

The Dalles Dam Fishway Status Report

6/26/2016

Inspection Period: 06/19 - 25/2016

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: 63.8 °F	
			Comments		Secchi: 5.2 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')	9.9			
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')	9.0			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria	4.9			
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')	9.2			
Entrance weir W2	0	depth (≥ 8')	9.2			
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	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.7'			
Spill volume	0	Spill at 40%				
Spill Pattern	0					
Turbine Unit Priority	9	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. ~60 Pelican active in SW3 and SW4
Gull predation moderate upstream of bridge at end of spillway. 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 6/25. Weir 158 found off. Maintenance corrected.
Spill 40% continues.

Current Outages:

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

Maintenance:

South entrance dewater pump rehab postponed, awaiting funds. Remains operable but in need of preventative maintenance.
East exit weir electrical panel FCQ7 panel delivered. Installation in gallery first week July. Power connection as funding allows.
Tailrace crane repair near west entrance delay continues. Return date unknown, Minimal work activity, therefore no fish passage concerns.
East exit 158 weir automation has intermittent failures. Manually adjusted as needed. New sensor being installed.
Long Term repair/maintenance 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.

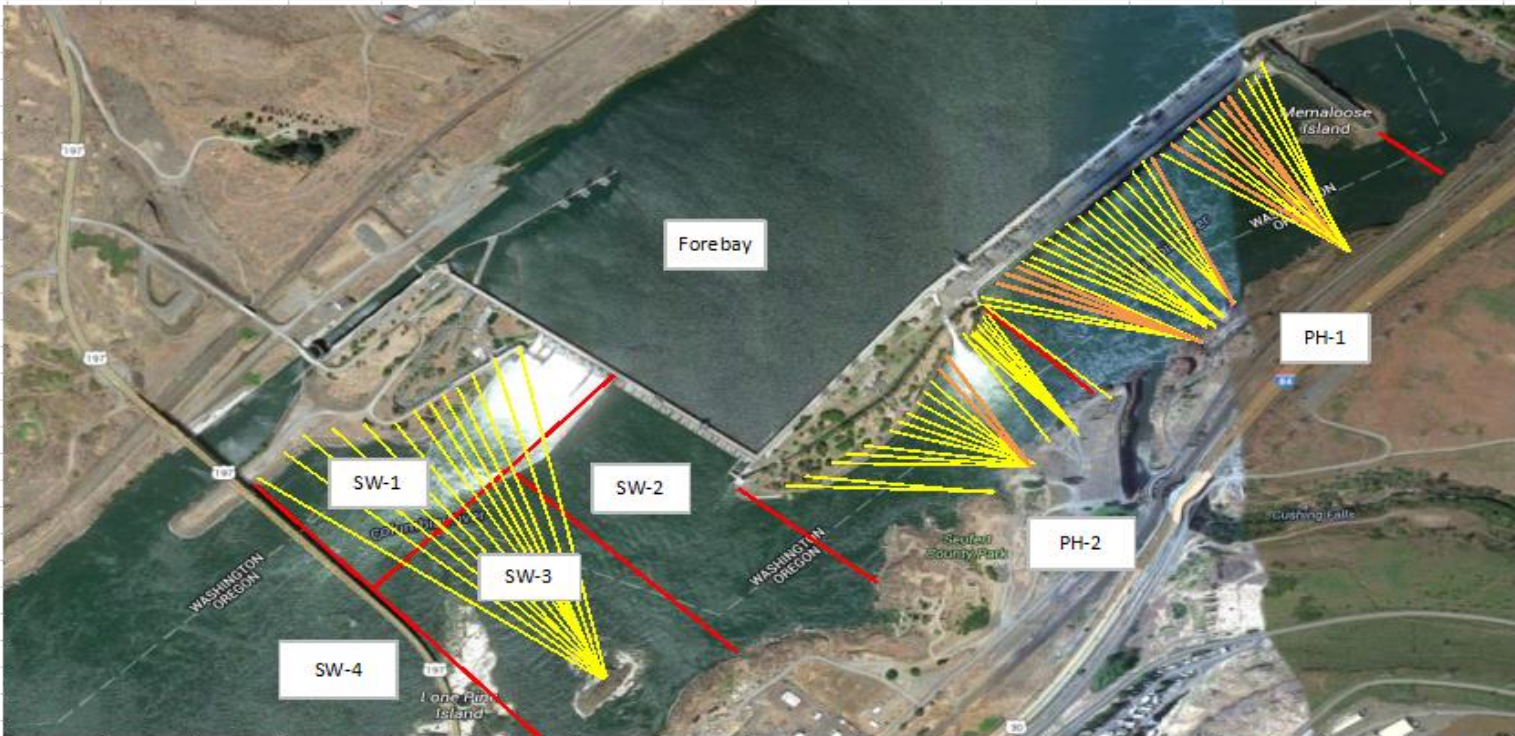
Studies/Construction:

North fishladder rehab/rock wall stabilizing. No new development.
East fishladder emergency backup construction this winter. Planning meetings 6/22. Forebay platform install prior to Dec1. FPOM coordination underway.
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 continues. Awaiting feedback from Washington for boundary distance.

Research/Contractors:

Northern Pikeminnow Management Program dam anglers caught 314 fish this week at The Dalles Dam powerhouse. Cumulative total 1,716.
Normandeau fish counters continue through Oct 30. No issues.
USDA avian hazer 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				
6/19/16	GJF	PM	FB	0	0	0	26	0	0	0	0	0	0	0	0	0	26		
			PH1	0	3	5	0	0	0	0	0	0	0	0	0	0	0	8	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW1	16	1	0	0	0	0	0	0	0	0	0	0	0	0	17	
			SW2	0	0	6	0	0	0	0	0	0	1	0	0	0	0	7	
			SW3	86	59	1	0	0	0	0	0	0	8	0	0	0	0	154	
6/20/16	EHK	AM	SW4	26	0	0	0	0	0	0	0	0	13	0	0	39			
			FB	0	0	0	34	0	0	0	0	0	0	0	0	0	34		
			PH1	0	0	0	1	0	0	0	0	0	0	0	0	1	2	GBH	
			PH2	0	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	0	0	
			SW2	0	0	0	3	0	0	0	0	0	0	0	0	1	4	osprey	
6/21/16	GJF	PM	SW3	9	0	0	0	0	0	0	0	18	0	0	0	27			
			SW4	0	0	0	0	0	0	0	0	11	3	0	0	14			
			FB	0	2	1	26	0	0	0	0	0	0	0	1	30	osprey		
			PH1	0	0	2	0	0	0	0	0	0	0	0	2	4	GBH		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW1	0	1	6	0	0	0	0	0	0	0	0	0	0	7		
6/22/16	JWR	AM	SW2	3	0	0	0	0	0	0	0	0	0	0	0	3			
			SW3	9	41	0	0	0	0	0	0	4	0	0	0	54			
			SW4	2	13	0	0	0	0	0	0	10	5	0	0	30			
			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		
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/23/16	GJF	PM	SW1	3	0	0	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	17	66	0	0	0	0	0	0	16	0	0	0	99			
			SW4	3	0	0	0	0	0	0	0	14	0	0	0	17			
			FB	0	0	3	9	0	0	0	0	0	0	0	0	0	12		
			PH1	0	0	1	4	0	0	0	0	0	0	0	0	0	5		
6/24/16	JWR	AM	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	1	0	0	0	0	0	0	0	0	0	1			
			SW3	32	42	0	0	0	0	0	0	26	0	0	0	100			
			SW4	0	0	0	0	0	0	0	0	19	0	0	0	19			
			FB	0	0	1	35	0	0	0	0	0	0	0	0	0	36		
6/25/16	JWR	PM	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	4	0	0	0	0	0	0	0	0	0	0	0	4			
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1			
			SW3	23	36	0	0	0	0	0	0	25	0	0	0	84			
			SW4	2	0	0	0	0	0	0	0	17	12	0	0	31			

