

The Dalles Dam Fishway Status Report

7/2/2016

Inspection Period: 06/26/2016-07/02/2016

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: 65.9 °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 out at forebay 158.3 Auto adjusts 1' increments.			
Weir 158-159 differential	0	1.0' ± 0.1'	158 manually adjusted as needed. New sensor purchased and being installed.			
Count station differential	1	≤ 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	0	depth (≥ 7')	9.5			
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria	5.6			
Entrance weir E2	0	depth (≥ 8')	12.0			
Entrance weir E3	0	depth (≥ 8')	12.0			
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	3.1			
South channel velocity	0	1.5 - 4 fps	3.3			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	9.1			
Entrance weir W2	0	depth (≥ 8')	9.1			
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir S1	0	depth (≥ 8')	8.5			
Entrance weir S2	0	depth (≥ 8')	8.5			
JUVENILE PASSAGE						
Sluiceway operation	10	Units 1, 8, 18	MU1 is replaced by MU2 but 2-1 is stuck so 3-1 is open but MU 3 is forced out			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.7'			
Spill volume	0	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.
Approx 60 Pelicans feeding in SW3 and 4. Congregating at end of spillwall. No gull activity at powerhouse.
Investigating possibility of limited lethal gull removal at project. District meeting 6/16 to determine best path forward. FPOM supports lethal gull removal.

Operations:

Gateway drawdown complete. All differentials within criteria.
Calibration 6/28. All in criteria
Spill 40% continues.

Current Outages:

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

Maintenance:

South entrance dewater pump removal next week for rehab. To be complete for this winter outage.
East exit weir electrical panel FCQ7 panel delivered. Installed in gallery. Power connection as funding allows.

East exit 158 weir automation intermittent failures. New sensor installed and monitored.

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:

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

East fishladder emergency backup construction this winter. Weekly planning meetings continue.

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

Transformer replacement planning underway. 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 plan awaiting feedback from Washington for boundary distance.

Research/Contractors:

Northern Pikeminnow Management Program dam anglers caught 81 fish this week at The Dalles Dam powerhouse. Cumulative total 2,133.

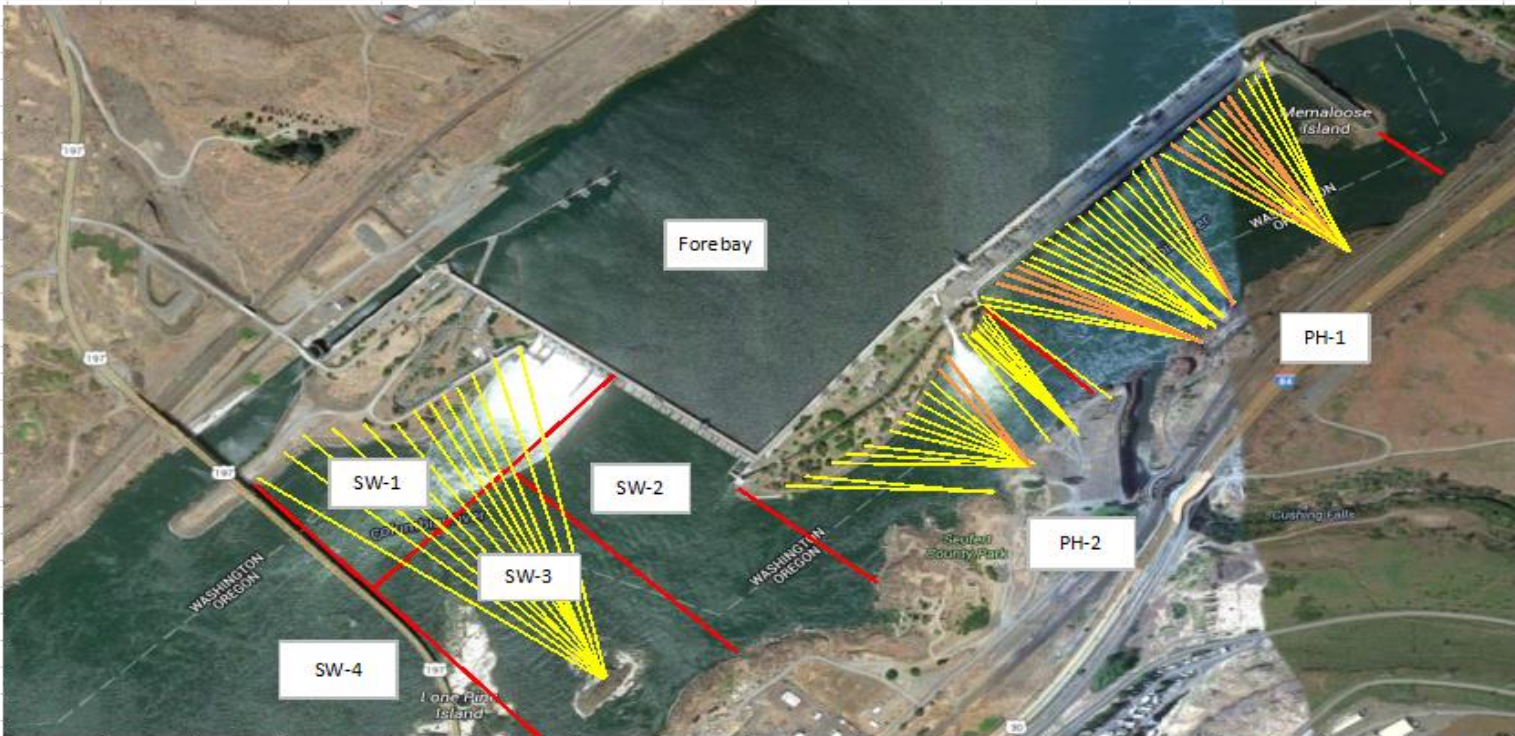
Normandeau fish counters continue through Oct 30. No issues.

