

The Dalles Dam Fishway Status Report

8/1/2015

Inspection Period: 7/26/2015 - 8/1/2015

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: 71.4 F
			Comments		Secchi: 5.3 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	9.3	
Entrance weir N2	0	Closed	Bulkhead installed.		
PUD Intake differential	2	≤ 0.5'	TDS raked PUD intake.		
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	11.1	Weir pulled to achieve criteria with low tailwater
East entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir E1	0	No criteria	Average	No criteria; manually adjusted as needed.	
Entrance weir E2	0	depth (≥ 8')	Average	11.9	
Entrance weir E3	0	depth (≥ 8')	Average	11.9	
Collection channel velocity	0	1.5 - 4 fps	Average	2.8	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.5	
North channel velocity	0	1.5 - 4 fps	Average	2.6	
South channel velocity	0	1.5 - 4 fps	Average	3.4	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	9.9	
Entrance weir W2	0	depth (≥ 8')	Average	9.9	
Entrance weir W3	0	No criteria	Average	No criteria; manually adjusted as needed.	
South entrance differential	0	1.0' - 2.0'	Average	1.4	
Entrance weir S1	0	depth (≥ 8')	Average	8.4	
Entrance weir S2	0	depth (≥ 8')	Average	8.4	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open.		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.2'- 0.9'.		
Spill volume	0	40%±1%	Average	40.0	
Spill Pattern	0	per FPP			
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. USDA hazing ended July 30. Evaluating effectiveness of periodic boat hazing use for next season planning.

Operations:

Turbine trashrack drawdown completed 8/1. The difference between forebay and gatewells in criteria.

Current Outages:

Transformer T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017.

Maintenance:

Midseason ROV fishway grating inspection scheduled for 8/4. Will include look at E1 entrance weir guide repair for wear, which will help determine plan for next winter guide repairs.

Three failed collection channel dewatering pump being repaired with end-of-year additions OM funds.

FCQ7 electrical panel for east exit upgrade funding in place and awaiting contracting approval. Installation next outage season pending funding.

Preparing workload for upcoming winter maintenance period; entrance weir wheel replace, entrance weir guide repair, exit sensor upgrades.

Long Term repair plans; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,

Fish related /non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 trunnion pin replace, sluiceway chaingate rehab (approx 50% complete), fish unit breaker replace (in planning), and transformer replace (in planning).

All spillway items on Critical Infrastructure list and Unfunded Requirement list. Spill gate 9 repair planning by small projects team stopped.

Studies:

North fishladder rehab study for rock wall 60% DDR review. Construction dates to be determined. Alternatives to be reviewed by FPOM.

Fish count video at north count station recording / testing underway.

East fishladder backup system construction start this winter. No plan changes.

Crane rail replacement on tailrace and intake decks winter of 2016-2017. No plan changes.

Transformer replacement planning underway. Plans include elimination of TA transformers with fish unit tie through T1 with another tie for backup.

Research/Contractors:

Columbia River Northern Pikeminnow Management Program dam angling 7/26; NPM \geq 230mm 192, YTD NPM \geq 230mm 3,911.

ODFW collecting biological data from harvested pikeminnow.

Normandeau fish counters at east and north count stations 16 hr/day through 10/31.

PSMFC Wasco County PUD weekly sampling; this was the last sample of the season. No salmonids were sampled.

Tribal lamprey trappers continue collecting lamprey daily from east count station.

Yakama Nation lamprey collections; 354 collected so far, 96 adults left for The Dalles to meet their 2015 allocation of 450.

Confederated Tribe of the Umatilla Indian Reservation lamprey collections; 314 collected so far, need 136 more to reach their goal of 450.

USGS total dissolved gas monitoring continues.

