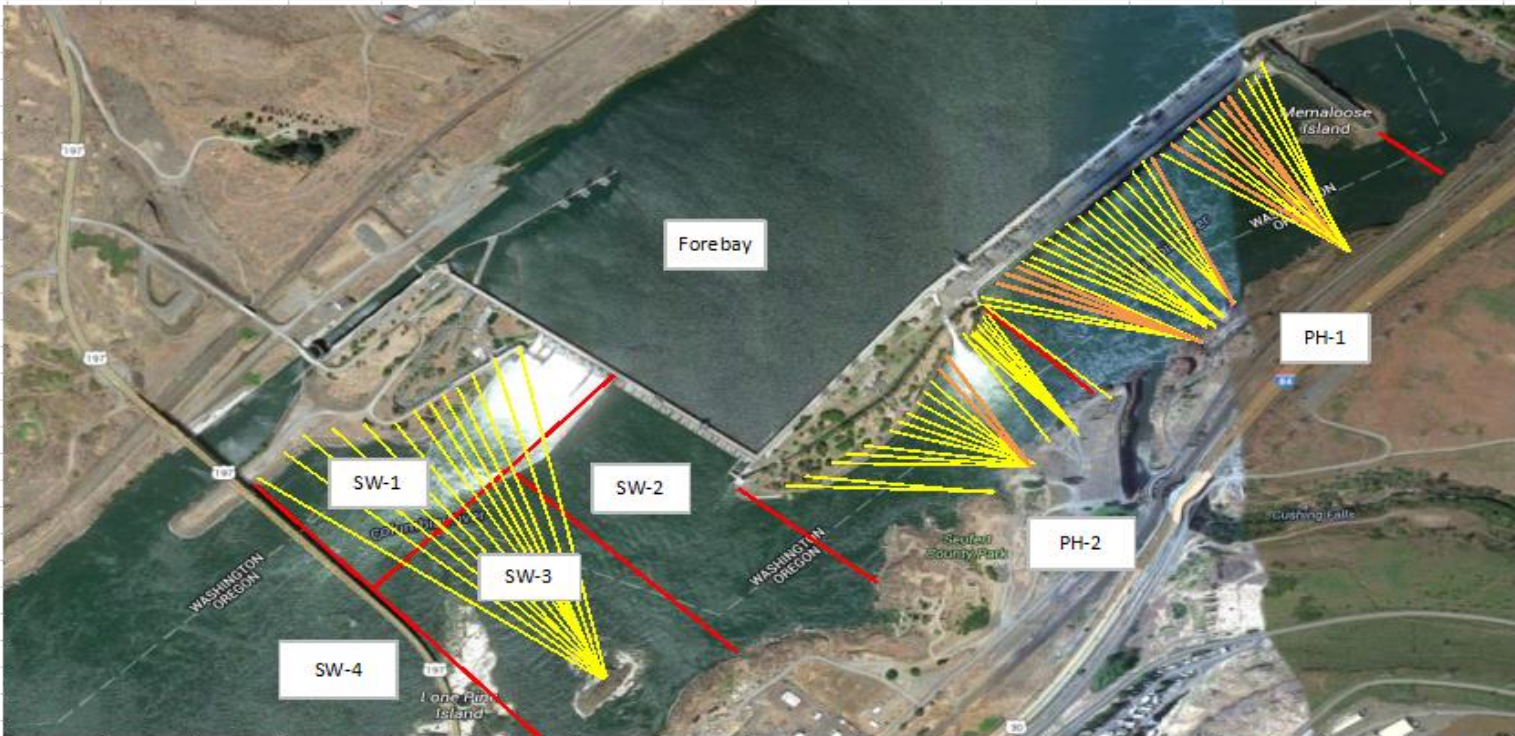
Fish unit breaker replacement - Start in water work period 2017/18

Research/Contractors:

Normandeau fish counters continue through Oct 30. No issues.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Yellow lines= present avian lines

red lines= Barriers between observation zones

Orange lines= Missing or down avian lines

2016 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	Observer	AM/PM	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				
10/9/16	GJF	PM	FB	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
			PH1	0	6	7	26	0	0	0	0	0	0	0	0	0	0		39
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0	0		2
			SW2	0	0	0	29	0	0	0	0	0	0	0	0	0	0		29
			SW3	0	0	0	57	0	0	0	0	0	0	0	0	0	0		57
			SW4	0	7	0	13	0	0	0	0	0	0	1	0	0	0		21
10/10/16	GJF	AM	FB	0	59	0	12	0	0	0	0	0	0	0	0	0	71		
			PH1	0	0	4	5	0	0	0	0	0	0	0	0	0	9		
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	0	3		
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0	2		
			SW2	0	0	0	78	0	0	0	0	0	0	0	0	0	78		
			SW3	0	5	0	15	0	0	0	0	0	0	0	0	0	20		
			SW4	0	13	0	13	0	0	0	0	0	1	0	0	0	27		
10/11/16	GJF	PM	FB	0	2	0	2	0	0	0	0	0	0	0	0	0	4	COME	
			PH1	0	1	2	26	0	0	0	0	0	0	0	0	0	29		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	1	1	0	0	0	0	0	0	0	0	0	0	2		
			SW2	0	0	0	1	0	0	0	0	0	0	0	1	0	2		
			SW3	0	12	0	59	0	0	0	0	0	0	0	0	0	71		
			SW4	0	78	0	6	0	0	0	0	0	0	0	0	0	84		
10/12/16	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		
			PH2	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		
			SW2	16	0	0	0	0	0	0	0	0	0	0	0	0	16		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW4	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
10/13/16	GJF	PM	FB	0	3	0	3	0	0	0	0	0	0	0	0	0	6	GBH	
			PH1	0	1	0	21	0	0	0	0	0	0	0	0	0	22		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	56	0	9	8	0	0	0	0	0	0	0	3	0	76		
			SW4	0	29	0	78	0	0	0	0	0	1	0	0	0	108		
10/14/16	JWR	AM	FB	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
			PH1	0	2	0	0	0	0	0	0	0	0	0	0	0	2		
			PH2	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	0	47	0	0	0	0	0	0	0	0	0	47		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10/15/16	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	0	24	0	0	0	0	0	0	0	15	0	39		
			PH2	18	0	0	0	0	0	0	0	0	0	0	0	0	18		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	2	0	1	0	0	0	0	0	0	0	0	0	0	3		
			SW3	0	0	0	38	0	0	0	0	0	0	0	0	0	38		
			SW4	0	40	0	15	0	0	0	0	0	0	0	0	0	55		
<i>daily averages</i>				1.9	5.3	0.6	11.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	20.1			

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
10/9	1124	980	144	1034	745	289	269	263	6	1	0	0	1
10/10	1215	970	245	891	622	269	164	150	14	0	0	0	1
10/11	880	743	137	757	485	272	526	503	23	0	0	0	1
10/12	900	734	166	787	524	263	199	187	12	0	0	0	0
10/13	333	271	62	149	101	48	13	12	1	0	0	0	1
10/14	569	514	55	264	188	76	26	26	0	0	0	0	0
10/15	433	337	96	511	318	193	201	179	22	2	0	0	0
Total	5454	4549	905	4393	2983	1410	1398	1320	78	3	0	0	4