USDA avian hazing start delayed 2 weeks. Boat appears to successfully move gulls. Will extend hazing 2 weeks at end of season.

Tribal lamprey trapping started at east count station. Project fisheries assisting until all safety requirements are met. Hoist purchased and implemented.

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				
6/26/16	JWR	AM	FB	0	0	0	86	0	0	0	0	0	0	0	0	0	86		
			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	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	44	26	0	0	0	0	0	0	0	27	0	0	0	0	97	
6/27/16	EHK	PM	SW4	9	0	0	0	0	0	0	0	30	1	0	0	40			
			FB	0	0	0	22	0	0	0	0	0	0	0	0	0	22		
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8	
6/28/16	JWR	AM	SW3	1	28	0	0	0	0	0	0	0	0	0	0	29			
			SW4	8	0	0	0	0	0	0	0	11	0	0	0	19			
			FB	0	0	0	51	0	0	0	0	0	0	0	0	0	51		
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/29/16	GJF	PM	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	14	45	0	0	0	0	0	0	38	0	0	0	97			
			SW4	0	0	0	0	0	0	0	0	22	8	0	0	30			
			FB	0	0	3	9	0	0	0	0	0	0	0	0	12			
			PH1	0	0	0	0	0	0	0	0	0	0	0	2	2			
			PH2	0	0	0	0	0	0	0	0	0	0	0	1	1			
6/30/16	JWR	AM	SW1	3	0	0	0	0	0	0	0	0	0	0	3				
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0			
			SW3	61	42	7	0	31	0	0	0	3	0	1	0	145			
			SW4	26	0	0	0	12	0	0	0	16	23	0	0	77			
			FB	0	0	0	32	0	0	0	0	0	0	0	0	32			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7/1/16	EHK	PM	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	2	0	0	0	0	0	0	0	0	0	0	0	2			
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	21	0	0	0	0	0	0	0	41	0	0	0	62			
			SW4	6	0	0	0	0	0	0	0	18	0	0	0	24			
			FB	0	0	0	22	0	0	0	0	0	0	0	0	22			
7/2/16	GJF	AM	PH1	0	3	2	6	0	0	0	0	1	0	0	12				
			PH2	0	7	1	0	0	0	0	0	0	0	0	8				
			SW1	27	0	0	0	0	0	0	0	0	0	0	27				
			SW2	0	5	0	0	0	0	0	2	0	0	0	7				
			SW3	87	67	0	0	0	0	0	35	0	0	0	189				
			SW4	31	18	0	0	0	0	0	84	24	0	0	157				

