

# The Dalles Dam Fishway Status Report

9/24/2016

Inspection Period: 09/18/2016-09/24/2016

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
P.O. Box 564  
The Dalles, OR 97058-9998  
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*Fishways are inspected twice daily plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 66.1 °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'	1.4			
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')	11.0			
East entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir E1	0	No criteria	6.7			
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')	8.9			
Entrance weir W2	0	depth (≥ 8')	8.9			
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	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

**Birds/Sea lions:**

No sea lions observed. Primarily common mergansers on site. Juvenile salmonid outmigration over  
Bird observation data collected once daily. Refer to Avian Zone map and bird count.  
Two of 13 spillway avian lines broke closest to bridge. Material on order. Replacement to occur this fall.

**Operations:A56:M96A56:M100A5A56:M89**

No equipment calibration check completed this week.  
Gateway drawdown completed 8/20.

**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 continues.  
New fiber being installed at south entrance for communication improvement. No power/automation interruption expected.  
*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.

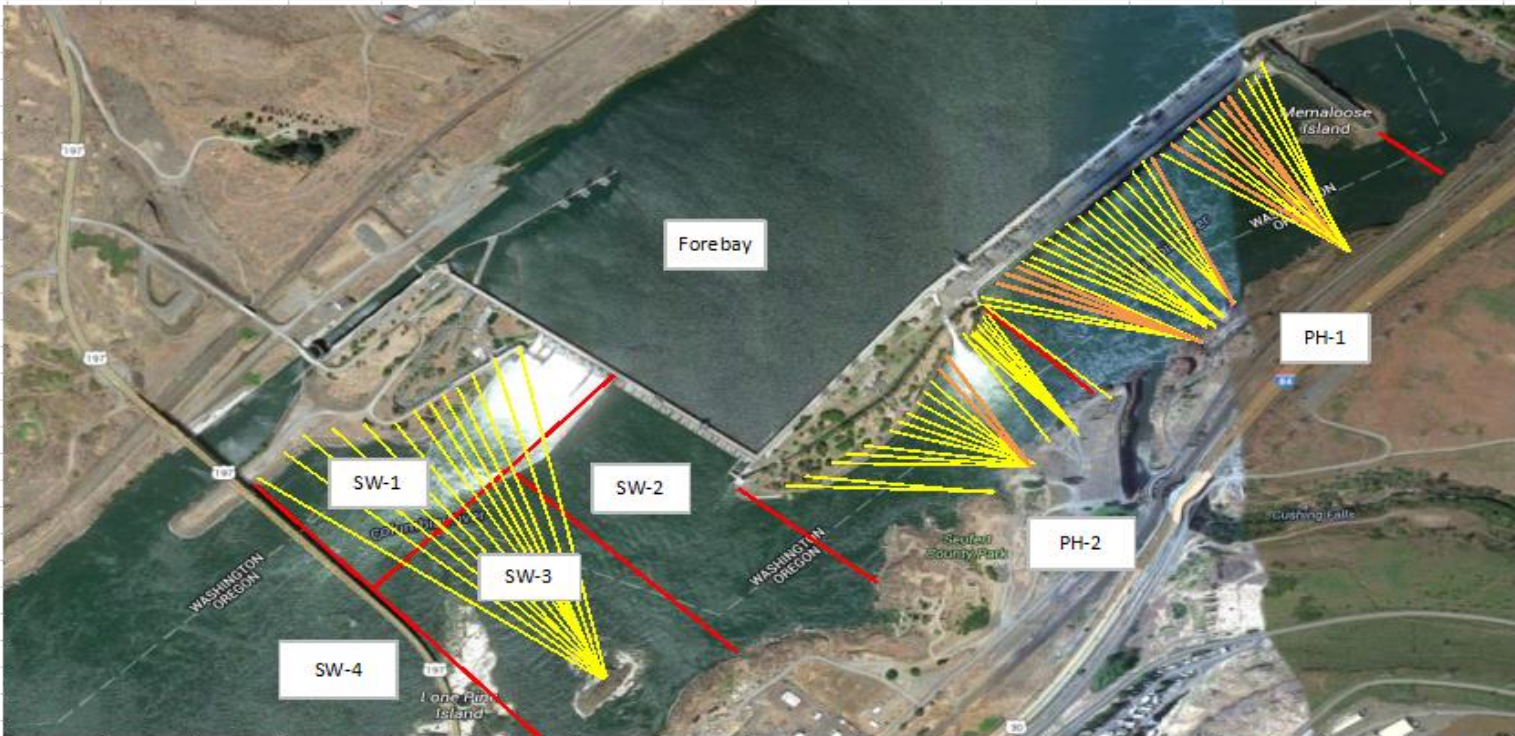
**Studies/Construction:**

Environmental acceptable grease testing - Unit 1 returned to service with open sluiceways.  
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:**

Northern Pikeminnow Management done for season. Cumulative total 3,064 through Sept 4.  
Normandeau fish counters continue through Oct 30. No issues.  
Tribal lamprey trapping done for season. Quota not met at The Dalles.