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
6/19	1573	1374	199	120	60	60	0	0	0	6433	0	0	20
6/20	1664	1554	110	89	52	37	0	0	0	9482	0	0	47
6/21	1258	1211	47	102	59	43	0	0	0	10627	0	0	10
6/22	1353	1219	134	115	72	43	0	0	0	12641	0	0	13
6/23	1635	1537	98	99	58	41	0	0	0	10538	0	0	12
6/24	1927	1787	140	230	118	112	0	0	0	9271	0	0	23
6/25	1637	1571	66	148	82	66	0	0	0	10092	0	0	6
total	11047	10253	794	903	501	402	0	0	0	69084	0	0	131

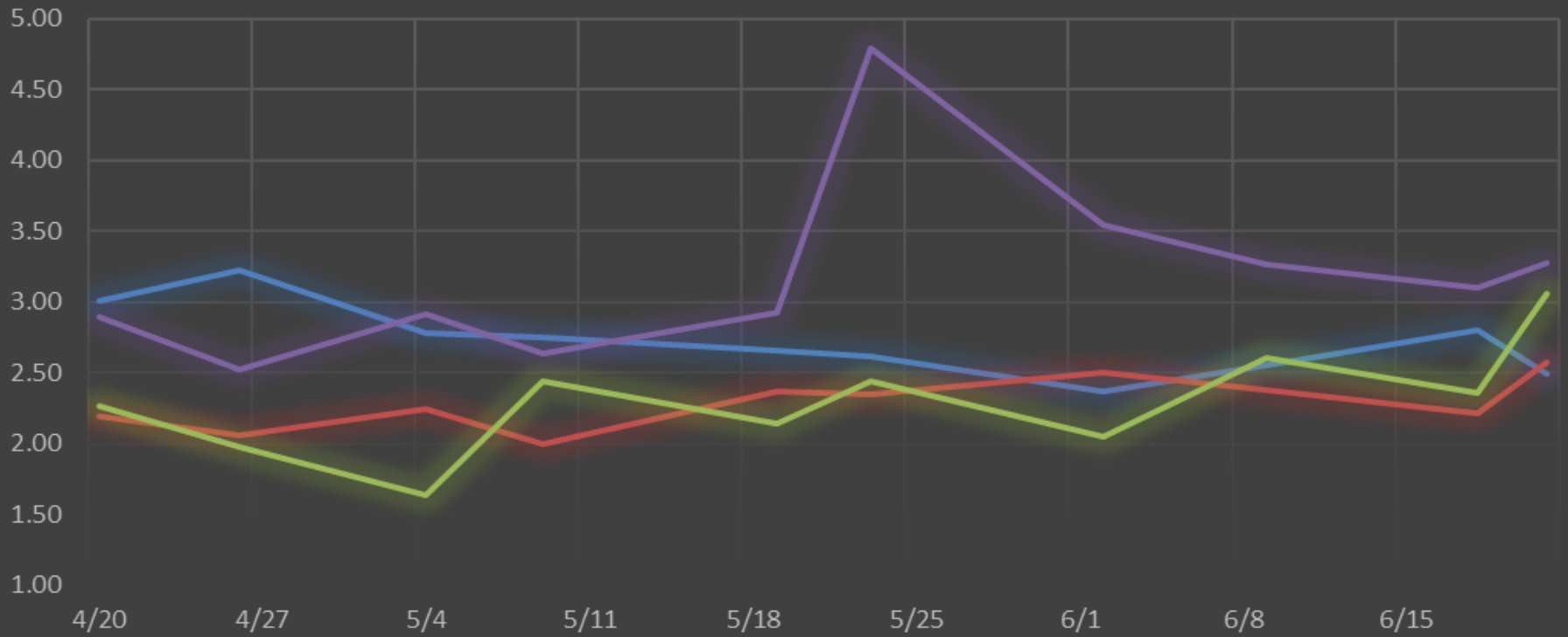
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/19	1687	1519	168	23	10	13	0	0	0	6806	0	0	13
6/20	728	660	68	14	6	8	0	0	0	5810	0	0	53
6/21	450	360	90	7	5	2	0	0	0	5131	0	0	84
6/22	504	451	53	17	7	10	0	0	0	7031	0	0	52
6/23	882	838	44	45	28	17	0	0	0	5587	0	0	26
6/24	1043	1014	29	82	30	52	0	0	0	10045	0	0	40
6/25	948	869	79	85	44	41	0	0	0	8599	0	0	66
total	6242	5711	531	273	130	143	0	0	0	49009	0	0	334
% North	36.1	35.8	40.1	23.2	20.6	26.2	0.0	0.0	0.0	41.5	0.0	0.0	71.8

