

The Dalles Dam Fishway Status Report

5/14/2016

Inspection Period: 05/08 - 05/14/2016

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: 57.8 °F
			Comments		Secchi: 4.0 feet
NORTH FISHWAY					
Exit differential	0	≤ 0.5'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Entrance differential	1	1.0' - 2.0'	1.4	out at 0.9'	
Entrance weir N1	0	depth (≥ 8')	10.1		
Entrance weir N2	0	Closed			
PUD Intake differential	1	≤ 0.5'		out 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	5	1.0' ± 0.1'	158 manually adjusted. Found at 0.8' and 1.7. New sensor being purchased.		
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')	13.4		
East entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir E1	0	No criteria	7.0		
Entrance weir E2	0	depth (≥ 8')	13.5		
Entrance weir E3	0	depth (≥ 8')	13.5		
Collection channel velocity	0	1.5 - 4 fps	2.7		
Transportation channel velocity	0	1.5 - 4 fps	2.0		
North channel velocity	0	1.5 - 4 fps	2.4		
South channel velocity	0	1.5 - 4 fps	2.6		
West entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir W1	0	depth (≥ 8')	11.1		
Entrance weir W2	0	depth (≥ 8')	11.1		
Entrance weir W3	0	No criteria	Closed		
South entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir S1	0	depth (≥ 8')	8.3		
Entrance weir S2	0	depth (≥ 8')	8.3		
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.3-0.9'		
Spill volume	0	Spill at 40%			
Spill Pattern	0				
Turbine Unit Priority	12	per FPP	MU 3, 15 & 16 forced out. Affects turbine block priority order.		
Turbine 1% Efficiency	0	per FPP	Out of fish passage season		

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

Bird observation data collected once daily. Refer to Avian Zone map. USDA hazers started May 7 after 2 week delay due to late approvals.

Bird predation extremely high downstream of spillway. No bird activity at powerhouse.

Sealions observations less frequent than previous week. USDA hazed sealion 1-31 on 5/4/16.

Operations:

Gateway drawdown complete. All differentials within criteria.

Calibration done 5/10, east channel minor discrepancy. Maintenance notified.

Spill 40% continues.

Current Outages:

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.

MU3 forced out through 6/9/2016 due to loss of governor sump oil level

Maintenance:

South entrance dewater pump rehab postponed to next season due to budget constraints.

Awaiting east exit weir electrical panel FCQ7 panel. May 20 delivery date. To be installed on gallery and connected as funding allows.

Tailrace crane repair near west entrance delayed to June. Work noise minimal. Protective cover in place to prevent anything from falling in.

Long Term repair maintained plans; 154 -157 weir mods, collection channel diffusers decommission, repair failed diffusers - all on hold due to funding

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

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Studies:

North fishladder rehab construction 2017/18. FPOM review as needed.

East fishladder emergency backup construction planning for work this winter.

Crane rail replacement on tailrace and intake for in water work period 2016/17.

Transformer replacement planning underway. Plans to eliminate fish unit TA transformers. Install start 2017. Planning meetings continue.

No new developments for north lighting video counting improvements.

In process of updating N Wasco Co PUD Memo of Agreement. Near complete.

Fish unit rehab project plan started. Will increase reliability of fish units and potential redundancy.

Fish unit breaker replace planned for in water work period 2017/18

Bouys installed at forebay in efforts to keep sport fishermen further away from fishway exit. Successful but only temporary. More work needed to clarify boundary limits in state regulations. Line will be painted on rocks when resolved. Refer to exit map for BRZ boundary and 200' reference.