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
6/26	2379	2132	247	156	68	88	0	0	0	10160	0	0	67
6/27	1566	1488	78	190	89	101	0	0	0	6682	0	0	88
6/28	1515	1322	193	207	115	92	0	0	0	7560	0	0	72
6/29	1468	1312	156	245	145	100	0	0	0	5830	0	0	34
6/30	1323	1178	145	248	134	114	0	0	0	4748	0	0	62
7/1	2173	1957	216	285	161	124	0	0	0	5179	0	0	109
7/2	1059	1013	46	179	90	89	0	0	0	4010	0	0	55
total	11483	10402	1081	1510	802	708	0	0	0	44169	0	0	487

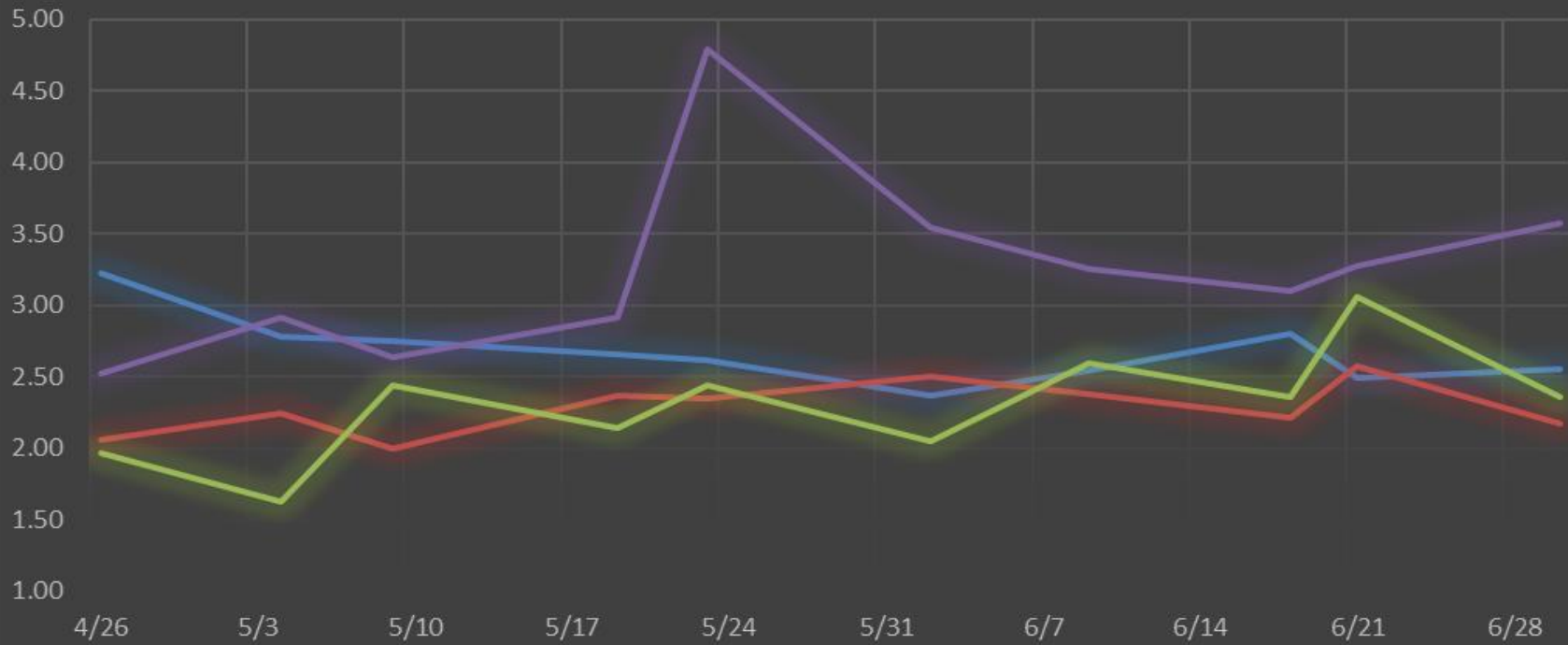
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/26	878	852	26	52	18	34	0	0	0	6252	0	0	79
6/27	782	712	70	97	36	61	0	0	0	3943	0	0	86
6/28	582	538	44	60	32	28	0	0	0	3593	0	0	55
6/29	611	540	71	86	43	43	0	0	0	4008	0	0	82
6/30	763	726	37	83	36	47	0	0	0	4213	0	0	52
7/1	874	854	20	94	50	44	0	0	0	2500	0	0	60
7/2	995	937	58	101	55	46	0	0	0	3823	0	0	29
total	5485	5159	326	573	270	303	0	0	0	28332	0	0	443
% North	32.3	33.2	23.2	27.5	25.2	30.0	0.0	0.0	0.0	39.1	0.0	0.0	47.6

