

The Dalles Dam Fishway Status Report

7/16/2016

Inspection Period: 07/10/2016-07/16/2016

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: 68.3 °F	
			Comments		Secchi: 5.3 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'	Currently set at 1.3' for shad passage			
Junction pool weir JP6	3	depth (≥ 7')	8.2	Weirs at east entrance adjusted to meet criteria		
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria	1.7			
Entrance weir E2	0	depth (≥ 8')	12.3			
Entrance weir E3	0	depth (≥ 8')	12.3			
Collection channel velocity	0	1.5 - 4 fps	2.6			
Transportation channel velocity	0	1.5 - 4 fps	2.4			
North channel velocity	0	1.5 - 4 fps	2.2			
South channel velocity	0	1.5 - 4 fps	3.4			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	12.8			
Entrance weir W2	0	depth (≥ 8')	8.9			
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.4			
Entrance weir S2	1	depth (≥ 8')	8.4	Adjusted		
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.6'			
Spill volume	2	Spill at 40%				
Spill Pattern	0					
Turbine Unit Priority	0	per FPP	MU 3, 13, 14, 15 & 16 forced out. Affects turbine block priority order.			
Turbine 1% Efficiency	0	per FPP				

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone map. USDA hazing to continue through mid August.
Pelican numbers dropping below spillway. Low feeding gull numbers continue. Still no gull activity at powerhouse.
Investigating possibility of limited lethal gull removal at project. District investigating feasibility. To be discussed at FPOM.
USDA gull hazing by boat continues through August 19.

Operations:

Gateway drawdown complete. All differentials within criteria.
Calibration 7/14. Minor discrepancies found, TDE notified
Spill 40% continues.

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. Power connection as funding allows.
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.

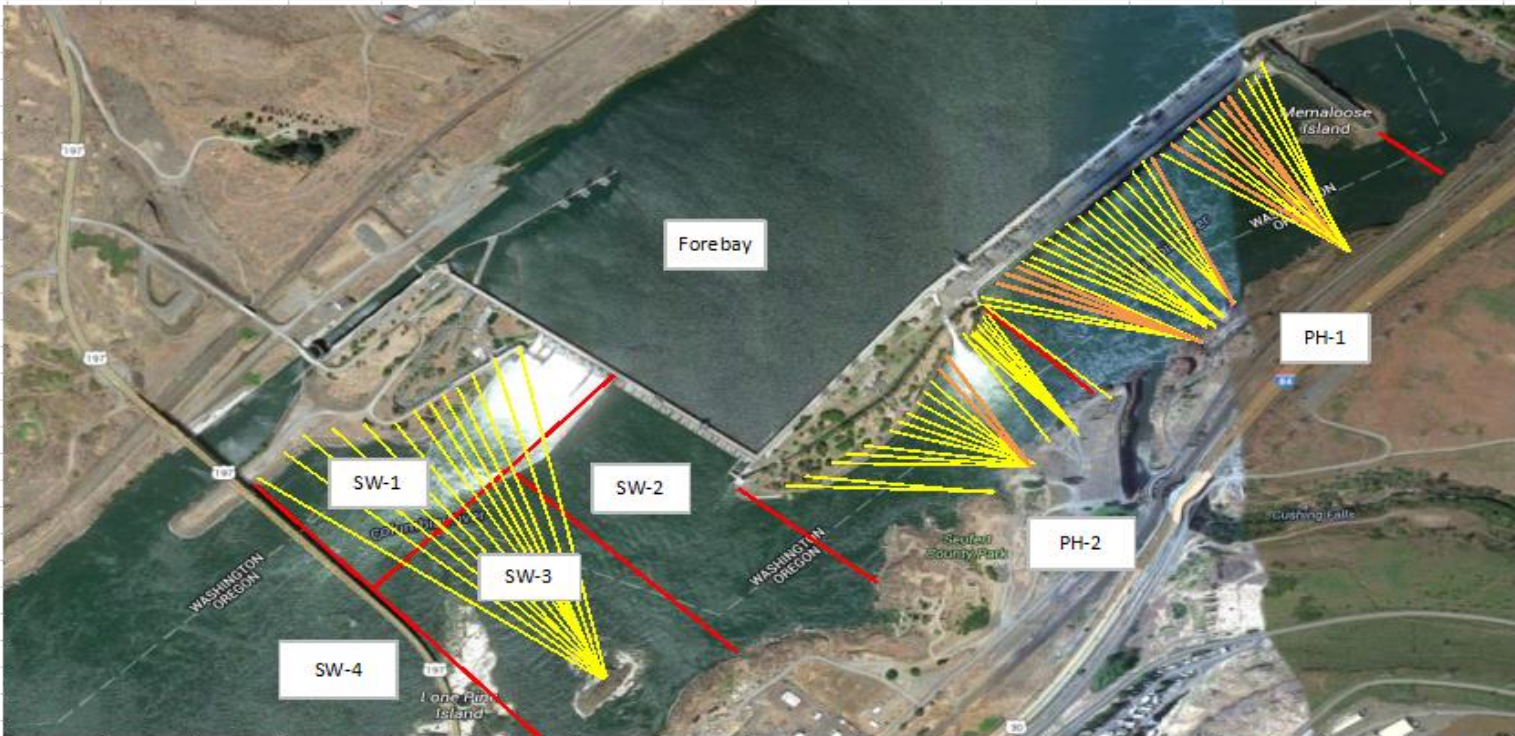
Studies/Construction:

