

# The Dalles Dam Fishway Status Report

9/10/2016

Inspection Period: 09/04/2016-09/10/2016

## 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: 69.0 °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'	1.3		
Entrance weir N1	0	depth (≥ 8')	9.8		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
<b>EAST FISHWAY</b>					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay			
Weir 158-159 differential	2	1.0' ± 0.1'	Work in progress on FCQ7		
Count station differential	1	≤ 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	7.6		
Entrance weir E2	0	depth (≥ 8')	13.0		
Entrance weir E3	0	depth (≥ 8')	13.0		
Collection channel velocity	0	1.5 - 4 fps	2.6		
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	3.4		
West entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir W1	0	depth (≥ 8')	8.4		
Entrance weir W2	0	depth (≥ 8')	8.4		
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	Adjusted	
<b>JUVENILE PASSAGE</b>					
Sluiceway operation	0	Units 2, 8, 18	Unit 1 off for EAL testing 8/29		
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.6'		
Spill volume	0	spill at 40%	Spillway off midnight 8/31		
Spill Pattern	0				
Turbine Unit Priority	3	per FPP	Too low of flow for priority, moving gates on MU 10		
Turbine 1% Efficiency	0	per FPP			

**Birds/Sea lions:**

Bird observation data collected once daily. Refer to Avian Zone map.

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 8/23, No discrepancies found

Gatewell drawdown 8/20 within criteria limits.

**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 maintained 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 continues at east count station. Trapping expected into October to meet quota.

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
9/4	14471	12912	1559	2676	2087	589	436	326	110	16	0	0	43
9/5	16860	14932	1928	2827	2219	608	381	313	68	1	0	0	30
9/6	12504	10975	1529	2983	2354	629	683	618	65	13	0	0	56
9/7	8580	7573	1007	2578	2051	527	573	557	16	2	0	0	53
9/8	19207	16517	2690	2535	1942	593	1279	1218	61	26	0	0	59
9/9	13840	11696	2144	2949	2449	500	1127	1026	101	1	0	0	58
9/10	12921	11602	1319	3000	2359	641	1034	930	104	10	0	0	38
<b>total</b>	<b>98383</b>	<b>86207</b>	<b>12176</b>	<b>19548</b>	<b>15461</b>	<b>4087</b>	<b>5513</b>	<b>4988</b>	<b>525</b>	<b>69</b>	<b>0</b>	<b>0</b>	<b>337</b>

