

The Dalles Dam Fishway Status Report

3/12/2016

Inspection Period: 03/06/2016-03/12/2016

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 once daily plus one SCADA inspection starting December 1

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7		Temperature: 43.9 °F	
			Comments		Secchi: 4.2 feet	
NORTH FISHWAY						
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')	9.6			
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'			PUD in bypass on 2/16/16. Entrance was still in criteria.	
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.			
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')	Average	12.1		
East entrance differential	0	1.0' - 2.0'	Average	1.6		
Entrance weir E1	0	No criteria	Average	7.9	No criteria for E1	
Entrance weir E2	0	depth (≥ 8')	Average	13.2		
Entrance weir E3	0	depth (≥ 8')	Average	13.2		
Collection channel velocity	0	1.5 - 4 fps	Average	3.3		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6		
North channel velocity	0	1.5 - 4 fps	Average	3.5		
South channel velocity	0	1.5 - 4 fps	Average	3.7		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	12.0		
Entrance weir W2	0	depth (≥ 8')	Average	12.0		
Entrance weir W3	0	No criteria	Average	Closed		
South entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir S1	1	depth (≥ 8')	Average	9.1	Differential recorded at 7.9 ft. has been adjusted.	
Entrance weir S2	0	depth (≥ 8')	Average	9.1		
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown		<1.5', wkly				
Spill volume	Spill RTS ~April 2016					
Spill Pattern						
Turbine Unit Priority	NA	per FPP	Out of fish passage season			
Turbine 1% Efficiency	NA	per FPP	Out of fish passage season			

OTHER ISSUES:**Birds/Sea lions:**

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

Sea lion observed once in front of powerhouse

Operations:

Calibration inspections completed. Minor discrepancies addressed by TDE

Current Outages:

T8 (MU15 & MU16) FOOS through 3/10/2016 due to high levels of methane production

MU3 FOOS through 4/1/2016 due to loss of governor sump oil level

MU11 FOOS through 2/22/2016 due to a thrust bearing cooler leak

F2 OOS 0600 12/1/2015 to 1700 2/29/2016 for O/H

EFL OOS 0600 1/3/2016 to 1700 2/29/2016 for annual maintenance

F1 OOS 0600 1/3/2016 to 1700 2/29/2016 for Annual

Spillway gates 1-6 OOS Daily from 0600 2/17/2016 to 1700 2/25/2016 to perform gate climbing inspections.

Maintenance:

Assembling last collection channel dewatering pump for installation. To be installed after in water work period.

New avian line pole constructed for west powerhouse grid. Awaiting line attachment parts. Install and line attachment to occur by first week April.

East exit weir electrical panel FCQ7 panel to arrive in March for initial installation. Final electrical connection awaiting funding.

New dewatering pump motor for north fishway entrance delivery this spring. Install before dewater season 2016/2017.

Tailrace crane repair near west entrance delayed beyond end of in water work period (~mid April). MOC form updated for FPOM review.

Long Term repair maintained plans; 154 -157 weir mods, collection channel diffusers decommission, repair failed diffusers - all on hold due to 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 study for rock wall ongoing. Construction 2017/18. FPOM review as needed.

East fishladder emergency backup construction delayed. Awaiting planning meetings.

Crane rail replacement on tailrace and intake 2016-17. To be completed within in water work period.

