

# The Dalles Dam Fishway Status Report

10/2/2016

Inspection Period: 09/25/2016 - 10/1/2016

## 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: 65.0 °F	
			Comments: Fall like conditions on project		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')	9.2			
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	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'	Picket leads raked as needed.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	11.4			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria	7.1			
Entrance weir E2	0	depth (≥ 8')	13.0			
Entrance weir E3	0	depth (≥ 8')	13.0			
Collection channel velocity	0	1.5 - 4 fps	2.9			
Transportation channel velocity	0	1.5 - 4 fps	2.7			
North channel velocity	0	1.5 - 4 fps	2.8			
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')	9.7			
Entrance weir W2	0	depth (≥ 8')	9.7			
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			
<b>JUVENILE PASSAGE</b>						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0					
spill off						
Turbine Unit Priority	1	per FPP				
Turbine 1% Efficiency	0	per FPP				

**Birds/Sea lions:**

No sea lions observed. Primarily cormorants on site. Some mergansers and gulls on site.  
Bird observation data collected once daily. Refer to Avian Zone map and bird count.  
Two of 13 spillway avian lines broke closest to bridge. New wire procured. Installation this fall.

**Operations:**

Calibration 10/01, all readings within criteria  
Gatewell drawdown completed 10/01, all readings within criteria

**Current Outages:**

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.  
MU3 forced out of service through 8/4/2016 due to loss of governor sump oil level

**Maintenance:**

New east exit weir electrical panel FCQ7 installation ~50% complete. To continue FY17 pending funding.  
New fiber installed for south entrance communication improvement.  
Planning underway for winter dewater season, East ladder out Dec 1 through end Feb for AWS backup construction. North ladder out 2 weeks mid Jan.  
*Long Term repair maintenance 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.  
All spillway items on Critical Infrastructure list and Unfunded Requirement list.

