

The Dalles Dam Fishway Status Report

3/19/2016

Inspection Period: 03/13/2016-03/19/2016

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: 7		Temperature: 44.5 °F
			Comments		Secchi: 4.0 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')	9.6		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			PUD in bypass on 2/16/16. Entrance was still in criteria.
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.		
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')	Average	11.4	
East entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir E1	0	No criteria	Average	8.8	No criteria for E1
Entrance weir E2	0	depth (≥ 8')	Average	13.4	
Entrance weir E3	0	depth (≥ 8')	Average	13.5	
Collection channel velocity	0	1.5 - 4 fps	Average	3.3	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6	
North channel velocity	0	1.5 - 4 fps	Average	3.5	
South channel velocity	0	1.5 - 4 fps	Average	3.7	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	11.4	
Entrance weir W2	0	depth (≥ 8')	Average	11.4	
Entrance weir W3	0	No criteria	Average	Closed	
South entrance differential	1	1.0' - 2.0'	Average	1.4	No power for PLC readings on 3/18 & 3/19
Entrance weir S1	0	depth (≥ 8')	Average	9.4	
Entrance weir S2	0	depth (≥ 8')	Average	9.4	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'		
Spill volume	Spill RTS ~April 2016				
Spill Pattern					
Turbine Unit Priority	14	per FPP	MU 15 & 16 OOS		
Turbine 1% Efficiency	NA	per FPP	Out of fish passage season		

OTHER ISSUES:**Birds/Sea lions:**

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

Sea lion observed once in front of powerhouse

Operations:

No power to the PLC on south and north on 3/19/16 for Nav Lock work

Navigation Lock returned to service 3/19/16

Calibration inspections completed. Minor discrepancies addressed by TDE

Gateway drawdown completed 3/19/16 and all differentials were within criteria.

Current Outages:

T8 (MU15 & MU16) FOOS through 3/10/2016 due to high levels of methane production

MU3 FOOS through 4/1/2016 due to loss of governor sump oil level

Spillway gates 1-6 OOS Daily from 0600 2/17/2016 to 1700 2/25/2016 to perform gate climbing inspections.

Maintenance:

Assembling last collection channel dewatering pump for installation. To be installed after in water work period.

New avian line pole constructed for west powerhouse grid. Awaiting line attachment parts. Install and line attachment to occur by first week April.

East exit weir electrical panel FCQ7 panel to arrive in March for initial installation. Final electrical connection awaiting funding.

New dewatering pump motor for north fishway entrance delivery this spring. Install before dewater season 2016/2017.

Tailrace crane repair near west entrance delayed beyond end of in water work period (~mid April). MOC form updated for FPOM review.

Long Term repair maintained plans; 154 -157 weir mods, collection channel diffusers decommission, repair failed diffusers - all on hold due to funding

Fish related /non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 trunnion pin replace, sluiceway chaingate rehab (near complete)

fish unit breaker replace (in planning), Fish unit rehab (in planning) and transformer replace (in planning).

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

Studies:

North fishladder rehab study for rock wall ongoing. Construction 2017/18. FPOM review as needed.

East fishladder emergency backup construction delayed. Awaiting planning meetings.

Crane rail replacement on tailrace and intake 2016-17. To be completed within in water work period.

Transformer replacement planning underway. Plans to eliminate fish unit TA transformers. Work to start 2017. Periodic planning meetings continue.

In process of updating N Wasco Co PUD Memo of Agreement.