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

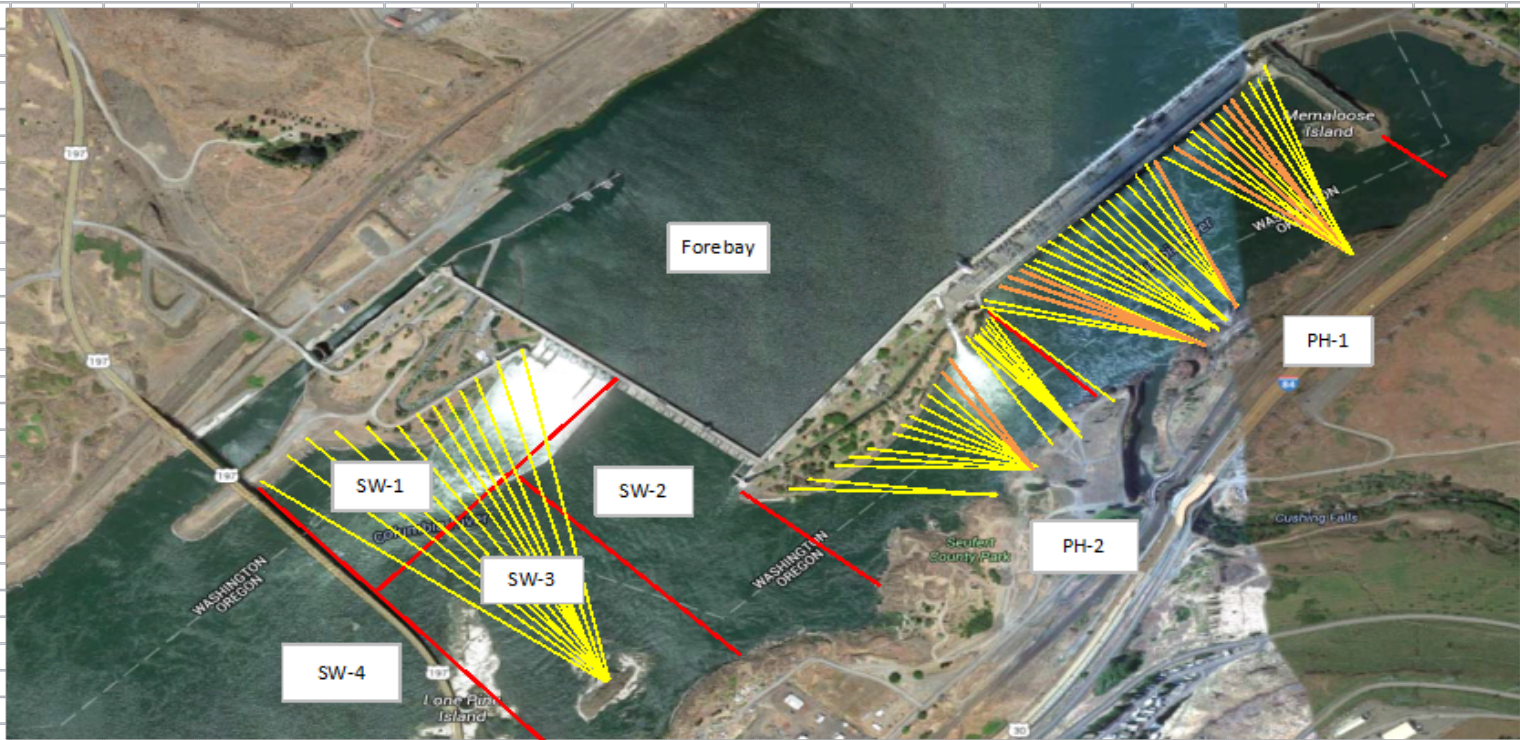
In process of updating N Wasco Co PUD Memo of Agreement.

Research/Contractors:

Normandeau fish counters season done 10/31. Resumes Apr1.

