

The Dalles Dam Fishway Status Report

8/14/2016

Inspection Period: 08/07/2016-08/13/2016

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: 70.5 °F
			Comments		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'	1.4		
Entrance weir N1	0	depth (≥ 8')	9.8		
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			
Weir 158-159 differential	0	1.0' ± 0.1'	158 manually adjusted as needed. New sensor purchased and being installed.		
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')	10.7		
East entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir E1	0	No criteria	5.5		
Entrance weir E2	0	depth (≥ 8')	13.0		
Entrance weir E3	0	depth (≥ 8')	13.0		
Collection channel velocity	0	1.5 - 4 fps	2.6		
Transportation channel velocity	0	1.5 - 4 fps	2.6		
North channel velocity	0	1.5 - 4 fps	2.5		
South channel velocity	0	1.5 - 4 fps	3.5		
West entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir W1	0	depth (≥ 8')	8.3		
Entrance weir W2	0	depth (≥ 8')	8.3		
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	Adjusted	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.6'		
Spill volume	0	Spill at 40%			
Spill Pattern	0				
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

Birds/Sea lions:

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

District investigating possibility of limited lethal gull removal at project. To be discussed at FPOM.

USDA gull hazing from shore continues through August 18. Almost exclusively juvenile gulls-feeding on fingerling shad

Two of 13 spillway avian lines broke closest to bridge. Replacement plans underway with in house labor.

Operations:

Calibration done 8/11, minor discrepancy on east exit weir 158 TDE corrected

Current Outages:

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

MU3 FOOS through 8/4/2016 due to loss of governor sump oil level, O/H and SCC upgrade

Maintenance:

South entrance dewater pump removed for rehab. To be complete for this winter outage.

New east exit weir electrical panel FCQ7 panel installed in gallery. Design in August. Electrical connection labor in September.

Long Term repair maintained plans; 154 -157 weir mods, 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.

Fish unit breaker replace, Fish unit rehab and transformer replace in planning.

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

Studies/Construction:

Environmental acceptable grease testing underway on unit 1. Outage planned this fall for analysis. Approved through FPOM.

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

East fishladder emergency backup construction this winter. Weekly planning meetings underway. Winter fishway dewatering schedule being developed.

Crane rail replacement on tailrace and intake for in water work period 2016/17.

Transformer replacement planning continues. Eliminate fish unit TA transformers and tie to T1 and T3. Install start 2017.

In process of updating N Wasco Co PUD Memo of Agreement. Final awaiting PUD comments.

Fish unit rehab project plan started. Will increase reliability of fish units and potential redundancy.

Fish unit breaker replace planned for in water work period 2017/18

Research/Contractors:

Northern Pikeminnow Management Program dam anglers caught 223 pikeminnow week of Aug1 at The Dalles. Cumulative total 2,873 through Aug 7.

Normandeau fish counters continue through Oct 30. No issues.

Tribal lamprey trapping continues at east count station. Catch rates decreasing. Started trapping at north count station to increase catch rate.

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			
8/7/16	GJF	AM	FB	0	0	0	14	0	0	0	0	0	0	0	0	0	14	
			PH1	0	0	1	2	0	0	0	0	0	0	0	0	0	3	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
			SW2	0	0	8	0	0	0	0	0	0	4	0	0	0	12	
			SW3	10	0	0	0	0	0	0	0	0	5	0	0	0	15	
SW4	37	21	0	0	0	0	0	0	0	35	69	0	0	162				
8/8/16	GJF	PM	FB	0	0	0	29	0	0	0	0	0	0	0	0	0	29	
			PH1	0	0	1	6	0	0	0	0	0	0	0	0	0	7	
			PH2	0	0	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	0	0	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW3	94	2	0	0	0	0	0	0	0	0	0	0	0	96	
SW4	159	31	0	0	0	0	0	0	0	29	33	0	0	252				
8/9/16	JWR	AM	FB	0	0	0	32	0	0	0	0	0	0	0	0	0	32	
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	0	4	
			PH2	0	0	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	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	8	0	0	0	0	0	0	0	0	2	0	0	0	10	
SW4	7	7	0	0	0	0	0	0	0	11	44	0	0	69				
8/10/16	GJF	PM	FB	0	0	2	30	0	0	0	0	0	0	3	0	35	osprey	
			PH1	0	0	3	7	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		
			SW3	8	0	0	0	0	0	0	0	0	0	0	0	0		8
SW4	43	5	0	0	0	0	0	0	0	25	8	0	0	81				
8/11/16	JWR	AM	FB	0	0	0	70	0	0	0	0	0	0	0	0	70	COME	
			PH1	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		
			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	35	0	0	0	0	0	0	0	0	0	0	6	41		
SW4	31	20	1	0	0	0	0	0	0	5	16	0	0	73				
8/12/16	JWR	PM	FB	0	0	0	27	0	0	0	0	0	0	0	0	27		
			PH1	1	7	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	76	0	1	0	0	0	0	1	0	0	0	78		
SW4	124	14	0	0	0	0	0	0	10	18	0	0	166					
8/13/16	GJF	AM	FB	0	0	4	19	0	0	0	0	0	2	0	25	osprey		
			PH1	0	0	2	8	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	2	0	0	0	0	0	0	0	0	0		2	
			SW3	5	0	0	0	0	0	0	0	1	0	0	0		6	
SW4	0	0	0	0	0	0	0	0	19	56	0	0	75					
Daily Averages				12	4	1	5	0	0	0	0	3	5	0	0	29		