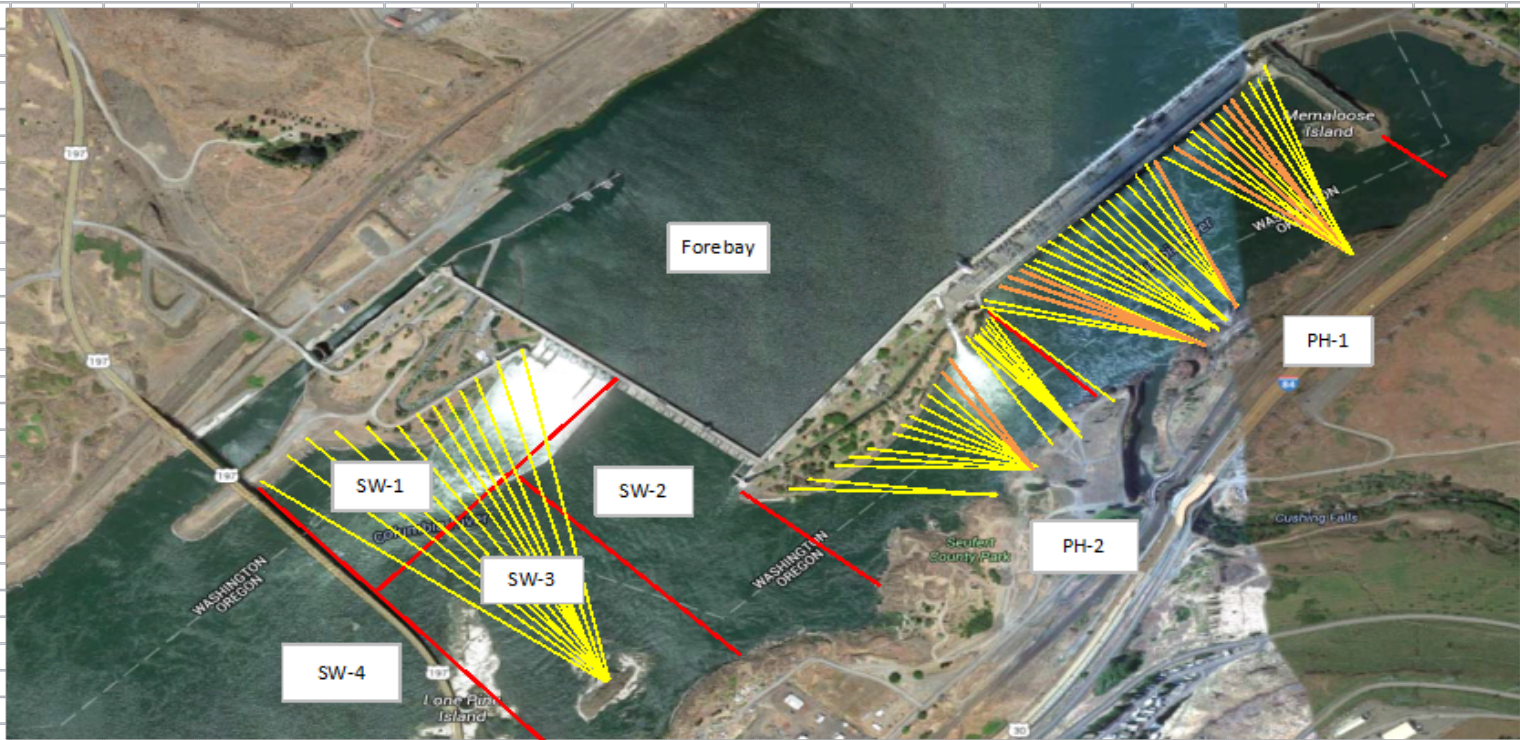
Research/Contractors:

Normandeau fish counters season done 10/31. Resumes Apr1.

USGS water quality monitoring pre season meeting complete. Monitor stations at east powerhouse forebay and tailrace shoreline.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Yellow lines= present avian lines