The Dalles North

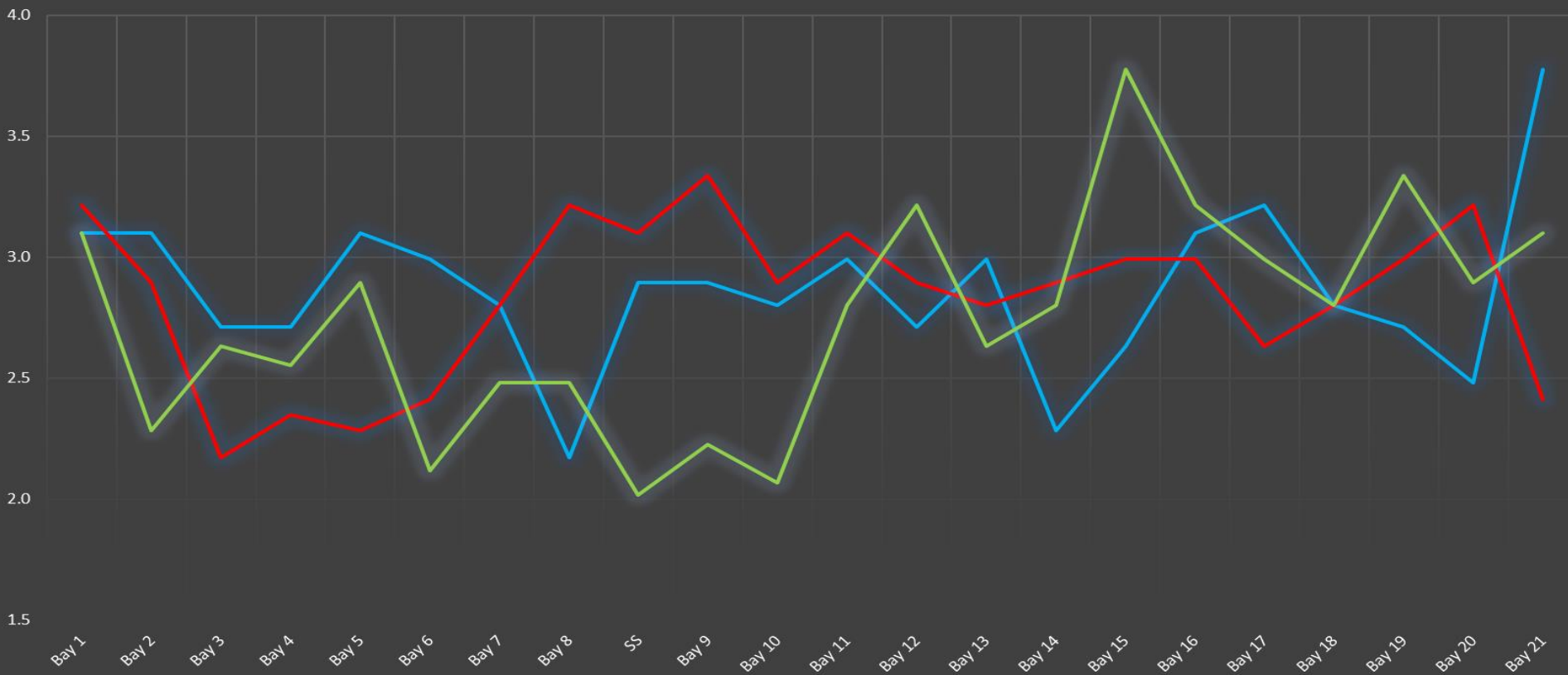
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/9	8	2	6	145	103	42	10	10	0	0	0	0	0
10/10	24	22	2	87	64	23	14	13	1	0	0	0	0
10/11	43	36	7	70	46	24	54	52	2	0	0	0	0
10/12	11	6	5	29	19	10	1	1	0	0	0	0	0
10/13	108	89	19	87	58	29	4	4	0	0	0	0	0
10/14	45	41	4	78	49	29	6	6	0	0	0	0	1
10/15	23	22	1	105	82	23	16	14	2	0	0	0	0
Total	262	218	44	601	421	180	105	100	5	0	0	0	1
% North	4.6	4.6	4.6	12.0	12.4	11.3	7.0	7.0	6.0	0.0	0.0	0.0	20.0

