

# The Dalles Dam Fishway Status Report

5/29/2016

Inspection Period: 05/22 - 05/28/2016

## 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: 58.9 °F	
			Comments		Secchi: 4.3 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	out at 0.9'		
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	0	Per forebay	Auto adjusts 1' increments.			
Weir 158-159 differential	2	1.0' ± 0.1'	158 manually adjusted. New sensor being purchased.			
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')	10.4			
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria	7.0			
Entrance weir E2	0	depth (≥ 8')	12.0			
Entrance weir E3	0	depth (≥ 8')	12.0			
Collection channel velocity	0	1.5 - 4 fps	2.6			
Transportation channel velocity	0	1.5 - 4 fps	2.4			
North channel velocity	0	1.5 - 4 fps	2.4			
South channel velocity	1	1.5 - 4 fps	4.8			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	9.5			
Entrance weir W2	0	depth (≥ 8')	9.5			
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	1.5			
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	<1.5', wkly	range: 0.2-0.9'			
Spill volume	0	Spill at 40%				
Spill Pattern	0					
Turbine Unit Priority	1	per FPP	MU 3, 15 & 16 forced out. Affects turbine block priority order.			
Turbine 1% Efficiency	0	per FPP				

**OTHER ISSUES:****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.  
Awaiting reply for request of Portland district to investigate feasibility of allowing limited lethal gull removal at project. FPOM supports lethal 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 delivery end of May. To be installed on gallery and connected as funding allows.  
Tailrace crane repair near west entrance delayed. No fish passage concerns.  
East exit 158 weir automation has intermittent failures. Manually adjusted as needed. New sensor on order.  
*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 evaluation, spillway crane rehab, spillgate 9 trunnion pin replace, sluiceway chaingate rehab (near complete)  
fish unit breaker replace (in planning), Fish unit rehab (in planning) and transformer replace (in planning).  
All spillway items on Critical Infrastructure list and Unfunded Requirement list.