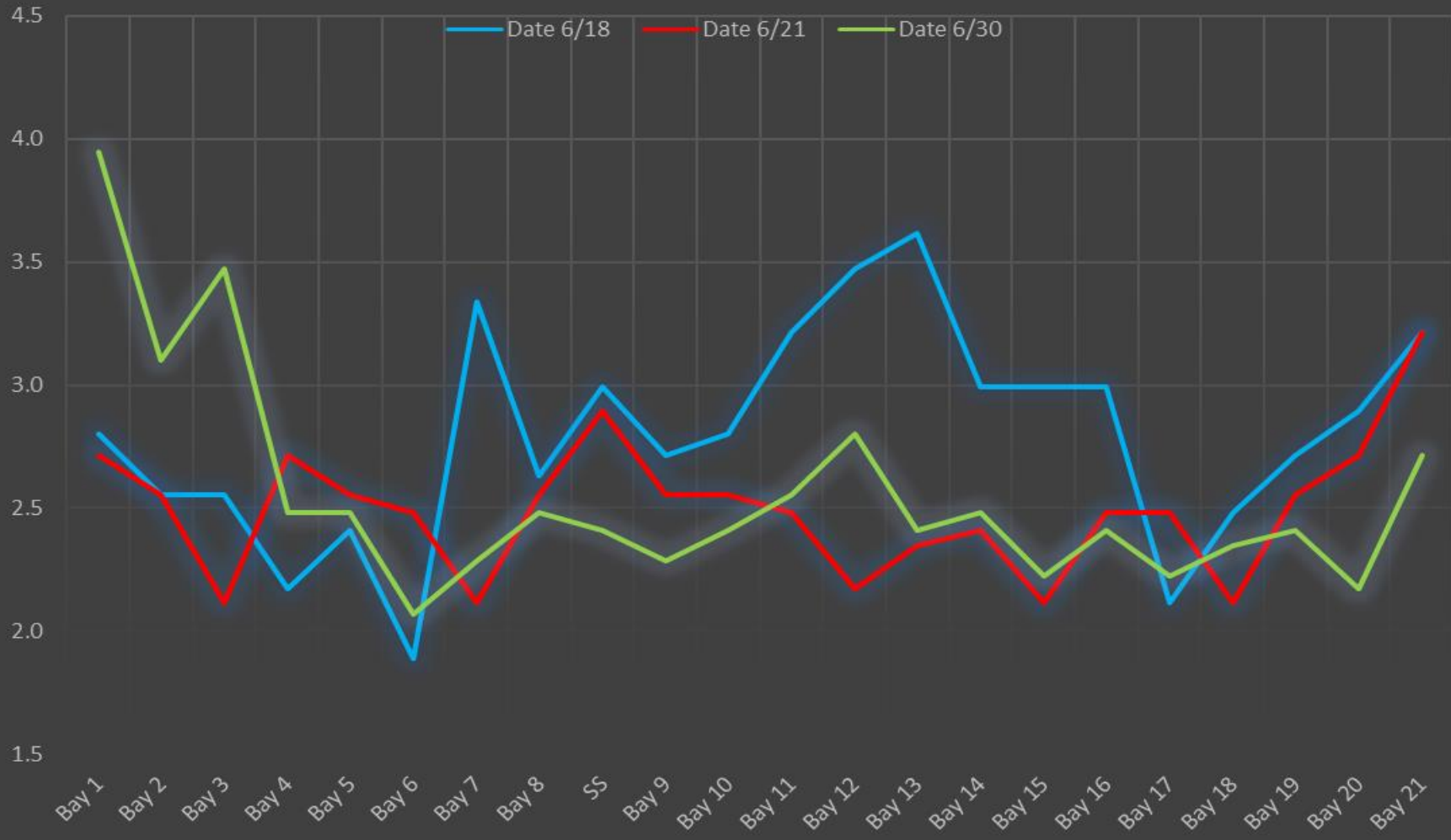
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