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
8/7	429	379	50	218	118	100	0	0	0	28	0	0	82
8/8	453	398	55	169	102	67	0	0	0	17	0	0	54
8/9	560	487	73	248	145	103	0	0	0	37	0	0	26
8/10	568	498	70	244	162	82	0	0	0	43	0	0	19
8/11	524	463	61	333	200	133	0	0	0	19	0	0	30
8/12	570	499	71	276	169	107	0	0	0	22	0	0	13
8/13	780	685	95	344	199	145	5	4	1	25	0	0	38
total	3884	3409	475	1832	1095	737	5	4	1	191	0	0	262

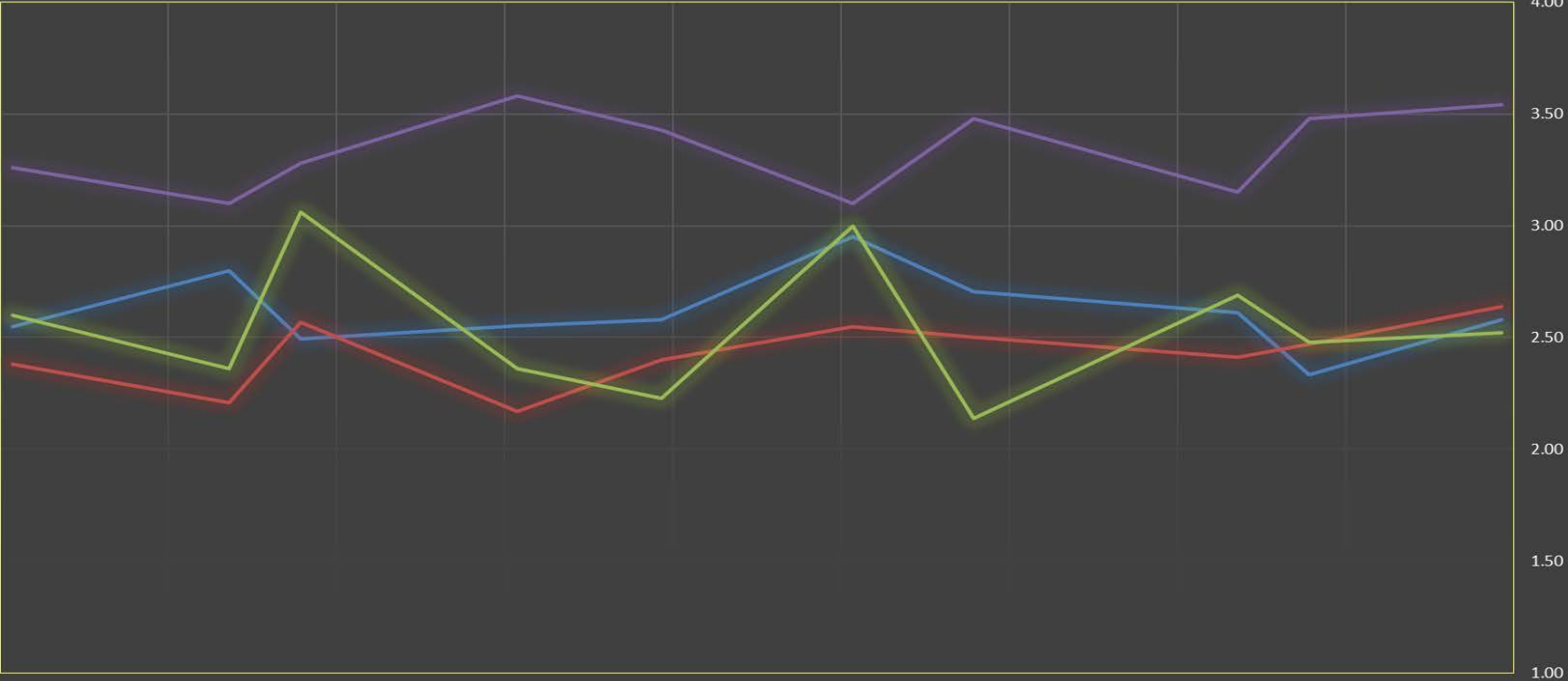
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/7	271	259	12	169	92	77	0	0	0	24	0	0	23
8/8	241	227	14	213	121	92	0	0	0	18	0	0	34
8/9	245	226	19	176	92	84	0	0	0	20	0	0	59
8/10	186	174	12	191	115	76	0	0	0	11	0	0	34
8/11	131	121	10	143	96	47	0	0	0	5	0	0	49
8/12	474	457	17	276	160	116	0	0	0	14	0	0	64
8/13	572	548	24	269	179	90	1	1	0	5	0	0	32
total	2120	2012	108	1437	855	582	1	1	0	97	0	0	295
% North	35.3	37.1	18.5	44.0	43.8	44.1	16.7	20.0	0.0	33.7	0.0	0.0	53.0