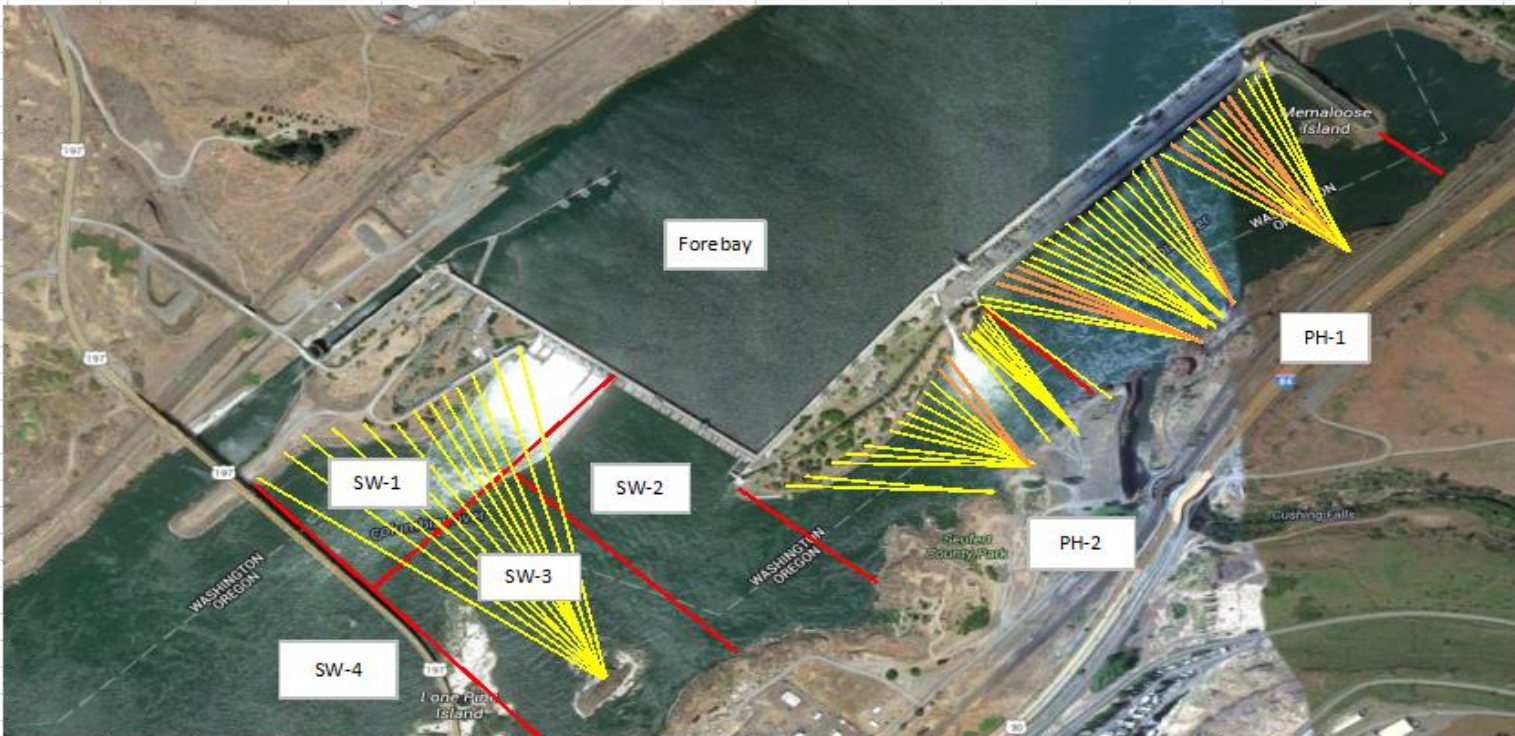
**Studies/Construction:**

Environmental acceptable grease testing in progress. More unit1 outages expected.  
North fishladder rehab/rock wall stabilizing - No new development.  
East fishladder emergency backup - Mobilization and prefab continues. Night work start in November. Day work start December.  
Crane rail replacement - Start in water work period 2016/17.  
Transformer replacement - Install start Oct 2017.  
N Wasco Co PUD Memo of Agreement - Meeting 9/14. PUD comments to be incorporated.  
Fish unit rehab - No new development.  
Fish unit breaker replacement - Start in water work period 2017/18

**Research/Contractors:**

Normandeau fish counters continue through Oct 30. No issues.

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				
9/25/16	GJF	PM	FB	0	0	0	9	0	0	0	0	0	0	0	0	0	9		
			PH1	0	0	3	13	0	0	0	0	0	0	0	0	0	0		16
			PH2	0	0	2	0	0	0	0	0	0	0	0	0	0	0		2
			SW1	0	0	3	0	0	0	0	0	0	0	0	0	0	0		3
			SW2	0	1	0	0	0	0	0	0	0	0	0	0	0	0		1
			SW3	0	0	0	38	0	0	0	0	0	0	0	0	0	0		38
			SW4	0	26	0	12	0	0	0	0	0	0	2	0	0	0		40
9/26/16	GJF	AM	FB	0	0	0	4	0	0	0	0	0	0	0	0	0	4	COME (Common Merganser)	
			PH1	1	0	3	8	0	0	0	0	0	0	0	0	0	12		
			PH2	3	0	1	0	0	0	0	0	0	0	0	0	0	4		
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0	2		
			SW2	0	0	6	0	0	0	0	0	0	0	0	7	0	13		
			SW3	0	0	0	29	0	0	0	0	0	0	0	0	0	29		
			SW4	0	15	0	36	0	0	0	0	0	0	0	0	0	51		
