

The Dalles Dam Fishway Status Report

6/13/2015

Inspection Period: 06/07-13/2015

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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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: 65.5 F
			Comments		Secchi: 4.8 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'	Average	1.4	
Entrance weir N1	0	depth (≥ 8')	Average	9.5	
Entrance weir N2	0	Closed	Bulkhead installed.		
PUD Intake differential	0	≤ 0.5'			
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	1	1.0' ± 0.1'	currently at 1.3' for shad passage	OOO at 1.1'; raking several times a week	
Junction pool weir JP6	0	depth (≥ 7')	Average	9.0	
East entrance differential	0	1.0' - 2.0'	Average	1.4	
Entrance weir E1	0	No criteria	Average	No criteria; manually adjusted as needed.	
Entrance weir E2	0	depth (≥ 8')	Average	12.5	
Entrance weir E3	0	depth (≥ 8')	Average	12.5	
Collection channel velocity	0	1.5 - 4 fps	Average	2.6	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6	
North channel velocity	0	1.5 - 4 fps	Average	2.2	
South channel velocity	0	1.5 - 4 fps	Average	3.5	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	9.8	
Entrance weir W2	0	depth (≥ 8')	Average	9.8	
Entrance weir W3	0	No criteria	Average	No criteria; manually adjusted as needed.	
South entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir S1	0	depth (≥ 8')	Average	8.2	
Entrance weir S2	0	depth (≥ 8')	Average	8.2	
JUVENILE PASSAGE					
Sluiceway operation	1	Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open	18-3 was open on 6/9 - operations corrected	
Turbine trashrack drawdown	0	<1.5', wkly	Range:		
Spill volume	0	40%±1%	Average	40.0	
Spill Pattern	0				
Turbine Unit Priority.	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

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

Bird observation data collected once daily. Refer to Avian Zone Map. No sea lions observations this week.
Gull predation high upstream of bridge within avian lines. Working with USDA to potentially get boat access to island for more effective hazing.

Operations:

All fishways in operation per Fish Passage Plan requirements.
Spill for juvenile passage started Apr 10.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017
MU7 OOS 0750 5/4/2015 to 1700 6/25/2015 for O/H and Turbine Integrity Inspection

Maintenance:

Entrance weir wheel and guide work to resume next winter outage.
Three collection channel dewatering pumps on deck for rehab, repair delayed due to lack of funding. Two of 6 collection channel pumps remain stuck.
FCQ7 electrical panel for east exit upgrade funding in place. Planning and parts purchase underway for installation next outage season.
Future repair plans; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,
Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 trunnion pin replacement, HDC updated fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.
All spillway items on Critical Infrastructure list and Unfunded Requirement list. Spill gate 9 repair planning underway through small projects team.

Studies:

North fishladder rehab of rock wall study started. Construction dates to be determined.
March fish count video at north count station completed and recording started. To be used with new software application.
BCOES review site visit for east fishladder backup system Apr30. Construction start this winter.
Crane rail replacement on tailrace and intake decks winter of 2016-2017. Schedule planning underway. FPOM coordination completed.

Research/Contractors:

USDA gull hazer's on site 12 hours/day, primarily hazing from the navlock peninsula. Pigeon removal and sea lion hazing as needed.
Fish counters at east and north count stations 16 hr/day.
PSMFC PUD weekly sampling continues. No issues.
WDFW conducting hook and line removals of predatory northern pikeminnow from the BRZ adjacent to the project.
University of Idaho maintaining antennas for adult steelhead and Pacific lamprey outfitted with half-duplex PIT tags ongoing.
Coordination underway for tribal lamprey trapping at east count station.
PSMFC monitoring and maintaining thin walled PIT tag antennas and computer equipment.
USGS total dissolved gas monitoring continues.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam

Columbia River DART
2015 Adult Passage Daily Ladder Counts at The Dalles
with Spill Percent and Outflow
6/7/2015 - 6/13/2015

Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho		Coho Jack		Lamprey		Outflow (kcfs)		
	Left		Right		Left		Right		Left		Right		Left		Right		Left		Right		Left		Right		Left			Right	
	Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder		Ladder			Ladder	
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#		Pct	#
6/7/15	69	1295	31	571	80	163	21	42	77	17	23	5	83	5	17	1	69	400	31	178	0	0	0	0	0	0	0	0	65.2
6/8/15	61	1518	40	990	81	197	19	46	59	13	41	9		0		4	72	535	28	205	0	0	0	0	0	0	0	67	
6/9/15	66	2053	34	1063	85	260	15	46	69	18	31	8	60	6	40	4	75	739	25	242	0	0	0	0	0	0	0	74.9	
6/10/15	66	1342	35	708	66	126	34	66		-2		8		-18		1	61	661	39	416	0	0	0	0	0	0	0	48	
6/11/15	59	1277	41	899	81	230	19	55	68	21	32	10	71	5	29	2	55	1045	45	853	0	0	0	0	0	0	0	61.8	
6/12/15	67	1619	33	798	56	144	44	114	69	22	31	10	75	6	25	2	44	1460	57	1896	0	0	0	0	0	0	0	56.5	
6/13/15	55	1568	46	1308	66	186	34	95	26	6	74	17		-7		4	35	1312	65	2401	0	0	0	0	0	0	0	57.4	
YTD	Left Ladder		Right		Left		Right		Left		Right		Left		Right		Left		Right										
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	#	#	#	#	#	#	#	#	
Date	63	10672	37	6337	74	1306	26	464	59	95	41	67		-3		18	50	6152	50	6191	0	0	0	0	0	0	0		
	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye												

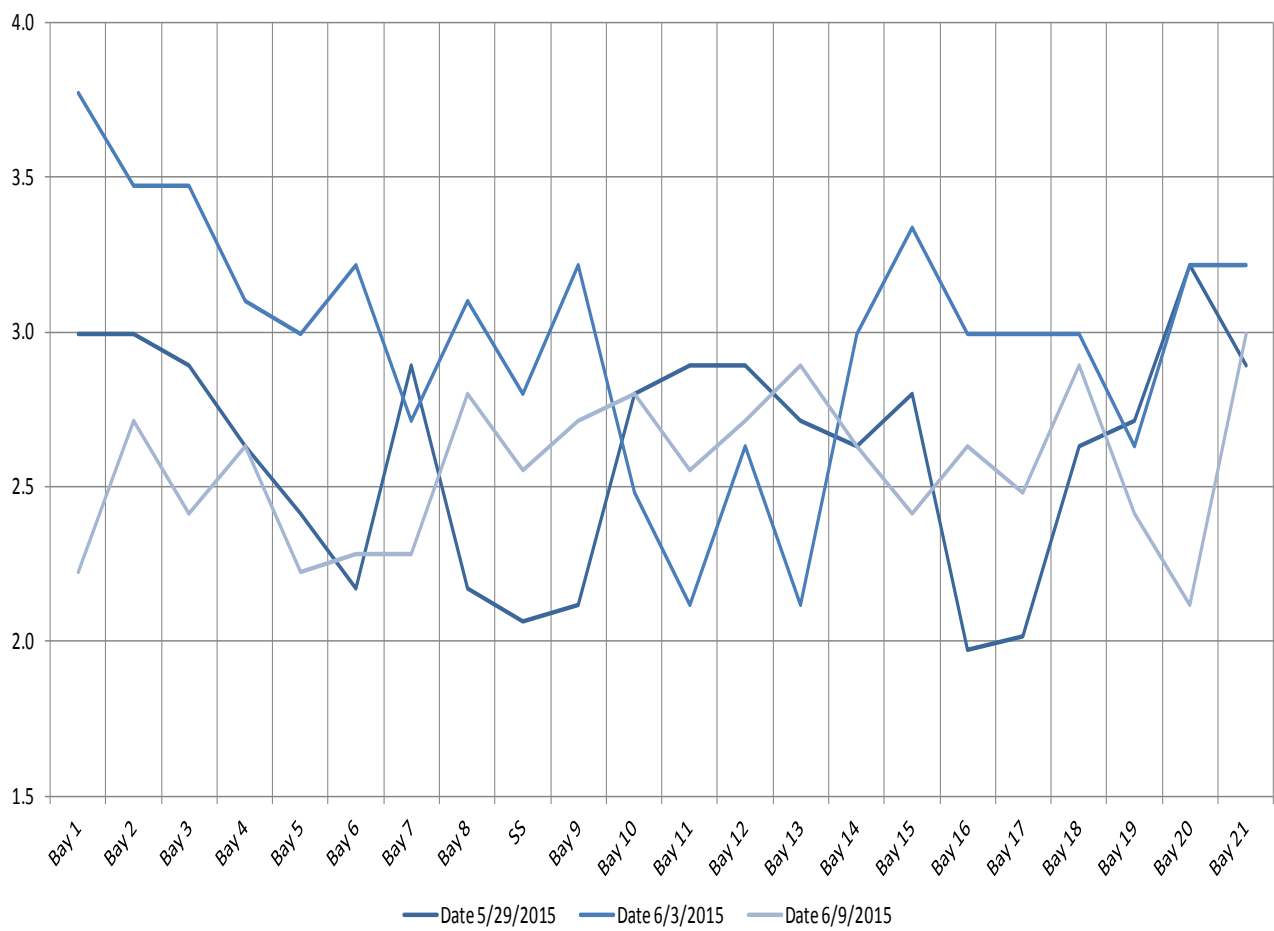
Notes:

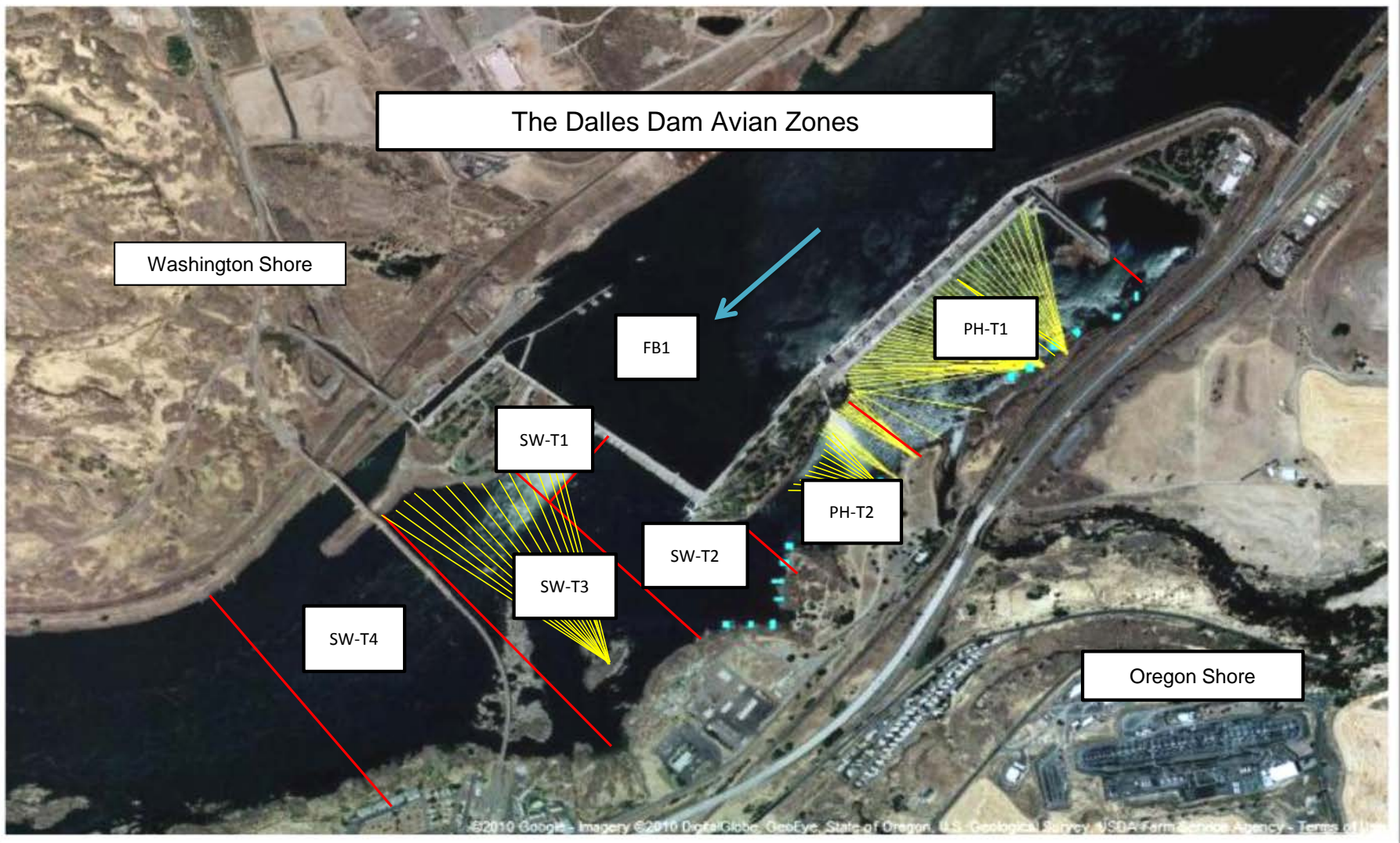
le Data Date included is 06/13/2015.

