

The Dalles Dam Fishway Status Report

10/4/2015

Inspection Period: 9/27/2015 - 10/03/2015

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: 65.4	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'				
Junction pool weir JP6	0	depth (≥ 7')	Average	12.1	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	12.0		
Entrance weir E3	0	depth (≥ 8')	Average	12.0		
Collection channel velocity	0	1.5 - 4 fps	Average	2.7		
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6		
North channel velocity	0	1.5 - 4 fps	Average	2.3		
South channel velocity	0	1.5 - 4 fps	Average	3.8		
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	11.3		
Entrance weir W2	0	depth (≥ 8')	Average	11.3		
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	8.5		
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 - 0.5'			
Spill volume	NA	40%+-1%	Average	Spill closed on 9/1/15		
Spill Pattern	NA	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 lion sightings.

Operations:

Turbine trashrack drawdown completed 9/28. Forebay/gatewell differential in criteria.

Fishway calibration completed 9/29, East entrance tailwater was off and corrected by electrical personnel.

Investigating operational changes needed for potential large oil spill in Columbia. Fishway protection measures to be evaluated. Plan to be presented to FPOM when complete. Fast water boom training to occur at Bonneville 10/5.

Current Outages:

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

Unit MU19 out of service 8/3 to 9/17/2015 for overhaul and Turbine Integrity Testing

Maintenance:

Tarp installed on ice and trash sluiceway to reduce mist on roadway on 9/22, however material is failing.

Three failed collection channel dewatering pumps repair underway.

Entrance/Exit weir sensor and PLC replacement/upgrade being investigated.

FCQ7 electrical panel for east exit upgrade awaiting contract approval. Installation planned for next outage season.

Doing inventory assessment on fish unit spare parts.

Purchasing new dewatering pump motor for north fishway entrance.

Investigating cost and feasibility for 154 -157 weir replacement through project labor.

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

Long Term repair plans; removal/permanent closure of collection channel and north 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.

Studies:

North fishladder rehab study for rock wall 90% DDR review. Construction 2017/18. FPOM review ongoing.

Fish count video at north count station recording / testing underway. Result review by Fish Field Unit through FPOM.

East fishladder emergency backup construction this winter likely delayed a year. Will adjust winter fishway dewater schedule to fit in water work period.

Crane rail replacement on tailrace and intake 2016-2017. First week august rail removal near east exit being coordinated through FPOM.

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

North spill attraction flow review continues. Threshold for daily passage amount to use spill remains unresolved.

