

The Dalles Dam Fishway Status Report

9/13/2015

Inspection Period: 9/6/2015 - 9/12/2015

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: 0.0 F
			Comments		Secchi: 5.4 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'	OOC at 0.6'		
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	3.6	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.8	
North channel velocity	0	1.5 - 4 fps	Average	2.5	
South channel velocity	0	1.5 - 4 fps	Average	3.9	
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	OOC at 7.6'
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: 0-0.5'		
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. Almost no gulls after end of spill. No sea lion sightings.

Operations:

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

Fishway calibration completed 9/10, most values within criteria TDE notified of discrepancies.

Current Outages:

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

MU19 OOS 0600 8/3/2015 to 1700 9/17/2015 for O/H and Turbine Integrity Testing

MU9 OOS 0001 9/7/2015 to 1700 9/10/2015 for Annual Maintenance

Maintenance:

Derelict Vertical Barrier Screen removal from gatewell of main unit 19 completed. ROV inspection planned for remaining gatewells to confirm no more.

Three failed collection channel dewatering pumps repair near complete.

Two new water sensor units and PLCs being purchased to replace east exit and entrance systems for improved reliability. Installation this winter.

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

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 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 moving again.

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 through FPOM.

East fishladder emergency backup construction to start this winter, through next 2 in water work periods. Contract awarded. Site meetings underway.

Crane rail replacement on tailrace and intake 2016-2017. Timing for 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 continues to be reviewed through FPOM. Threshold for daily passage amount to use spill remains unresolved. Approaching 25K chinook per day with no observable passage delay.

Research/Contractors:

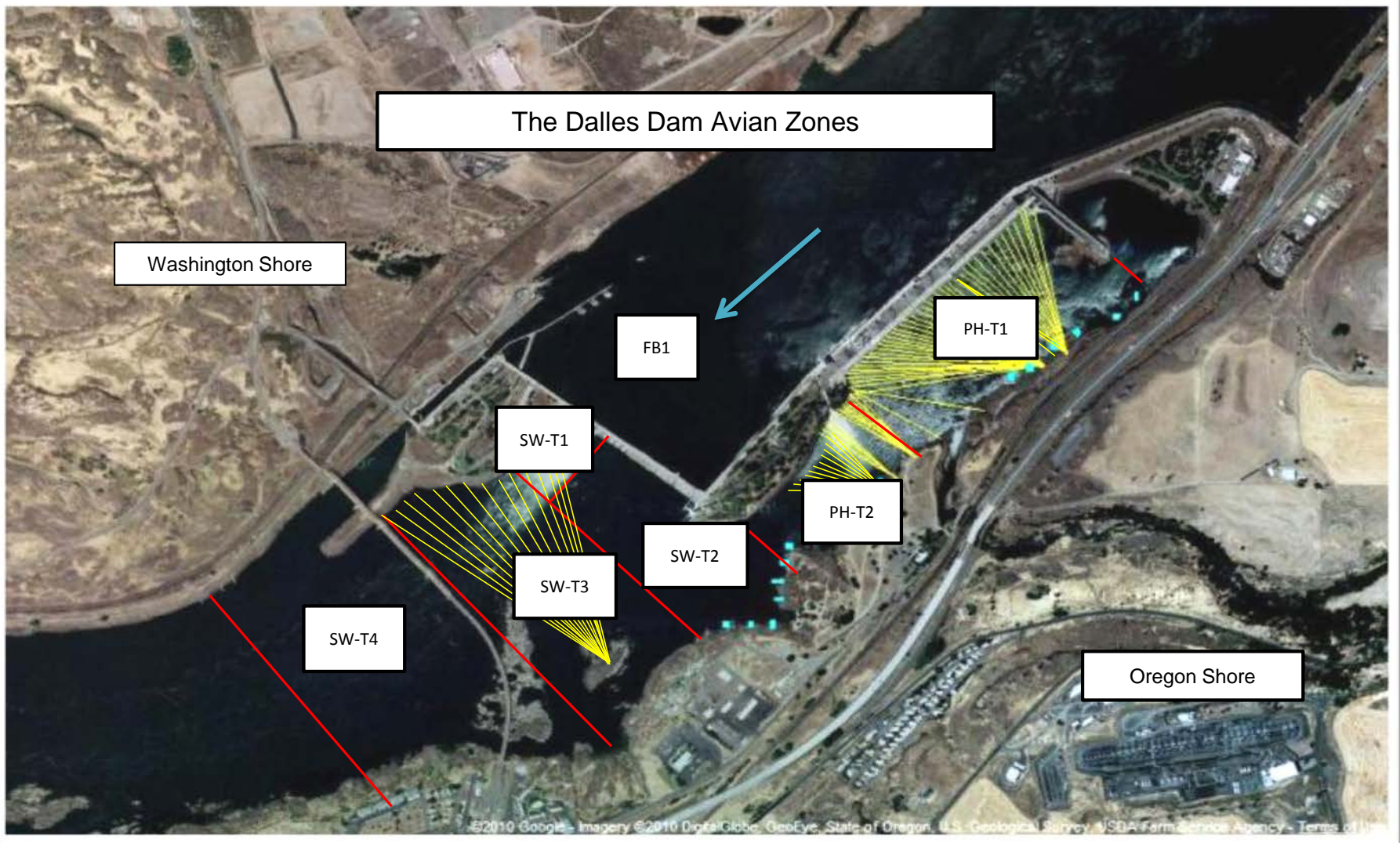
Pikeminnow dam angling had low catch rates this week. Weekly total for NPM >230mm was 14 and 4,507 YTD.