Main unit 1 returned to service 7/7 with environmental acceptable grease testing. Sluice gates adjusted from unit 2 back to unit 1. More outages to come.
North fishladder rehab/rock wall stabilizing. No new development.
East fishladder emergency backup construction this winter. Weekly planning meetings underway.
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.
No new developments for north lighting video counting improvements.
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
East exit fishing boundary marker will be addressed with Boat Restricted Zone line.

Research/Contractors:

Northern Pikeminnow Management Program dam anglers caught 81 fish as of July 3 at The Dalles. Cumulative total 2,133.
Normandeau fish counters continue through Oct 30. No issues.
Tribal lamprey trapping continues at east count station. Approx 30% catch target. Catch rates decreasing. Considering trapping at north count station.

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				
7/10/16	JWR	AM	FB	0	0	0	38	0	0	0	0	0	0	0	0	0	38		
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	0	0		1
			SW1	26	1	0	0	0	0	0	0	0	0	0	0	0	0		27
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	28	75	0	4	0	0	0	0	0	25	24	0	0	0		156
7/11/16	GJF	PM	SW4	0	0	0	0	0	0	0	0	68	36	0	0	0	104		
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7/12/16	GJF	AM	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	0	0	0	0	0		
			FB	0	0	0	28	0	0	0	0	0	0	0	0	0	0		28
			PH1	0	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		0
			SW1	5	0	0	0	0	0	0	0	0	0	0	0	0	0		5
7/13/16	GJF	PM	SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	osprey	
			SW3	0	36	0	0	0	0	0	0	22	12	0	0	0	70		
			SW4	4	297	0	3	0	0	0	0	56	74	0	0	0	434		
			FB	0	1	0	36	0	0	0	0	0	0	1	0	0	38		
			PH1	0	0	1	4	0	0	0	0	0	0	0	0	0	5		
			PH2	0	2	1	0	0	0	0	0	0	0	0	0	0	3		
7/14/16	JWR	AM	SW1	7	0	0	0	0	0	0	0	0	0	0	0	0	7		
			SW2	0	0	1	0	0	0	0	0	4	0	0	0	0	5		
			SW3	0	18	1	0	0	0	0	0	0	0	0	0	0	19		
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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		
7/15/16	GJF	PM	PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	osprey	
			SW1	8	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	4	0	0	0	0	0	3	0	0	0	0	0		
			SW3	5	28	1	0	0	0	0	0	15	6	0	0	0	0		
			SW4	6	206	0	8	0	0	0	0	61	42	0	0	0	0		
			FB	0	2	2	19	0	0	0	0	0	0	1	0	0	0		
7/16/16	GJF	AM	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	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW2	0	0	4	0	0	0	0	0	2	0	0	0	0	6		
			SW3	1	20	0	0	0	0	0	0	8	3	0	0	0	32		
			SW4	3	175	0	0	0	0	0	0	42	68	0	0	0	288		