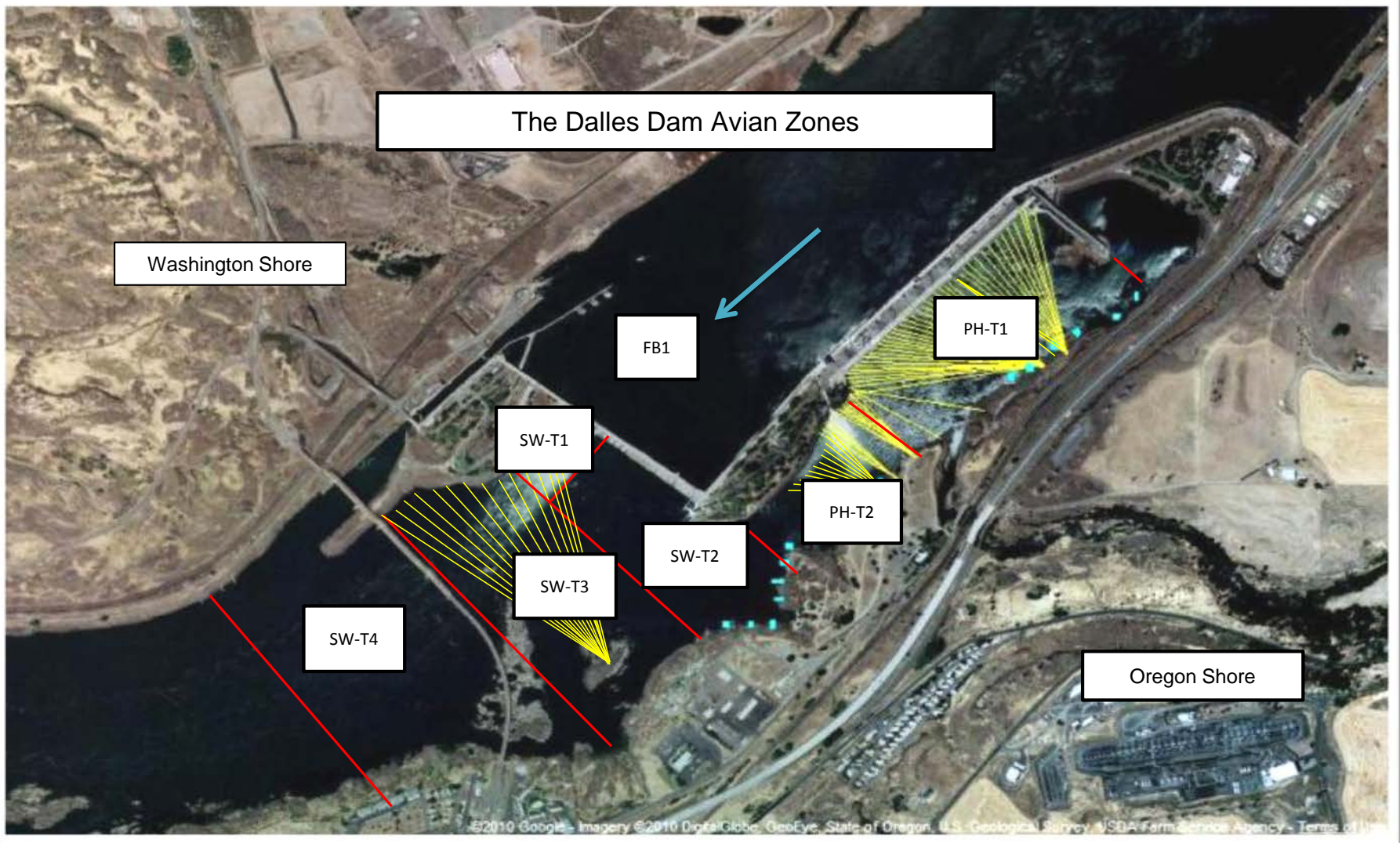
Research/Contractors:

Pikeminnow dam angling had low catch rates this week. Weekly total for NPM >230mm was 30 and 4,552 YTD.

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

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



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

2015 Piscivorous Bird

F=foraging, NF=non-foraging

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Gre
				F	NF	F	NF	F	NF	F
9/27/15	EHK	14:45	FB	0	0	0	18	0	0	0
		15:25	PH1	0	0	0	26	0	0	0
		14:05	PH2	4	0	0	0	0	0	0
		15:02	SW1	0	0	0	0	0	0	0
		14:09	SW2	0	0	0	0	0	0	0
		14:10	SW3	0	8	0	22	0	0	0
		14:43	SW4	0	12	0	12	0	0	0
9/28/15	EHK	10:01	FB	0	0	0	68	0	0	0
		9:15	PH1	0	0	0	8	0	0	0
		9:35	PH2	0	0	0	0	0	0	0
		10:20	SW1	0	0	0	0	0	0	0
		9:40	SW2	1	0	0	0	0	0	0
		9:48	SW3	0	0	0	27	0	0	0
		9:51	SW4	0	27	0	0	0	0	0
9/29/15	EHK	14:31	FB	0	0	0	23	0	0	1
		13:55	PH1	0	0	0	23	0	0	0
		14:02	PH2	0	0	0	0	0	0	0
		14:42	SW1	0	0	0	1	0	0	0
		14:12	SW2	0	2	0	0	0	0	0
		14:14	SW3	0	2	0	0	0	0	0
		14:59	SW4	0	18	0	7	0	0	0
9/30/15	EHK	14:21	FB	0	0	0	7	0	0	0
		13:38	PH1	0	1	1	31	0	0	0
		13:44	PH2	2	0	0	0	0	0	0
		14:40	SW1	0	0	0	0	0	0	0
		13:55	SW2	0	0	0	0	0	0	0
		13:58	SW3	0	0	0	10	0	0	0
		14:59	SW4	0	0	0	26	0	0	0
10/1/15	JWR	9:24	FB	0	0	0	102	0	0	0
		8:50	PH1	0	0	0	14	0	0	0
		8:57	PH2	0	0	0	0	0	0	0
		9:26	SW1	0	0	0	0	0	0	0
		9:00	SW2	0	0	0	0	0	0	0
		9:23	SW3	0	0	0	17	0	0	0
		9:22	SW4	0	19	0	0	0	0	0
10/2/15	JWR	10:33	FB	0	0	0	20	0	0	0
		9:58	PH1	0	0	0	10	0	0	0
		10:04	PH2	0	0	0	0	0	0	0
		10:36	SW1	0	0	0	0	0	0	0
		10:08	SW2	0	0	0	0	0	0	0
		10:09	SW3	0	1	2	41	0	0	0
		10:10	SW4	0	0	0	34	0	0	0
10/3/15	JWR	10:33	FB	0	0	0	20	0	0	0
		9:58	PH1	0	0	0	10	0	0	0
		10:04	PH2	0	0	0	0	0	0	0
		10:36	SW1	0	0	0	0	0	0	0
		10:08	SW2	0	0	0	0	0	0	0
		10:09	SW3	0	1	2	41	0	0	0
		10:10	SW4	0	0	0	34	0	0	0
Totals for the reporting week				7	91	5	652	0	0	1

