

# The Dalles Dam Fishway Status Report

6/11/2016

Inspection Period: 06/05 - 11/2016

## 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: 63.7 °F	
			Comments		Secchi: 5.0 feet	
<b>NORTH FISHWAY</b>						
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'	1.5			
Entrance weir N1	0	depth (≥ 8')	9.7			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
<b>EAST FISHWAY</b>						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	1	Per forebay	Weir out at forebay 158.3 Auto adjusts 1' increments.			
Weir 158-159 differential	3	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	0	depth (≥ 7')	10.2			
East entrance differential	1	1.0' - 2.0'	1.5	FU 1 forced out at 20:00 - 01:00 on 6/2 to clean slip ring area		
Entrance weir E1	0	No criteria	5.7			
Entrance weir E2	0	depth (≥ 8')	12.5			
Entrance weir E3	0	depth (≥ 8')	12.5			
Collection channel velocity	0	1.5 - 4 fps	2.4			
Transportation channel velocity	0	1.5 - 4 fps	2.5			
North channel velocity	0	1.5 - 4 fps	2.1			
South channel velocity	0	1.5 - 4 fps	3.5			
West entrance differential	1	1.0' - 2.0'	1.5	FU 1 forced out at 20:00 - 01:00 on 6/2 to clean slip ring area		
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	1	1.0' - 2.0'	1.5	FU 1 forced out at 20:00 - 01:00 on 6/2 to clean slip ring area		
Entrance weir S1	0	depth (≥ 8')	8.5			
Entrance weir S2	0	depth (≥ 8')	8.5			
<b>JUVENILE PASSAGE</b>						
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	4	per FPP	MU 3, 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.

Gull predation low downstream of spillway and moderate upstream of bridge at end of spillway. No gull activity at powerhouse.

Investigate feasibility of limited lethal gull removal at project. Portland district meeting 6/16 to determine path forward. FPOM supports lethal gull removal.

**Operations:**

Gateway drawdown complete. All differentials within criteria.

Unable to perform calibration due to excessive wind

Spill 40% continues.

**Current Outages:**

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

MU3 forced out through 6/9/2016 due to loss of governor sump oil level

**Maintenance:**

South entrance dewater pump rehab postponed to next season.

East exit weir electrical panel FCQ7 panel delivered. To be installed in gallery. Connection as funding allows.

Tailrace crane repair near west entrance delay continues. No fish passage concerns.

East exit 158 weir automation has intermittent failures. Manually adjusted as needed. New sensor to be installed.

*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:**

North fishladder rehab construction after completion of AWS backup. No new development.

East fishladder emergency backup construction to this winter. Planning meetings with project underway. Mobilization to start this summer.

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

Transformer replacement planning underway. Plans to eliminate fish unit TA transformers. Install start 2017. Planning meetings continue.

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 367 fish this week at The Dalles Dam powerhouse. Cumulative total 1,402.

