

The Dalles Dam Fishway Status Report

9/18/2016

Inspection Period: 09/11/2016-09/17/2016

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: 67.7 °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'	1.3		
Entrance weir N1	0	depth (≥ 8')	9.7		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	3	Per forebay	FSQ7 work. weir 156 not in 9/11 and 9/12 am		
Weir 158-159 differential	0	1.0' ± 0.1'	FSQ7 work 9/16, no reading to PLC, remained in criteria		
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')	11.7		
East entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir E1	0	No criteria	7.1		
Entrance weir E2	0	depth (≥ 8')	13.0		
Entrance weir E3	0	depth (≥ 8')	13.0		
Collection channel velocity	0	1.5 - 4 fps	2.5		
Transportation channel velocity	0	1.5 - 4 fps	2.6		
North channel velocity	0	1.5 - 4 fps	2.7		
South channel velocity	0	1.5 - 4 fps	3.6		
West entrance differential	0	1.0' - 2.0'	1.5		
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		
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:

Sea lions not seen since May. Pelicans and gulls all but gone from project, common mergansers on site. Juvenile salmonid outmigration over Bird observation data collected once daily. Refer to Avian Zone map and bird count.

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

Two of 13 spillway avian lines broke closest to bridge. Material on order. Replacement to occur after spillway closure.

Operations:

Calibration done 9/16, minor discrepancy found west channel, TDE notified

Gatewell drawdown 8/20 within criteria limits.

River temperatures now at or below 8 year average

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:

New east exit weir electrical panel FCQ7, electricians assembling.

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.

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 on unit 1 underway. Unit 2 serves as priority unit with open sluiceway gates.

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

East fishladder emergency backup construction this winter. Mobilization and prefab work underway. Night work start in November.

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 planning to restart late Oct, early Nov. 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 did not fish this week at The Dalles. Cumulative total 3,064 through Sept 4.

Normandeau fish counters continue through Oct 30. No issues.

Tribal lamprey trapping done 9/17

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			
9/11/16	GJF	PM	FB	0	0	0	6	0	0	0	0	0	0	0	0	0	6	
			PH1	0	0	7	5	0	0	0	0	0	0	0	0	0	12	
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
			SW3	0	0	0	49	0	0	0	0	0	0	0	0	0	49	
			SW4	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
9/12/16	GJF	AM	FB	0	0	0	24	0	0	0	0	0	0	0	0	24		
			PH1	0	0	5	13	0	0	0	0	0	0	0	0	18		
			PH2	2	0	3	0	0	0	0	0	0	0	0	0	5		
			SW1	0	0	3	0	0	0	0	0	0	0	0	0	3		
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	2		
			SW3	0	0	0	34	0	0	0	0	0	0	0	0	34		
			SW4	0	12	0	0	0	0	0	0	0	2	0	0	14		
9/13/16	JWR	PM	FB	0	0	4	25	0	0	0	0	0	0	0	0	29	COME	
			PH1	0	0	3	17	0	0	0	0	0	0	0	0	20		
			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	11	11		
			SW3	0	2	2	23	0	0	0	0	0	0	0	0	27		
			SW4	0	0	0	1	0	0	0	0	0	0	0	0	1		
9/14/16	JWR	AM	FB	0	0	1	64	0	0	0	0	0	0	0	0	65		
			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	1	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	9	0	16	0	0	0	0	0	0	0	0	25		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		
9/15/16	GJF	PM	FB	0	0	5	6	0	0	0	0	0	0	0	0	11	COME	
			PH1	0	1	3	18	0	0	0	0	0	0	3	0	25		
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	1		
			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	10	0	12		
			SW3	0	0	0	31	0	0	0	0	0	0	0	0	31		
			SW4	0	0	0	25	0	0	0	0	0	0	0	0	25		
9/16/16	JWR	AM	FB	0	0	2	57	0	0	0	0	0	0	0	0	59	COME	
			PH1	0	0	1	9	0	0	0	0	0	0	0	0	10		
			PH2	3	0	0	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	0	0	0	0	0	0	0	0	0	0	0	13	13		
			SW3	0	0	0	25	0	0	0	0	0	0	0	0	25		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		
9/17/16	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	GBHE	
			PH1	0	1	0	14	0	0	0	0	0	0	1	0	16		
			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	0	2	29	0	0	0	0	0	0	0	4	35		
			SW4	0	10	0	10	0	0	0	0	0	1	0	0	21		
daily averages				0	1	1	10	0	0	0	0	0	0	1	13			