Bird Counts						
Counting						
Date	Pelican		Other		Total birds in zone	Notes
	NF	F	NF	F		
0	0	0	0	0	18	9 mergansers & 1 gbh
0	0	0	0	10	36	
0	0	0	0	0	4	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	30	
0	0	0	0	0	24	
0	0	0	0	0	68	
0	0	0	0	0	8	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	1	
0	0	0	0	0	27	
0	0	0	0	0	27	
0	0	0	0	0	24	
0	0	0	0	1	24	
0	0	0	0	0	0	
0	0	0	0	0	1	
0	0	0	0	0	2	
0	0	0	0	0	2	
0	0	0	0	0	25	
0	0	0	0	0	7	
0	0	0	0	1	34	GBH
0	0	0	0	0	2	
0	0	0	0	0	0	
0	0	0	0	0	10	
0	0	0	0	0	26	
0	0	0	0	0	102	
0	0	0	0	0	14	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	17	
0	0	0	0	0	19	
0	0	0	0	0	20	
0	0	0	0	0	10	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	44	
0	0	0	0	0	34	
0	0	0	0	0	20	
0	0	0	0	0	10	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	44	
0	0	0	0	0	34	
0	0	0	0	12	768	

The Dalles East

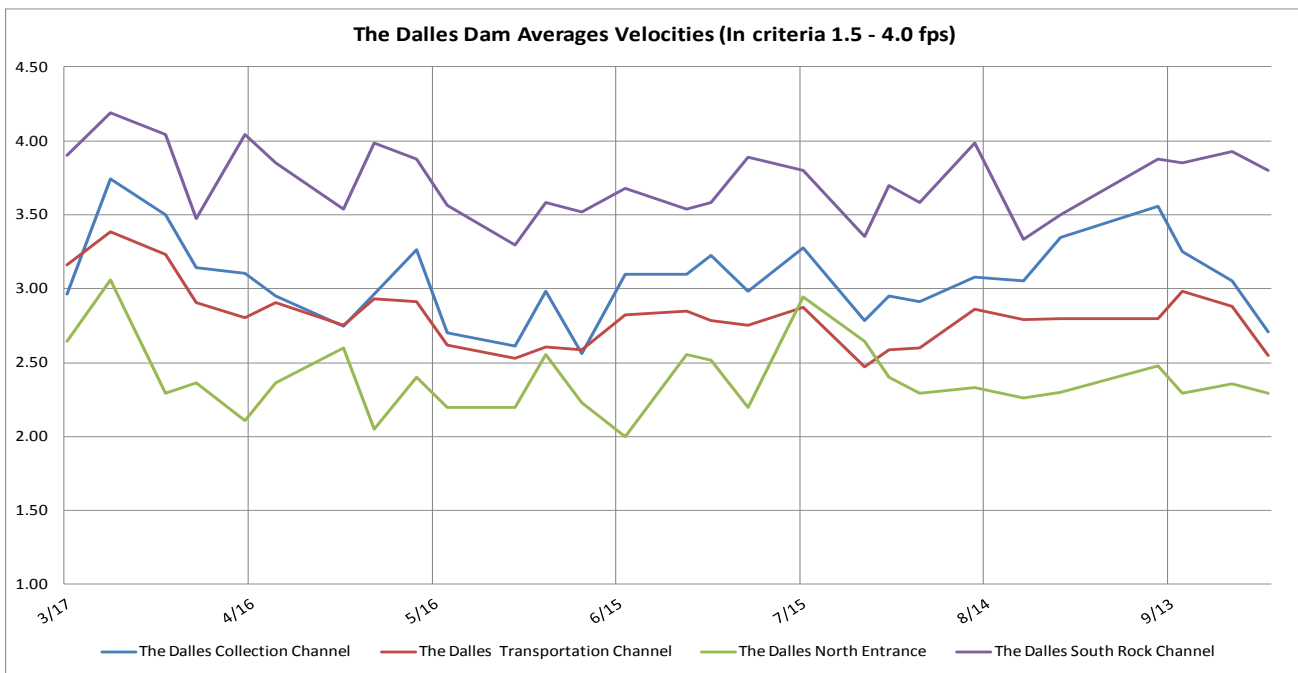
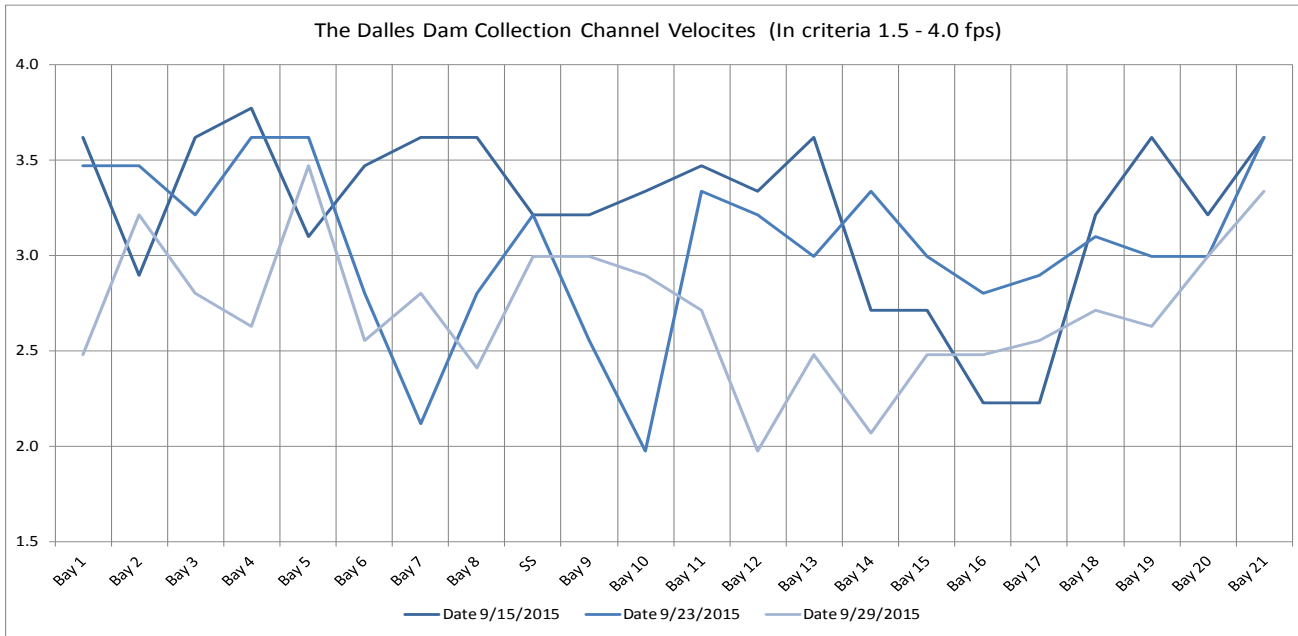
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho
9/27	11358	10198	1160	2846	2041	805	744	712	32
9/28	9768	7822	1946	2130	1578	552	793	731	62
9/29	8916	8009	907	1818	1236	582	307	290	17
9/30	10116	7680	2436	1405	1009	396	524	454	70
10/1	10132	9058	1074	1663	1130	533	287	274	13
10/2	8484	7330	1154	1714	1208	506	265	245	20
10/3	6816	5845	971	1884	1272	612	348	329	19
total	65590	55942	9648	13460	9474	3986	3268	3035	233
% North passage	4.90%	4.96%	4.50%	5.73%	5.56%	6.12%	3.97%	3.44%	10.38%