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

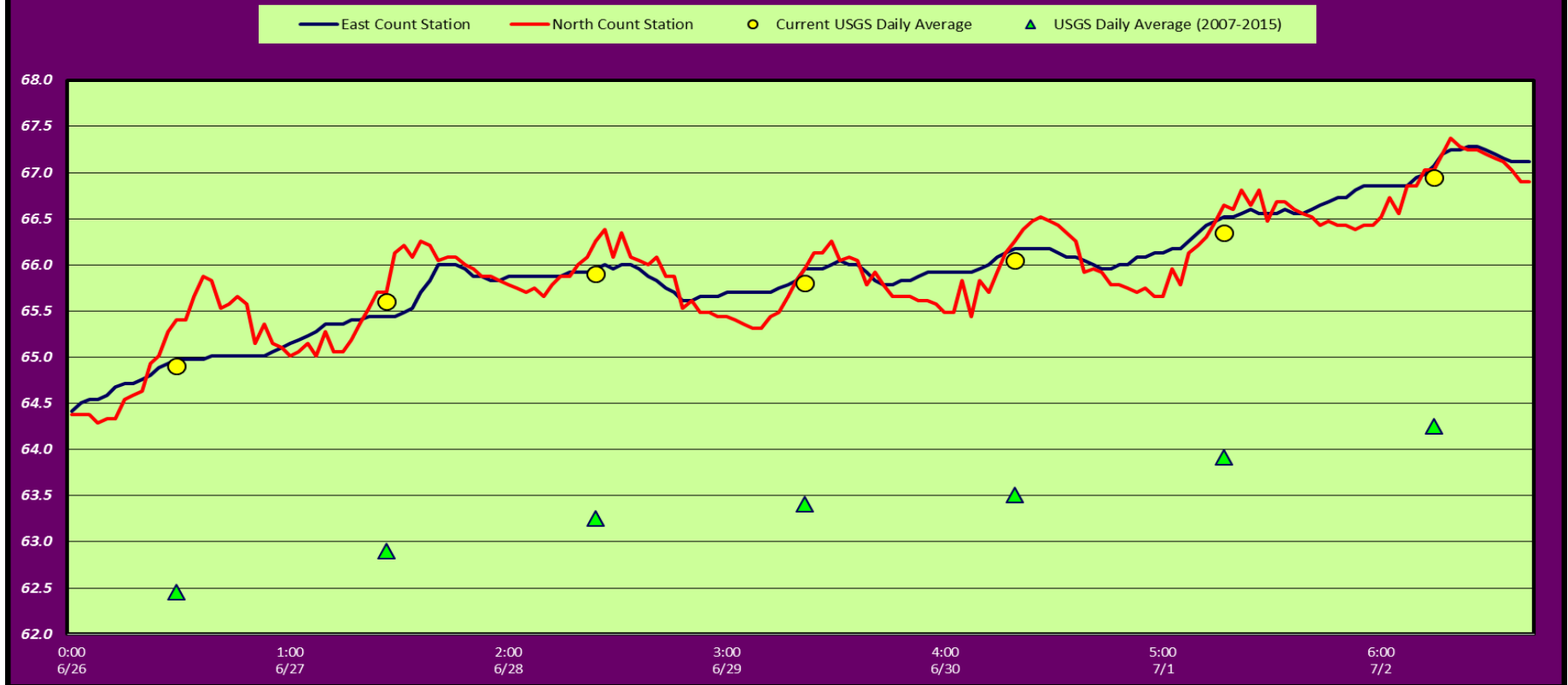
— The Dalles Collection Channel — The Dalles Transportation Channel
— The Dalles North Entrance — The Dalles South Rock Channel