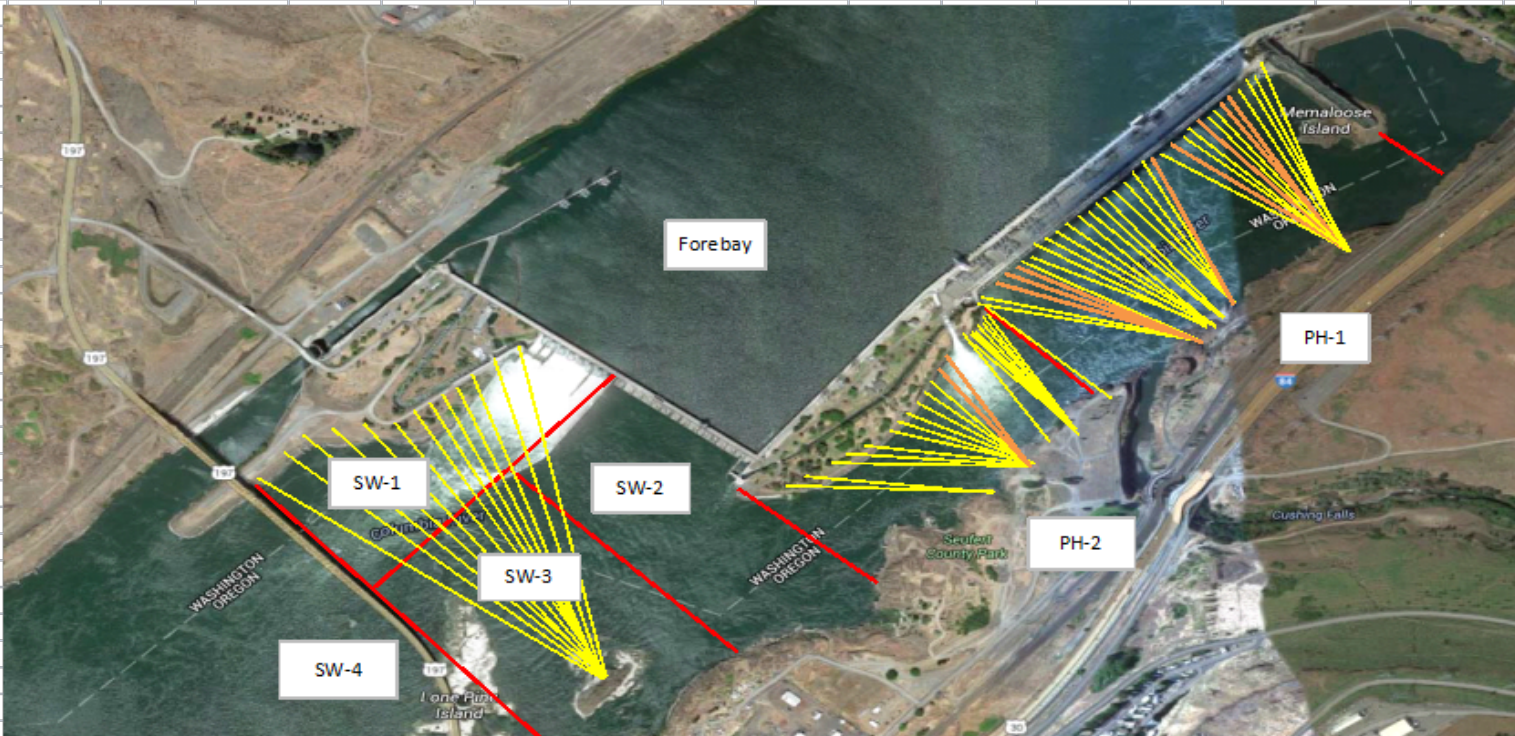
Research/Contractors:

Normandeau fish counters season resumed Apr1. No issues.

USDA avian hazer start delayed 2 weeks. Boat appears to successfully move gulls.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Yellow lines= present avian lines

red lines= Barriers between observation zones

Orange lines= Missing or down avian lines

The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
5/8	4422	3932	490	1	1	0	0	0	0	0	0	0	0
5/9	3634	3214	420	4	0	4	0	0	0	0	0	0	0
5/10	3358	2866	492	0	0	0	0	0	0	0	0	0	0
5/11	1595	1354	241	0	0	0	0	0	0	0	0	0	0
5/12	2075	1698	377	0	0	0	0	0	0	0	0	0	0
5/13	2165	1739	426	1	0	1	0	0	0	0	0	0	0
5/14	2470	1836	634	2	1	1	0	0	0	0	0	0	0
total	19719	16639	3080	8	2	6	0	0	0	0	0	0	0