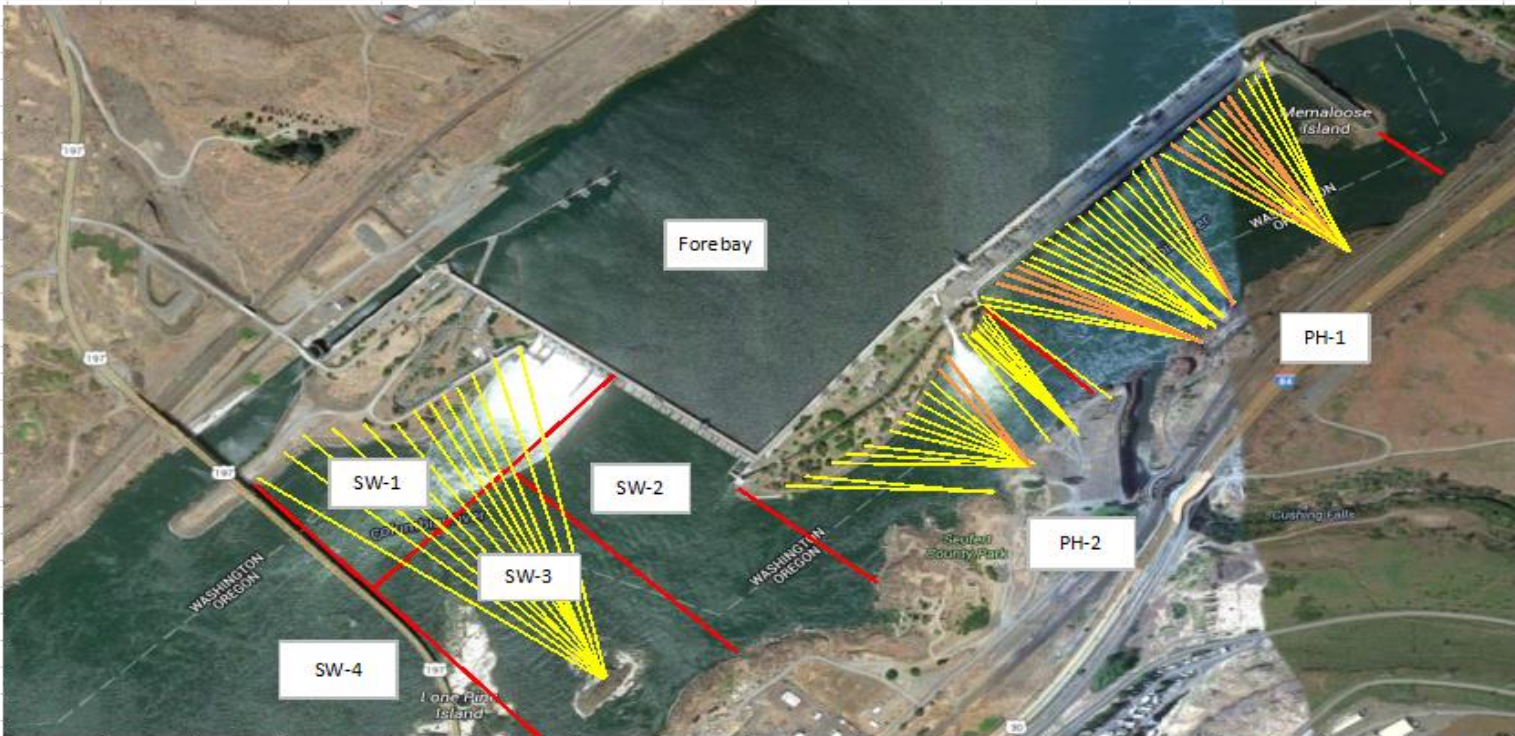
**Studies:**

North fishladder rehab construction 2017/18. FPOM review as needed.  
East fishladder emergency backup construction planning for work this winter. Mobilization to start this fall.  
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. Near complete.  
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 154 fish this week at The Dalles Dam powerhouse. Cumulative total 550.  
Normandeau fish counters season resumed Apr1. No issues.  
USDA avian hazer start delayed 2 weeks. Boat appears to successfully move gulls.

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
5/22	1545	1328	217	3	2	1	0	0	0	0	0	0	0
5/23	1132	989	143	6	4	2	0	0	0	0	0	0	0
5/24	1083	977	106	1	1	0	0	0	0	0	0	0	0
5/25	1075	911	164	2	1	1	0	0	0	2	0	0	1
5/26	819	716	103	1	0	1	0	0	0	1	0	0	1
5/27	838	696	142	1	1	0	0	0	0	2	0	0	0
5/28	1173	1010	163	1	1	0	0	0	0	12	0	0	0
<b>total</b>	<b>7665</b>	<b>6627</b>	<b>1038</b>	<b>15</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>2</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
5/22	406	372	34	0	0	0	0	0	0	0	0	0	0
5/23	298	292	6	0	0	0	0	0	0	0	0	0	0
5/24	298	290	8	0	0	0	0	0	0	0	0	0	2
5/25	269	262	7	0	0	0	0	0	0	0	0	0	1
5/26	291	257	34	1	1	0	0	0	0	0	0	0	4
5/27	271	251	20	0	0	0	0	0	0	0	0	0	1
5/28	450	425	25	0	0	0	0	0	0	5	0	0	0
<b>total</b>	<b>2283</b>	<b>2149</b>	<b>134</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>% North</b>	<b>22.9</b>	<b>24.5</b>	<b>11.4</b>	<b>6.3</b>	<b>9.1</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>	<b>0.0</b>

<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 Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)