The Dalles East

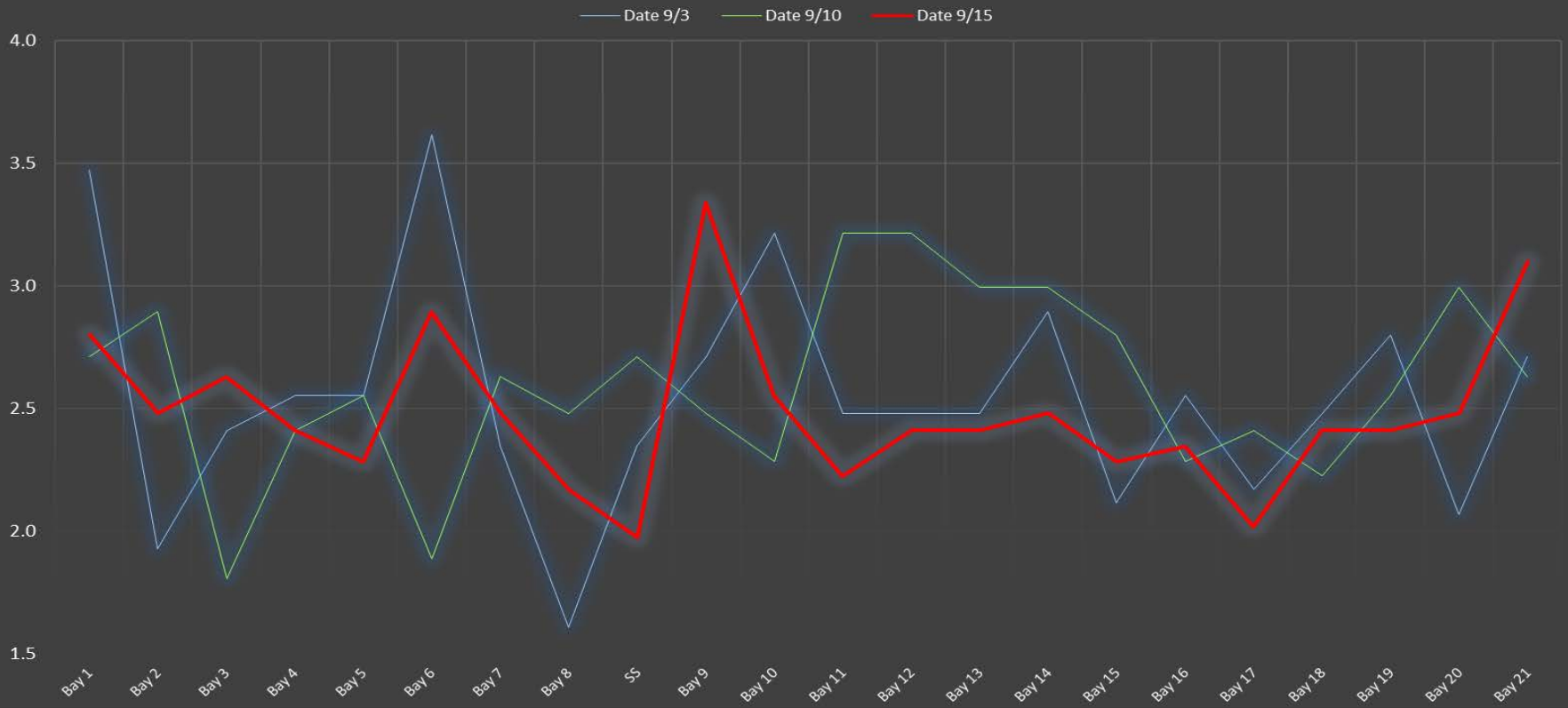
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/11	12255	10718	1537	3840	3120	720	1031	940	91	0	0	0	23
9/12	16616	14844	1772	3573	2735	838	1452	1315	137	0	0	0	26
9/13	12728	11094	1634	3487	2712	775	1074	1030	44	0	0	0	32
9/14	8053	6631	1422	2316	1836	480	455	379	76	0	0	0	22
9/15	8113	6948	1165	2933	2332	601	761	724	37	1	0	0	7
9/16	13485	11215	2270	3930	3164	766	1036	934	102	0	0	0	23
9/17	13265	11152	2113	4386	3566	820	998	956	42	0	0	0	17
total	84515	72602	11913	24465	19465	5000	6807	6278	529	1	0	0	150