The Dalles North

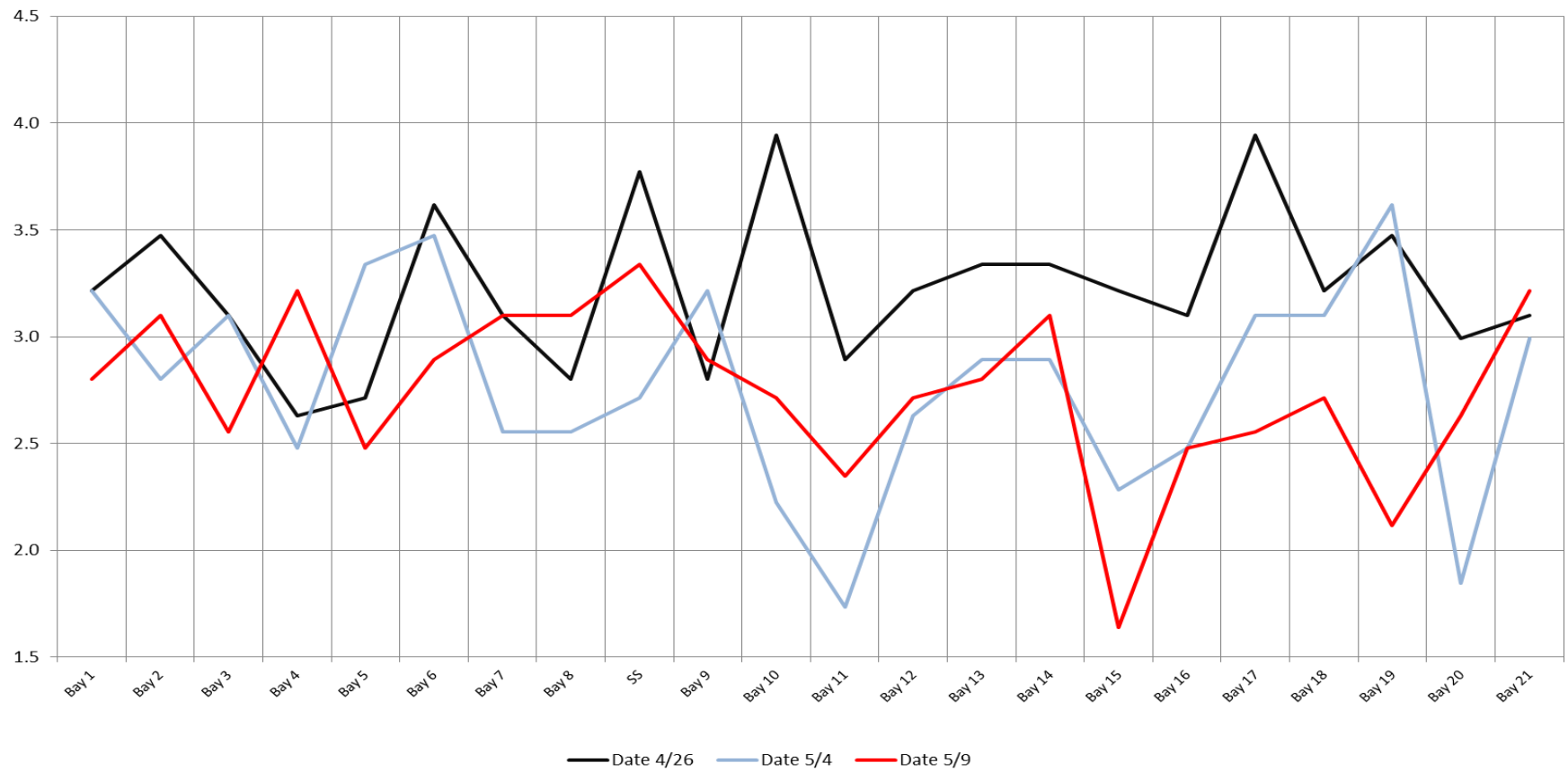
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
5/8	512	500	12	0	0	0	0	0	0	0	0	0	0
5/9	288	283	5	0	0	0	0	0	0	0	0	0	0
5/10	240	236	4	0	0	0	0	0	0	0	0	0	0
5/11	141	137	4	0	0	0	0	0	0	0	0	0	0
5/12	192	190	2	0	0	0	0	0	0	0	0	0	0
5/13	331	314	17	0	0	0	0	0	0	0	0	0	0
5/14	829	769	60	-1	-1	0	0	0	0	0	0	0	1
total	2533	2429	104	-1	-1	0	0	0	0	0	0	0	1
% North	11.4	12.7	3.3	-14.3	-100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

