

The Dalles Dam Fishway Status Report

4/6/2015

Inspection Period: 3/29/2015 to 4/4/2015

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: 18		Temperature: 48.0 F
			Comments		Secchi: 4.5 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	1.5	
Entrance weir N1	0	depth (≥ 8')	Average	9.5	
Entrance weir N2	0	Closed	Bulkhead installed.		
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	1	Per forebay	Auto adjusts 1' increments. OOC; weir 155 out at forebay 157.4'		
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	12.8	
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	1	depth (≥ 8')	Average	10.5 ; OOC at 7.8'	
Entrance weir E3	0	depth (≥ 8')	Average	12.6	
Collection channel velocity	0	1.5 - 4 fps	Average	3.5	
Transportation channel velocity	0	1.5 - 4 fps	Average	3.2	
North channel velocity	0	1.5 - 4 fps	Average	2.3	
South channel velocity	0	1.5 - 4 fps	Average	4.0	
West entrance differential	0	1.0' - 2.0'	Average	1.6	
Entrance weir W1	0	depth (≥ 8')	Average	12.5	
Entrance weir W2	0	depth (≥ 8')	Average	12.5	
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	9.7	
Entrance weir S2	0	depth (≥ 8')	Average	9.7	
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18	Sluiceways 1-1, 1-2, 1-3, 8-1, 8-2, 18-2 open.		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.3' - 0.8'.		
Spill volume			Spill starts Apr 10.		
Spill Pattern					
Turbine Unit Priority.	0	per FPP	West to east block priority started Apr 1		
Turbine 1% Efficiency	0	per FPP			

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map. California sea lion observed 3/30 and 4/1 (C014) near west entrance. No sightings inside fishway entrance to date.

Operations:

Calibration check 3/30. East exit weir 158 found out of criteria, maintenance corrected.
Gatewell drawdown completed on 3/30. All values were within criteria.
SCADA computer repair completed 4/1
Main Unit 1 was returned to service 4/2.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017.
MU2 out of service 3/23/2015 to 4/6/2015 for Annual.
MU6 out of service 3/30/2015 to 5/7/2015 for overhaul.

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.

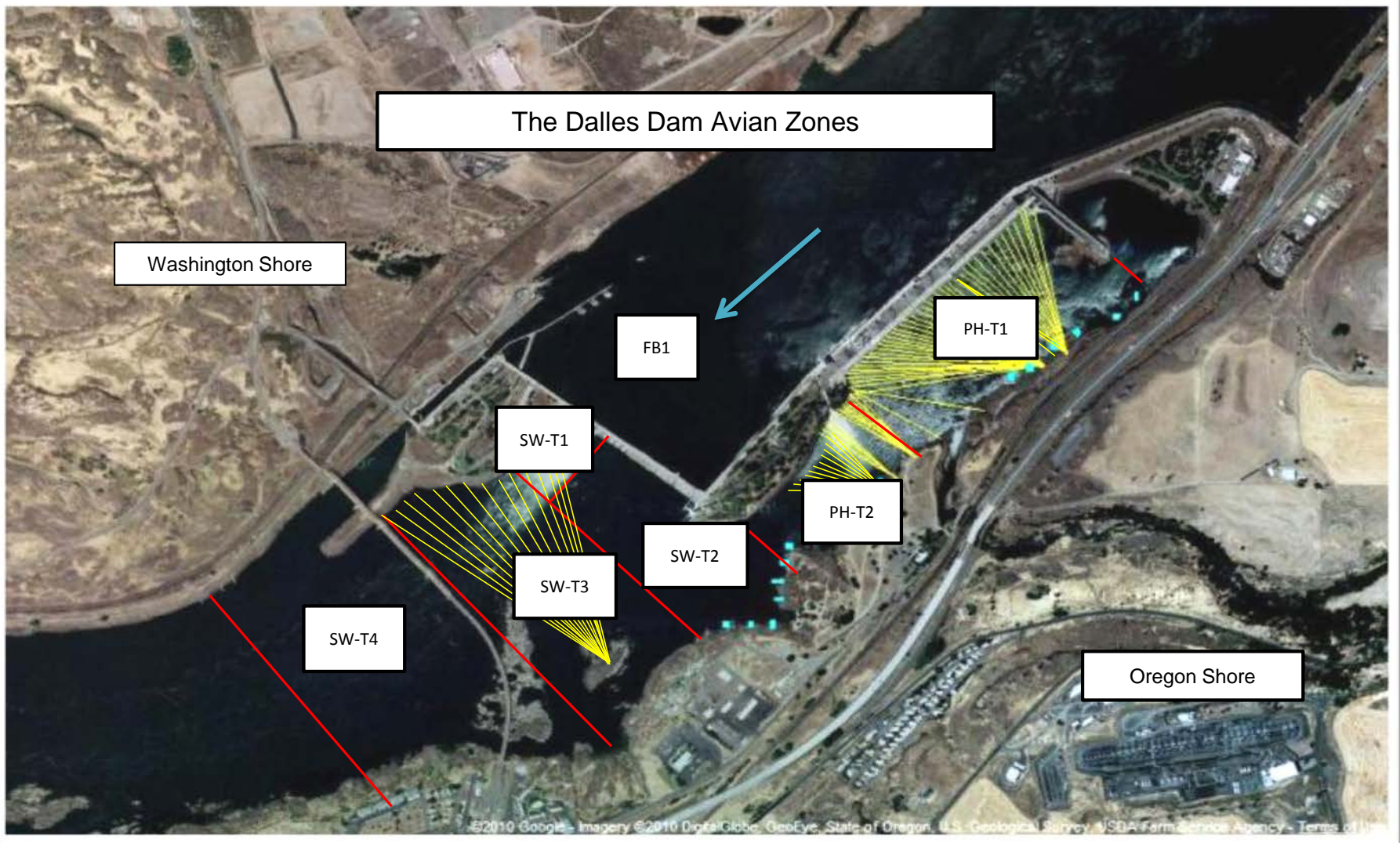
Studies:

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. Hydroacoustic survey of the forebay wall Apr 9 and 10.
PUD 'freedom' second turbine study proposal cancelled until further notice.

Research/Contractors:

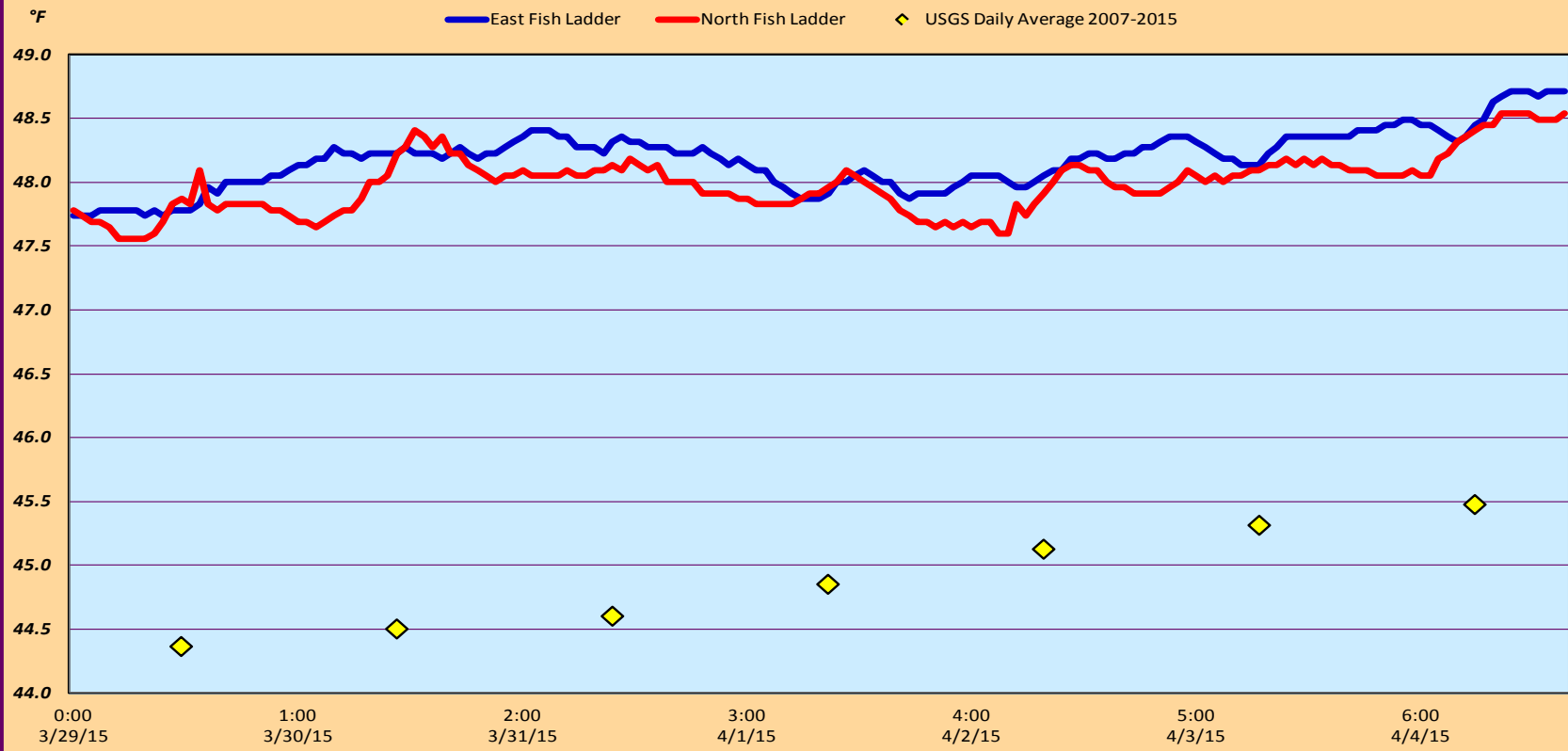
Normandeau fish counters computer training, project specific training and fish identification training completed; counting started Apr 1.
WDFW to conduct hook and line removals of predatory northern pikeminnow from the BRZ adjacent to the project 5/1/2015 through 10/15/2015.
USGS equipment installed Mar 18 for total dissolved gas monitoring,
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 being determined for next winter. FPOM coordination expected.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam

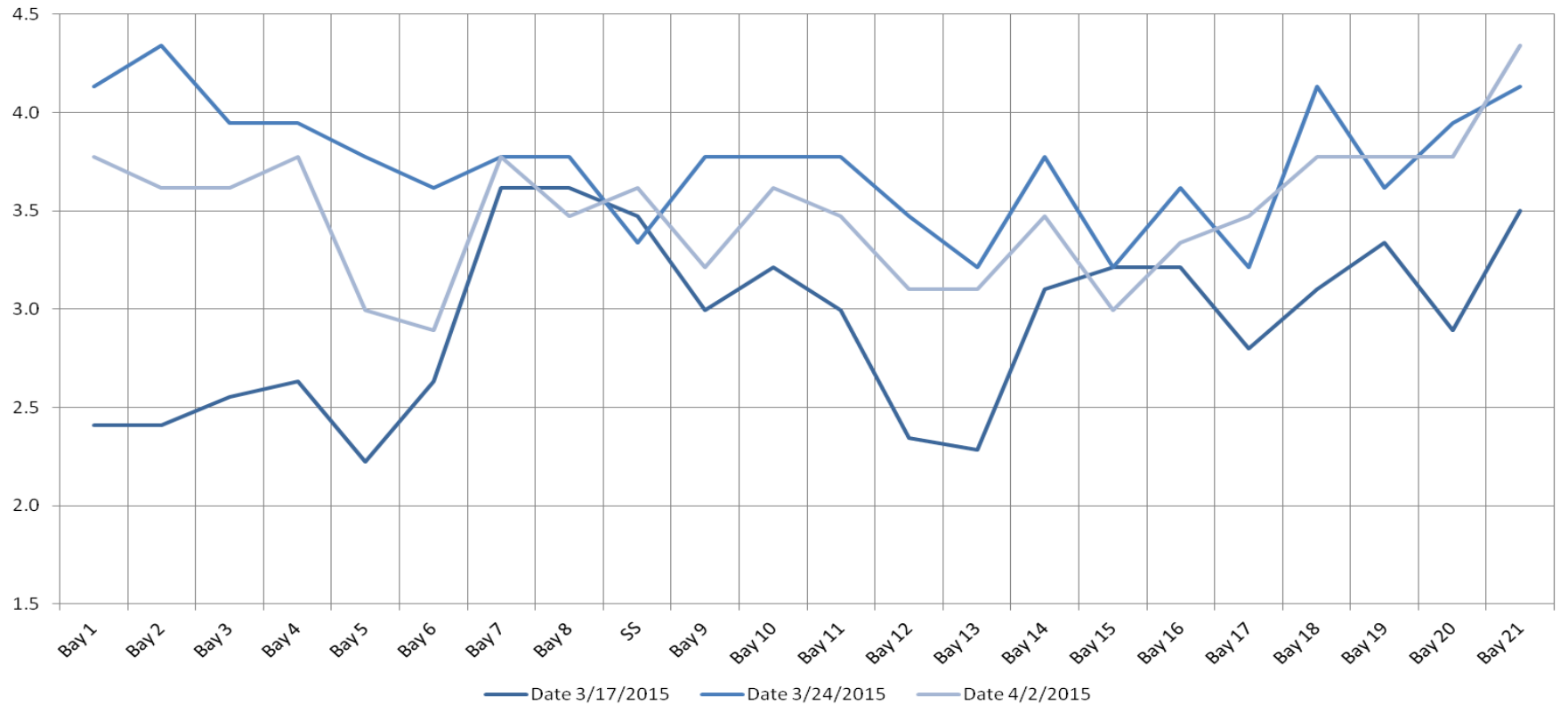


Avian lines in yellow, zones in red, river flow in blue.

The Dalles Dam Adult Fish Ladder and River/Water Temperatures



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



Temperatures

47.8
47.8
48.1
48.2
47.9
48.0
48.2
AVG: 48.0

Sun
Mon
Tue
Wed
Thurs
Fri
Sat
AVG

Secchi:

5.0
5.0
5.0
4.0
4.0
4.5
4.3
AVG 4.5

**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	
3/29/15	1.4	9.4	1.5	0.7	11.9	11.9	13.4	1.7	12.0	12.0		1.7	9.4	9.5	
	1.5	9.4	1.4	0.8	12.1	12.2	13.6	1.7	12.0	12.0		1.7	9.4	9.4	
3/30/15	1.5	9.4	1.6		12.1	12.1	13.1	1.6	12.2	12.1		1.5	9.5	9.5	
	1.4	10.4	1.6	0.1	12.1	12.0	13.1	1.6	12.0	12.0	0.7	1.6	9.6	9.6	
3/31/15	1.4	9.1	1.7	0.2	12.0	12.0	13.2	1.8	12.0	12.0	0.7	1.5	9.6	9.6	