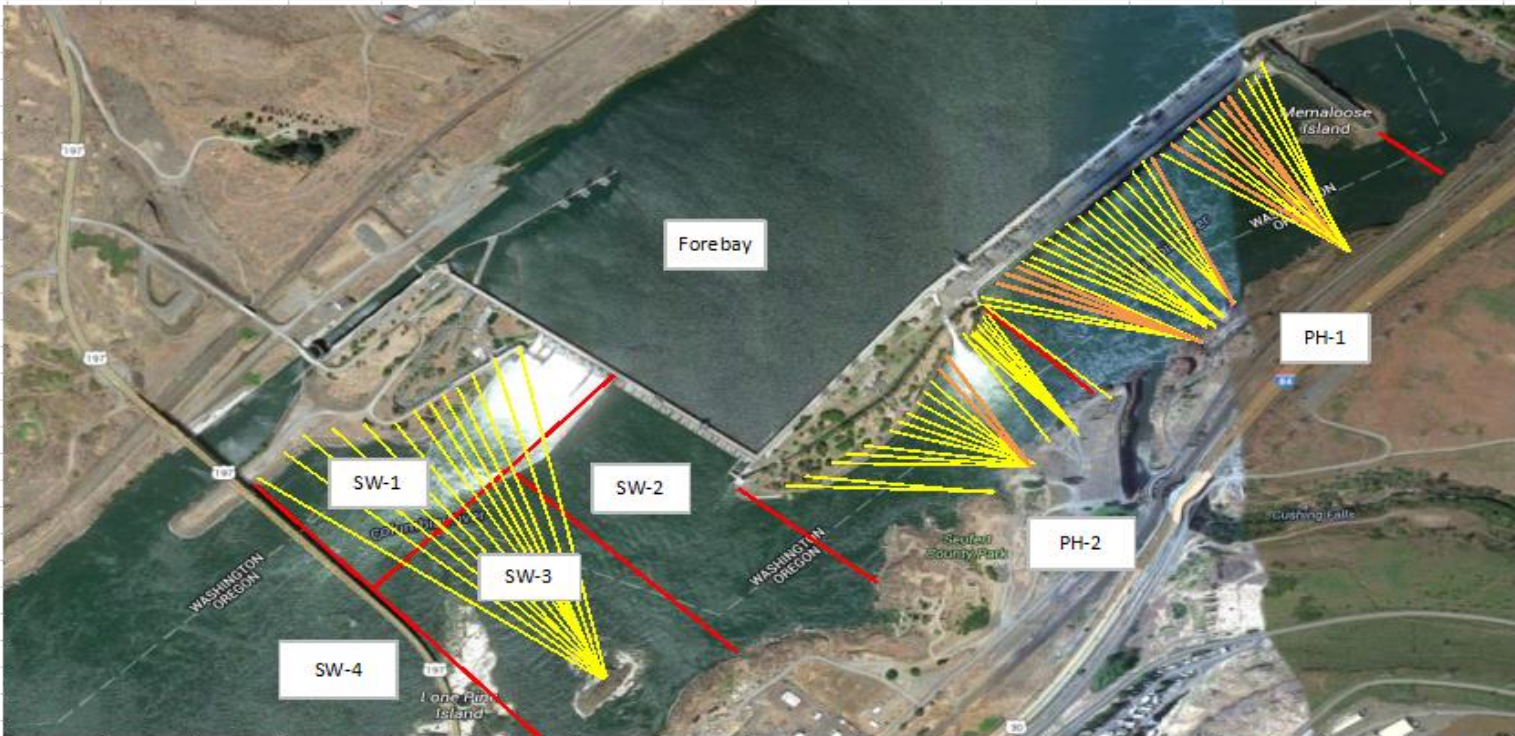
Normandeau fish counters continue through Oct 30. No issues.

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.

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



## The Dalles East

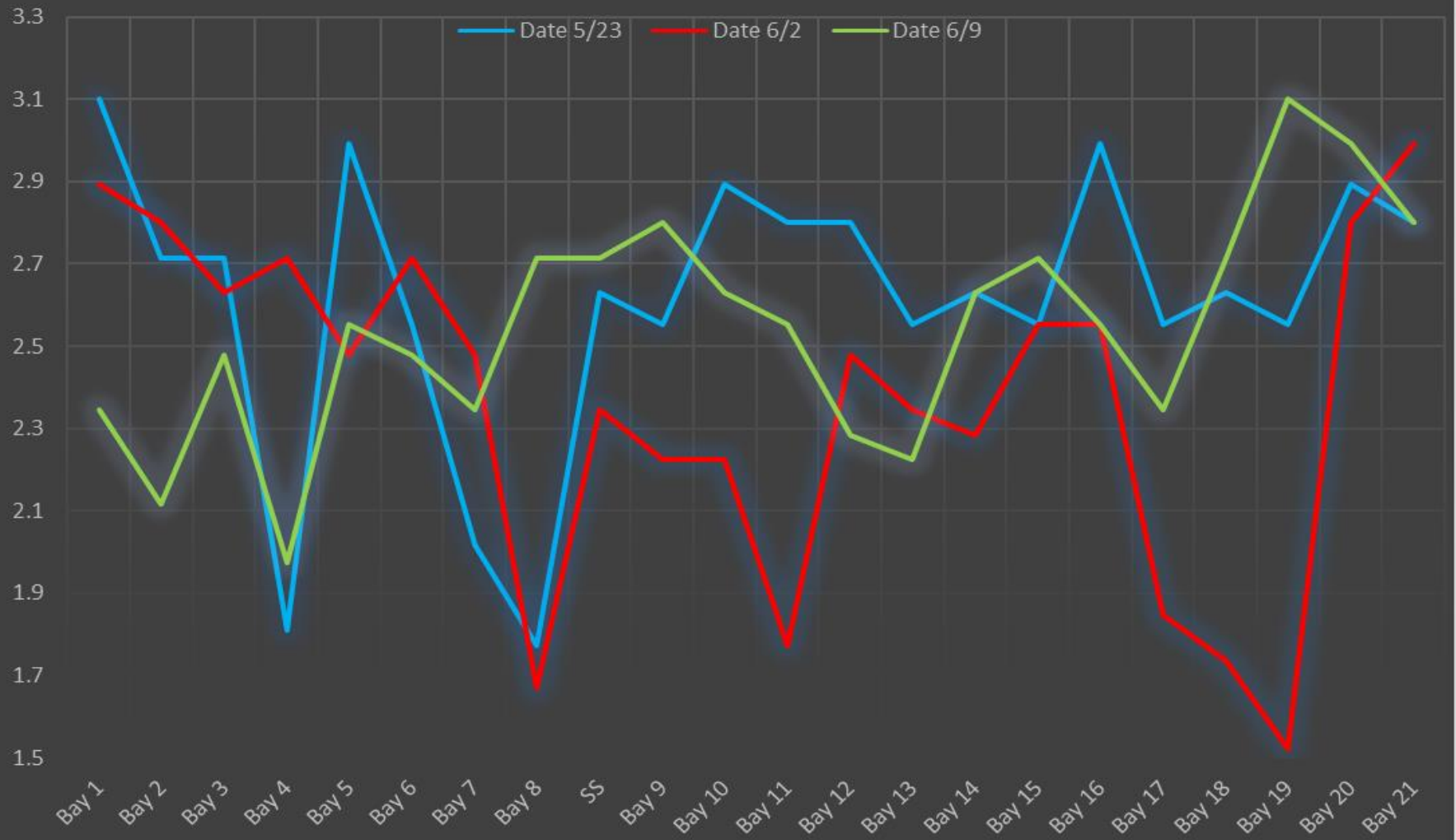
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
6/5	1411	1230	181	25	14	11	0	0	0	564	0	0	22
6/6	1207	1074	133	17	7	10	0	0	0	524	0	0	44
6/7	1381	1261	120	34	18	16	0	0	0	776	0	0	24
6/8	1672	1504	168	37	20	17	0	0	0	1474	0	0	28
6/9	1614	1489	125	30	8	22	0	0	0	1248	0	0	52
6/10	1275	1198	77	30	11	19	0	0	0	978	0	0	40
6/11	1385	1278	107	51	25	26	0	0	0	1526	0	0	13
<b>total</b>	<b>9945</b>	<b>9034</b>	<b>911</b>	<b>224</b>	<b>103</b>	<b>121</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7090</b>	<b>0</b>	<b>0</b>	<b>223</b>