9/27/16	GJF	PM	FB	0	0	0	3	0	0	0	0	0	0	0	0	0	3		
			PH1	0	1	2	17	0	0	0	0	0	0	0	0	0	20		
			PH2	2	0	1	0	0	0	0	0	0	0	0	0	0	3		
			SW1	0	0	3	0	0	0	0	0	0	0	0	0	0	3		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
			SW3	0	0	0	42	0	0	0	0	0	0	0	0	0	42		
			SW4	0	0	0	8	0	0	0	0	0	0	1	0	0	9		
9/28/16	GJF	AM	FB	0	0	0	31	0	0	0	0	0	0	0	0	0	31		
			PH1	0	0	1	13	0	0	0	0	0	0	0	0	0	14		
			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		
			SW3	0	0	0	42	0	0	0	0	0	0	0	0	0	42		
			SW4	0	16	0	5	0	0	0	0	0	0	0	0	0	21		
9/29/16	GJF	PM	FB	0	0	0	4	0	0	0	0	0	0	0	0	0	4		
			PH1	0	0	2	23	0	0	0	0	0	0	0	0	0	25		
			PH2	5	0	0	0	0	0	0	0	0	0	0	0	0	5		
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	5	0	37	0	0	0	0	0	0	0	0	0	42		
			SW4	0	7	0	3	0	0	0	0	0	0	0	0	0	10		
9/30/16	JWR	AM	FB	0	0	0	43	0	0	0	0	0	0	0	0	0	43		
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	0	4		
			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		
			SW3	0	1	1	41	0	0	0	0	0	0	0	0	0	43		
			SW4	0	12	0	0	0	0	0	0	0	0	0	0	0	12		
10/1/16	JWR	PM	FB	0	6	0	15	0	0	0	0	0	0	0	0	0	21		
			PH1	0	0	1	14	0	0	0	0	0	0	0	0	0	15		
			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		
			SW3	0	0	1	23	0	0	0	0	0	0	0	0	0	24		
			SW4	0	3	0	0	0	0	0	0	0	0	1	0	0	4		
<i>daily averages</i>				<i>0.22</i>	<i>1.9</i>	<i>0.69</i>	<i>10.6</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>0.14</i>	<i>0.0</i>	<i>13.6</i>			