red lines= Barriers between observation zones

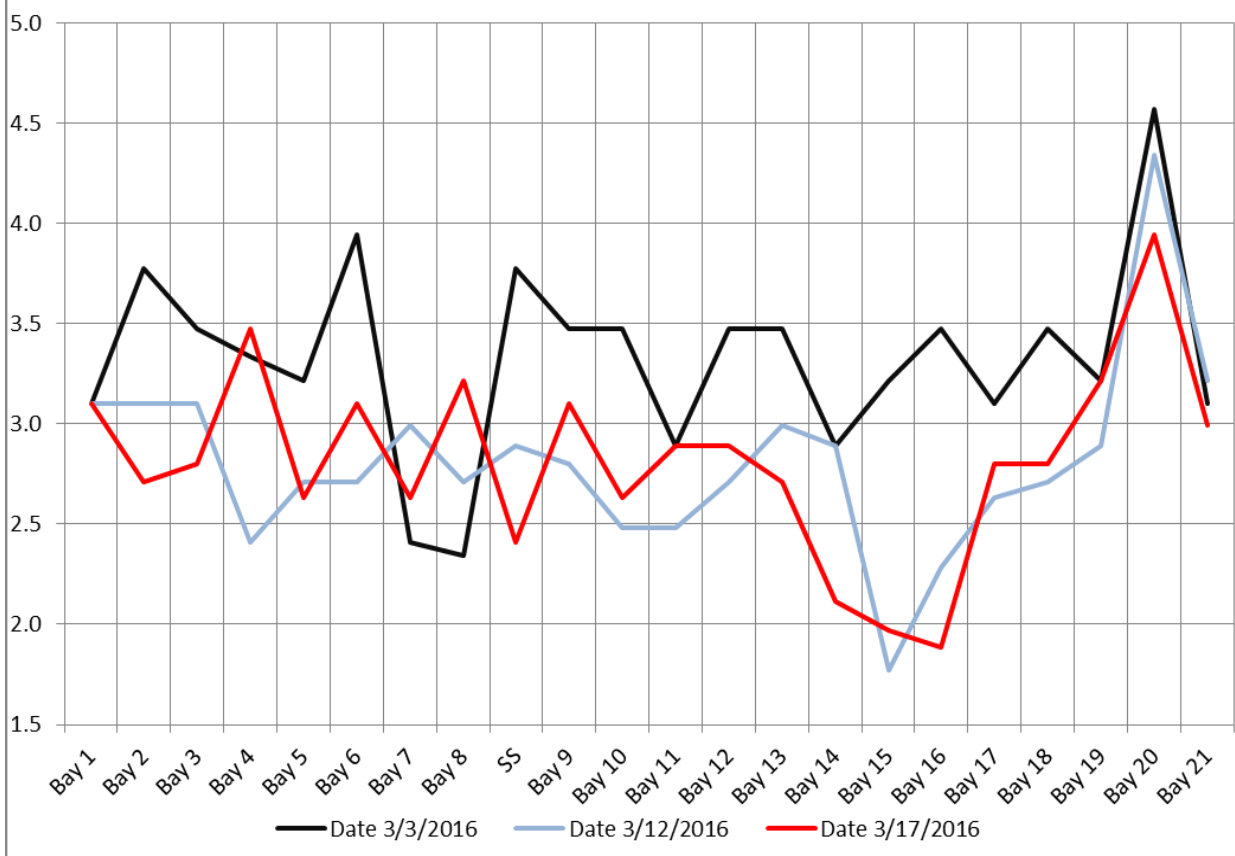
Orange lines= Missing or down avian lines

2016 Piscivorous Bird Counts

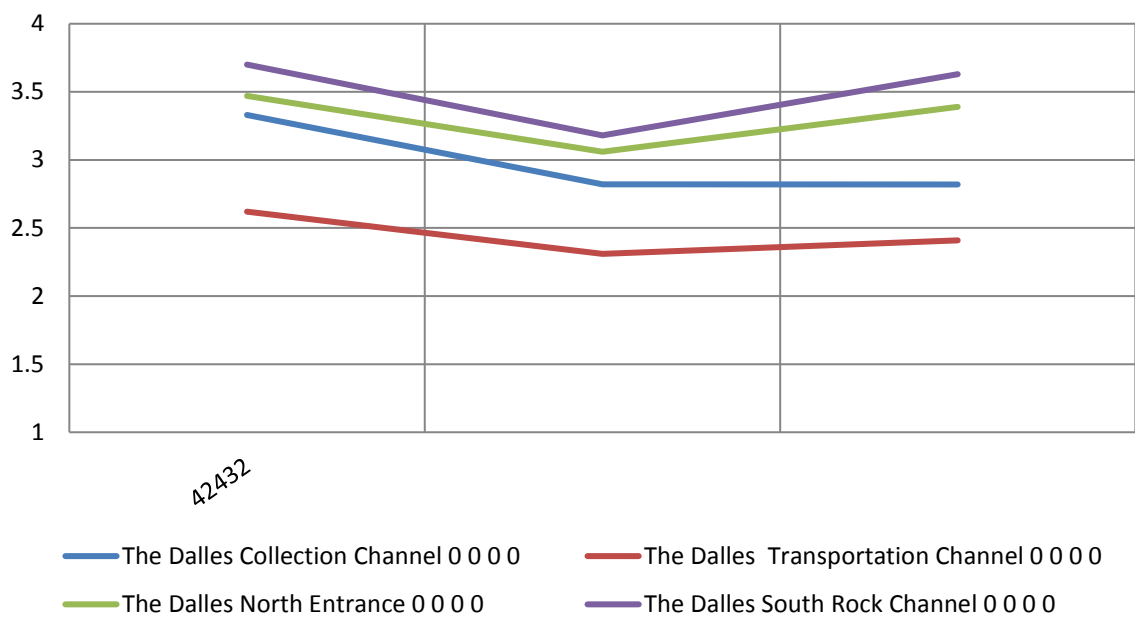
F=foraging, NF=non-foraging																			
Date	observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in zone	Notes		
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF				
3/13/16	GJF	13:23	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:15	PH1	0	2	0	5	0	0	0	0	0	0	0	0	0	0	7	
		13:07	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		13:35	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		13:00	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		13:01	SW3	0	0	0	56	0	0	0	0	0	0	0	0	0	0	56	
		13:02	SW4	0	15	0	21	0	0	0	0	0	0	0	0	0	0	36	
3/14/16	GJF	8:40	FB	0	3	0	0	0	0	0	0	0	0	0	0	0	3		
		8:00	PH1	0	1	0	3	0	0	0	0	0	0	0	0	0	4		
		8:05	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:31	SW1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	COME	
		8:07	SW2	0	0	0	0	0	0	0	0	0	0	3	0	3	COME		
		8:08	SW3	0	12	0	37	0	0	0	0	0	0	0	0	0	49		
		8:09	SW4	0	0	0	6	0	0	0	0	0	0	0	0	0	6		
3/15/16	GJF	13:55	FB	0	0	0	0	0	0	0	0	0	0	0	1	1	1	BAEA	
		13:10	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:15	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:45	SW1	0	15	0	0	0	0	0	0	0	0	0	0	0	15		
		13:17	SW2	0	0	0	6	0	0	0	0	0	0	0	0	0	6		
		13:18	SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:19	SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3/16/16	JWR	10:38	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:14	PH1	0	0	0	1	0	0	0	0	0	0	0	0	1	2	COME	
		10:18	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:37	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:20	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:21	SW3	0	0	0	12	0	0	0	0	0	0	0	0	2	14	COME	
		10:22	SW4	0	44	0	0	0	0	0	0	0	0	0	0	0	44		
3/17/16	GJF	13:55	FB	0	0	0	0	0	0	0	0	0	0	1	0	1	1	BAEA	
		12:53	PH1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
		12:09	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:43	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:13	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:14	SW3	0	0	0	24	0	0	0	0	0	0	0	0	0	24		
		13:15	SW4	0	52	0	6	0	0	0	0	0	0	0	0	0	58		
3/18/16	JWR	10:17	FB	0	0	0	0	0	0	1	0	0	0	0	0	1	1	pie-billed	
		9:55	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:57	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:16	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:59	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:00	SW3	0	0	0	11	0	0	0	0	0	0	0	0	0	11		
		10:01	SW4	0	24	0	0	0	0	0	0	0	0	0	0	0	24		
3/19/16	EHK	14:55	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:14	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:20	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		15:05	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:23	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:24	SW3	0	0	0	5	0	0	0	0	0	0	0	0	0	5		
		14:25	SW4	0	50	0	0	0	0	0	0	0	0	0	0	0	50		