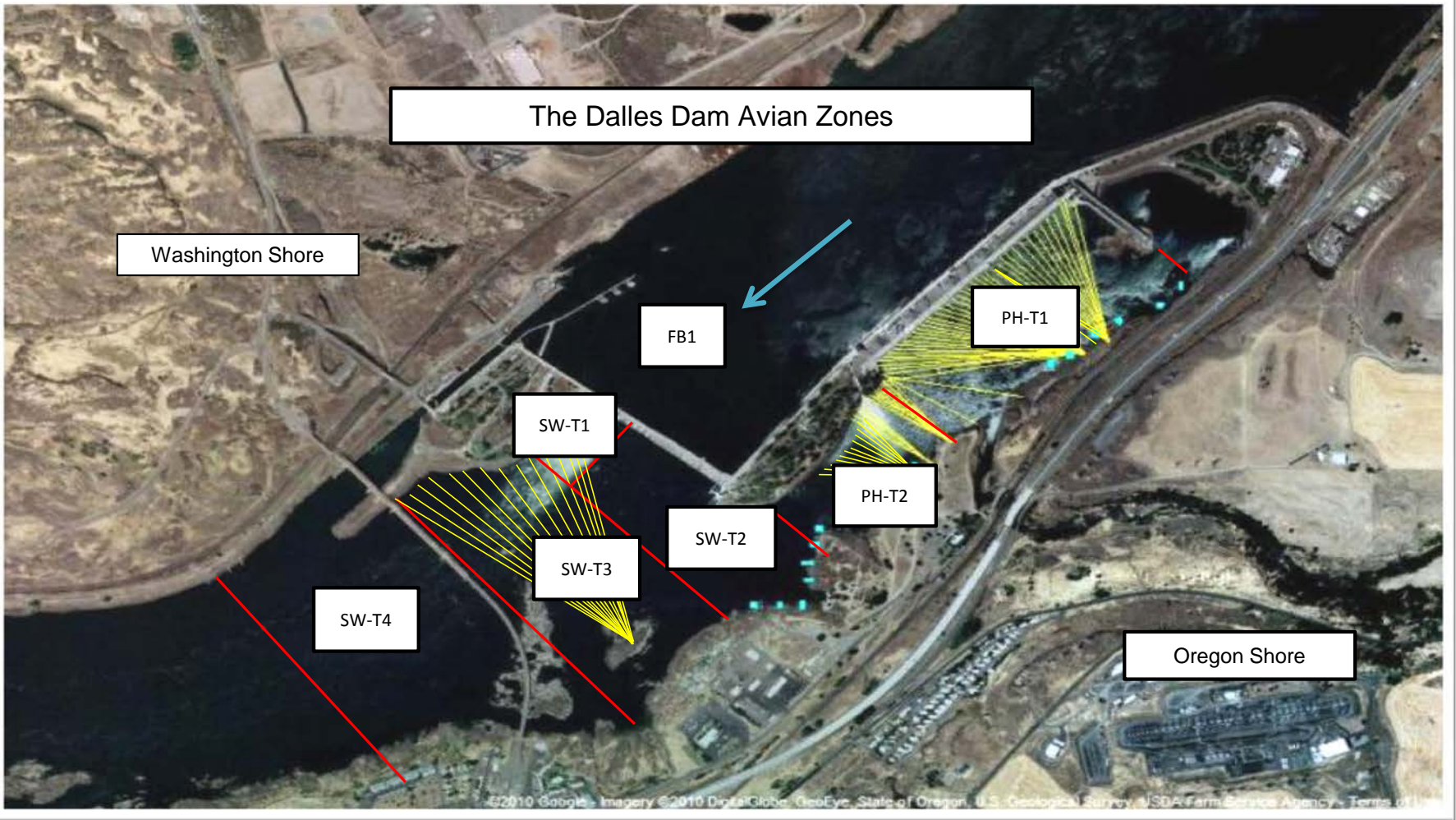
Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