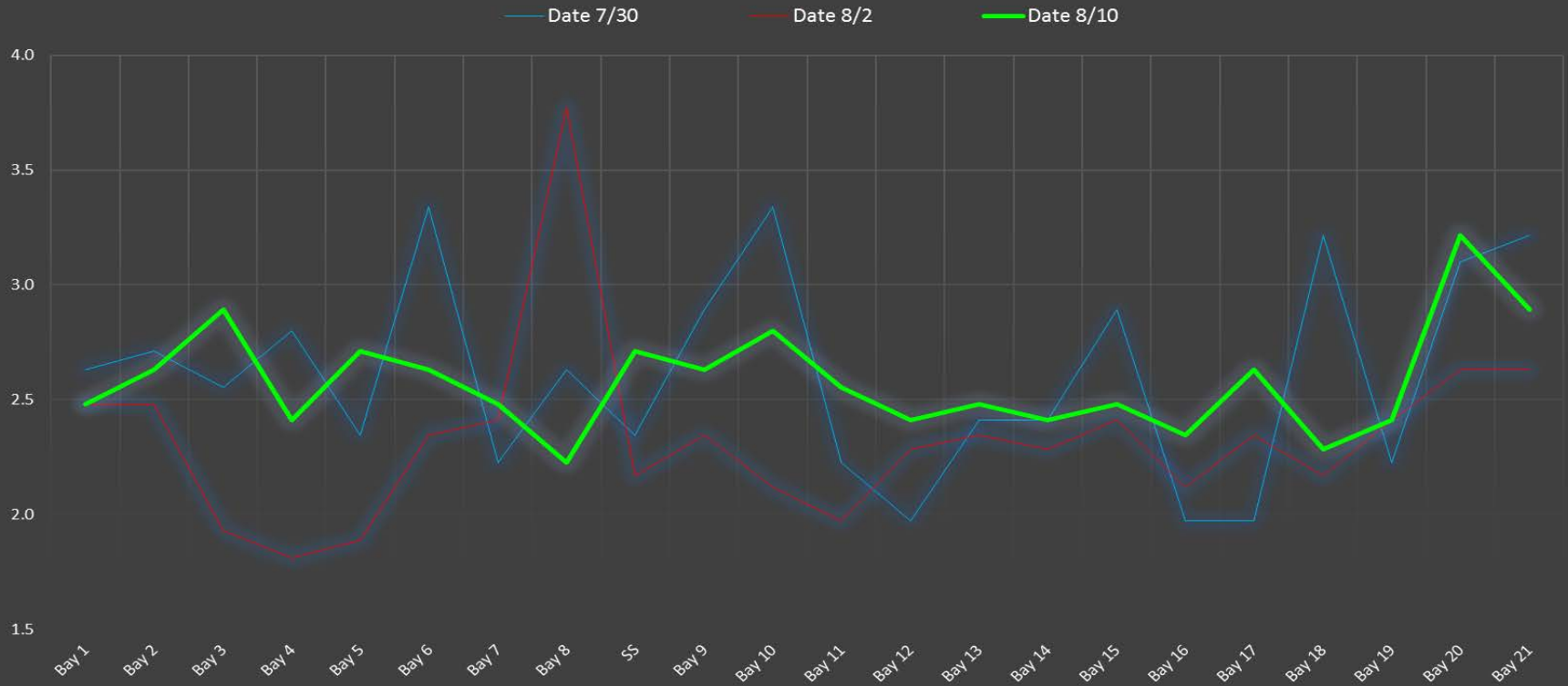
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