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

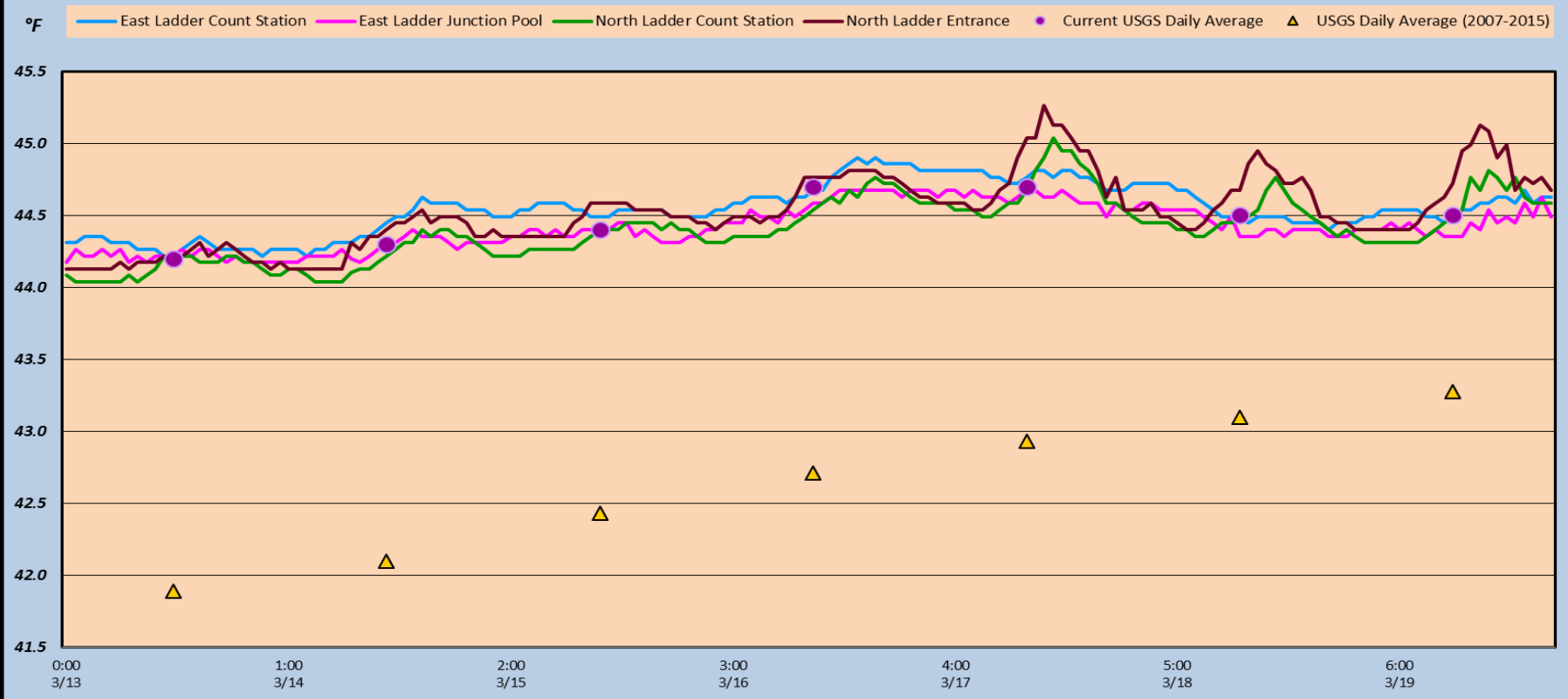
The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)