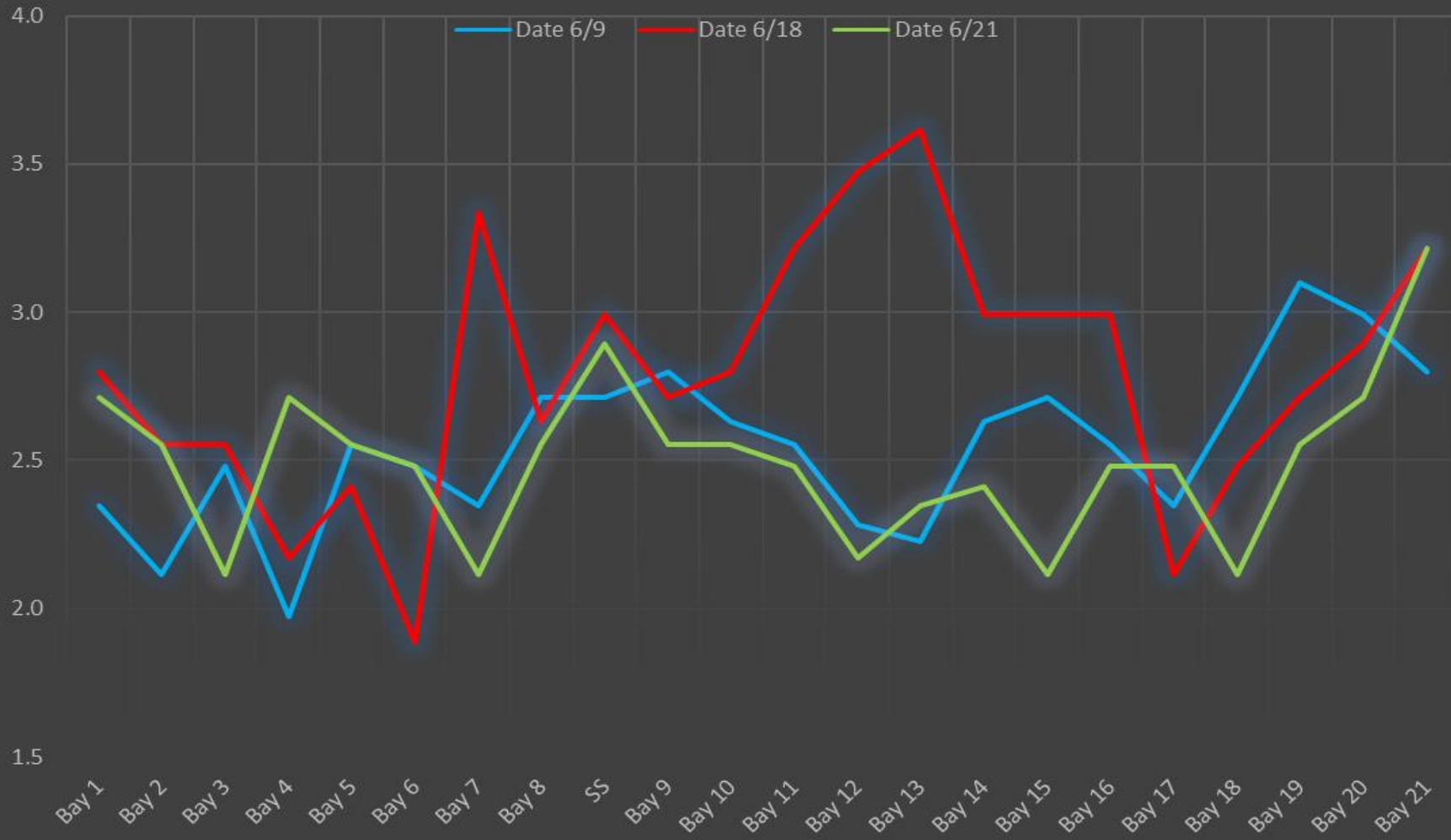
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

