

The Dalles Dam Fishway Status Report

6/20/2015

Inspection Period: 06/14-20/2015

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 twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 67.3 F
			Comments		Secchi: 5.0 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	9.4	
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	0	1.0' ± 0.1'	currently at 1.3' for shad passage		
Junction pool weir JP6	0	depth (≥ 7')	Average	8.5	
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	12.0	
Collection channel velocity	0	1.5 - 4 fps	Average	3.1	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.8	
North channel velocity	0	1.5 - 4 fps	Average	2.0	
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	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	8.3	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open	18-2 was switched to 19-2 from 6/16-18	
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.2-0.6'		
Spill volume	0	40%±1%	Average	40.0	
Spill Pattern	0		Interpolating with RCC		
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. USDA used boat hazing on Wednesday, Thursday and Friday for more effective hazing.
Pelicans are feeding now in SW3 and 4

Operations:

All fishways in operation per Fish Passage Plan requirements.
Spill for juvenile passage started Apr 10.
Gateway drawdown completed on 6/14/15. All values were within criteria.
MU 18 was OOS for annual maintenance from June 16-18. The chain gate was changed from MU 18-2 to 19-2.

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
MU17 OOS 0001 6/15/2015 to 1700 6/18/2015 for Annual
T9 OOS 0001 6/15/2015 to 1700 6/18/2015 for Doble Testing

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.
Lighting improvements system in place at the TDA north count station test location. FFU has begun testing of IR lighting to enhance night video capture.

Research/Contractors:

Columbia River Northern Pikeminnow Management Program dam angling 6/14; total NPM $\geq 2,846$.
Fish counters at east and north count stations 16 hr/day.
PSMFC PUD weekly sampling 6/17; 1 Chinook yearling plus some incidentals.
WDFW conducting hook and line removals of predatory northern pikeminnow from the BRZ adjacent to the project.
CRITFC personnel will be assisting it's member tribes (YN, CTUIR, and NPT) collect adult pacific lamprey from pot traps at the TDA.
PSMFC monitoring and maintaining thin walled PIT tag antennas and computer equipment.
USGS total dissolved gas monitoring continues.
USDA gull hazer's on site 12 hours/day, primarily hazing from the navlock peninsula. Pigeon removal and sea lion hazing as needed.