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
9/11	513	446	67	316	251	65	52	42	10	0	0	0	6
9/12	277	217	60	272	222	50	102	91	11	0	0	0	8
9/13	357	265	92	219	176	43	49	42	7	0	0	0	7
9/14	171	149	22	104	76	28	37	35	2	0	0	0	4
9/15	369	311	58	178	158	20	26	24	2	0	0	0	1
9/16	164	138	26	210	173	37	50	48	2	0	0	0	4
9/17	118	86	32	430	347	83	10	8	2	0	0	0	1
total	1969	1612	357	1729	1403	326	326	290	36	0	0	0	31

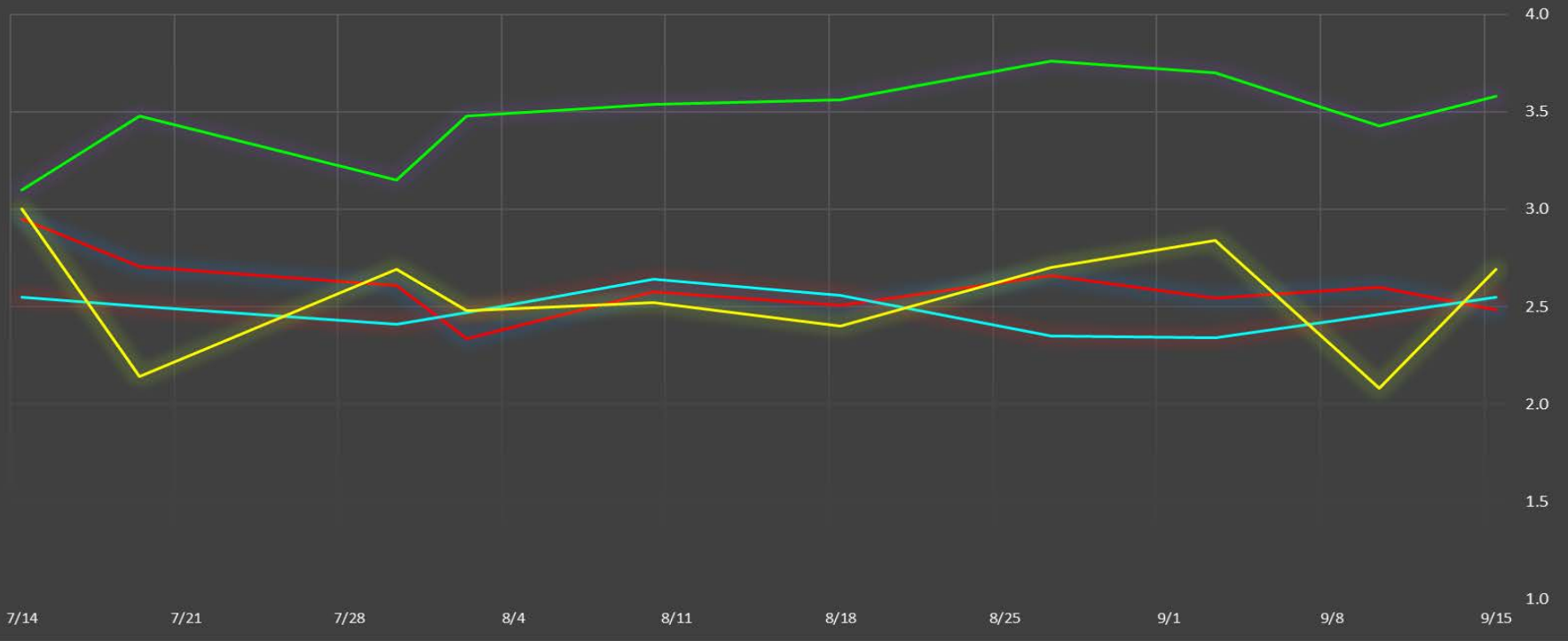
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts/>