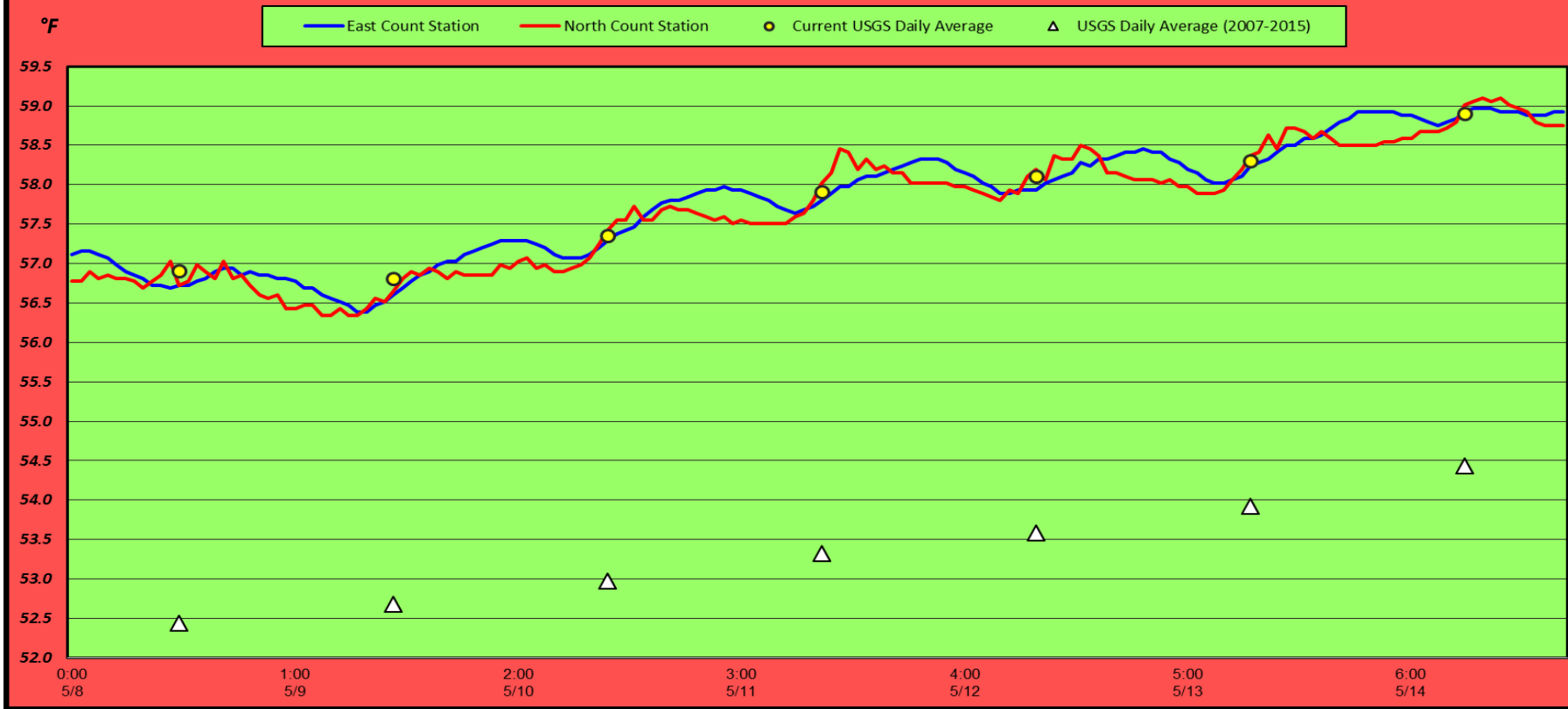
The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)