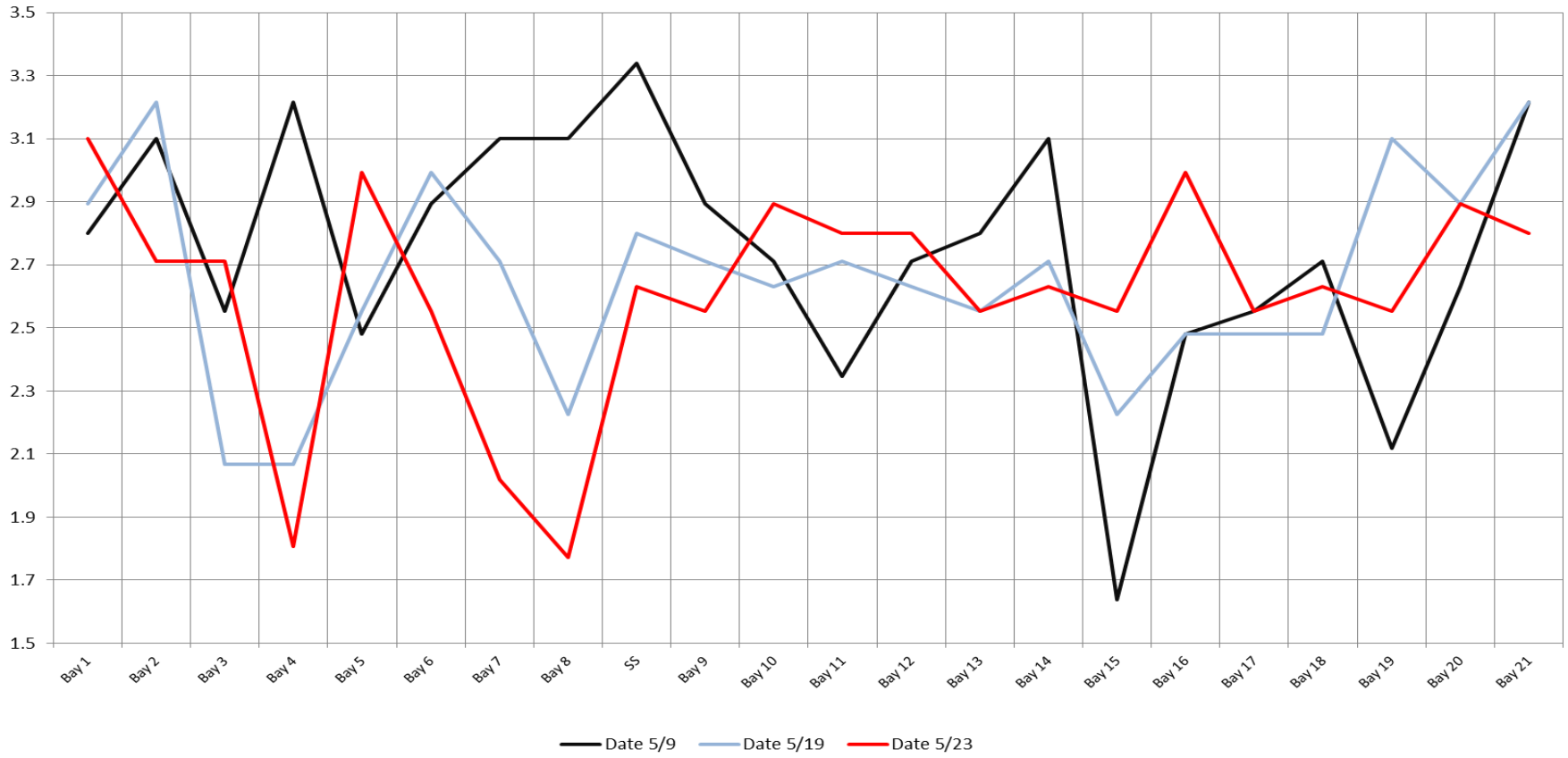
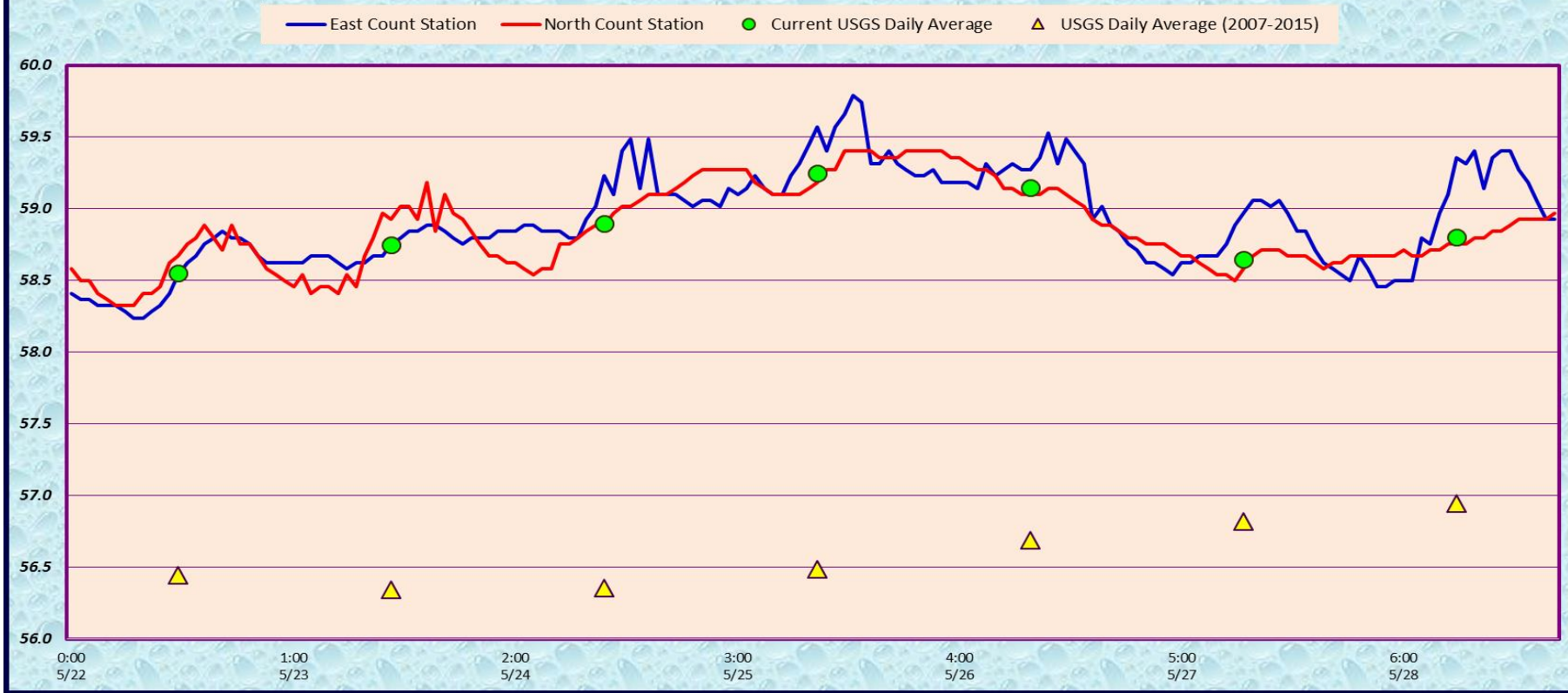