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
7/10	914	808	106	360	208	152	0	0	0	937	0	0	38
7/11	1077	959	118	437	220	217	0	0	0	869	0	0	180
7/12	616	548	68	353	191	162	0	0	0	814	0	0	55
7/13	828	745	83	331	168	163	0	0	0	769	0	0	92
7/14	1010	846	164	452	222	230	0	0	0	718	0	0	47
7/15	917	769	148	361	198	163	0	0	0	714	0	0	66
7/16	803	670	133	392	214	178	0	0	0	462	0	0	56
total	6165	5345	820	2686	1421	1265	0	0	0	5283	0	0	534

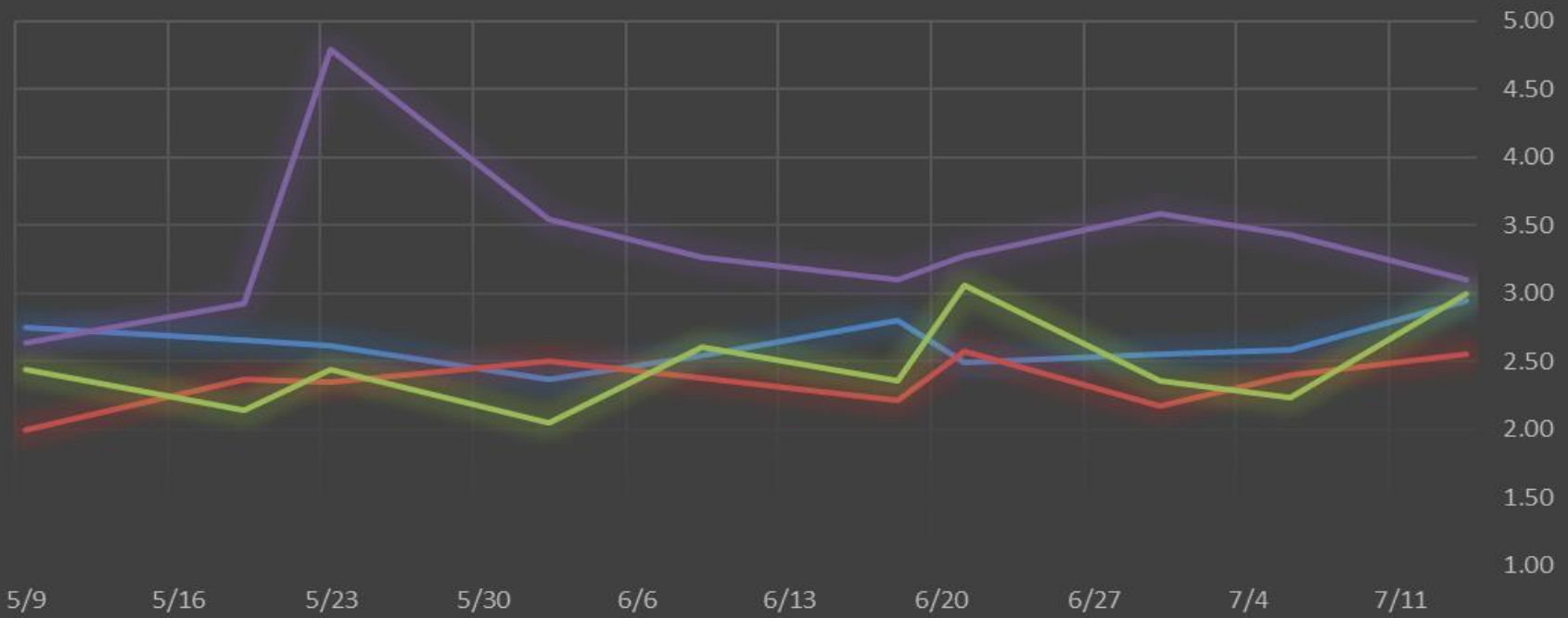
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/10	782	698	84	222	98	124	0	0	0	916	0	0	133
7/11	359	328	31	177	104	73	0	0	0	685	0	0	28
7/12	256	236	20	150	84	66	0	0	0	560	0	0	122
7/13	440	392	48	186	103	83	0	0	0	444	0	0	66
7/14	423	376	47	236	114	122	0	0	0	497	0	0	215
7/15	576	504	72	233	114	119	0	0	0	764	0	0	44
7/16	433	397	36	222	126	96	0	0	0	325	0	0	94
total	3269	2931	338	1426	743	683	0	0	0	4191	0	0	702
% North	34.7	35.4	29.2	34.7	34.3	35.1	0.0	0.0	0.0	44.2	0.0	0.0	56.8

