

The Dalles Dam Fishway Status Report

3/22/2015

Inspection Period: 3/15/2015 to 3/21/2015

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: 14		Temperature: 45.4 F
			Comments		Secchi: 4.9 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'	Daily differentials and weir depths, see AVGS tab.		
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'	out of criteria at 1.2'		
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Junction pool weir JP6	0	depth (≥ 7')	Average	11.3	
East entrance differential	0	1.0' - 2.0'	Average	1.2	
Entrance weir E1	0	No criteria	Average	5.6	Manually adjusted as needed.
Entrance weir E2	0	depth (≥ 8')	Average	11.4	
Entrance weir E3	0	depth (≥ 8')	Average	11.9	
Collection channel velocity	0	1.5 - 4 fps	Average	3.0	
Transportation channel velocity	0	1.5 - 4 fps	Average	3.2	
North channel velocity	0	1.5 - 4 fps	Average	2.6	
South channel velocity	0	1.5 - 4 fps	Average	3.9	
West entrance differential	0	1.0' - 2.0'	Average	1.6	
Entrance weir W1	0	depth (≥ 8')	Average	10.8	
Entrance weir W2	0	depth (≥ 8')	Average	10.5	
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	9.5	
Entrance weir S2	0	depth (≥ 8')	Average	9.6	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 18	Sluiceways 1-2,1-3,18-1, &18-2 are open		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0-0.7'		
Spill volume	On Seal.				
Spill Pattern					
Turbine Unit Priority.	0	per FPP	West to east block priority starts Apr 1		
Turbine 1% Efficiency	0	per FPP			

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

Bird observation data collected once daily. Refer to Avian Zone Map.

Operations:

Calibration check 3/17. East exit weir 158 found out, E2,E3, South differential and tail water numbers off. Maintenance corrected

South entrance weirs auto failure. Operating in manual mode.

Gatewell drawdown completed on 3/16. All values were within criteria.

SCADA computer is out of service and return of service is unknown.

F1 and F2 taken out one at a time on Mar18 to address governor oil leak and check brushes. Approx 1 hour each. Entrance criteria maintained.

Current Outages:

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

MU8 out of service 2/2/2015 to 3/26/2015 for overhaul.

Navigation out of service for annual maintenance 3/7 - 3/21/2015. Upstream gate area dewatered. No fish found

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 prep work completed. 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 wire rope replacement, HDC update 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.

Studies:

North fishladder rock stabilization project. No new development.

North fish count station mods completed for visibility improvement. March video recording underway. Evaluation to follow.

East AWS backup (auxiliary water system) plans and specifications underway. Additional measurements include a hydroacoustic survey of the forebay wall at the construction location for the intake structure and additional wall measurements Apr 9-10.

PUD 'freedom' second turbine; Field test proposal summer 2015 reviewed. COE comments submitted.

Research/Contractors:

ODFW to start monthly fishway inspections of adult and juvenile passage systems Mar 24.

Normandea fish counters to start Apr 1. Pre-season meeting to occur Mar 24.

USGS planning to install the TDG equipment Wednesday, Mar 18.

University of Idaho maintaining antennas. Continuing downloads of winter steelhead.

Research approval letters forwarded for; ODFW forbay Northern Pikeminnow Management Program, PSMFC sampling at PUD intake structure, University of Idaho monitoring fallback movements of steelhead outfitted with radio tags and adult Pacific Lamprey outfitted with half-duplex PIT tags, PSMFC for monitoring and maintaining thin walled PIT tag antennas and computer equipment and USGS total dissolved gas monitoring .

Scheduling for EFL AWS backup, crane rail rehab and deck rail replacement bing determined for next winter. FPOM coordination expected.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