## 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
9/25	5143	4350	793	3482	2580	902	375	326	49	0	0	0	11
9/26	3512	3032	480	2522	1956	566	334	328	6	0	0	0	11
9/27	2671	2088	583	2250	1822	428	298	278	20	0	0	0	17
9/28	3300	2743	557	2364	1836	528	302	282	20	0	0	0	7
9/29	3054	2312	742	2438	1868	570	256	238	18	0	0	0	10
9/30	2700	2102	598	1958	1477	481	158	144	14	0	0	0	6
10/1	2614	2093	521	2417	1813	604	57	50	7	0	0	0	6
<b>Total</b>	<b>22994</b>	<b>18720</b>	<b>4274</b>	<b>17431</b>	<b>13352</b>	<b>4079</b>	<b>1780</b>	<b>1646</b>	<b>134</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>68</b>

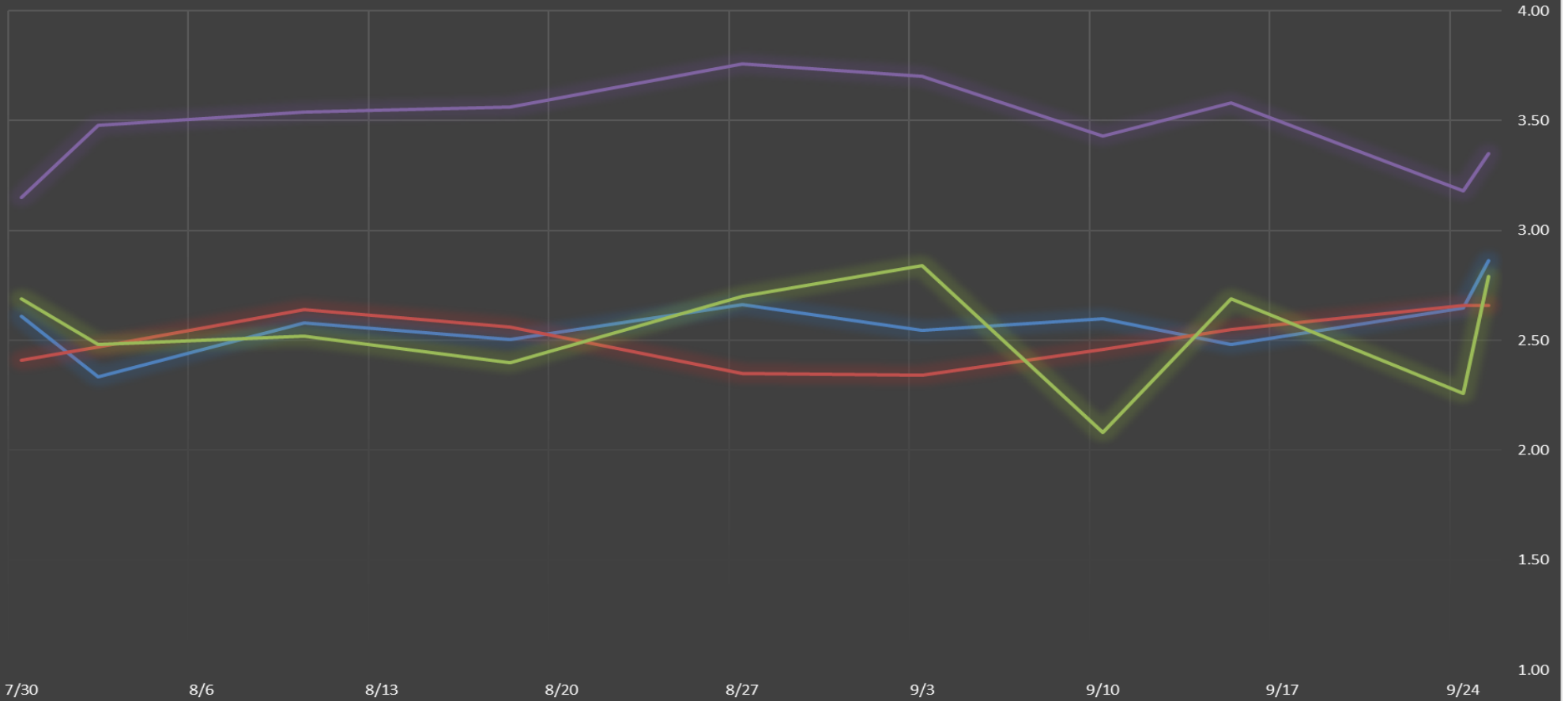
## The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/25	210	188	22	249	199	50	45	44	1	0	0	0	2
9/26	34	24	10	159	130	29	6	4	2	1	0	0	1
9/27	23	16	7	96	82	14	6	6	0	0	0	0	2
9/28	70	48	22	117	89	28	10	10	0	0	0	0	4
9/29	90	64	26	169	140	29	19	18	1	0	0	0	4
9/30	94	74	20	139	116	23	6	5	1	0	0	0	1
10/1	116	86	30	158	126	32	7	6	1	0	0	0	0
<b>Total</b>	<b>637</b>	<b>500</b>	<b>137</b>	<b>1087</b>	<b>882</b>	<b>205</b>	<b>99</b>	<b>93</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>14</b>
% North	2.7	2.6	3.1	5.9	6.2	4.8	5.3	5.3	4.3	100.0	0.0	0.0	17.1