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

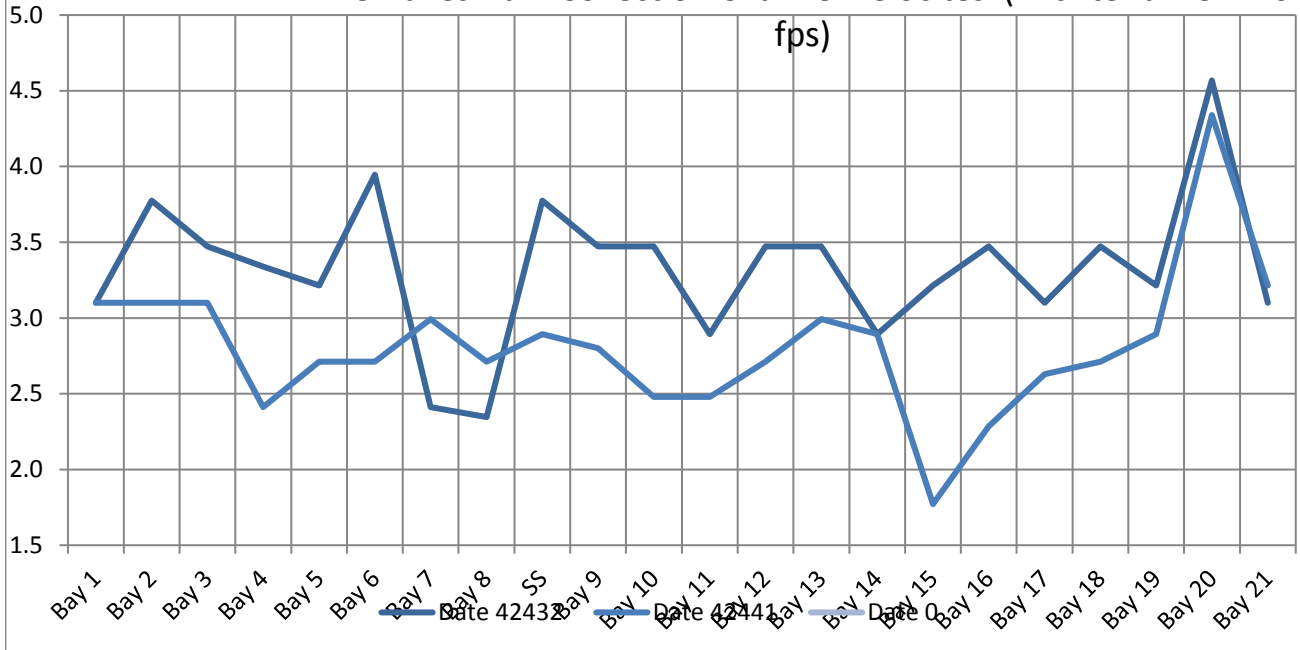
2016 Piscivorous Bird Counts

F=foraging, NF=non-foraging

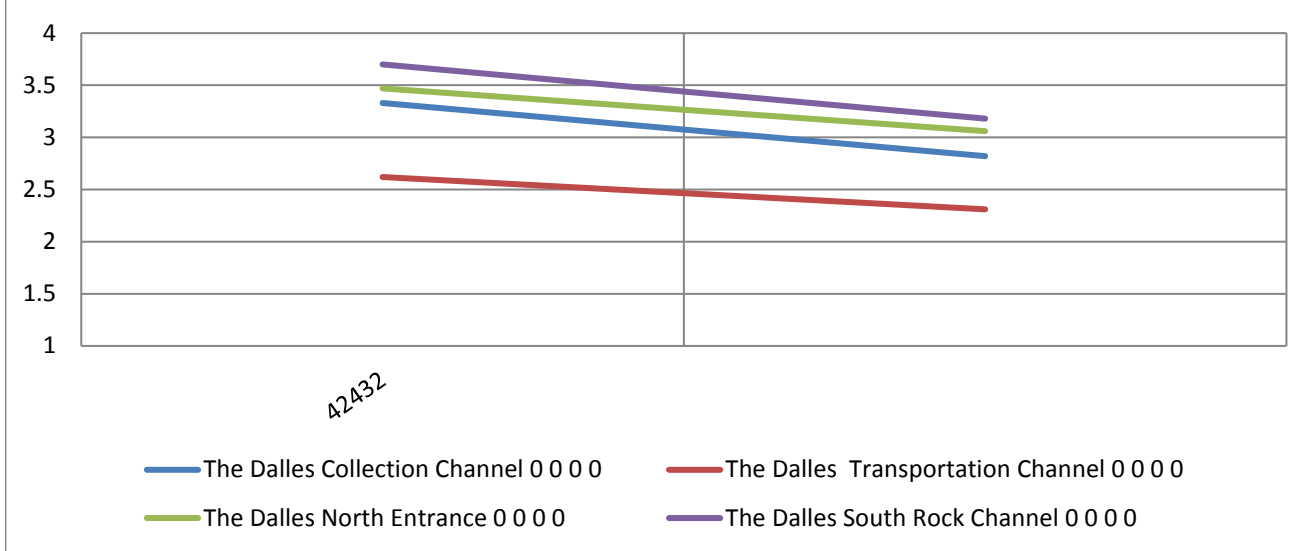
Date	observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in zone	Notes	
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF			
3/6/16	JWR	9:48	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:03	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		10:06	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:30	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:54	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:53	SW3	0	0	0	19	0	0	0	0	0	0	0	0	0	19	
		9:54	SW4	0	5	0	1	0	0	0	0	0	0	0	0	0	6	
3/7/16	EHK	14:10	FB	0	0	0	0	0	0	0	0	0	0	0	2	2	BAEA	
		13:29	PH1	0	1	0	0	0	0	0	0	0	0	0	0	1		
		13:41	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:14	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:50	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:51	SW3	0	0	0	13	0	0	0	0	0	0	0	0	13		
		13:52	SW4	0	17	0	0	0	0	0	0	0	0	0	0	17		
3/8/16	JWR	8:12	FB	1	1	0	0	0	0	0	1	0	0	0	0	3		
		7:46	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		7:48	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		8:11	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:48	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		7:54	SW3	0	1	0	19	0	0	0	0	0	0	0	0	20		
		7:55	SW4	0	0	0	0	0	0	0	0	0	0	0	0	0		
3/9/16	EHK	14:09	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:35	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:42	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:12	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:44	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:46	SW3	0	0	0	14	0	0	0	0	0	0	0	0	14		
		13:47	SW4	0	39	0	2	0	0	0	0	0	0	0	0	41		
3/10/16	JWR	11:17	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:22	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:26	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		11:16	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:28	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		10:24	SW3	0	0	1	7	0	0	0	0	0	0	0	0	8		
		10:30	SW4	0	8	0	0	0	0	0	0	0	0	0	0	8		
3/11/16	EHK	14:05	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:35	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:41	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:11	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		17:42	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:45	SW3	0	0	0	21	0	0	0	0	0	0	0	0	21		
		13:46	SW4	0	34	0	0	0	0	0	0	0	0	0	0	34		
3/12/16	GJF	9:15	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:45	PH1	0	2	0	4	0	0	0	0	0	0	0	0	6		
		9:55	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:30	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
		9:58	SW2	0	0	2	0	0	0	0	0	0	0	0	0	2		
		9:59	SW3	0	0	0	6	0	0	0	0	0	0	0	0	6		
		10:00	SW4	0	5	0	19	0	0	0	0	0	0	0	0	24		