	1.5	9.4	1.7	0.2	11.9	11.9	13.2	1.7	12.5	12.4	0.7	1.5	9.5	9.4	
4/1/15	1.4	9.6	1.4	-1.8	12.9	12.0	10.5	1.5	11.7	11.6	-1.8	1.2	10.2	10.1	
	1.8	9.6	1.5	3.5	9.4	12.1	11.0	1.6	11.0	10.9		1.4	10.1	10.0	
4/2/15	1.4	9.6	1.7	0.5	8.9	13.1	12.0	1.6	12.0	12.0	-0.7	1.4	10.0	10.0	
	1.5	9.4	1.6		10.9	12.5	11.4	1.5	11.9	12.0		1.3	10.1	10.1	
4/3/15	1.5	9.4	1.6	1.6	9.5	12.4	13.1	1.5	13.5	13.6	0.6	1.5	9.5	9.5	
	1.4	9.5	1.5	1.9	9.4	11.7	13.4	1.5	13.4	13.6	0.8	1.5	9.4	9.4	
4/4/15	1.4	9.4	1.2	2.8	9.4	13.6	14.3	1.5	13.5	13.5	1.6	1.6	9.5	9.5	
	1.4	9.5	1.4	2.3	8.0	14.2	13.8	1.6	13.5	13.5	1.1	1.6	9.5	9.5	
AVG:	1.5	9.5	1.5	No criteria	10.5	12.6	12.8	1.6	12.5	12.5	No criteria	1.5	9.7	9.7	

On sea l

Fishways are inspected twice daily plus one SCADA inspection, SCADA RTS 4/1/2015