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

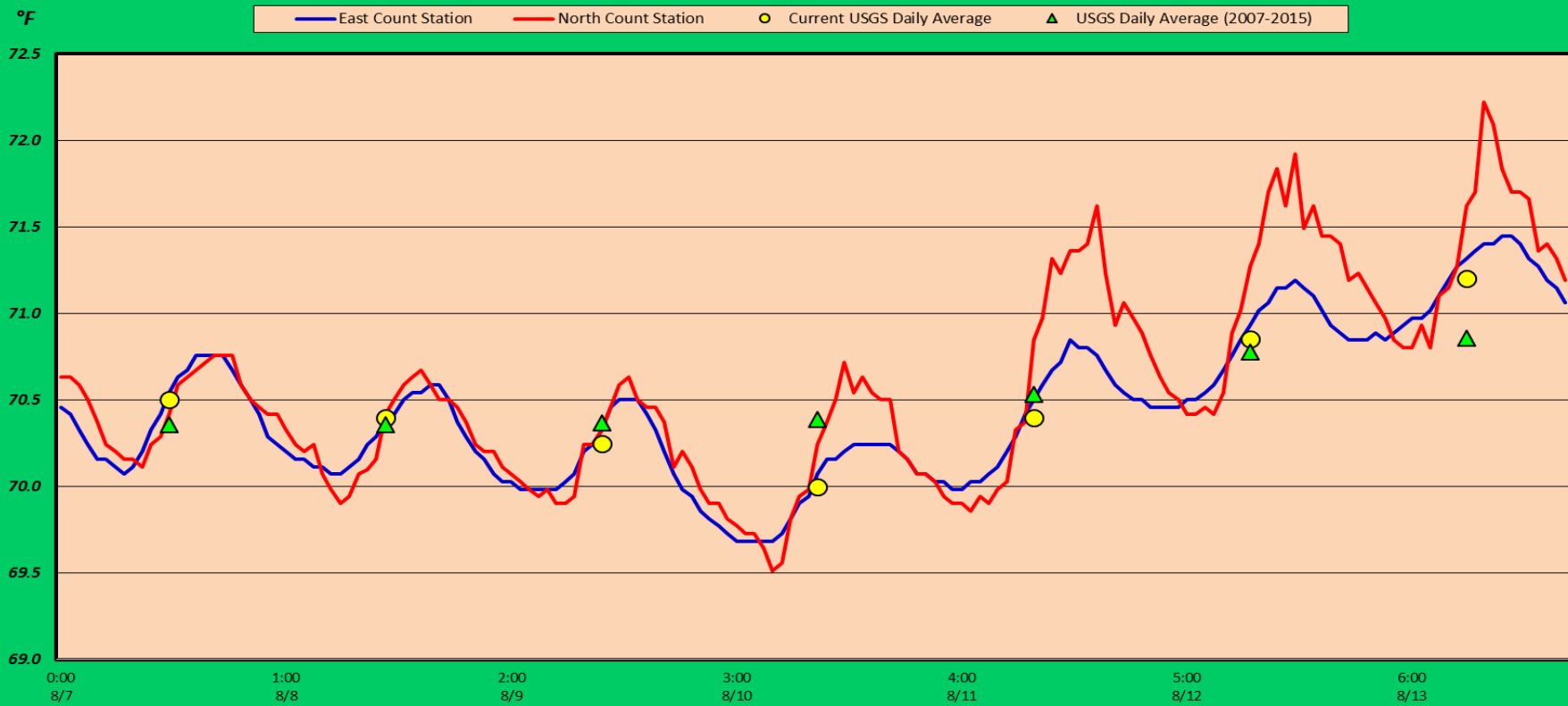
The Dalles Collection Channel The Dalles Transportation Channel The Dalles North Entrance The Dalles South Rock Channel