Key: BAEA = Bald Eagle; GBH = Great Blue Heron; COME = Common Merganser

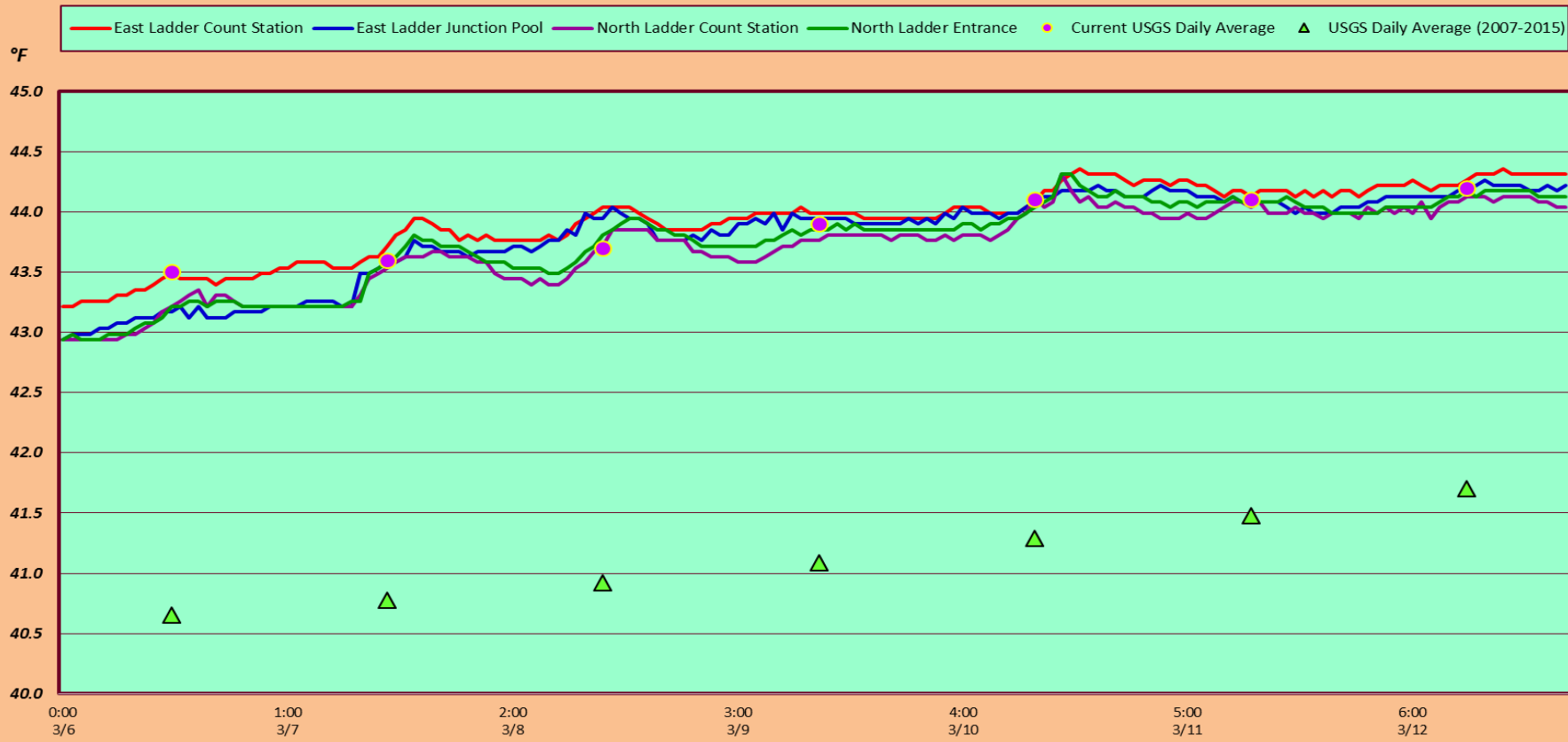
The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)