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

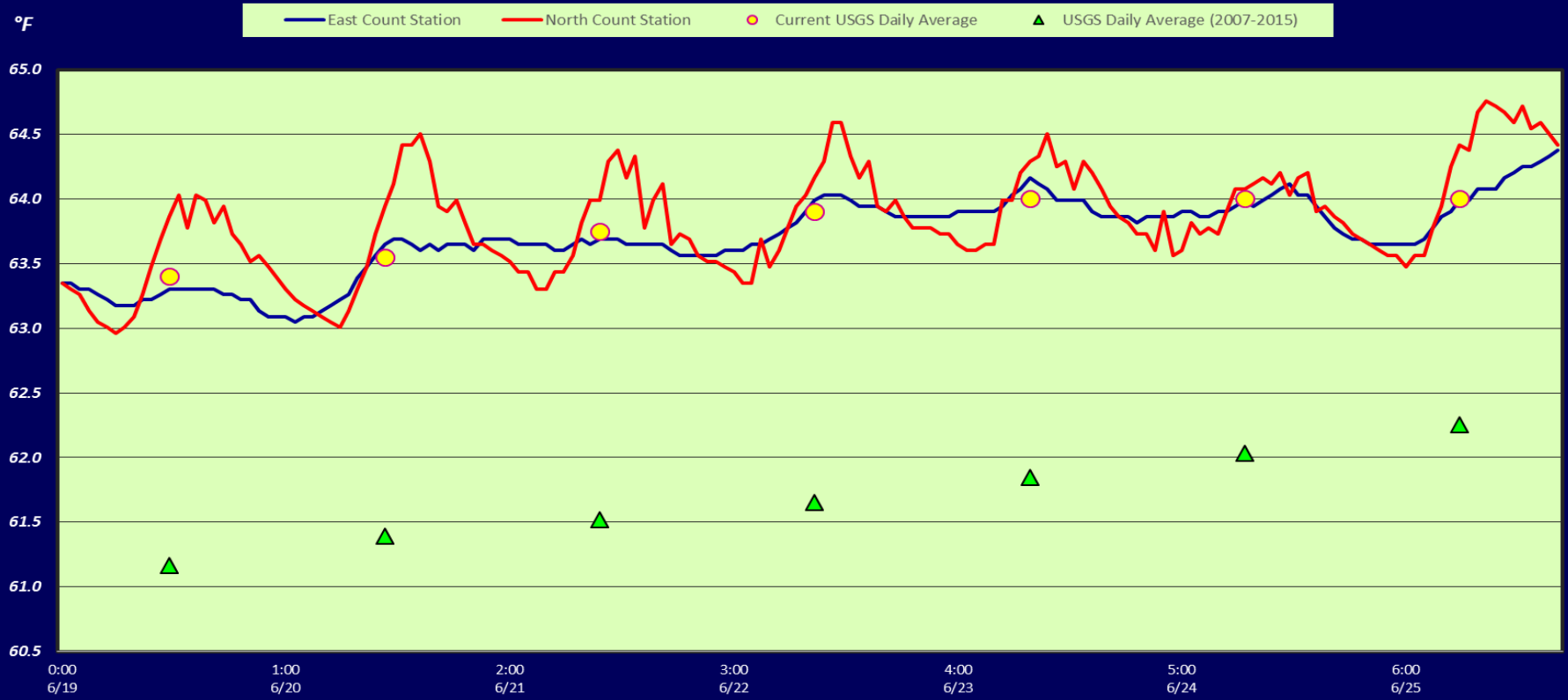
— The Dalles Collection Channel — The Dalles Transportation Channel
— The Dalles North Entrance — The Dalles South Rock Channel