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/201605.lcol.html>

Secchi:		Temperatures
5.0	Sun	64.90
5.0	Mon	65.60
5.0	Tue	65.90
5.0	Wed	65.80
5.0	Thurs	66.05
	Fri	66.35
	Sat	66.95
5.0	AVG	65.94

**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	
6/26			1.4	6.9	11.8	11.8	9.0	1.4	9.5	9.5		1.5	8.4	8.4	39.8
	1.3	9.8	1.5	4.5	12.0	12.0	9.0	1.5	9.0	9.0		1.5	8.5	8.5	
	1.4	9.9	1.6	6.0	12.0	12.0	9.6	1.5	9.3	9.3		1.5	8.4	8.4	
6/27			1.4	6.1	12.0	12.0	9.5	1.4	9.3	9.3		1.5	8.5	8.5	39.5
	1.4	9.9	1.5	5.1	12.0	12.0	9.4	1.6	9.0	9.0		1.5	8.4	8.4	
	1.4	8.9	1.5	4.9	12.0	12.1	9.2	1.6	9.0	9.0		1.6	8.4	8.4	
6/28			1.2	7.6	12.0	11.9	8.5	1.5	9.0	9.0		1.4	8.5	8.5	40.3
	1.3	10.0	1.5	4.5	12.0	12.0	8.9	1.5	9.1	9.1		1.5	8.6	8.6	
	1.5	9.8	1.8	6.1	11.9	12.0	10.5	1.7	9.1	9.1		1.5	8.5	8.5	
6/29			1.4	6.0	12.0	12.1	9.3	1.6	8.9	8.9		1.6	8.4	8.4	39.8
	1.3	9.8	1.4	5.9	11.9	12.0	9.4	1.5	9.0	9.0		1.5	8.5	8.4	
	1.5	9.8	1.7	6.0	12.0	11.9	10.1	1.7	9.0	9.1		1.5	8.5	8.5	
6/30			1.3	6.0	11.9	12.0	8.3	1.4	9.1	9.1		1.4	8.5	8.5	39.7
	1.3	10.0	1.6	4.6	12.0	12.0	9.1	1.6	9.0	9.0		1.5	8.5	8.5	
	1.5	9.7	1.7	4.6	12.0	12.1	10.2	1.7	8.9	8.9		1.5	8.6	8.6	
7/1			1.6	4.6	12.1	12.2	9.4	1.6	9.0	9.0		1.4	8.5	8.5	40.0
	1.5	9.8	1.6	4.5	12.1	12.0	9.8	1.6	8.9	8.9		1.5	8.6	8.6	
	1.5	9.8	1.8	5.5	12.0	12.0	10.9	1.5	9.5	9.5		1.5	8.6	8.6	
7/2			1.5	5.6	12.0	11.9	9.9	1.5	9.4	9.4		1.5	8.8	8.6	39.9
	1.5	9.7	1.4	6.6	11.9	12.0	9.6	1.5	9.2	9.2		1.5	8.3	8.4	
	1.5	9.6	1.3	6.5	11.9	12.1	9.0	1.3	9.4	9.4		1.5	8.5	8.5	
AVG:	1.4	9.8	1.5	5.6	12.0	12.0	9.5	1.5	9.1	9.1		1.5	8.5	8.5	39.9

Fishways are inspected twice daily plus one SCADA inspection.