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

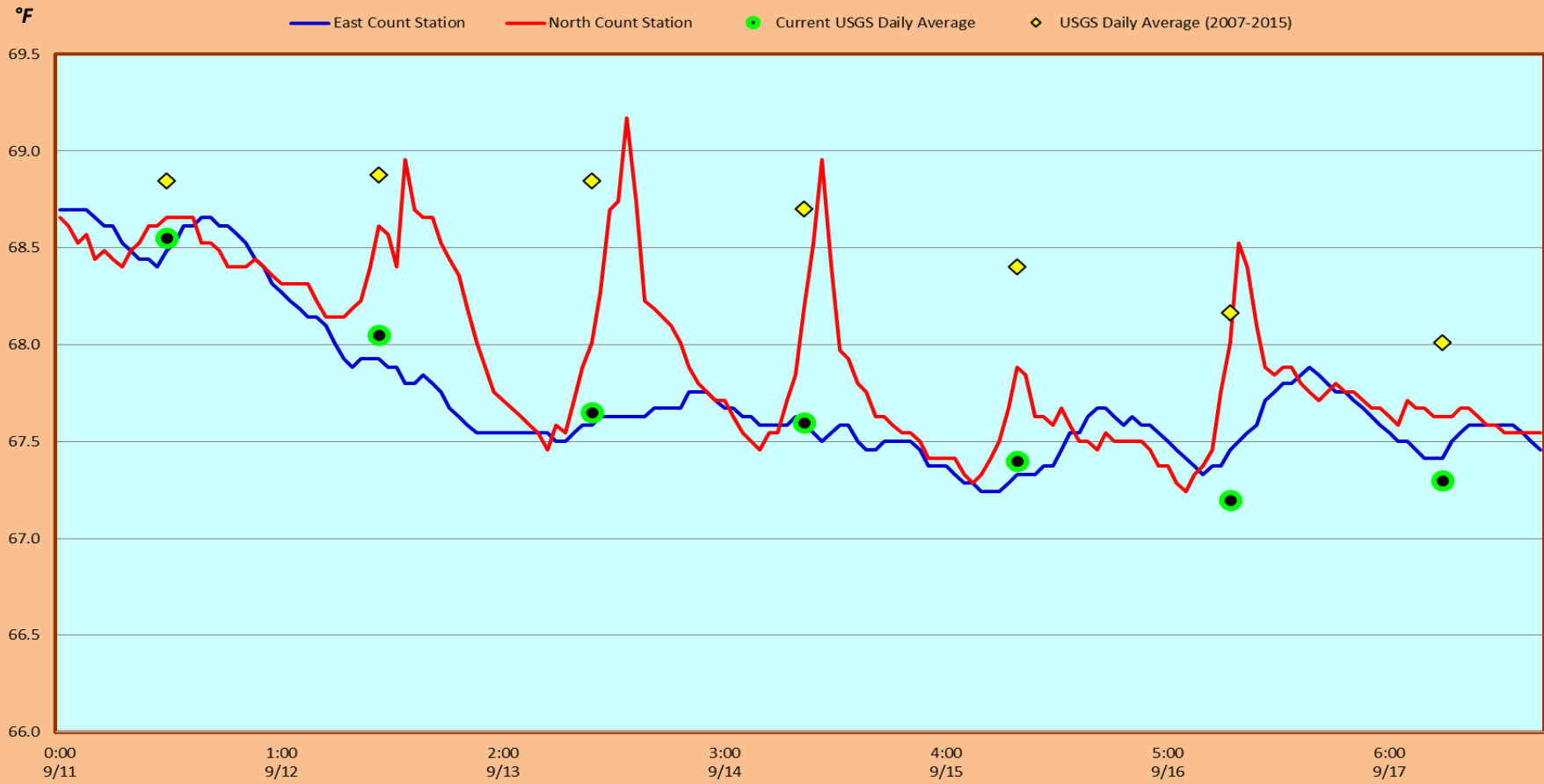


The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

The Dalles 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: (Sept) http://www.nwd.wc.usace.army.mil/imt/documents/ops/temp/201609_tcol.htm

	Secchi:		Temperatures
9/11	5.0	Sun	68.6
9/12	5.0	Mon	68.1
9/13	5.0	Tue	67.7
9/14	5.0	Wed	67.6
9/15	5.0	Thurs	67.4
9/16	5.0	Fri	67.2
9/17	5.0	Sat	67.3
	5.0	AVG	67.7

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

= Out of criteria

Date:	North Ladder							East Ladder							S P I L L O F F
	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	
9/11			1.5	6.9	12.9	12.9	11.2	1.5	8.3	8.3	C L O S E D	1.4	8.3	8.3	
	1.3	9.7	1.5	7.0	13.0	13.0	11.5	1.5	8.3	8.3		1.4	8.3	8.3	
	1.3	9.8	1.4	7.0	13.0	13.1	11.6	1.4	8.3	8.3		1.4	8.3	8.3	
9/12			1.6	6.9	12.9	12.9	11.9	1.6	8.2	8.2		1.5	8.2	8.3	
	1.3	9.8	1.6	7.0	13.1	13.1	12.0	1.5	8.2	8.2		1.4	8.3	8.3	