The Dalles Dam Collection Channel Velocites (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/201608/col.html>

	Secchi:		Temperatures
8/7	5.0	Sun	70.50
8/8	5.0	Mon	70.40
8/9	5.0	Tue	70.25
8/10	5.0	Wed	70.00
8/11	5.0	Thurs	70.40
8/12	5.0	Fri	70.85
8/13	5.0	Sat	71.20
	5.0	AVG	70.51

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

= Out of criteria

Date:	North Ladder		East Ladder											% Spill	
	North Entrance		East Entrance					West Entrance			South Entrance				
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
8/7			1.4	9.5	12.9	12.9	11.7	1.5	8.3	8.3		1.4	8.2	8.2	40.0
	1.6	9.8	1.3	9.4	12.9	13.0	11.6	1.4	8.2	8.2		1.4	8.3	8.3	
	1.5	9.6	1.4	9.5	13.0	12.9	11.7	1.5	8.3	8.3		1.4	8.2	8.2	
8/8			1.0	9.5	12.9	12.9	9.9	1.2	8.3	8.3		1.3	8.3	8.3	40.1
	1.3	9.8	1.4	2.5	12.9	12.9	9.9	1.3	8.3	8.3		1.3	8.3	8.3	
	1.3	9.9	1.5	2.5	13.1	12.9	10.1	1.4	8.3	8.3		1.4	8.2	8.2	
8/9			1.7	2.4	13.0	13.0	9.4	1.5	8.2	8.2		1.5	8.2	8.2	40.1
	1.3	9.8	1.6	5.6	13.0	13.0	9.4	1.3	8.3	8.3		1.4	8.3	8.3	
	1.3	9.9	1.4	5.4	13.0	12.9	10.7	1.5	8.2	8.2		1.5	8.2	8.2	
8/10			1.1	5.5	13.0	13.0	10.0	1.3	8.3	8.3		1.4	8.3	8.3	40.0
	1.3	9.8	1.5	1.6	12.9	12.9	9.7	1.4	8.3	8.3		1.4	8.3	8.3	
	1.5	9.7	1.6	4.0	13.1	13.1	10.9	1.5	8.3	8.4		1.5	8.3	8.3	
8/11			1.2	6.0	13.0	13.0	10.1	1.4	8.2	8.2		1.4	8.3	8.3	39.9
	1.5	9.7	1.6	4.0	13.1	13.1	10.9	1.5	8.3	8.4	1.5	8.3	8.3		
	1.3	9.8	1.5	2.5	13.0	13.0	10.1	1.4	8.4	8.3	1.4	8.2	8.2		
8/12			1.8	2.6	13.0	13.0	10.9	1.5	8.3	8.3	1.4	8.3	8.4	40.0	
	1.3	9.8	1.6	6.5	12.9	12.9	11.0	1.5	8.2	8.2	1.4	8.2	8.2		
	1.4	9.8	1.5	6.5	13.0	13.0	11.0	1.4	8.2	8.2	1.4	8.3	8.3		
8/13			1.6	7.0	12.9	12.9	11.5	1.5	8.3	8.3	1.5	8.2	8.2	40.1	
	1.5	10.2	1.6	7.0	12.9	12.9	11.3	1.6	8.3	8.3	1.4	8.3	8.2		
	1.6	9.8	1.6	7.0	13.1	13.1	11.9	1.5	8.4	8.4	1.4	8.3	8.3		
AVG:	1.4	9.8	1.5	5.5	13.0	13.0	10.7	1.4	8.3	8.3		1.4	8.3	8.3	40.0

Fishways are inspected twice daily plus one SCADA inspection.

North ladder entrance conditions with ~40 KCFS spill.