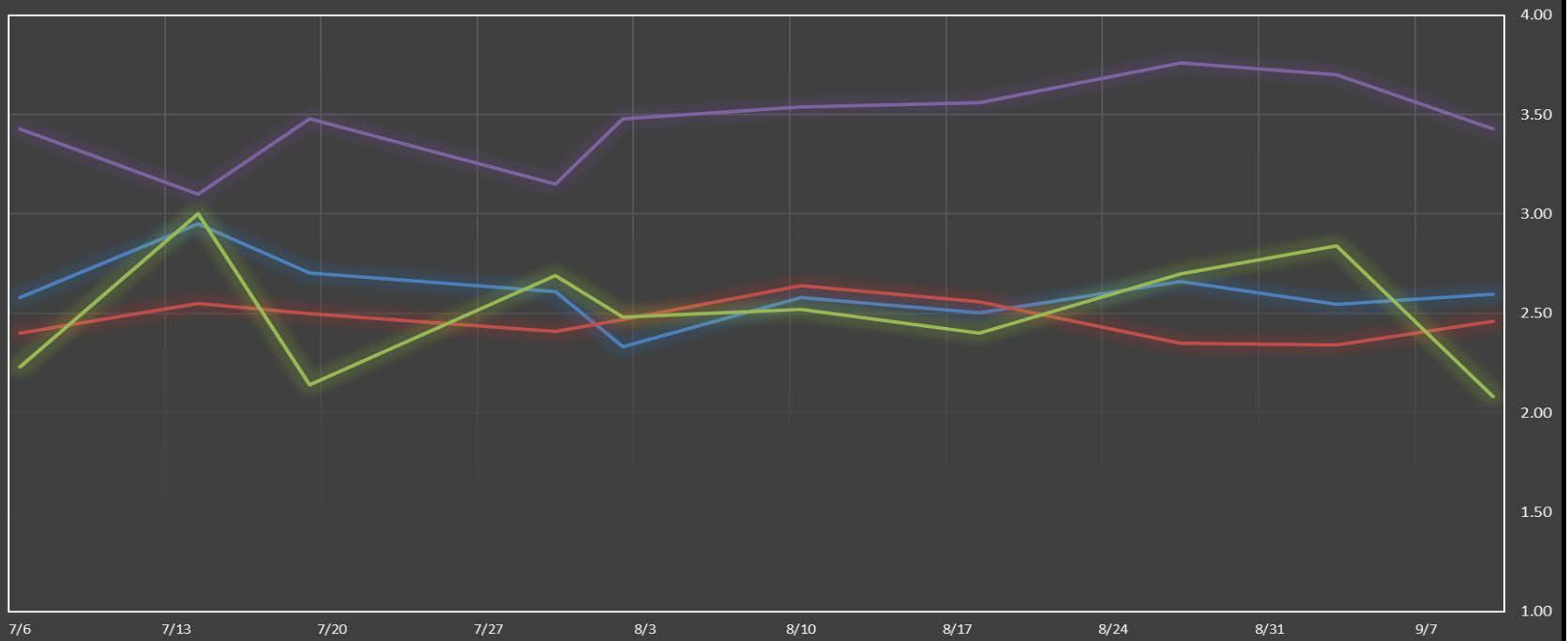
## The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/4	463	433	30	157	132	25	12	12	0	2	0	0	10
9/5	405	358	47	175	140	35	45	41	4	0	0	0	4
9/6	343	295	48	193	134	59	19	17	2	0	0	0	6
9/7	203	162	41	163	122	41	47	46	1	1	0	0	1
9/8	951	805	146	211	176	35	84	78	6	0	0	0	22
9/9	696	620	76	150	128	22	48	44	4	0	0	0	1
9/10	118	84	34	120	109	11	15	11	4	0	0	0	5
<b>total</b>	<b>3179</b>	<b>2757</b>	<b>422</b>	<b>1169</b>	<b>941</b>	<b>228</b>	<b>270</b>	<b>249</b>	<b>21</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>49</b>

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

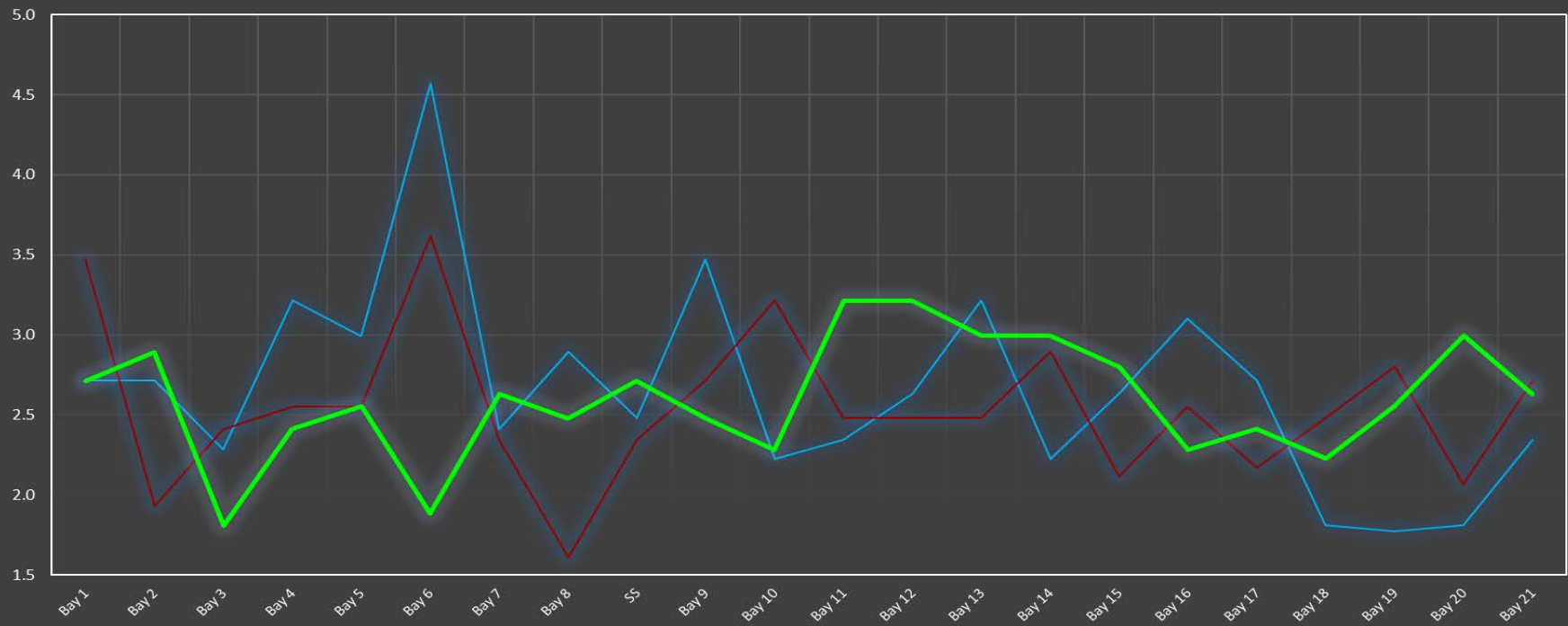
### The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