The Dalles North

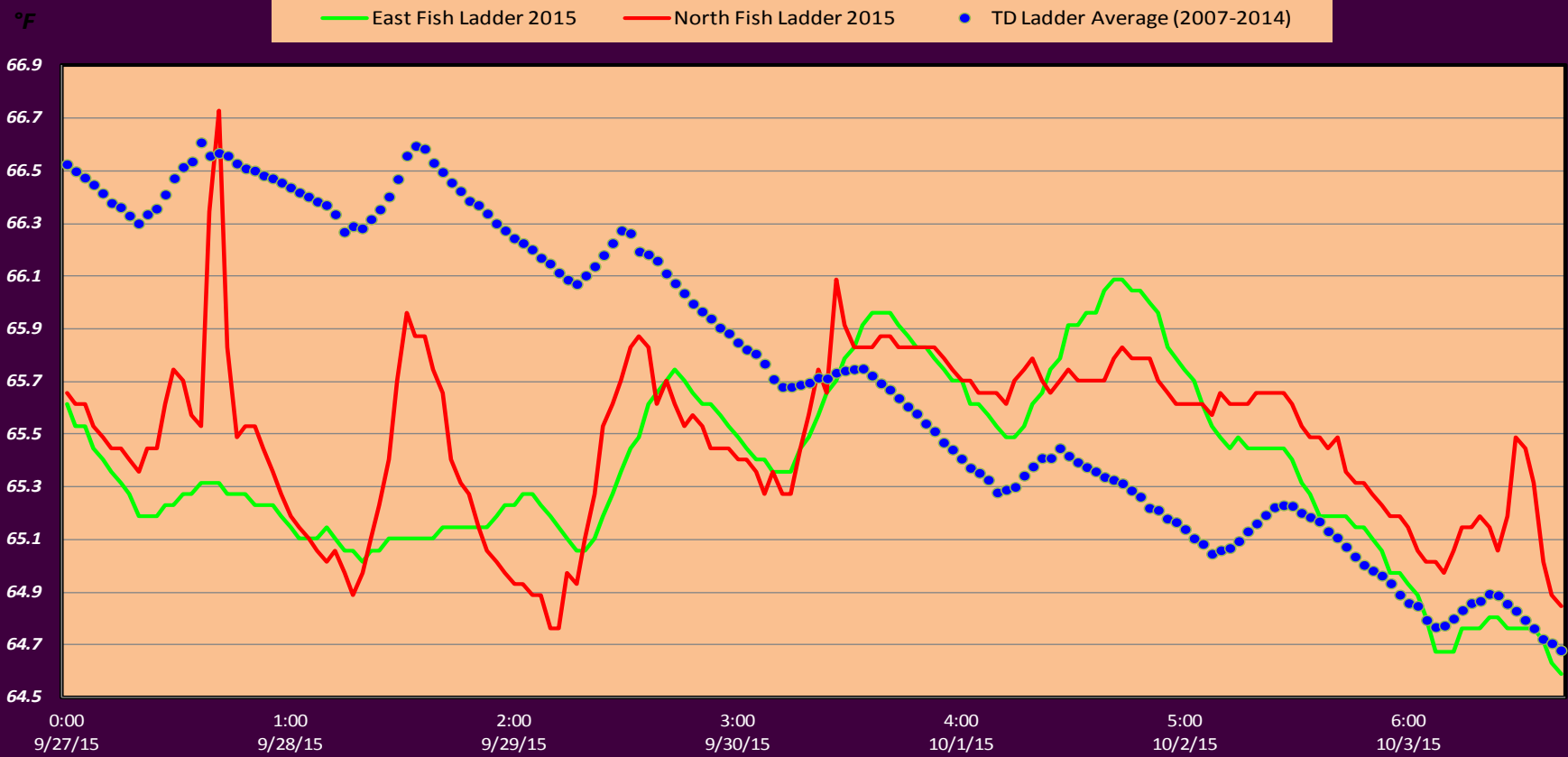
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho
9/27	498	428	70	140	96	44	34	29	5
9/28	741	667	74	130	84	46	18	17	1
9/29	210	176	34	54	44	10	21	14	7
9/30	357	289	68	84	58	26	12	10	2
10/1	267	208	59	84	61	23	19	11	8
10/2	238	196	42	44	36	8	4	4	0
10/3	1066	958	108	282	179	103	27	23	4
total	3377	2922	455	818	558	260	135	108	27