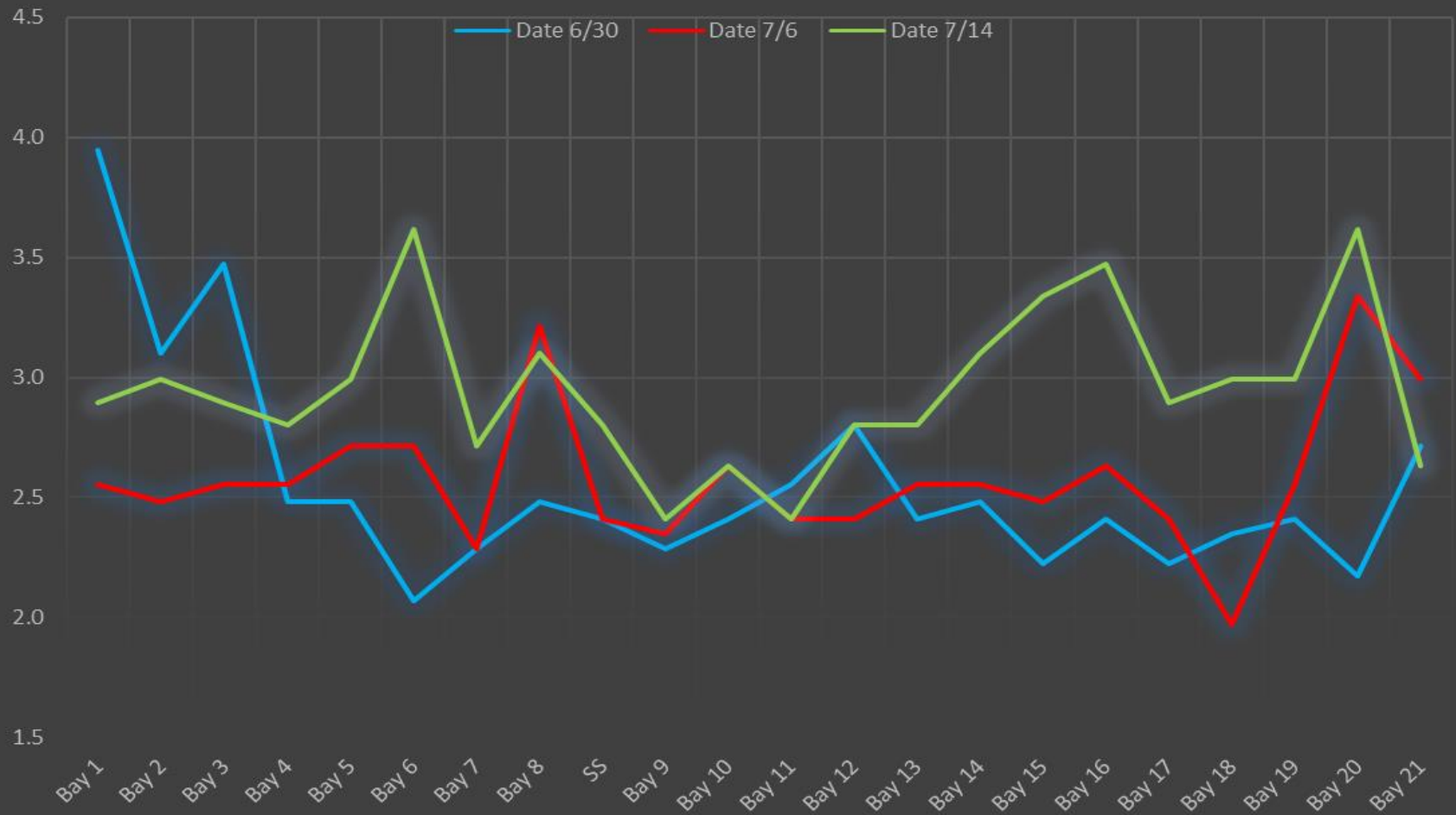
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