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

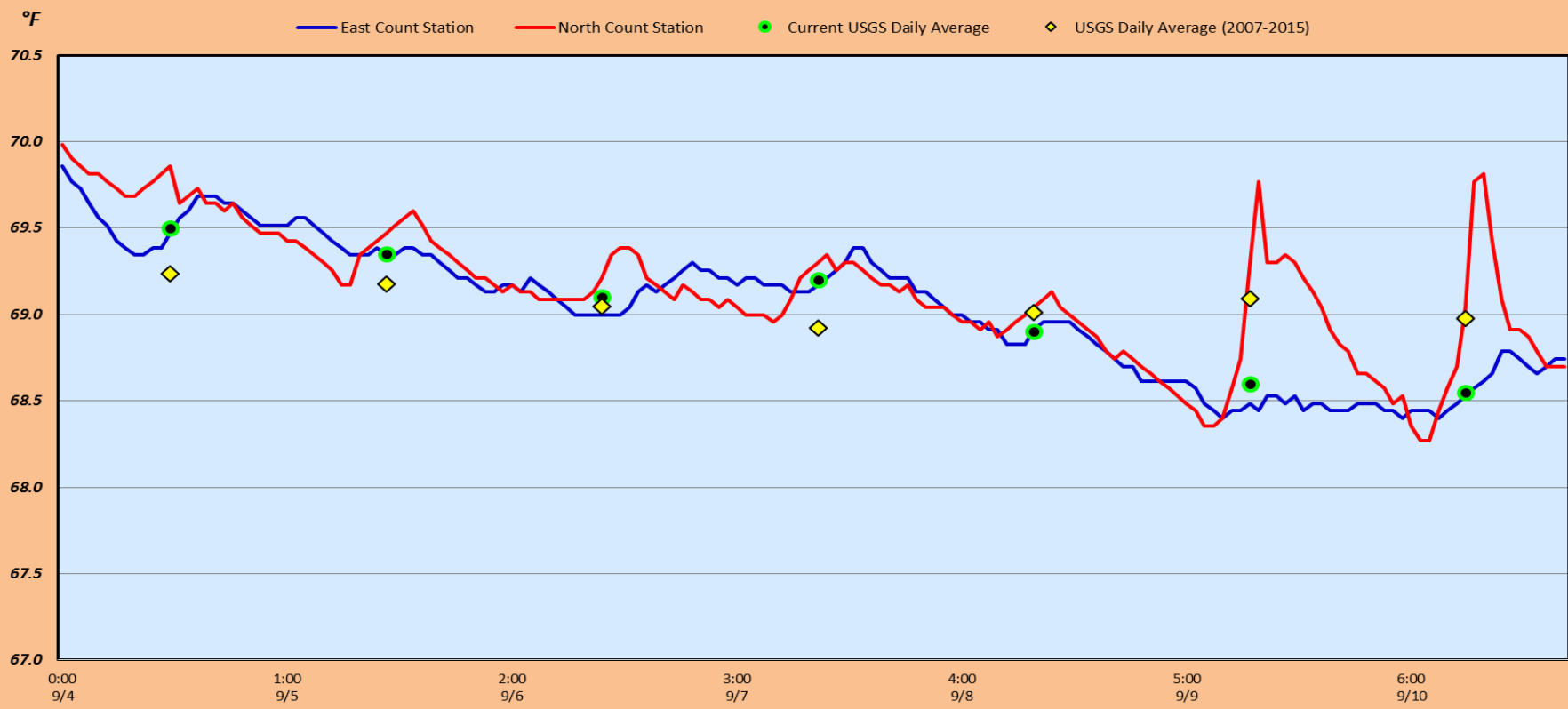


# The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)