Sockeye	Chum	Pink	Lamprey
1	0	0	10
0	0	1	4
2	0	0	4
0	0	0	1
2	0	0	7
5	0	1	4
1	0	0	
11	0	2	30
8.33%	NA	0.00%	9.09%

Sockeye	Chum	Pink	Lamprey
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
1	0	0	1
0	0	0	
1	0	0	3



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



USGS: <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201509.lcol.h>

Secchi:		Temperatures
5.0	Sun	65.5
5.0	Mon	65.2
5.0	Tue	65.3
5.0	Wed	65.6
5.0	Thurs	65.8
5.0	Fri	65.6
5.0	Sat	65.0
5.0	AVG	65.4

<http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201510.lcol.h>

**The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill**

= Out of criteria

Date:	North Ladder		East Ladder					West Entrance			South Entrance			SPILL ON SEAL	
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth		S2 Depth
9/27			1.4	8.0	12.0	12.6	11.3	1.5	10.4	10.4		1.5	8.5	8.5	
	1.3	9.4	1.3	8.0	12.0	12.6	11.3	1.6	10.3	10.3		1.4	8.5	8.4	
	1.4	9.3	1.3	8.4	12.0	13.0	11.7	1.5	10.4	10.4		1.4	8.6	8.6	
9/28			1.4	8.4	12.0	13.0	11.6	1.6	10.3	10.3		1.4	8.5	8.5	
	1.4	9.5	1.4	8.3	12.0	13.0	11.6	1.6	10.3	10.3		1.4	8.5	8.5	
	1.4	9.5	1.4	8.2	12.0	12.8	11.5	1.6	10.4	10.4		1.5	8.3	8.4	
9/29			1.5	7.8	11.5	13.2	11.8	1.6	10.3	10.3		1.5	8.4	8.5	
	1.4	9.3	1.3	7.8	12.3	13.7	12.3	1.6	10.3	10.3		1.4	8.6	8.6	
	1.5	9.3	1.4	7.8	12.0	13.5	12.1	1.5	10.0	10.0		1.4	8.6	8.6	
9/30			1.3	7.8	11.6	13.0	11.6	1.5	10.4	10.4		1.4	8.5	8.5	
	1.3	9.5	1.5	6.5	11.7	13.1	11.7	1.6	10.2	10.2		1.4	8.5	8.5	
	1.4	9.4	1.6	6.5	11.9	13.3	11.9	1.5	10.3	10.3		1.4	8.5	8.4	
10/1			1.5	6.7	11.5	12.9	11.5	1.6	10.4	10.4		1.4	8.6	8.6	
	1.5	9.3	1.4	5.5	11.7	13.1	11.7	1.6	10.5	10.5		1.4	8.5	8.5	
	1.4	9.3	1.5	5.0	12.0	13.4	12.0	1.5	10.6	10.6		1.5	8.5	8.5	
10/2			1.6	5.6	11.5	12.9	11.5	1.5	10.6	10.6		1.4	8.6	8.6	
	1.3	9.3	1.5	5.5	11.7	13.1	11.7	1.6	10.5	10.5		1.5	8.5	8.5	
	1.4	9.3	1.5	5.0	12.0	13.4	12.0	1.5	10.6	10.6		1.5	8.5	8.5	
10/3			1.7	5.0	11.3	12.7	11.3	1.6	10.4	10.4		1.6	8.2	8.2	
	1.4	9.4	1.6	5.5	11.4	12.8	11.4	1.5	10.6	10.6		1.5	8.4	8.4	
	1.4	9.4	1.6	5.6	11.5	12.9	11.5	1.6	10.5	10.5		1.5	8.3	8.3	
AVG:	1.4	9.4	1.5	6.8	11.8	13.0	11.7	1.6	10.4	10.4	closed	1.4	8.5	8.5	

Fishways are inspected twice daily plus one SCADA inspection.