	1.4	9.8	1.7	7.0	13.0	13.0	12.4	1.6	8.3	8.3		1.4	8.4	8.4	
9/13			1.4	7.1	13.1	13.1	11.1	1.4	8.4	8.4		1.4	8.3	8.3	
	1.3	9.7	1.3	5.1	13.0	13.0	10.4	1.3	8.4	8.3		1.3	8.3	8.3	
	1.2	9.9	1.5	5.0	13.0	13.0	10.8	1.4	8.2	8.2		1.3	8.4	8.4	
9/14			1.6	7.0	13.1	13.1	12.1	1.4	8.4	8.4		1.5	8.3	8.3	
	1.3	9.7	1.6	6.9	13.0	13.0	12.2	1.6	8.1	8.1		1.5	8.2	8.2	
	1.4	9.8	1.6	7.0	13.0	13.0	12.3	1.5	8.2	8.2		1.5	8.3	8.3	
9/15			1.6	7.0	13.1	13.1	12.1	1.6	8.4	8.4		1.5	8.2	8.2	
	1.3	9.8	1.6	8.5	13.0	13.0	12.3	1.5	8.4	8.4		1.4	8.3	8.3	
	1.3	9.7	1.6	8.5	13.0	13.0	12.3	1.6	8.3	8.3		1.4	8.3	8.3	
9/16			1.5	8.4	13.0	13.0	10.8	1.4	8.4	8.4	1.3	8.4	8.4		
	1.2	9.7	1.6	5.4	13.0	13.0	11.2	1.5	8.3	8.3	1.4	8.3	8.3		
	1.4	9.5	1.7	8.5	13.1	13.1	11.7	1.4	8.5	8.5	1.5	8.3	8.3		
9/17			1.4	8.5	13.0	13.0	11.5	1.4	8.3	8.3	1.4	8.3	8.3		
	1.3	9.6	1.5	7.0	13.1	13.1	11.6	1.5	8.3	8.3	1.4	8.3	8.3		
AVG:	1.3	9.7	1.5	7.1	13.0	13.0	11.7	1.5	8.3	8.3		1.4	8.3	8.3	

Fishways are inspected twice daily plus one SCADA inspection.