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s of Engineers makes no warranties concerning the accuracy, reliability, or suitability of this data for any particular purpose.

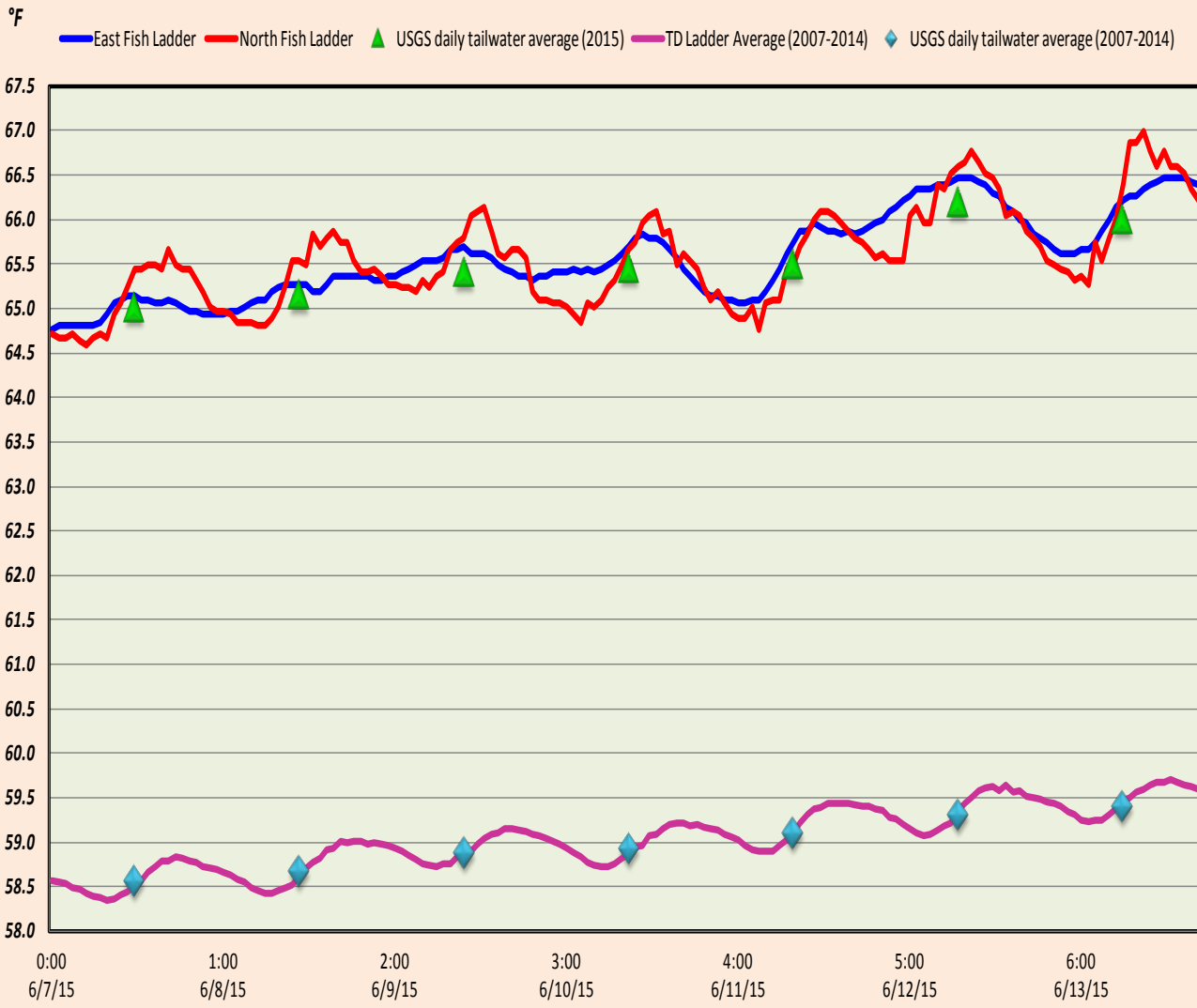
The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)