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

6/14/2015 - 6/20/2015

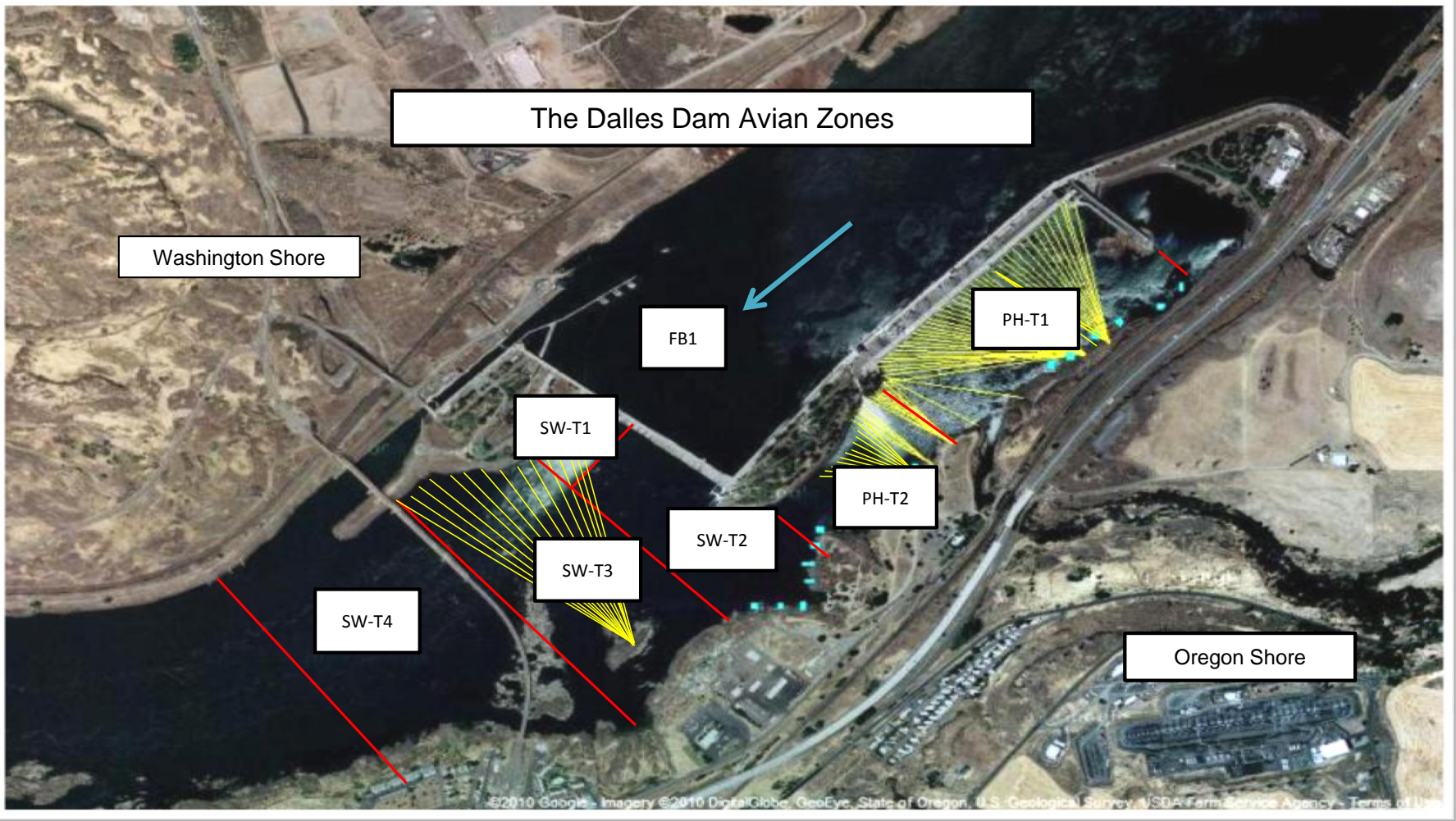
Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Lamprey				Outflow (kcfs)
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder						
	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#			
6/14	69.2	1916	30.8	854	56.2	155	43.8	121	76.9	30	23.1	9	92.9	13	7.1	1	42.7	1939	57.3	2599	0	0	0	0	0	0	0	0	52.9	163	47.1	145	53.9
6/15	63.4	1985	36.6	1144	84.7	372	15.3	67	68.5	37	31.5	17	46.7	14	53.3	16	50.6	2869	49.4	2798	0	0	0	0	0	0	45.5	90	54.5	108	61.4		
6/16	61.2	1907	38.8	1211	68.4	283	31.6	131	65.8	48	34.2	25	93.3	14	6.7	1	62.2	4481	37.8	2724	0	0	0	0	0	0	51.2	107	48.8	102	61.9		
6/17	60.5	1433	39.5	934	52.1	149	47.9	137	61.8	34	38.2	21	38.1	8	61.9	13	37.2	3110	62.8	5255	0	0	0	0	0	0	52.9	92	47.1	82	44.1		
6/18	63.5	1543	36.5	887	62.7	193	37.3	115	70.7	53	29.3	22	60	24	40	16	51.1	5382	48.9	5146	0	0	0	0	0	0	72.4	89	27.6	34	44.5		
6/19	68.7	1844	31.3	840	63.2	216	36.8	126	74.1	83	25.9	29	63.8	30	36.2	17	45.3	5846	54.7	7067	0	0	0	0	0	0	72.8	182	27.2	68	43.2		
6/20	69.3	1913	30.7	848	62.7	232	37.3	138	56.3	71	43.7	55	43.1	31	56.9	41	40.3	5036	59.7	7445	0	0	0	0	0	0	66.1	82	33.9	42	40.4		
week totals	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#			
	65.1	#####	34.9	6718	65.7	1600	34.3	835	66.7	356	33.3	178	56.1	134	43.9	105	46.5	#####	53.5	#####	0	0	0	0	0	0	0	0	58.1	###	41.9	###	

http://www.cbr.washington.edu/dart/wrapper?type=php&fname=adulladder_1434996570_383.php