ODFW collecting biological data from harvested pikeminnow.

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.

The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho
9/6/2015	17657	16013	1644	7140	5286	1854	936	908	28
9/7/2015	18349	16049	2300	5647	4230	1417	730	563	167
9/8/2015	17340	16121	1219	4951	3497	1454	972	905	67
9/9/2015	17813	15425	2388	2611	2004	607	913	629	284
9/10/2015	21477	19624	1853	4090	2950	1140	1244	1165	79
9/11/2015	22817	20713	2104	2629	2077	552	927	776	151
9/12/2015	24567	21784	2783	3230	2292	938	996	816	180
total	140020	125729	14291	30298	22336	7962	6718	5762	956
% North Passage	4.40%	4.42%	4.14%	5.56%	5.24%	6.43%	6.53%	6.51%	6.64%

The Dalles North

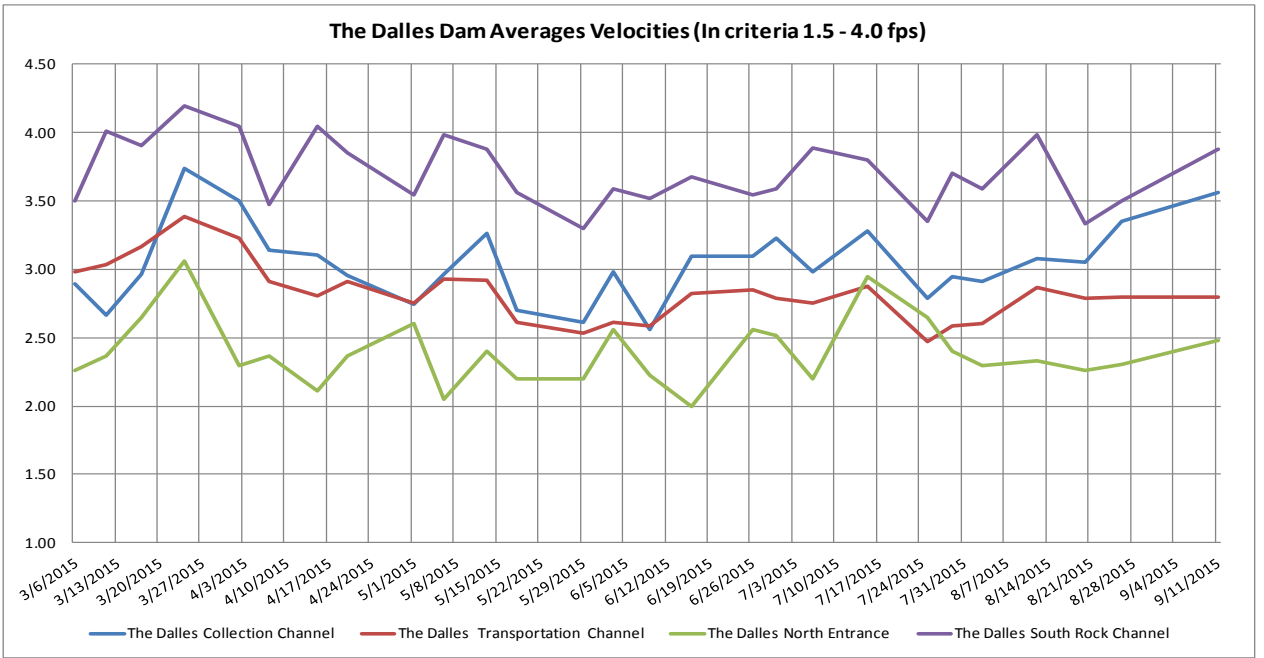
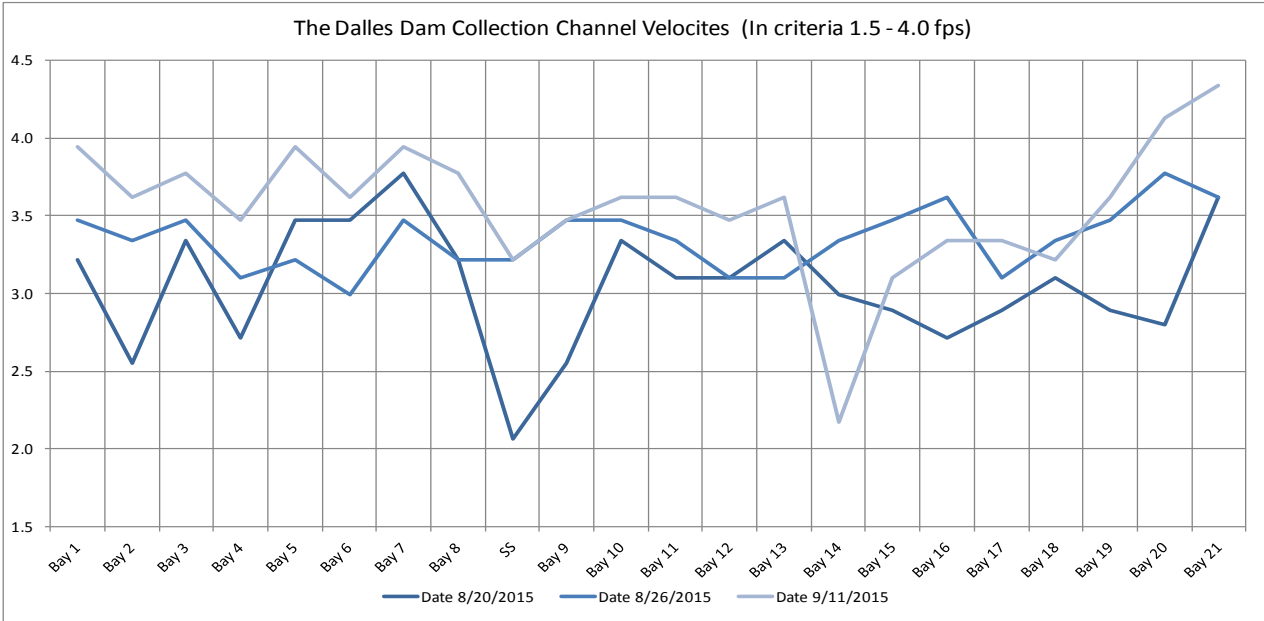
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho
9/6/2015	663	577	86	550	398	152	53	42	11
9/7/2015	796	744	52	412	275	137	58	58	0
9/8/2015	620	548	72	191	121	70	43	26	17
9/9/2015	1656	1538	118	207	133	74	83	79	4
9/10/2015	788	698	90	159	116	43	59	41	18
9/11/2015	754	674	80	114	79	35	70	59	11
9/12/2015	1128	1034	94	148	112	36	103	96	7
total	6405	5813	592	1781	1234	547	469	401	68