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

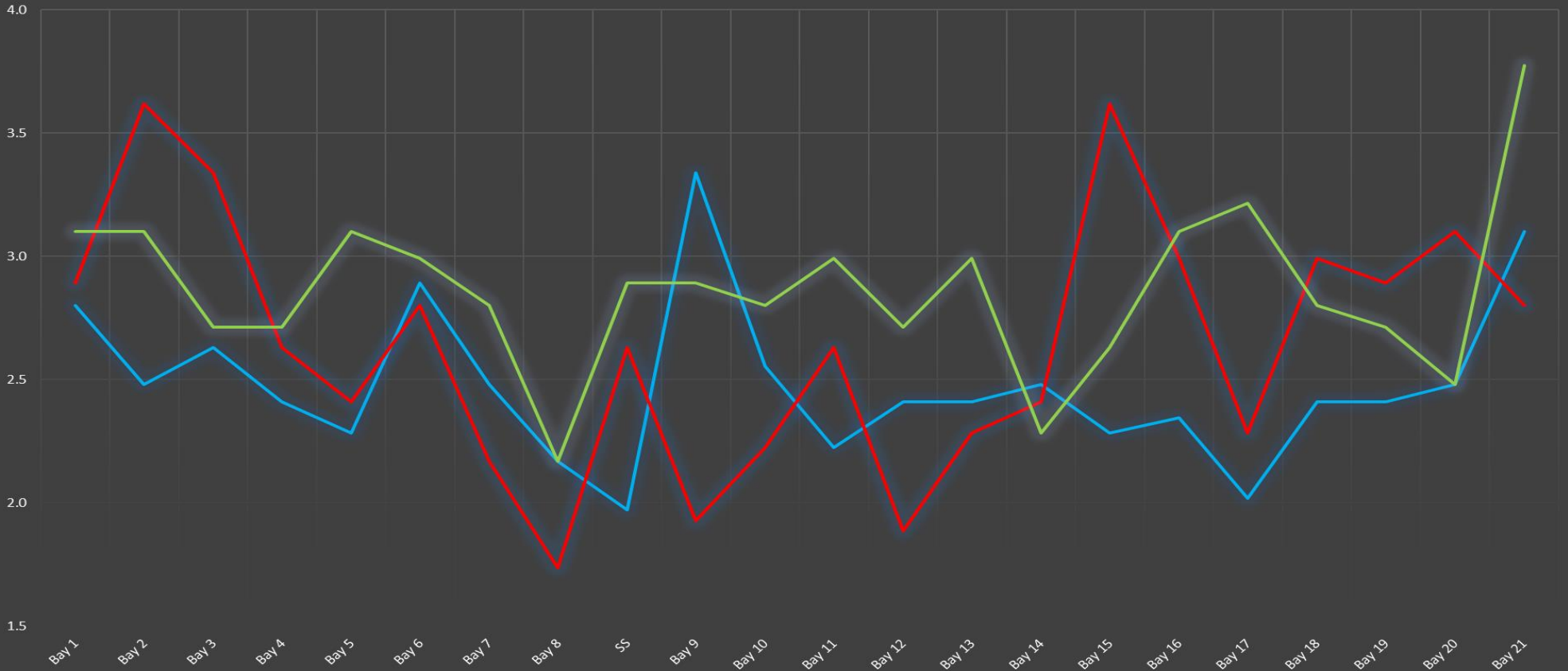
# The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