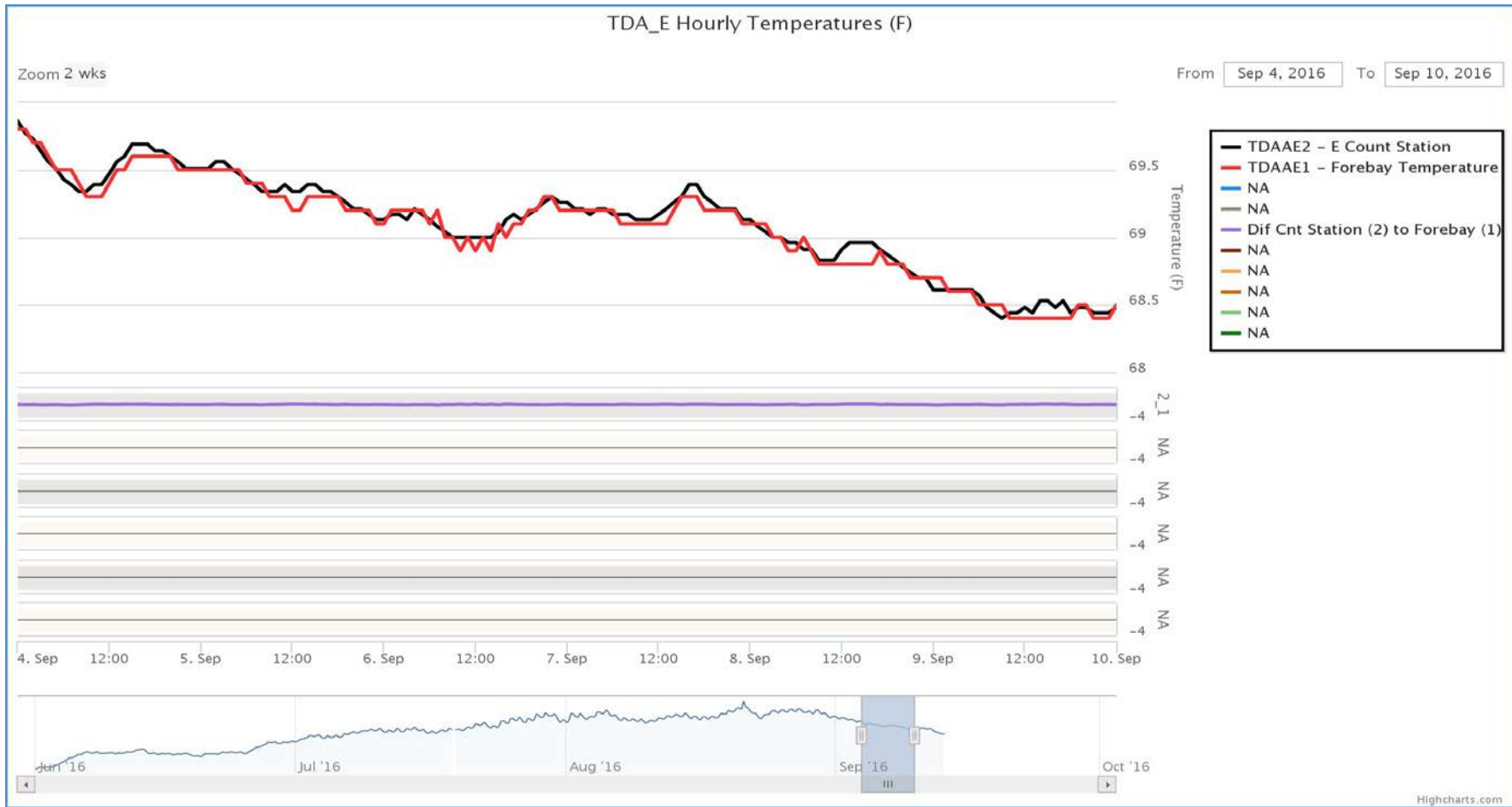
— Date 8/27 — Date 9/3 — Date 9/10



### The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures







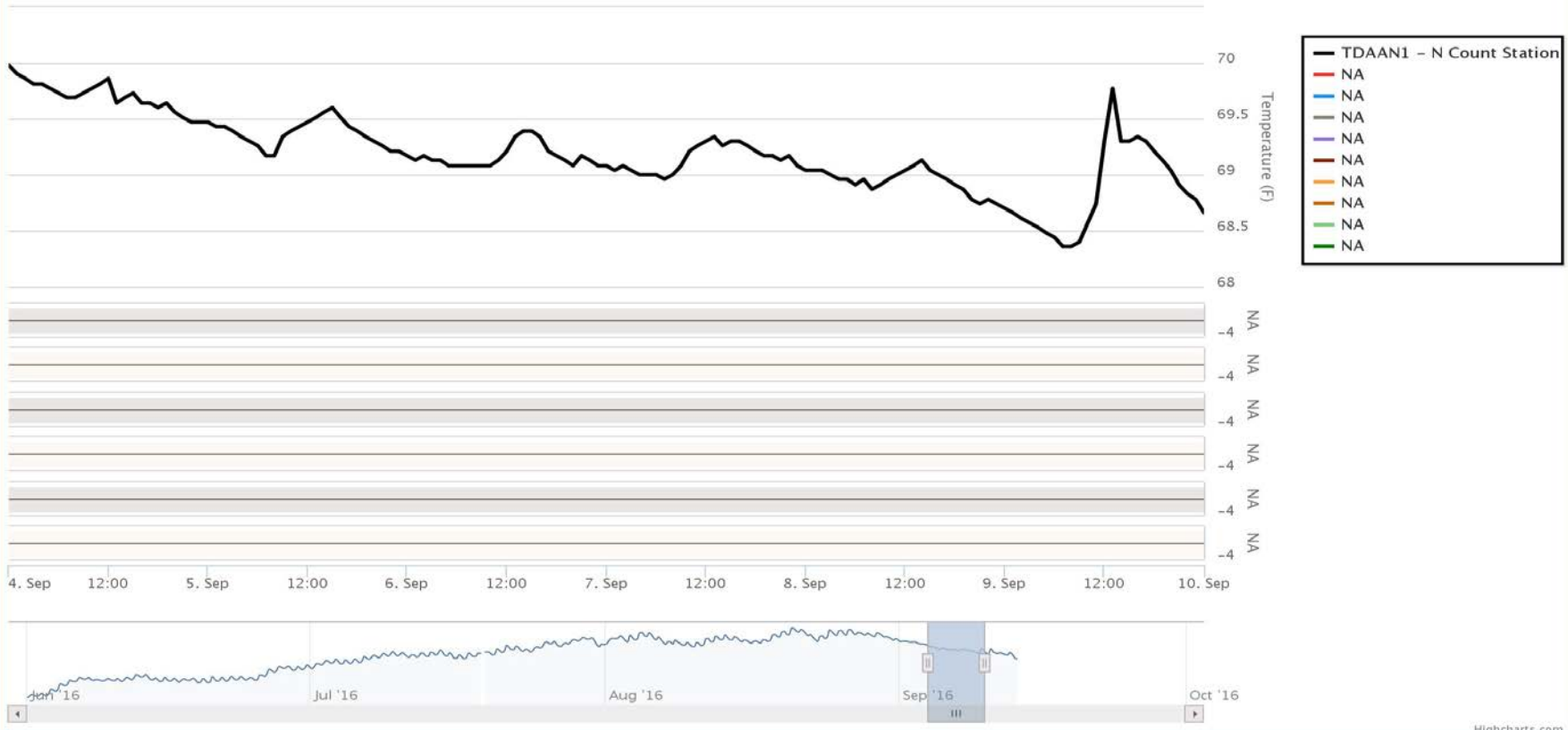
New collaborative Temperature data sharing and reporting effort with Fish Passage Center