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts/>

Yellow indicates Power house outage

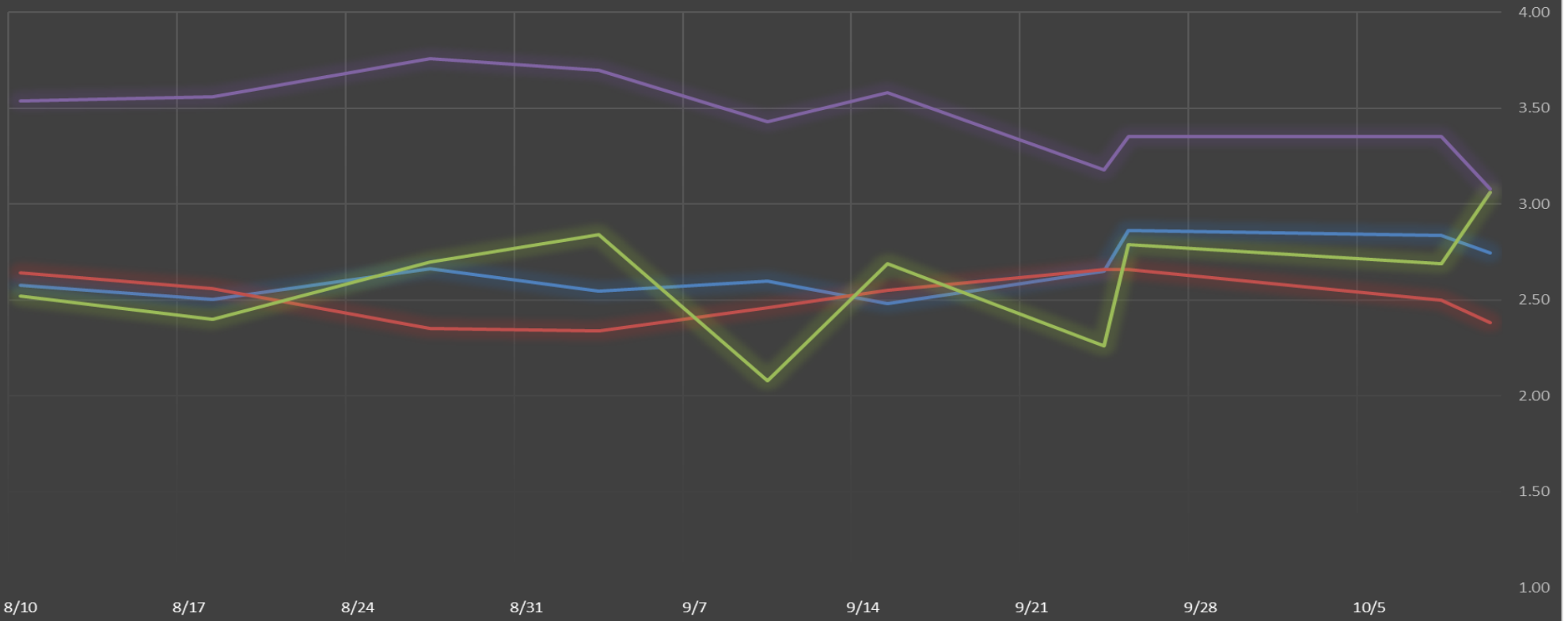
The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)