Chart Title





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

Secchi:		Temperatures
4.0	Sun	58.55
5.0	Mon	58.75
4.0	Tue	58.90
4.0	Wed	59.25
4.0	Thurs	59.15
4.5	Fri	58.65
4.5	Sat	58.80
4.3	AVG	58.86

**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			% Spill
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	
5/22			1.0	7.8	12.9	12.9	9.5	1.2	10.0	10.0		1.6	8.2	8.1	39.9
	1.4	9.7	1.4	9.0	10.6	10.6	9.5	1.6	9.0	9.0		1.6	8.3	8.3	
	1.5	9.6	1.6	8.9	10.6	10.6	8.9	1.5	9.0	9.0		1.6	8.3	8.3	
5/23			1.8	9.0	10.7	10.6	10.0	1.6	9.1	9.1		1.6	8.3	8.4	39.8
	1.5	9.6	1.7	9.1	10.6	10.7	10.1	1.6	9.1	9.1		1.6	8.4	8.3	
	1.5	9.6	1.5	9.1	11.3	11.3	10.4	1.4	9.9	10.0		1.5	8.4	8.3	
5/24			1.7	9.2	11.5	11.5	10.8	1.4	9.9	9.9		1.4	8.5	8.5	40.1
	1.5	9.7	1.5	9.1	12.0	12.0	11.3	1.4	10.0	10.0		1.5	8.3	8.3	
	1.5	9.7	1.6	9.0	11.9	11.9	11.4	1.5	9.9	9.9		1.6	8.2	8.3	
5/25			1.6	9.1	12.1	12.1	11.1	1.4	9.9	9.9		1.4	8.4	8.4	40.0
	1.5	9.6	1.4	9.1	13.1	13.1	11.9	1.5	9.6	9.6		1.4	8.3	8.3	
	1.4	9.6	1.5	4.0	13.0	13.0	11.1	1.6	8.5	8.4		1.4	8.2	8.3	
5/26			1.6	4.1	13.2	13.2	10.6	1.6	9.5	9.5		1.5	8.3	8.3	40.1
	1.4	9.8	1.5	4.9	12.9	12.9	10.5	1.5	9.5	9.5		1.6	8.2	8.2	
	1.6	9.7	1.6	4.4	12.5	12.5	9.7	1.6	9.2	9.1		1.5	8.4	8.3	
5/27			1.8	4.5	12.5	12.5	10.9	1.7	8.9	8.9	1.6	8.3	8.3	40.1	
	1.5	9.6	1.6	6.5	12.5	12.5	11.3	1.5	9.9	9.9	1.6	8.2	8.2		
	1.5	9.6	1.6	6.4	10.0	10.0	11.4	1.5	9.8	9.8	1.5	8.4	8.4		
5/28			1.2	6.5	12.9	12.9	9.6	1.4	9.9	9.9	1.6	8.1	8.1	39.9	
	1.5	9.6	1.5	4.5	12.4	12.4	9.7	1.6	9.2	9.2	1.6	8.2	8.2		
	1.5	9.7	1.5	3.5	12.5	12.5	9.4	1.5	9.2	9.2	1.6	8.2	8.2		
<b>AVG:</b>	<b>1.5</b>	<b>9.7</b>	<b>1.5</b>	<b>7.0</b>	<b>12.0</b>	<b>12.0</b>	<b>10.4</b>	<b>1.5</b>	<b>9.5</b>	<b>9.5</b>	<b>1.5</b>	<b>8.3</b>	<b>8.3</b>	<b>40.0</b>	

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