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

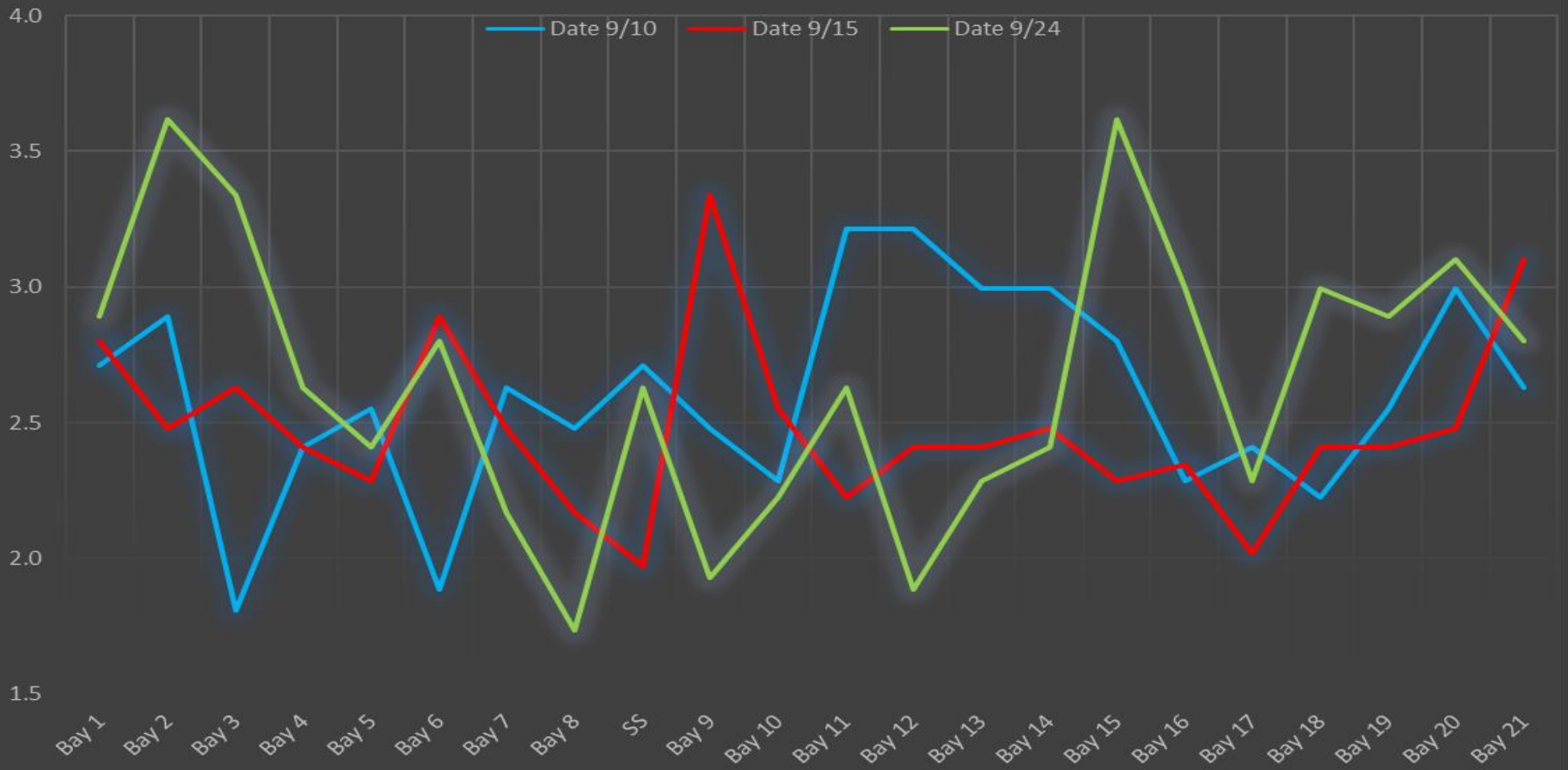
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
9/18	9212	7984	1228	3069	2462	607	560	522	38	0	0	0	8
9/19	9768	8620	1148	3017	2436	581	771	737	34	0	0	0	7
9/20	6292	5206	1086	2332	1872	460	498	463	35	0	0	0	12
9/21	4852	3851	1001	2189	1762	427	257	227	30	1	0	0	5
9/22	4196	3302	894	2461	1993	468	244	220	24	0	0	0	12
9/23	4696	3900	796	2777	2135	642	490	454	36	0	0	0	19
9/24	3797	3277	520	3689	2849	840	447	422	25	0	0	0	4
<b>Total</b>	<b>42813</b>	<b>36140</b>	<b>6673</b>	<b>19534</b>	<b>15509</b>	<b>4025</b>	<b>3267</b>	<b>3045</b>	<b>222</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>67</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
9/18	110	97	13	283	234	49	24	23	1	0	0	0	5
9/19	341	245	96	621	511	110	21	20	1	0	0	0	4
9/20	88	56	32	73	66	7	14	12	2	0	0	0	0
9/21	46	32	14	97	71	26	0	0	0	0	0	0	1
9/22	141	104	37	102	84	18	11	7	4	0	0	0	6
9/23	558	486	72	710	558	152	87	80	7	1	0	0	0
9/24	278	236	42	235	179	56	34	29	5	0	0	0	1
<b>Total</b>	<b>1562</b>	<b>1256</b>	<b>306</b>	<b>2121</b>	<b>1703</b>	<b>418</b>	<b>191</b>	<b>171</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>17</b>
% North	3.5	3.4	4.4	9.8	9.9	9.4	5.5	5.3	8.3	50.0	0.0	0.0	20.2