## 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
6/5	487	469	18	6	0	6	0	0	0	65	0	0	28
6/6	471	448	23	6	0	6	0	0	0	152	0	0	38
6/7	549	530	19	10	5	5	0	0	0	72	0	0	36
6/8	790	772	18	3	1	2	0	0	0	73	0	0	20
6/9	701	676	25	6	2	4	0	0	0	210	0	0	18
6/10	953	913	40	6	5	1	0	0	0	600	0	0	28
6/11	689	679	10	7	2	5	0	0	0	534	0	0	29
<b>total</b>	<b>4640</b>	<b>4487</b>	<b>153</b>	<b>44</b>	<b>15</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1706</b>	<b>0</b>	<b>0</b>	<b>197</b>
<b>% North</b>	<b>31.8</b>	<b>33.2</b>	<b>14.4</b>	<b>16.4</b>	<b>12.7</b>	<b>19.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

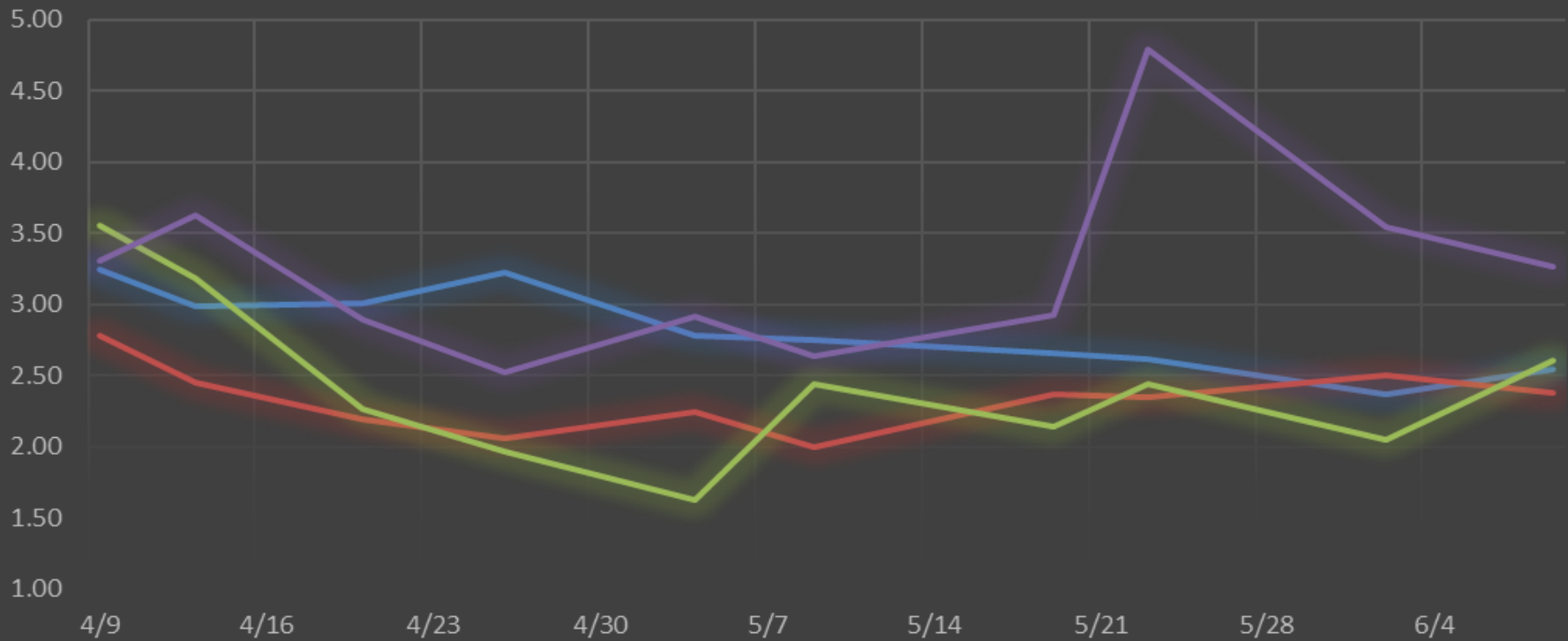
<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx>