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

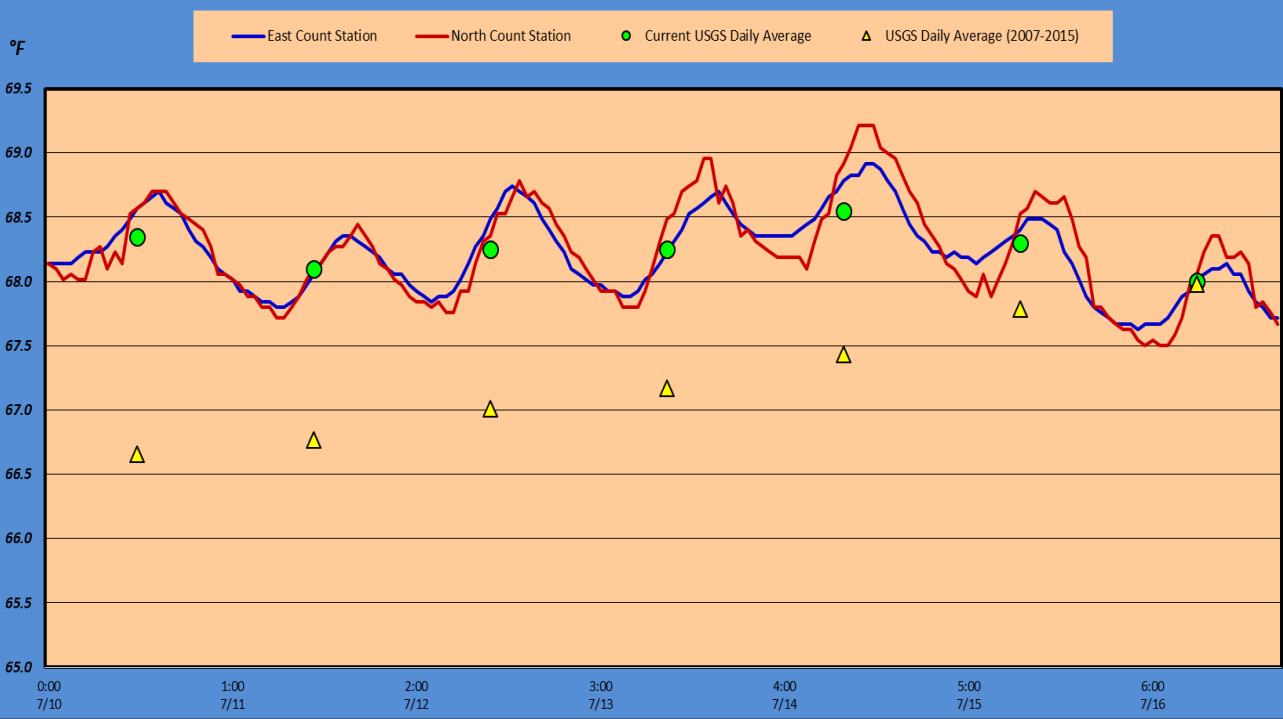
— The Dalles Collection Channel — The Dalles Transportation Channel
— The Dalles North Entrance — The Dalles South Rock Channel