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

### 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

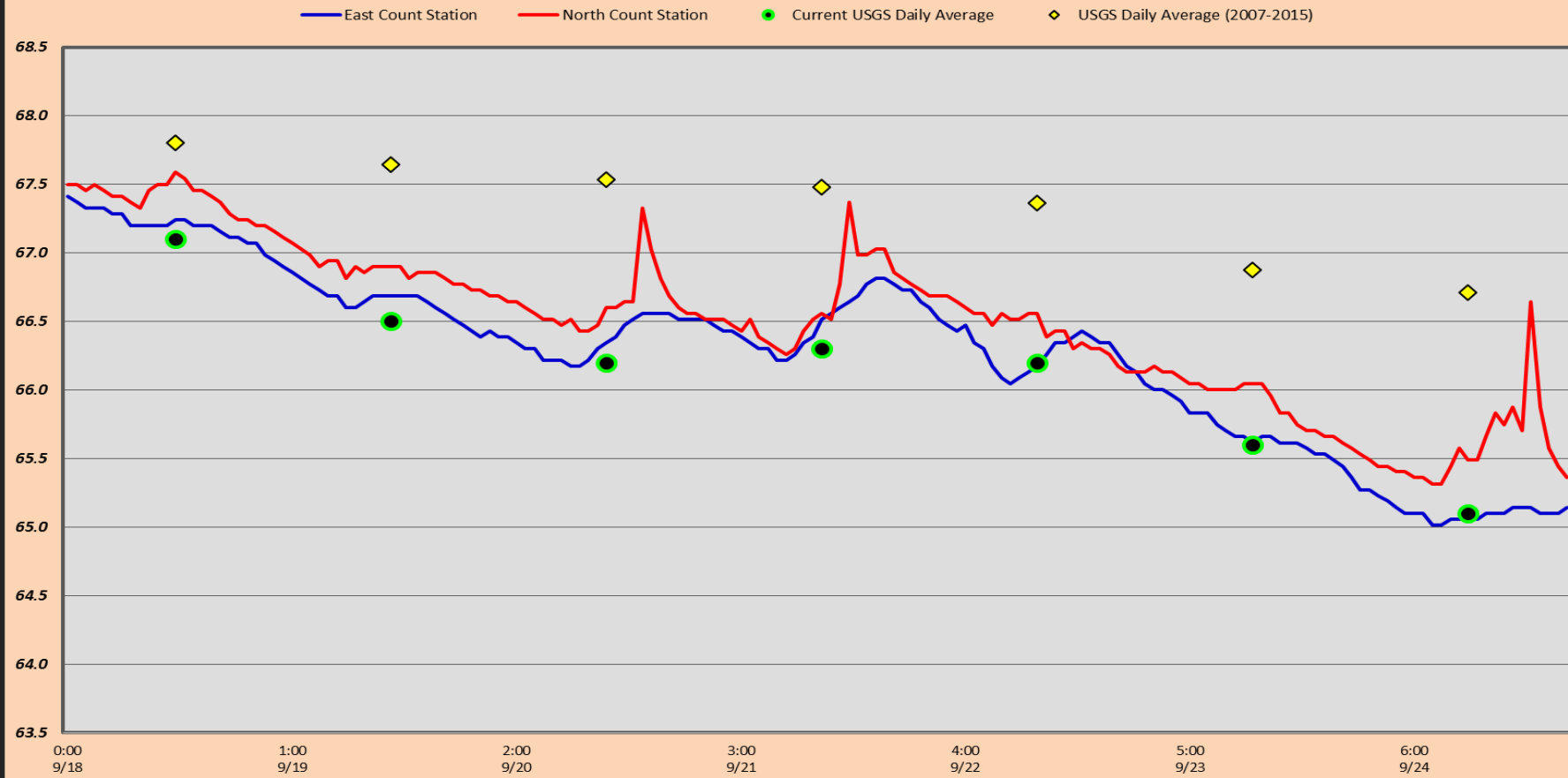
— The Dalles Transportation Channel

— The Dalles North Entrance

— The Dalles South Rock Channel



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





USGS: (Sept) [http://www.rwd-wc.usace.army.mil/tmi/documents/ops/temp/201609\\_tcol.html](http://www.rwd-wc.usace.army.mil/tmi/documents/ops/temp/201609_tcol.html)

	Secchi:		Temperatures
9/18	5.0	Sun	67.1
9/19	5.0	Mon	66.5
9/20	5.0	Tue	66.2
9/21	5.0	Wed	66.3
9/22	5.0	Thurs	66.2
9/23	5.0	Fri	65.6
9/24	5.0	Sat	65.1
	5.0	AVG	66.1

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

= Out of criteria

North Ladder				East Ladder										
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
9/18			1.5	7.0	13.0	13.0	11.3	1.5	8.2	8.2	C L O S E D	1.4	8.3	8.3
	1.4	9.5	1.4	7.0	13.0	13.0	11.1	1.4	8.3	8.3		1.4	8.3	8.3
	1.3	9.6	1.5	5.9	13.0	13.0	10.9	1.3	8.2	8.2		1.4	8.2	8.2
9/19			1.8	6.1	13.1	13.1	11.9	1.7	8.2	8.2		1.5	8.3	8.3
	1.4	9.0	1.5	5.0	13.0	13.0	10.6	1.4	8.4	8.4		1.4	8.3	8.3