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

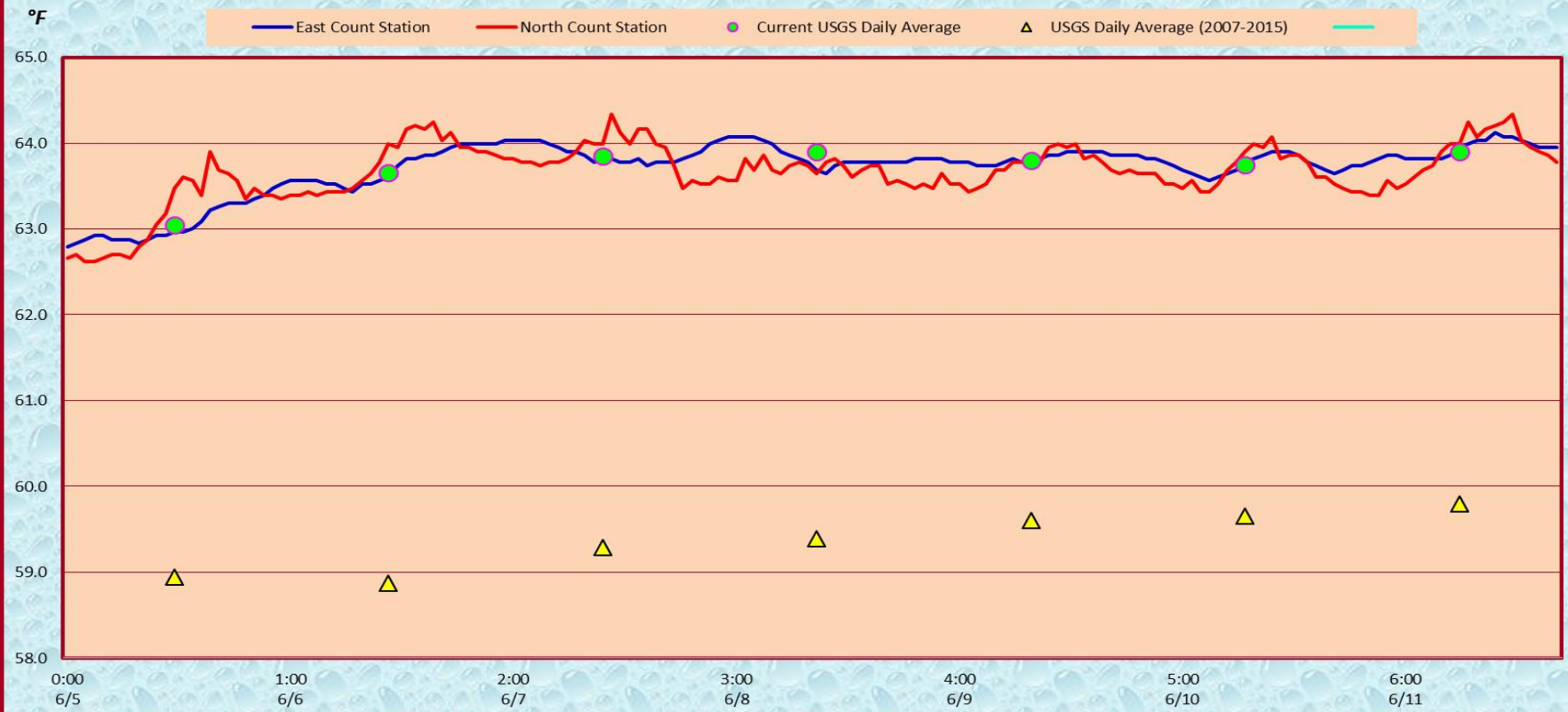


## The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

— 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 w/ Spill KCFS





USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201605.lcol.html>

Secchi:		Temperatures
4.0	Sun	63.05
5.0	Mon	63.65
5.0	Tue	63.85
5.0	Wed	63.90
5.0	Thurs	63.80
5.0	Fri	63.75
6.0	Sat	63.90
5.0	AVG	63.70

**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	
6/5			1.3	6.9	12.1	12.0	9.2	1.6	8.8	8.8		1.5	8.4	8.5	39.9
	1.4	9.8	1.4	7.0	11.9	12.1	9.9	1.5	8.1	8.1		1.5	8.5	8.5	
	1.4	9.8	1.7	7.1	12.0	12.0	12.0	1.8	9.1	9.0		1.5	8.5	8.5	
6/6			1.1	6.9	12.8	12.9	8.7	1.2	9.7	9.7		1.3	8.7	8.7	40.0
	1.5	9.6	1.5	4.4	12.4	12.4	10.2	1.6	9.0	9.0		1.6	8.1	8.1	
	1.5	9.6	1.6	4.7	12.7	12.6	11.6	1.7	9.0	9.1		1.6	8.3	8.3	
6/7			1.5	4.5	12.6	12.5	10.1	1.6	9.0	9.0		1.6	8.2	8.2	40.0
	1.5	9.8	1.6	6.6	12.5	12.5	11.1	1.6	9.5	9.5		1.4	8.6	8.6	
	1.5	9.6	1.5	6.6	12.5	12.5	10.9	1.5	8.5	8.6		1.5	8.5	8.5	
6/8			1.5	6.6	12.5	12.5	10.2	1.4	9.5	9.5		1.5	8.5	8.6	40.0
	1.5	9.6	1.6	6.0	12.5	12.5	10.4	1.5	9.5	9.5		1.5	8.5	8.5	
	1.5	9.6	1.5	4.9	12.5	12.5	10.4	1.5	9.6	9.6		1.6	8.4	8.4	
6/9			1.3	6.2	12.6	12.6	9.6	1.4	9.6	9.6		1.4	8.6	8.6	39.9
	1.5	9.7	1.5	6.0	12.5	12.5	10.4	1.5	9.5	9.5		1.6	8.4	8.5	
	1.6	9.6	1.5	6.1	12.5	12.6	10.8	1.6	9.6	9.5		1.5	8.6	8.6	
6/10			1.3	6.1	12.6	12.5	9.6	1.4	9.5	9.5	1.5	8.5	8.5	40.2	
	1.4	9.6	1.5	4.4	12.4	12.4	9.3	1.6	8.9	8.9	1.5	8.5	8.5		
	1.5	9.7	1.5	4.7	12.7	12.7	9.8	1.5	9.1	9.1	1.4	8.6	8.7		
6/11			1.5	4.5	12.5	12.5		1.5	9.0	9.0	1.6	8.3	8.3	40.0	
	1.3	9.8	1.4	4.6	12.6	12.6	9.9	1.6	9.1	9.1	1.4	8.5	8.7		
	1.5	9.6	1.5	4.6	12.5	12.5	10.6	1.6	9.1	9.1	1.6	8.5	8.5		
<b>AVG:</b>	<b>1.5</b>	<b>9.7</b>	<b>1.5</b>	<b>5.7</b>	<b>12.5</b>	<b>12.5</b>	<b>10.2</b>	<b>1.5</b>	<b>9.2</b>	<b>9.2</b>	<b>1.5</b>	<b>8.5</b>	<b>8.5</b>	<b>40.0</b>	

*Fishways are inspected twice daily plus one SCADA inspection.*



Hoist purchased to assist tribal lamprey trap removal at east count station.