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



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



USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201603.lcol.html>

Secchi:		Temperatures
4.0	Sun	44.2
5.0	Mon	44.3
4.5	Tue	44.4
5.0	Wed	44.7
3.0	Thurs	44.7
3.0	Fri	44.5
3.5	Sat	44.5
4.0	AVG	44.5

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

= Out of criteria

		North Ladder						East Ladder									
		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			
3/13			1.3	10.4	13.5	13.5	11.0	1.4	11.8	11.8		1.5	9.2	9.1	S P I L L O N S E A L		
	1.3	9.6	1.4	9.3	13.4	13.4	13.4	1.5	11.2	11.3		1.4	9.3	9.2			
	1.4	9.4	1.5	9.9	13.4	13.6	10.5	1.6	11.2	11.2		1.5	11.2	11.1			
3/14			1.7	9.4	12.9	12.6	10.0	1.5	11.2	11.2		1.4	9.2	9.2			
	1.3	9.6	1.6	8.4	12.9	13.4	10.0	1.6	10.4	10.4		1.4	11.2	11.2			
	1.4	9.7	1.5	9.8	13.3	13.6	10.4	1.6	10.6	10.6		1.3	10.3	10.3			
3/15			1.9	12.0	13.5	13.5	12.6	1.9	10.6	10.6		1.3	9.4	9.3			
	1.4	9.6	1.4	12.2	13.5	13.6	12.8	1.5	12.1	12.0		1.5	9.1	9.1			
	1.5	9.5	1.6	12.0	13.5	13.4	12.6	1.6	12.0	12.0		1.4	9.3	9.3			
3/16			1.6	10.9	13.5	13.5	11.5	1.3	12.2	12.2		1.4	9.3	9.3			
	1.4	9.6	1.5	10.5	13.5	13.5	11.3	1.4	11.0	11.0		1.4	9.3	9.3			
	1.3	9.7	1.4	9.4	13.4	13.4	11.4	1.6	11.0	11.0		1.5	9.0	9.0			
3/17			1.2	9.6	13.6	13.8	11.1	1.6	11.0	11.0		0.6	8.9	8.9			
	1.4	9.6	1.6	8.5	13.5	13.5	10.6	1.5	11.0	11.0		1.5	9.0	9.0			
	1.7	9.6	1.5	8.5	12.9	13.5	10.0	1.5	10.9	10.9		1.6	8.9	8.9			
3/18			2.0	8.3	13.4	13.5	12.3	1.7	11.3	11.3							
			1.4	4.8	13.3	13.3	11.9	1.5	12.0	11.9							
	1.4	8.7	1.4	5.0	13.6	13.6	11.4	1.4	12.0	12.0							
3/19			1.5	5.0	13.4	13.5		1.4	12.0	12.0		1.9	8.4	8.3			
	1.3	10.7	1.4	5.0	13.6	13.5	12.0	1.5	11.9	11.9		1.7	8.9	9.0			
	1.4	9.5	1.4	4.9	13.4	13.5	11.2	1.4	11.9	11.9		1.6	9.0	8.9			
AVG:	1.4	9.6	1.5	8.8	13.4	13.5	11.4	1.5	11.4	11.4		1.4	9.4	9.4			

Fishways are inspected twice daily plus one SCADA inspection.