[http://www.fpc.org/river/Q\\_ladderwatertempgraph.php](http://www.fpc.org/river/Q_ladderwatertempgraph.php)

### TDA\_N Hourly Temperatures (F)

Zoom 2 wks

From Sep 4, 2016 To Sep 10, 2016



Secchi:		USGS: (Sept) <a href="http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201609.html">http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201609.html</a>
		Temperatures
9/4	5.0	Sun 69.50
9/5	5.0	Mon 69.35
9/6	5.0	Tue 69.10
9/7	5.0	Wed 69.20
9/8	5.0	Thurs 68.90
9/9	5.0	Fri 68.60
9/10	5.0	Sat 68.55
	5.0	AVG 69.0

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	
9/4			1.4	9.0	13.0	13.0	11.5	1.4	8.3	8.3	C L O S E D	1.3	8.4	8.4	S P I L L  O F F
	1.3	9.8	1.4	9.0	13.0	13.0	11.9	1.4	8.3	8.3		1.4	8.4	8.4	
	1.3	9.7	1.5	8.9	12.9	12.9	12.0	1.5	8.3	8.3		1.4	8.2	8.2	
9/5			1.5	6.9	13.0	13.0	10.9	1.3	8.3	8.3		1.3	8.3	8.5	
	1.3	9.8	1.5	7.2	13.1	13.1	11.2	1.4	8.4	8.4		1.4	8.4	8.4	
	1.3	9.8	1.5	7.0	13.0	13.1	12.0	1.5	8.3	8.4		1.4	8.3	8.3	
9/6			1.4	9.0	12.9	12.9	11.1	1.4	8.4	8.4		1.3	8.4	8.4	
	1.2	9.7	1.5	5.5	13.0	13.0	11.0	1.3	8.3	8.3		1.3	8.3	8.3	
	1.4	9.8	1.4	10.0	13.0	13.0	12.1	1.5	8.3	8.3		1.5	8.4	8.4	
9/7			1.6	7.1	13.1	13.1	12.2	1.5	9.4	9.4		1.4	8.3	8.4	
	1.4	9.8	1.5	7.1	13.0	13.1	12.2	1.5	8.2	8.3		1.4	8.4	8.3	
	1.4	9.7	1.6	7.0	13.0	13.1	12.2	1.5	8.3	8.3		1.4	8.3	8.3	
9/8			1.7	8.6	13.0	13.0	12.0	1.5	8.3	8.3		1.4	8.4	8.4	
	1.3	9.7	1.4	7.1	13.0	13.1	11.7	1.5	8.3	8.3		1.4	8.3	8.2	
	1.3	9.8	1.6	7.1	13.0	13.1	12.2	1.5	8.3	8.3		1.4	8.4	8.4	
9/9			1.4	6.9	13.0	12.9	10.9	1.4	8.3	8.3	1.3	8.4	8.4		
	1.3	9.8	1.3	7.1	12.9	13.0	10.6	1.3	8.2	8.2	1.3	8.4	8.4		
	1.5	9.7	1.6	8.9	13.0	13.0	12.1	1.5	8.3	8.3	1.4	8.3	8.3		
9/10			1.4	7.0	13.0	13.0	11.1	1.4	8.4	8.4	1.4	8.2	8.2		
	1.3	9.8	1.6	7.0	13.1	13.0	12.0	1.4	8.5	8.5	1.5	8.3	8.3		
	1.3	9.7	1.6	7.0	13.1	13.0	12.0	1.4	8.5	8.5	1.5	8.3	8.3		
<b>AVG:</b>	<b>1.3</b>	<b>9.8</b>	<b>1.5</b>	<b>7.6</b>	<b>13.0</b>	<b>13.0</b>	<b>11.7</b>	<b>1.4</b>	<b>8.4</b>	<b>8.4</b>		<b>1.4</b>	<b>8.3</b>	<b>8.3</b>	<b>#DIV/0!</b>

Fishways are inspected twice daily plus one SCADA inspection.