2015 Piscivorous Bird Counts

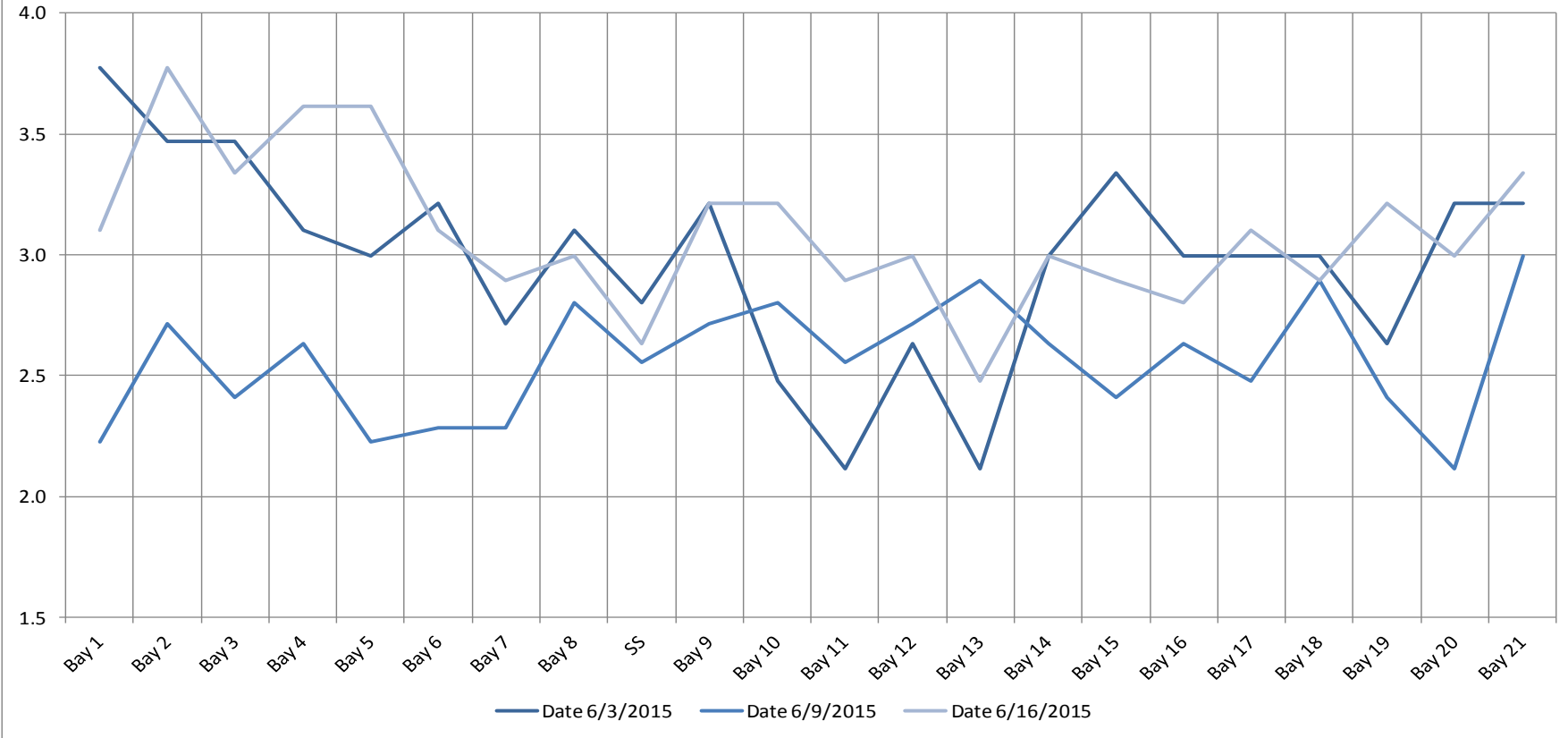
F=foraging, NF=non-foraging

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in	Notes		
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF				
6/14/15	EHK	15:02	FB	0	0	0	8	0	0	0	0	0	0	0	0	0	8		
		14:22	PH1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
		14:35	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:15	SW1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
		14:37	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:06	SW3	24	89	0	0	0	0	0	0	0	0	0	0	0	0	113	
6/15/15	jwr	15:07	SW4	29	0	0	0	0	0	0	0	0	0	0	0	0	29		
		9:08	FB	0	4	53	0	0	0	0	3	0	0	0	0	0	60		
		8:23	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		8:26	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		9:02	SW1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
		8:29	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/16/15	PSK	8:37	SW3	18	45	0	0	0	0	0	0	0	0	0	0	0	63		
		8:39	SW4	10	0	0	0	0	0	0	0	1	0	0	0	0	11		
		14:54	FB	0	0	0	25	0	0	0	3	0	0	0	0	0	28		
		13:45	PH1	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
		14:01	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		15:12	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/17/15	PSK	14:08	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		15:18	SW3	13	55	0	0	0	0	0	0	0	0	0	1	0	69	GBHE	
		15:23	SW4	0	10	0	0	0	0	0	0	0	0	0	0	0	10		
		8:06	FB	0	0	1	54	0	0	0	0	0	0	0	0	0	55		
		7:11	PH1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
		7:23	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/18/15	jwr	8:16	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		7:28	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		8:44	SW3	19	41	0	0	0	0	0	0	0	0	0	0	0	60	boat hazing	
		8:47	SW4	1	0	0	0	0	0	0	0	3	0	0	0	0	4		
		13:14	FB	0	0	2	31	0	0	0	0	0	0	0	0	0	33		
		12:36	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/19/15	PSK	12:41	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		13:16	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		12:45	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		12:48	SW3	19	14	0	0	0	0	0	0	0	0	0	0	0	33	boat hazing	
		12:50	SW4	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
		14:18	FB	0	0	0	26	0	0	0	0	0	0	0	0	0	26		
6/20/15	EHK	12:52	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:30	SW1	4	0	0	0	0	0	0	0	0	0	0	0	0	4		
		13:02	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		14:38	SW3	13	29	0	0	0	0	0	0	0	0	0	0	0	42		
		14:41	SW4	19	0	0	0	0	0	0	0	0	0	0	0	0	19	boat hazing	
		9:06	FB	0	0	0	46	0	0	0	0	0	0	0	0	0	46		
6/20/15	EHK	8:11	PH1	0	0	0	1	0	0	0	0	0	0	0	1	2	2	GBHE	
		8:23	PH2	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
		9:20	SW1	17	0	0	0	0	0	0	0	0	0	0	0	0	17		
		8:26	SW2	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
		9:27	SW3	65	28	0	0	0	0	0	0	0	0	0	0	0	93		
		9:39	SW4	29	1	0	0	0	0	0	0	3	0	0	0	0	33	pelican	