The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 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/201605.lcol.html>

Secchi:		Temperatures
4.0	Sun	56.90
4.0	Mon	56.80
3.5	Tue	57.35
3.5	Wed	57.90
4.5	Thurs	58.10
4.5	Fri	58.30
4.0	Sat	58.90
4.0	AVG	57.75

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

= Out of criteria

North Ladder			East Ladder											% Spill	
North Entrance			East Entrance				West Entrance				South Entrance				
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	
5/8			1.7	6.9	13.4	13.5	14.9	1.8	11.9	11.9		1.6	8.3	8.3	
	1.4	9.8	1.8	7.1	14.6	14.6	14.9	1.8	13.9	13.9		1.6	8.3	8.4	
	1.5	9.8	1.9	7.0	13.6	13.6	14.7	1.8	11.9	11.9		1.4	8.2	8.2	
5/9			1.5	6.9	13.4	13.4	12.7	1.6	12.0	12.0		1.5	8.3	8.3	
	0.9	9.8	1.6	8.0	13.5	13.5	13.1	1.5	12.6	12.6		1.5	8.3	8.3	
	1.6	10.4	1.5	7.1	13.5	14.3	13.9	1.4	12.5	12.5		1.5	8.4	8.4	
5/10			1.7	8.1	13.6	13.6	14.8	1.6	12.5	12.5		1.5	8.3	8.3	
	1.6	9.9	1.6	8.9	13.5	13.5	14.5	1.6	12.9	12.9		1.5	8.3	8.3	
	1.7	9.9	1.7	8.9	13.5	13.5	14.5	1.6	8.1	8.1		1.6	8.1	8.1	
5/11			1.4	7.3	13.6	13.6	12.8	1.3	11.8	11.8		1.7	8.3	8.3	
	1.4	10.1	1.3	8.9	13.5	13.5	13.0	1.3	11.0	11.0		1.5	8.3	8.3	
	1.5	10.1	1.4	6.4	13.4	13.4	12.7	1.4	10.5	10.4		1.4	8.4	8.4	
5/12			1.6	6.5	13.5	13.5	11.6	1.4	10.6	10.6		1.4	8.3	8.3	
	1.5	10.1	1.4	6.5	13.6	13.6	11.7	1.4	10.5	10.5		1.5	8.2	8.2	
	1.5	10.3	1.5	6.6	13.6	13.6	11.6	1.4	10.1	10.1		1.5	8.3	8.3	
5/13			1.6	6.5	13.5	13.5	11.9	1.5	9.9	9.9	1.5	8.2	8.2		
	1.4	10.2	1.5	6.5	13.5	13.5	11.8	1.5	10.1	10.1	1.5	8.3	8.3		
	1.4	10.2	1.5	6.4	13.5	13.5	14.1	1.4	10.0	10.0	1.5	8.2	8.2		
5/14			1.3	6.4	13.3	13.3		1.5	10.2	10.2	1.5	8.2	8.2		
	1.4	10.1	1.5	5.5	13.0	13.0	13.7	1.5	9.9	9.9	1.5	8.3	8.3		
	1.4	10.2	1.4	5.5	12.9	13.0	14.1	1.5	9.9	9.9	1.5	8.3	8.4		
AVG:	1.4	10.1	1.5	7.0	13.5	13.5	13.4	1.5	11.1	11.1		1.5	8.3	8.3	39.7

Fishways are inspected twice daily plus one SCADA inspection.



Approximate 200 ft Buffer from East Fish Ladder Exit
Managed waters at The Dalles Lock and Dam
U.S. Army Corps of Engineers



Pink line is 200' proposed boundary marking on rocks. Washington state to decide distance.