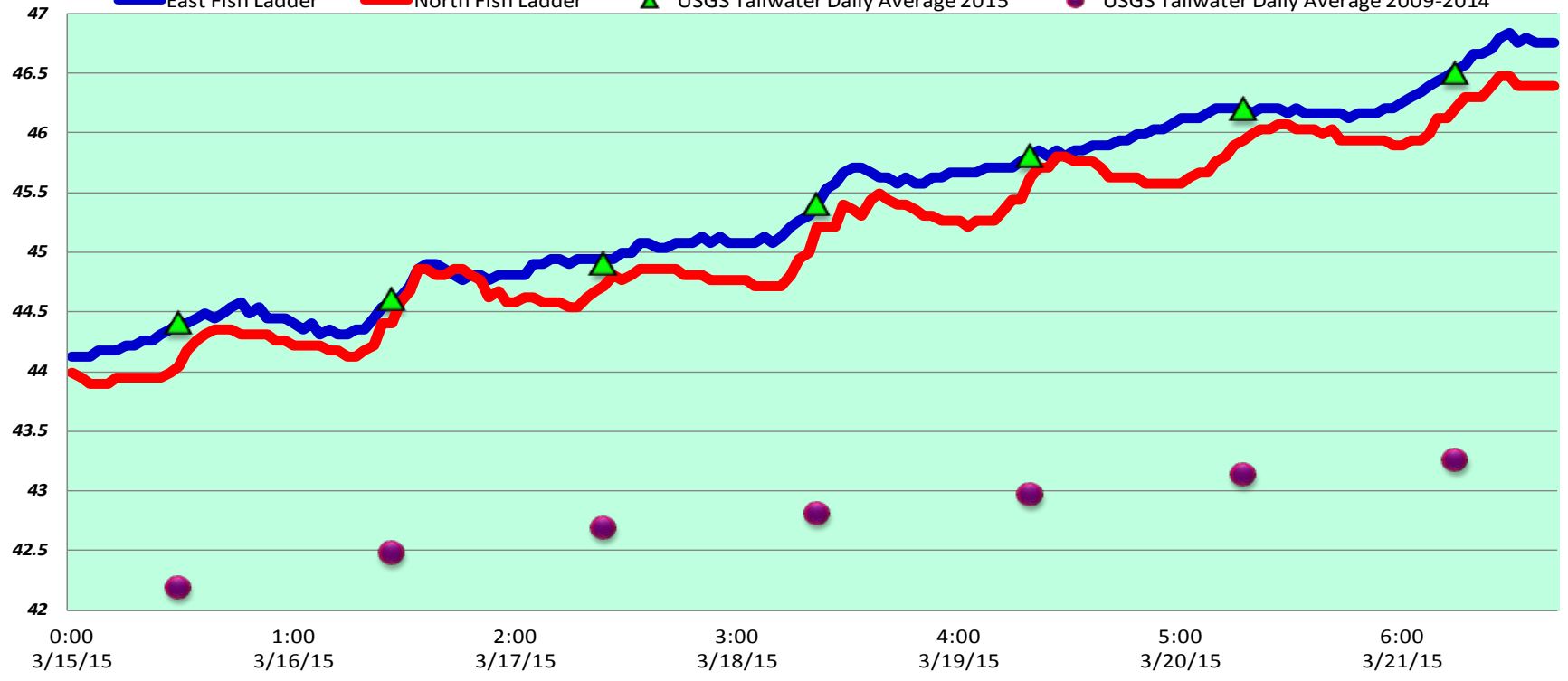


Avian lines in yellow, zones in red, river flow in blue.