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/201605.lcol.html>

Secchi:		Temperatures
5.0	Sun	63.40
6.0	Mon	63.55
5.0	Tue	63.75
5.0	Wed	63.90
5.0	Thurs	64.00
	Fri	64.00
	Sat	64.00
5.2	AVG	63.80

**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	
6/19			1.4	5.6	12.0	11.9	9.4	1.6	9.1	9.1		1.5	8.4	8.4	40.3
	1.3	9.9	1.3	5.5	11.9	11.8	9.3	1.5	9.1	9.0		1.6	8.3	8.3	
	1.3	9.9	1.1	6.5	12.9	13.0	9.1	1.3	9.0	9.0		1.5	8.5	8.5	
6/20			1.0	4.7	12.0	11.9	7.3	1.2	9.0	9.0		1.4	8.4	8.4	40.1
	1.3	10.0	1.2	3.6	12.0	11.9	7.3	1.4	8.8	8.8		1.3	8.5	8.5	
	1.6	9.8	1.8	2.8	12.1	12.0	10.1	1.8	8.7	8.7		1.7	8.4	8.4	
6/21			1.6	2.8	12.0	12.0	8.1	1.6	8.9	8.9		1.4	8.5	8.5	40.0
	1.4	9.9	1.6	2.7	11.9	11.9	8.2	1.5	8.8	8.8		1.5	8.5	8.5	
	1.4	9.8	1.8	5.1	12.1	12.0	10.9	1.7	9.1	9.1		1.5	8.6	8.6	
6/22			1.3	6.5	11.9	11.9	7.7	1.1	9.7	9.7		1.3	8.7	8.7	40.1
	1.4	9.9	1.5	5.0	12.1	12.1	8.9	1.5	8.9	8.9		1.5	8.4	8.4	
	1.4	9.9	1.6	5.0	12.1	12.0	10.2	1.7	9.4	9.4		1.6	8.4	8.4	
6/23			1.3	5.0	11.9	11.9	8.2	1.2	9.5	9.5		1.4	8.4	8.4	40.0
	1.4	9.8	1.6	3.0	12.0	12.0	8.6	1.6	8.8	8.8		1.5	8.4	8.4	
	1.4	9.9	1.5	6.5	11.9	12.1	10.7	1.4	9.8	9.9		1.5	8.6	8.6	
6/24			1.3	6.4	11.8	12.0	8.8	1.3	9.8	9.8		1.5	8.5	8.5	40.0
	1.4	9.8	1.5	4.0	11.9	11.9	9.1	1.6	8.9	8.9		1.5	8.5	8.5	
	1.6	9.8	1.5	4.1	12.0	12.0	9.0	1.5	9.1	9.1		1.5	8.5	8.5	
6/25			1.5	4.1	12.1	12.0	9.1	1.3	9.8	9.8		1.5	8.5	8.5	40.0
	1.5	9.9	1.5	7.0	12.1	12.1	9.7	1.6	9.0	9.0		1.5	8.5	8.5	
	1.5	9.8	1.5	6.9	12.0	12.0	10.3	1.5	9.1	9.1		1.5	8.6	8.6	
AVG:	1.4	9.9	1.4	4.9	12.0	12.0	9.0	1.5	9.2	9.2		1.5	8.5	8.5	40.1

Fishways are inspected twice daily plus one SCADA inspection.



Pelicans congregating at end of spillwall. They access flying under bridge and avian lines.