	1.4	9.2	1.5	5.0	13.0	13.0	10.6	1.3	8.4	8.4		1.3	8.3	8.3
9/20			1.6	5.0	13.0	13.0	10.7	1.5	8.2	8.2		1.5	8.2	8.2
	1.6	9.1	1.6	5.1	13.0	13.0	11.0	1.4	8.3	8.3		1.3	8.3	8.3
	1.4	9.1	1.8	5.0	13.0	13.0	11.8	1.6	8.4	8.4		1.5	8.3	8.2
9/21			1.6	5.2	13.2	13.2	11.5	1.5	8.4	8.4		1.4	8.3	8.4
	1.5	9.2	1.4	8.0	13.0	13.0	11.8	1.4	8.3	8.3		1.4	8.3	8.3
	1.5	9.2	1.5	8.0	13.0	13.0	12.0	1.6	9.6	9.6		1.4	8.4	8.4
9/22			1.6	8.1	13.1	13.1	11.2	1.6	9.6	9.6		1.2	8.5	8.5
	1.5	9.3	1.5	7.5	13.1	13.1	11.6	1.6	9.5	9.5		1.3	8.3	8.3
	1.4	9.1	1.5	7.4	13.0	13.0	11.5	1.6	9.4	9.6		1.3	8.4	8.4
9/23			1.2	7.4	12.9	12.9	10.3	1.3	9.5	9.5	1.3	8.4	8.4	
	1.4	9.1	1.1	7.4	12.9	12.9	10.3	1.4	9.5	9.5	1.2	8.4	8.4	
	1.5	9.1	1.3	7.5	13.0	13.0	10.8	1.4	9.5	9.5	1.2	8.4	8.4	
9/24			1.1	7.6	13.0	13.0	10.4	1.4	9.6	9.6	1.3	8.3	8.3	
	1.4	9.2	1.1	7.5	13.1	13.1	10.3	1.3	9.5	9.5	1.4	8.2	8.2	
	1.4	9.2	1.1	7.6	13.0	13.0	10.4	1.4	9.4	9.4	1.3	8.3	8.3	
<b>AVG:</b>	<b>1.4</b>	<b>9.2</b>	<b>1.4</b>	<b>6.7</b>	<b>13.0</b>	<b>13.0</b>	<b>11.0</b>	<b>1.5</b>	<b>8.9</b>	<b>8.9</b>		<b>1.4</b>	<b>8.3</b>	<b>8.3</b>

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