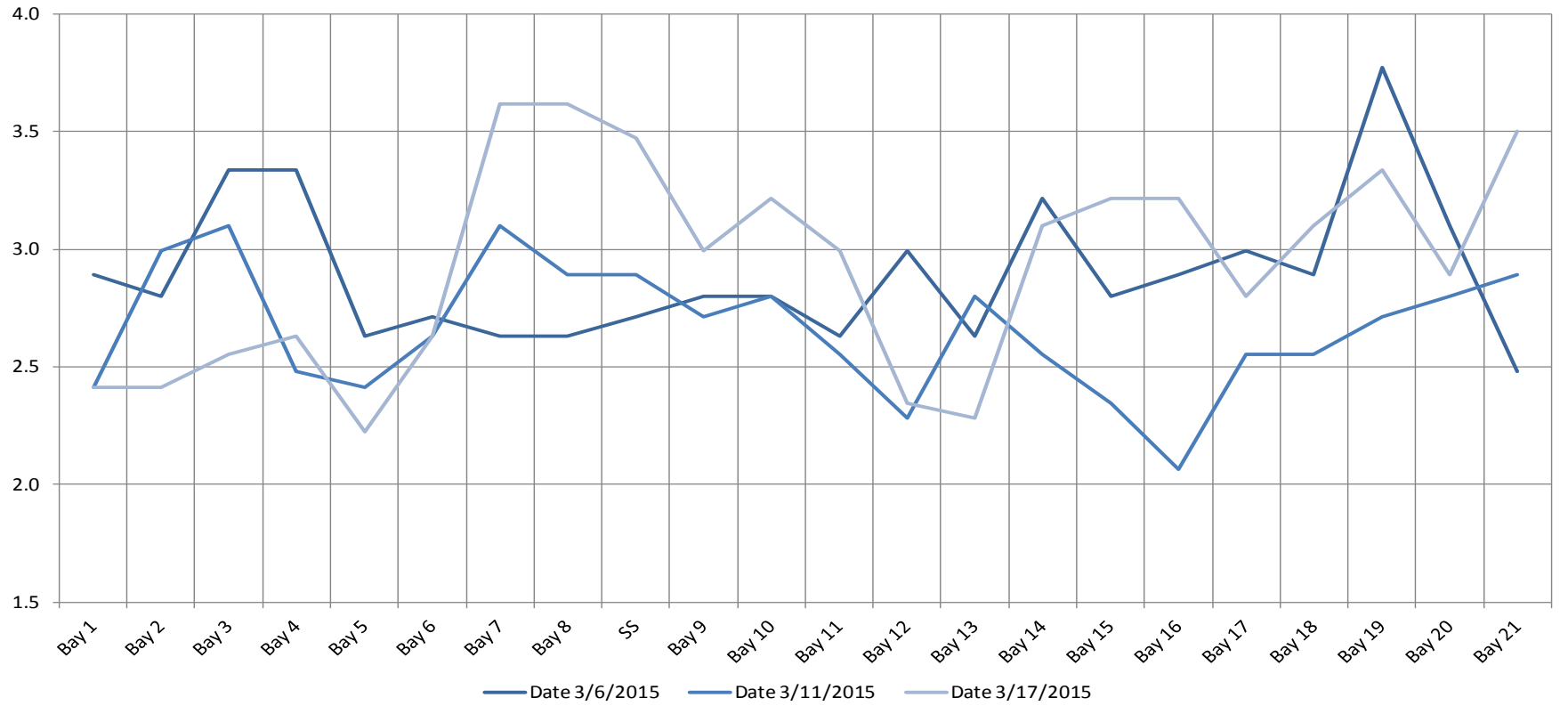
The Dalles Dam River/Water Temperatures

°F

— East Fish Ladder — North Fish Ladder ▲ USGS Tailwater Daily Average 2015 ● USGS Tailwater Daily Average 2009-2014



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



Temperatures

44.4
44.6
44.9
45.4
45.8
46.2
46.5
AVG: 45.4

Sun
Mon
Tue
Wed
Thurs
Fri
Sat
AVG

Secchi:

5.0
5.0
4.5
5.0
5.0
5.0
5.0
AVG 4.93

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

= Out of criteria

North Ladder			East Ladder												Spill KCFS
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	
3/15/15	1.4	9.3	1.2	4.1	11.9	12.0	9.5	1.3	10.6	10.5		1.3	9.4	9.5	
	1.4	9.2	1.2	4.8	12.0	12.0	9.0	1.4	10.5	10.5		1.3	9.5	9.6	
3/16/15	1.5	9.1	1.2	7.7	12.0	11.9	11.9	1.8	9.5	10.4		1.5	9.4	9.5	
	1.4	9.4	1.5	4.9	11.8	10.3	10.2	1.4	10.5	10.2		1.4	9.6	9.5	
3/17/15	1.4	9.5	1.5	5.1	12.1	11.9	11.8	1.7	10.5	11.1		1.5	9.6	9.4	
	1.4	9.4	1.3	4.8	12.0	11.6	11.5	1.6	10.5	10.9		1.4	9.6	9.7	
3/18/15	1.4	9.5	1.6	4.0	12.0	11.8	10.7	1.5	10.7	11.1		1.5	9.5	9.4	
	1.4	9.5	0.5		8.3	8.8	10.8	3.4	9.4	2.1		1.0	9.5	9.6	
3/19/15	1.5	9.4	1.1	9.0	12.1	12.2	13.3	2.0	10.0	10.0		1.4	9.5	9.5	
	1.5	9.5	1.2	4.9	11.9	13.6	12.7	1.4	12.0	12.0		1.4	9.5	9.4	
3/20/15	1.5	9.5	1.1	4.9	11.9	13.0	12.4	1.4	12.1	12.1		1.3	9.7	9.6	
	1.4	9.4	1.1	7.1	12.0	12.7	11.8	1.3	11.9	12.0		1.4	9.4	10.3	
3/21/15	1.4	9.5	1.5	6.9	9.0	11.9	11.0	1.3	12.0	12.0		1.4	9.5	9.6	
	1.4	9.5	1.4	5.0	11.1	12.2	11.3	1.4	11.5	11.5		1.4	9.5	9.5	
AVG:	1.4	9.4	1.2	5.6	11.4	11.9	11.3	1.6	10.8	10.5	No criteria	1.4	9.5	9.6	

O
n
s
e
a
l

Fishways are inspected twice daily plus one SCADA inspection; SCADA OOS, TDE working on repair. South entrance weirs auto failure, operating in manual mode.