— Date 9/25 — Date 10/8 — Date 10/10

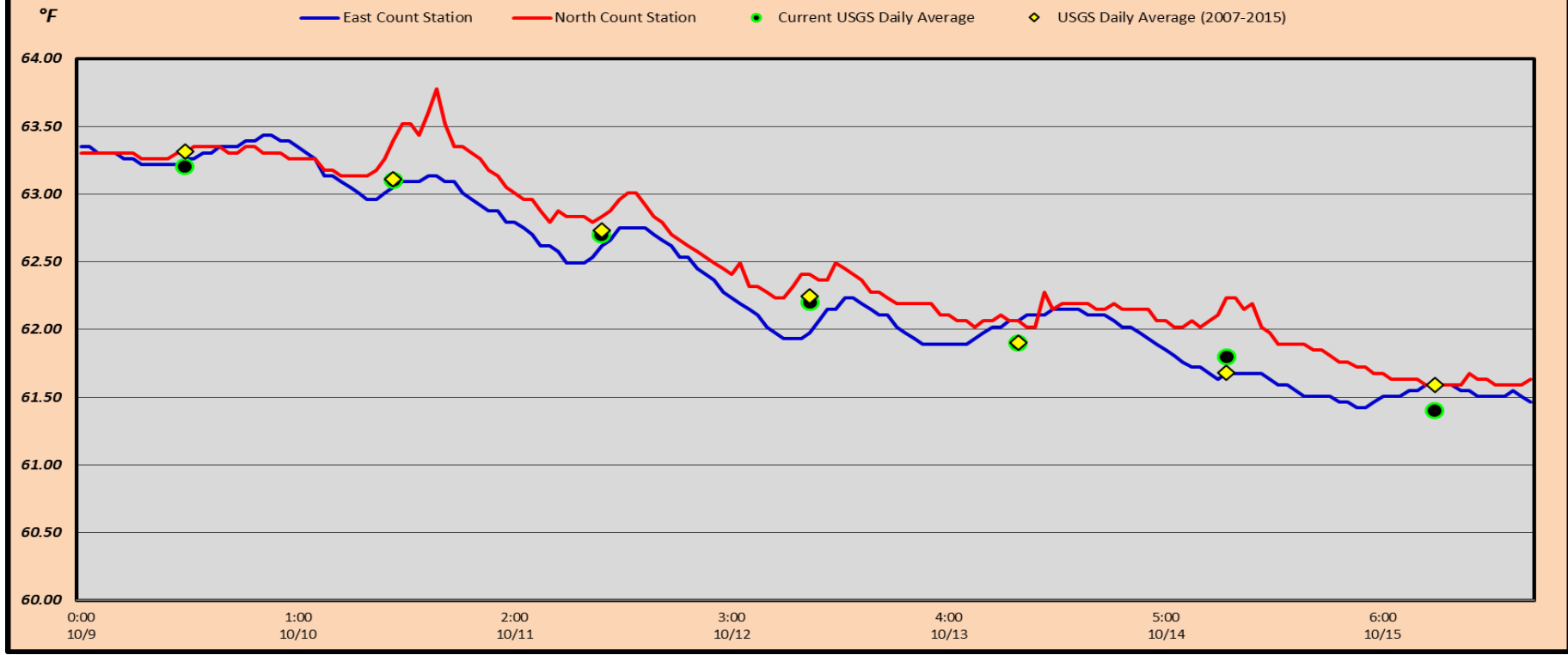


The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

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



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



		USGS:	(Oct) http://www.nwd-wc.usace.army.mil/tml/documents/ops/temp/201610.html
Secchi:		Temperatures	
10/9	5.0	Sun	63.2
10/10	5.0	Mon	63.1
10/11	5.0	Tue	62.7
10/12	5.0	Wed	62.2
10/13	5.0	Thurs	61.9
10/14	5.0	Fri	61.8
10/15	5.0	Sat	61.4
	5.0	AVG	62.3

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

= Out of criteria

North Ladder				East Ladder											S P I L L O F F
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	
10/9			1.4	4.9	12.9	13.0	10.7	1.5	9.4	9.4		1.2	8.3	8.4	
	1.4	9.1	1.4	6.1	13.1	13.1	11.4	1.5	9.5	9.6		1.3	8.4	8.3	
	1.4	9.1	1.5	5.1	13.0	13.1	11.6	1.5	9.5	9.5		1.3	8.3	8.3	
10/10			1.6	4.9	12.9	12.9	12.3	1.7	9.4	9.4		1.5	8.2	8.2	
	1.4	9.1	1.9	5.1	13.1	13.1	12.3	1.6	9.5	9.5		1.4	8.3	8.3	
	1.5	9.2	1.8	5.0	13.0	13.0	12.4	1.7	9.4	9.4		1.4	8.3	8.3	
10/11			1.6	4.9	13.0	13.0	11.5	1.6	9.6	9.6		1.4	8.3	8.2	
	1.5	9.1	1.6	5.0	13.0	13.0	10.9	1.5	9.5	9.5		1.3	8.4	8.3	
	1.5	9.1	1.6	5.1	13.1	13.1	11.4	1.6	9.6	9.6		1.3	8.3	8.4	
10/12			1.7	5.0	13.0	13.0	11.9	1.7	9.5	9.5		1.4	8.3	8.3	
	1.5	10.2	1.6	5.1	13.1	13.1	12.2	1.7	9.5	9.5		1.4	8.3	8.3	
	1.4	9.1	1.7	5.0	13.0	13.0	12.7	1.7	9.7	9.7		1.4	8.4	8.4	
10/13			1.6	7.1	12.9	12.9	12.7	1.5	9.5	9.5		1.4	8.3	8.3	
	1.4	9.1	1.5	7.0	13.0	13.0	12.7	1.5	10.6	10.6		1.4	8.3	8.3	
	1.5	9.1	10/13/2016 11:30 20:30 ALL UNITS					L2 Energized MU3&4 and Lines 1,3,4,5					and 6 De-energized		
10/14			1.5	5.0	13.0	13.0	11.4	1.4	10.6	10.6		1.5	8.2	8.2	
	1.5	NAV	1.6	8.5	13.0	13.0	12.9	1.6	10.5	10.5		OUTAGE			
	1.5	LOCK	1.6	9.0	12.9	12.9	12.0	1.4	10.4	10.4					
10/15			1.3	9.0	13.1	13.1	12.1	1.4	10.5	10.5		1.4	8.3	8.3	
	1.4	9.2	1.5	8.9	13.0	13.0	12.4	1.5	10.5	10.5		1.5	8.3	8.3	
	1.5	9.1	1.5	9.0	13.0	13.0	11.6	1.5	9.0	9.0		1.4	8.3	8.3	
AVG:	1.5	9.2	1.6	6.0	13.0	13.0	12.0	1.6	9.8	9.8		1.4	8.3	8.3	

Fishways are inspected twice daily plus one SCADA inspection.



Attempt to install new lines on island attachment pole.