Columbia River DART

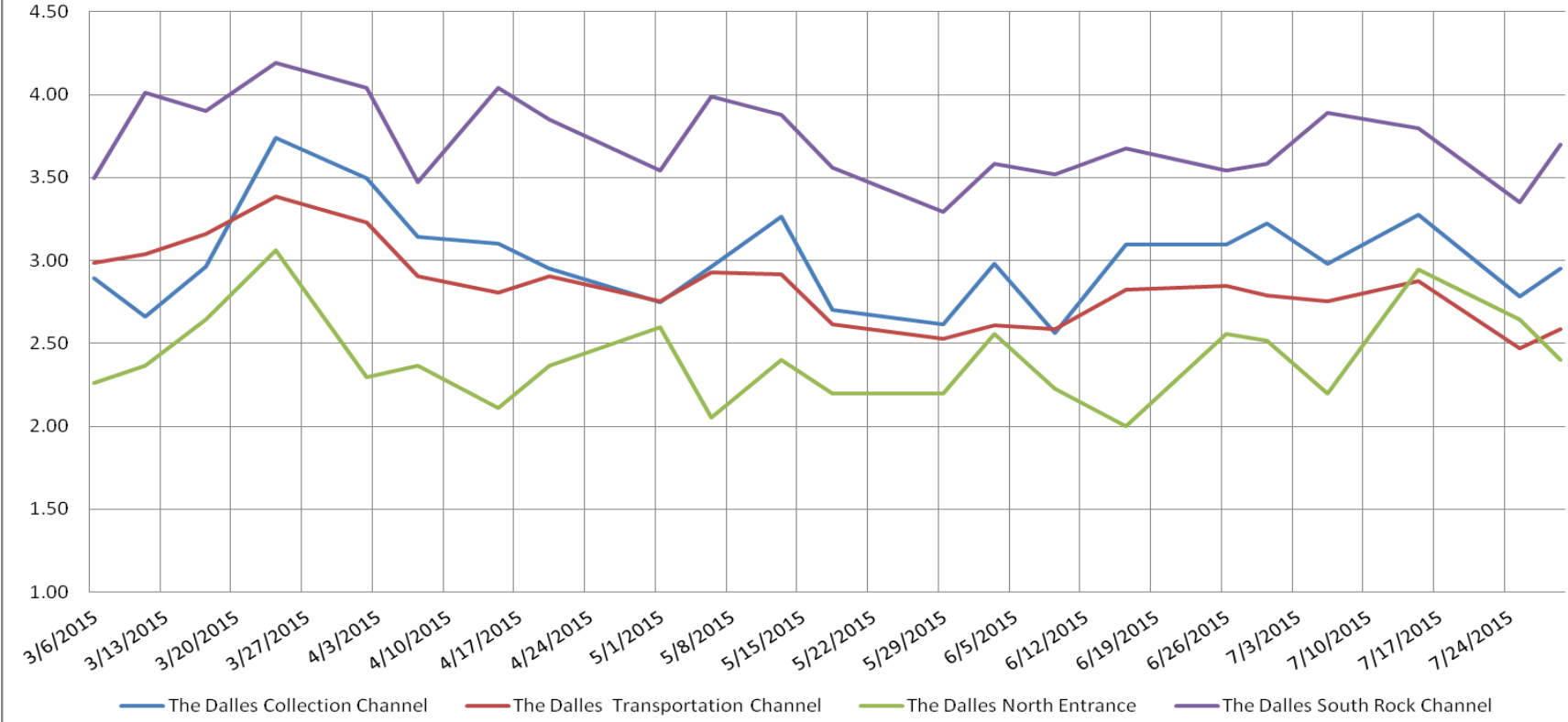
2015 Adult Passage Daily Ladder Counts at The Dalles with Spill Percent 7/26/2015 - 8/1/2015

Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Shad				Lamprey				Bull Trout				Outflow (kcs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder										
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	
26-Jul-15	79	1015	21	265	67	53	33	26	70	773	30	328	69	496	31	222	55	526	45	434	0	0	0	0	0	0	0	0	0	0	50	19	50	19	0	0	0	0	44		
27-Jul-15	83	1181	17	240	87	150	13	22	64	940	37	541	60	542	40	365	54	458	46	384	0	0	0	0	0	0	0	0	0	0	39	20	61	31	0	0	0	0	45		
28-Jul-15	86	838	14	133	89	108	12	14	70	1337	30	579	69	828	31	373	69	584	31	265	0	0	0	0	0	0	0	0	0	0	73	64	27	24	0	0	0	0	48		
29-Jul-15	84	595	16	110	83	83	17	17	66	1005	34	508	65	545	35	298	55	280	45	226	0	0	0	0	0	0	0	0	0	0	33	17	67	35	0	0	0	0	49		
30-Jul-15	80	1052	20	266	87	131	13	20	69	1346	31	603	68	751	32	350	69	340	31	154	0	0	0	0	0	0	0	0	0	0	44	34	56	44	0	0	0	0	57		
31-Jul-15	77	1068	23	318	83	130	17	26	59	1190	41	815	54	592	46	499	64	269	36	151	0	0	0	0	0	0	0	0	0	0	47	53	54	61	0	0	0	0	52		
1-Aug-15	86	1098	14	185	86	170	14	28	71	1506	29	619	71	820	29	342	77	209	23	64	0	0	0	0	0	0	0	0	0	0	69	50	32	23	0	0	0	0	53		
YTD	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder						
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	
	82	6847	18	1517	84	825	16	153	67	8097	33	3993	65	4574	35	2449	61	2666	39	1678	0	0	0	0	0	0	0	0	0	0	52	257	48	237	0	0	0	0			
Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Shad				Lamprey				Bull Trout				Outflow