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts>

Sockeye	Chum	Pink	Lamprey
41	0	1	50
11	0	2	13
11	0	1	29
10	0	8	12
7	0	0	26
4	0	12	40
7	0	11	35
91	0	35	205
11.65%	0.00%	10.26%	19.61%

Sockeye	Chum	Pink	Lamprey
2	0	0	6
2	0	0	5
2	0	2	6
2	0	0	12
2	0	1	1
2	0	0	6
0	0	1	14
12	0	4	50

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USGS:

Temperatures	Secchi:	
67.8	Sun	5.0
67.4	Mon	5.0
67.8	Tue	5.0
68.2	Wed	5.0
68.3	Thurs	5.0
68.2	Fri	5.0
68.2	Sat	5.0
68.0	AVG	5.0

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

= Out of criteria

Date:	North Ladder							East Ladder							% Spill
	North Entrance		East Entrance					West Entrance				South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
9/6			1.6	2.9	11.1	11.1		1.4	11.0	11.0		1.6	8.6	8.6	
	1.3	9.4	1.6	3.0	11.3	11.3	11.3	1.6	10.5	10.5		1.5	8.5	8.5	
	1.3	9.5	1.3	6.6	11.5	11.5	11.5	1.6	10.5	10.5		1.5	8.5	8.5	
9/7			1.4	6.4	11.3	11.3		1.6	10.5	10.5		1.5	8.5	8.5	
	1.3	9.4	1.3	7.0	11.3	11.3	11.3	1.5	10.4	10.4		1.5	8.5	8.5	
	1.4	9.4	1.3	7.0	11.3	11.3	11.3	1.5	10.6	10.6		1.4	8.5	8.5	
9/8			1.2	7.0	11.8	11.8		1.6	10.6	10.6		1.4	8.6	8.6	
	1.3	9.4	1.2	7.1	11.7	11.7	11.7	1.6	10.5	10.5		1.5	8.4	8.4	
	1.3	9.4	1.2	6.9	11.8	11.8	11.8	1.6	10.4	10.4		1.4	8.6	8.6	
9/9			1.3	6.9	11.4	11.4		1.6	10.5	10.5		1.5	8.4	8.4	
	1.3	9.5	1.4	7.0	11.6	11.6	11.6	1.6	10.5	10.5		1.4	8.6	8.6	
	1.3	9.5	1.3	7.5	12.1	12.2	12.3	1.6	10.5	10.5		1.4	8.6	8.6	
9/10			1.5	3.6	12.4	12.4		1.5	11.5	11.5		1.5	8.6	8.6	
	1.4	9.5	1.5	3.5	12.3	12.3	12.3	1.5	11.4	11.4		1.6	8.4	8.4	
	1.4	9.4	1.5	3.0	12.5	12.5	12.5	1.6	11.1	11.1		1.5	8.5	8.5	
9/11			1.6	3.0	11.7	11.7		1.4	11.2	11.2		1.5	8.5	8.5	
	1.4	9.3	1.6	3.1	11.8	11.8	11.8	1.4	11.2	11.2		1.5	8.5	8.5	
	1.4	9.5	1.6	3.1	12.4	12.4	12.4	1.4	11.3	11.3		1.5	8.5	8.5	
9/12			1.5	3.1	12.2	12.2		1.5	11.2	11.2		1.5	8.6	8.6	
	1.4	9.3	1.6	3.0	12.1	12.1	12.1	1.5	11.1	11.1		1.6	8.5	8.5	
	1.4	9.5	1.6	3.0	12.9	12.9	12.9	1.5	11.3	11.3		1.5	8.5	8.5	
AVG:	1.4	9.4	1.4	No criteria	11.8	11.8	11.9	1.5	10.8	10.8	closed	1.5	8.5	8.5	#DIV/0!

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Fishways are inspected twice daily plus one SCADA inspection.

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