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

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



USGS:	http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201506.lcol.html	
Temperatures		Secchi:
66.7	Sun	5.0
67.1	Mon	5.0
67.6	Tue	5.0
67.3	Wed	5.0
67.4	Thurs	5.0
67.5	Fri	5.0
67.5	Sat	5.0
AVG: 67.3	AVG	5.0

**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
6/14/15			1.3	6.0	12.7	12.7		1.5	10.0	10.0	closed	1.5	8.3	8.3	39.8
	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	
	1.4	9.4	1.3	6.0	12.7	12.7	9.2	1.6	10.0	10.0		1.4	8.3	8.3	
6/15/15			1.3	6.0	12.7	12.7		1.5	10.1	10.1		1.3	8.3	8.3	40.0
	1.4	9.4	1.3	6.0	12.7	12.7	9.2	1.5	9.9	9.9		1.5	8.2	8.2	
	1.4	9.6	1.5	2.0	13.8	13.8	10.3	1.5	10.5	10.5		1.5	9.0	9.0	
6/16/15			1.9	2.0	11.9	12.0		1.3	10.5	10.5		1.5	8.2	8.2	40.0
	1.4	9.4	1.5	4.1	12.7	12.7	9.2	1.5	10.4	10.4		1.5	8.3	8.2	
	1.4	9.5	1.5	4.0	13.6	13.6	10.1	1.5	10.4	10.4		1.5	8.2	8.1	
6/17/15			1.7	4.1	11.9	12.0		1.3	10.6	10.6		1.5	8.2	8.1	40.0
	1.4	9.4	1.7	4.1	12.1	12.2	8.6	1.3	10.5	10.6		1.4	8.2	8.3	
	1.4	9.5	1.5	6.0	12.4	12.4	8.9	1.5	10.0	10.0		1.4	8.2	8.2	
6/18/15			1.7	6.1	11.1	11.1		1.4	10.0	10.0		1.4	8.2	8.2	40.0
	1.3	9.3	1.7	6.1	11.1	11.1	7.6	1.4	10.0	10.0		1.4	8.2	8.2	
	1.5	9.1	1.6	8.1	11.2	11.2	7.7	1.6	9.1	9.0		1.4	8.2	8.3	
6/19/15			1.6	8.1	11.1	11.1		1.6	9.0	9.0		1.5	8.2	8.2	40.2
	1.4	9.1	1.6	7.9	11.1	11.1	7.6	1.5	9.1	9.1	1.4	8.3	8.3		
	1.4	9.3	1.6	7.9	11.1	11.1	7.6	1.6	9.1	9.1	1.5	8.1	8.1		
6/20/15			1.6	8.0	10.7	10.7		1.5	8.9	8.9	1.5	8.1	8.2	39.7	
	1.4	9.3	1.5	7.9	10.7	10.7	7.2	1.5	9.0	9.0	1.5	8.1	8.2		
	1.5	9.2	1.5	8.1	10.7	10.7	7.2	1.5	8.9	8.9	1.4	8.2	8.2		
AVG:	1.4	9.4	1.5	No criteria	11.9	12.0	8.5	1.5	9.8	9.8	closed	1.5	8.2	8.3	40.0

Fishways are inspected twice daily plus one SCADA inspection.

Lamprey			
Left Ladder		Right Ladder	
%	#	%	#
52.9220779	163	47.1	145
45.4545455	90	54.5	108
51.1961722	107	48.8	102
52.8735632	92	47.1	82
72.3577236	89	27.6	34
72.8	182	27.2	68
66.1290323	82	33.9	42
%	#	%	#
58.0808081	805	41.9	581