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

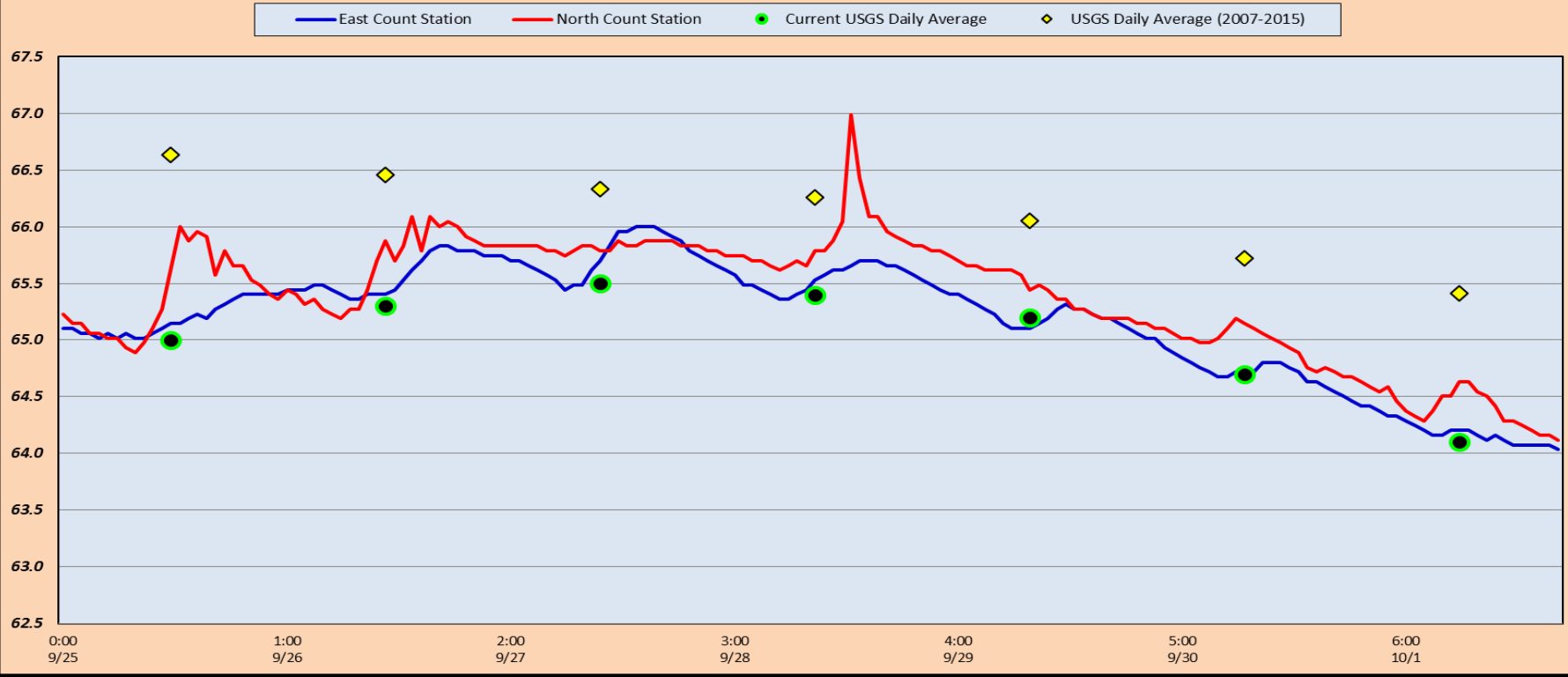


# The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)

Date 9/15 Date 9/24 Date 9/25



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





		<b>USGS:</b> (Sept) <a href="http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201609.tcol.html">http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201609.tcol.html</a>	
		(Oct) <a href="http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201610.tcol.html">http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201610.tcol.html</a>	
	Secchi:		Temperatures
9/25	5.0	Sun	65.0
9/26	5.0	Mon	65.3
9/27	5.0	Tue	65.5
9/28	5.0	Wed	65.4
9/29	5.0	Thurs	65.2
9/30	5.0	Fri	64.7
10/1	5.0	Sat	64.1
	5.0	AVG	65.0

**The Dalles Dam Daily Readings and Averages for  
Temperatures, Secchi, Entrances, and Spill**

= Out of criteria

North Ladder				East Ladder											S P I L L  O F F
North Entrance		East Entrance					West Entrance				South Entrance				
Date:	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
9/25			1.3	7.4	12.9	12.9	10.5	1.4	9.4	9.4		1.3	8.2	8.2	
	1.5	9.1	1.4	7.6	13.1	13.1	10.9	1.5	9.7	9.7		1.2	8.3	8.3	
	1.5	9.2	1.4	7.5	13.1	13.0	11.8	1.5	9.5	9.5		1.5	8.2	8.2	
9/26			1.3	7.5	13.1	13.1	10.7	1.5	9.4	9.4		1.3	8.3	8.3	
	1.5	9.1	1.3	7.5	13.1	13.0	10.3	1.5	9.4	9.4		1.3	8.3	8.3	
	1.4	9.4	1.5	7.6	13.1	13.0	12.6	1.6	9.4	9.4		1.3	8.3	8.3	
9/27			1.6	7.6	13.1	13.0	11.2	1.6	9.7	9.7		1.2	8.5	8.5	
	1.4	9.2	1.3	7.6	13.1	13.1	11.5	1.5	9.6	9.6		1.3	8.4	8.4	
	1.4	9.1	1.4	7.6	13.1	13.1	12.1	1.8	9.3	9.4		1.5	8.4	8.4	
9/28			1.5	7.5	13.0	13.0	11.5	1.7	9.5	9.5		1.5	8.3	8.3	
	1.4	9.2	1.3	7.6	13.0	13.1	11.3	1.7	9.5	9.5		1.5	8.3	8.2	
	1.5	9.2	1.5	7.6	13.0	13.1	11.3	1.6	9.5	9.5		1.5	8.3	8.2	
9/29			1.3	7.5	13.0	13.1	10.8	1.5	9.4	9.4		1.5	8.3	8.3	
	1.4	9.3	1.5	6.0	13.0	13.0	10.8	1.5	9.6	9.6		1.4	8.3	8.3	
	1.5	9.2	1.5	7.0	13.0	13.0	11.9	1.6	9.8	9.7		1.3	8.4	8.5	
9/30			1.5	7.0	13.1	13.1	11.3	1.5	9.8	9.8		1.3	8.4	8.4	
	1.5	9.2	1.5	6.5	13.0	13.0	11.8	1.6	9.8	9.8		1.4	8.2	8.2	
	1.5	9.1	1.5	6.3	12.9	12.9	11.6	1.4	10.2	10.2		1.4	8.3	8.3	
10/1			1.5	5.9	13.0	13.0	11.4	1.5	9.9	9.9		1.4	8.4	8.4	
	1.4	9.3	1.6	5.9	13.0	13.0	11.2	1.4	10.0	10.0		1.4	8.3	8.3	
	1.4	9.1	1.4	6.0	13.1	13.1	11.1	1.4	10.1	10.1		1.3	8.3	8.3	
<b>AVG:</b>	<b>1.5</b>	<b>9.2</b>	<b>1.4</b>	<b>7.1</b>	<b>13.0</b>	<b>13.0</b>	<b>11.4</b>	<b>1.5</b>	<b>9.7</b>	<b>9.7</b>		<b>1.4</b>	<b>8.3</b>	<b>8.3</b>	

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