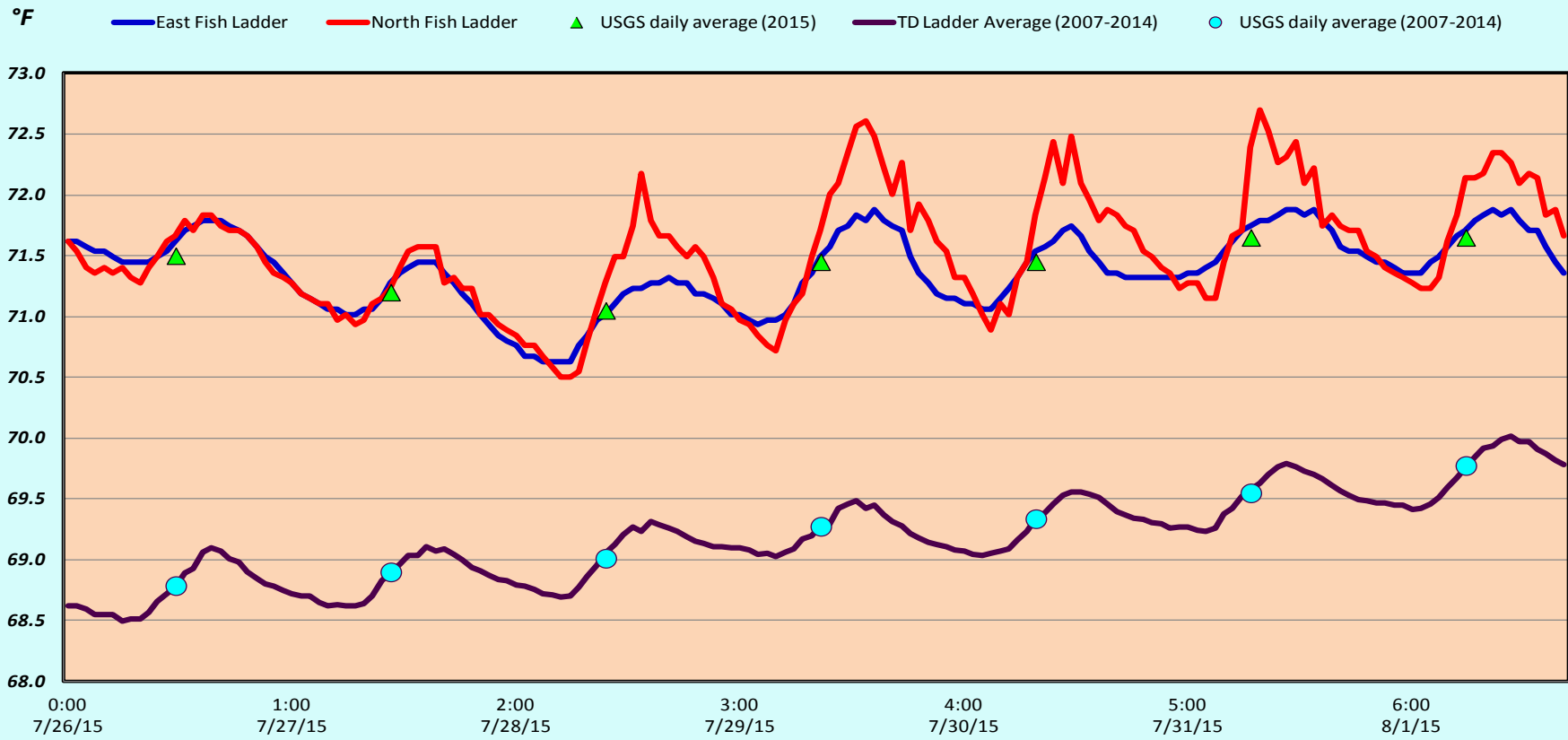


Avian lines in yellow, zones in red, river flow in blue.

The Dalles Dam Averages Velocities (In criteria 1.0 - 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/201507.lcol.html	
Temperatures		Secchi:
71.5	Sun	5.0
71.2	Mon	5.0
71.1	Tue	5.0
71.5	Wed	6.0
71.5	Thurs	6.0
71.7	Fri	5.0
71.7	Sat	5.0
AVG: 71.4	AVG	5.3

**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
7/26			1.5	8.5	11.5	11.5		1.5	9.8	9.8	closed	1.4	8.2	8.2	40.3
	1.4	9.4	1.5	8.5	11.7	11.7	10.7	1.6	9.7	9.7		1.5	8.2	8.2	
	1.4	9.5	1.4	8.5	11.7	11.7	10.7	1.6	9.7	9.7		1.5	8.2	8.2	
7/27			1.5	8.4	11.5	11.5		1.6	9.8	9.8		1.4	8.3	8.3	39.9
	1.4	8.4	1.5	8.4	11.6	11.6	12.6	1.6	9.8	9.8		1.5	8.1	8.1	
	1.4	9.4	1.5	8.0	12.0	12.0	11.0	1.6	9.7	9.7		1.5	8.2	8.2	
7/28			1.5	8.0	11.9	11.9		1.6	9.7	9.7		1.5	8.1	8.2	39.8
	1.4	9.4	1.5	8.0	12.0	12.0	11.0	1.6	9.7	9.7		1.5	8.3	8.2	
	1.4	9.4	1.4	8.0	12.0	12.0	11.0	1.5	9.7	9.7		1.5	8.1	8.1	
7/29			1.5	8.0	11.7	11.7		1.6	9.5	9.5		1.6	8.1	8.1	39.8
	1.5	9.3	1.5	8.0	11.7	11.7	10.7	1.6	9.6	9.6		1.5	8.1	8.1	
	1.4	9.4	1.5	8.0	11.7	11.7	10.9	1.6	9.6	9.6		1.4	9.3	9.5	
7/30			1.4	8.0	12.4	12.4		1.6	9.7	9.7		1.2	8.9	9.6	40.2
	1.4	9.3	1.4	8.0	12.4	12.4	11.4	1.7	9.6	9.8		1.3	8.9	8.3	
	1.5	9.4	1.4	8.1	12.8	12.7	11.8	1.5	10.4	10.4					
7/31			1.5	8.1	11.7	11.7		1.4	10.3	10.3	1.4	8.2	8.6	40.0	
	1.4	9.3	1.6	7.9	11.8	11.8	10.8	1.4	10.4	10.4	1.4	8.4	8.4		
	1.4	9.4	1.5	7.9	11.6	11.6	10.6	1.4	10.1	10.1	1.5	8.1	8.5		
8/1			1.4	8.0	12.2	12.2		1.5	10.4	10.4	1.4	8.5	8.5	40.1	
	1.4	9.3	1.4	8.1	12.3	12.3	11.3	1.4	10.3	10.3	1.4	8.6	8.6		
	1.5	9.3	1.6	8.2	12.5	12.5	11.5	1.5	10.5	10.5	1.2	8.6	8.6		
AVG:	1.4	9.3	1.5	No criteria	11.9	11.9	11.1	1.5	9.9	9.9	closed	1.4	8.4	8.4	40.0

Fishways are inspected twice daily plus one SCADA inspection.