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/201607/icoi.html>

Secchi:		Temperatures
5.0	Sun	68.35
5.0	Mon	68.10
5.0	Tue	68.25
5.0	Wed	68.25
5.0	Thurs	68.55
6.0	Fri	68.30
6.0	Sat	68.00
5.3	AVG	68.26

**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	
7/10			1.5	5.5	12.0	12.0	9.4	1.5	92.0	9.2		1.5	8.5	7.5	39.8
	1.4	9.8	1.5	5.5	12.0	12.0	9.2	1.4	9.3	9.3		1.5	8.5	8.5	
	1.4	9.8	1.4	5.6	12.1	12.1	9.3	1.3	9.2	9.2		1.4	8.5	8.5	
7/11			1.1	5.7	12.0	12.0	7.2	1.2	9.4	9.4		1.3	8.5	8.5	39.8
	1.3	9.8	1.5	0.5	11.9	11.9	7.1	1.5	8.5	8.5		1.5	8.2	8.2	
	1.3	10.1	1.5	0.6	11.9	11.9	6.7	1.4	8.6	8.5		1.4	8.4	8.4	
7/12			1.4	0.6	12.0	12.1	6.9	1.4	8.6	8.6		1.5	8.3	8.3	39.8
	1.3	10.2	1.3	0.4	12.0	12.0	7.0	1.5	8.5	8.5		1.4	8.3	8.3	
	1.3	9.6	1.4	0.6	12.0	12.1	6.9	1.6	8.5	8.5		1.4	8.4	8.4	
7/13			1.4	0.5	12.1	12.1	7.0	1.5	8.6	8.6		1.5	8.3	8.3	39.9
	1.4	9.8	1.6	0.0	12.1	12.0	7.1	1.6	8.6	8.6		1.5	8.3	8.3	
	1.4	9.7	1.8	0.0	12.0	12.1	8.6	1.7	8.4	8.4		1.5	8.3	8.4	
7/14			1.6	0.0	12.0	12.0	7.3	1.6	8.5	8.5		1.5	8.3	8.3	39.9
	1.3	9.7	1.6	0.0	12.0	12.0	7.3	1.6	8.5	8.5		1.5	8.2	8.2	
	1.5	9.7	1.9	1.3	12.0	12.1	9.4	1.6	9.5	9.5		1.5	8.4	8.4	
7/15			1.8	1.5	12.0	12.1	9.6	1.5	9.6	9.6	1.5	8.6	8.6	40.0	
	1.5	9.7	1.8	1.8	12.1	12.0	9.9	1.6	9.6	9.6	1.5	8.6	8.6		
	1.4	9.7	1.5	1.9	13.2	13.3	10.0	1.6	9.0	9.0	1.5	8.5	8.5		
7/16			1.4	0.4	13.4	13.3	8.5	1.5	9.1	9.1	1.4	8.6	8.6	40.2	
	1.4	10.1	1.5	1.0	13.4	13.4	9.1	1.6	8.9	8.9	1.5	8.4	8.4		
	1.4	9.8	1.4	1.5	13.4	13.4	9.6	1.6	8.1	8.1	1.4	8.6	8.6		
AVG:	1.4	9.8	1.5	1.7	12.3	12.3	8.2	1.5	12.8	8.9		1.5	8.4	8.4	39.9

Fishways are inspected twice daily plus one SCADA inspection.