Avian lines in yellow, zones in red, river flow in blue.

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



USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201504.lcol.html>

Temperatures		Secchi:
65.0	Sun	5.0
65.2	Mon	5.0
65.4	Tue	4.5
65.5	Wed	4.0
65.5	Thurs	5.0
66.2	Fri	5.0
66.0	Sat	5.0
AVG: 65.5	AVG	4.8

**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		
6/7/15			1.4	6.6	12.2	12.2		1.5	9.6	9.6	closed	1.5	8.2	8.2	40.2	
	1.5	9.4	1.6	6.4	12.2	12.2	8.7	1.5	9.6	9.6		1.4	8.2	8.2		
	1.4	9.4	1.5	6.1	12.3	12.3	8.8	1.6	9.6	9.6		1.5	8.2	8.2		
6/8/15																40.2
	1.4	9.5	1.5	6.0	11.8	11.8	8.3	1.5	9.6	9.5		1.5	8.2	8.2		
	1.4	9.5	1.6	5.9	12.1	12.1	8.6	1.6	9.6	9.5		1.4	8.2	8.2		
6/9/15			1.4	6.0	12.9	12.9		1.6	9.6	9.6			1.4	8.3	8.3	40.0
	1.4	9.5	1.5	6.0	12.9	12.9	9.4	1.6	9.5	9.4		1.4	8.3	8.3		
	1.5	9.5	1.4	6.0	13.6	13.6	10.1	1.7	9.5	9.6		1.5	8.2	8.2		
6/10/15			1.5	6.0	11.9	12.0		1.6	9.4	9.4			1.5	8.2	8.2	40.0
	1.4	9.4	1.5	6.0	11.9	12.0	8.4	1.5	9.4	9.4		1.5	8.2	8.2		
	1.4	9.5	1.6	6.2	12.5	12.5	9.0	1.6	9.7	9.7		1.5	8.1	8.1		
6/11/15			1.4	7.0	12.2	12.3		1.5	10.0	10.0			1.5	8.2	8.2	40.0
	1.4	9.5	1.5	6.0	12.3	12.3	8.8	1.5	10.1	10.1		1.5	8.2	8.2		
	1.4	9.5	1.3	6.0	12.7	12.7	9.4	1.5	10.1	10.1		1.5	8.1	8.1		
6/12/15			1.3	6.0	12.7	12.7		1.4	10.0	10.0		1.5	8.3	8.3	40.0	
	1.3	9.5	1.3	6.0	12.7	12.7	9.2	1.4	10.0	10.0	1.5	8.1	8.1			
	1.4	9.4	1.3	6.0	12.7	12.7	9.2	1.4	10.0	10.0	1.5	8.2	8.2			
6/13/15			1.3	6.0	12.7	12.7		1.6	10.1	10.1		1.5	8.1	8.1	39.8	
	1.4	9.4	1.3	6.7	12.7	12.7	9.2	1.6	10.1	10.1	1.4	8.2	8.2			
	1.4	9.4	1.3	6.0	12.7	12.7	9.2	1.5	10.0	10.0	1.5	8.1	8.1			
AVG:	1.4	9.5	1.4	No criteria	12.5	12.5	9.0	1.5	9.8	9.8	closed	1.5	8.2	8.2	40.0	

Fishways are inspected twice daily plus one SCADA inspection.