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



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



USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201603.lcol.html>

Secchi:		Temperatures
4.0	Sun	43.5
4.5	Mon	43.6
4.5	Tue	43.7
4.0	Wed	43.9
4.5	Thurs	44.1
4.0	Fri	44.1
4.0	Sat	44.2
4.2	AVG	43.9

**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			
3/6			1.7	3.2	12.7	12.7	11.1	1.6	12.1	12.1		1.4	9.7	9.7			
	1.4	9.6	1.6	4.5	12.7	12.7	11.2	1.5	12.3	12.3		1.5	9.3	9.3			
	1.3	9.6	1.5	4.0	12.9	12.9	11.4	1.5	12.0	12.0		1.5	9.2	9.2			
3/7			1.7	4.9	12.8	12.8	11.3	1.5	12.1	12.1		1.5	9.2	9.2			
	1.4	9.5	1.4	4.9	14.0	14.0	12.5	1.7	11.9	11.9		1.6	9.1	9.1			
	1.4	9.6	1.8	4.8	12.2	12.2	10.7	1.3	12.6	12.6		1.5	9.5	9.4			
3/8			1.6	6.3	12.6	13.1	9.5	1.2	11.2	11.2		1.3	9.5	9.5			
	1.3	9.6	1.4	6.2	13.0	13.0	11.7	1.8	11.0	11.0		1.7	8.8	8.8			
	1.4	9.7	1.5	5.6	13.0	13.0	14.4	1.5	13.0	13.0		1.5	9.5	9.5			
3/9			1.6	5.6	13.2	13.1	12.1	1.6	12.2	12.2		1.5	9.5	9.5			
	1.4	9.6	1.6	5.5	13.1	13.0	14.7	1.6	12.5	12.5		1.9	8.0	8.1			
	1.4	9.5	1.6	10.5	13.6	13.5	12.6	1.6	11.8	11.8		1.5	8.9	8.8			
3/10			1.6	11.4	13.5	13.5	12.4	1.6	11.7	11.7		1.5	8.8	8.8			
	1.4	9.6	1.4	10.6	13.5	13.5	11.6	1.4	11.7	11.6		1.5	8.8	8.8			
	1.4	9.5	1.6	9.6	13.4	13.5	11.1	1.4	11.7	11.8		1.7	8.1	8.1			
3/11			1.7	12.0	13.5	13.5	12.5	1.7	11.8	11.8		1.9	7.9	8.0			
	1.4	9.6	1.4	11.5	13.4	13.4	12.1	1.4	12.1	12.2		1.4	10.0	10.0			
	1.4	9.6	1.5	10.7	13.6	13.6	12.3	1.6	11.8	11.8		1.5	9.1	9.2			
3/12			1.5	11.4	13.5	13.6	12.0	1.4	11.9	11.9		1.5	9.2	9.2			
	1.3	9.6	1.5	11.4	13.5	13.4	13.0	1.4	11.8	12.0		1.5	9.2	9.2			
	1.5	9.4	1.4	11.4	13.5	13.4	13.0	1.5	11.8	11.8		1.6	9.1	9.1			
AVG:	1.4	9.6	1.6	7.9	13.2	13.2	12.1	1.5	12.0	12.0		1.5	9.1	9.1			

S P I L L O N S E A L

Fishways are inspected twice daily plus one SCADA inspection.