

# The Dalles Dam Fishway Status Report

# THE DALLES DAM

2/22/2015  
 Inspection Period: 2/15/2015 to 2/21/2015



**US Army Corps  
 of Engineers**  
 Portland District

The Dalles Project-Fisheries  
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*Fishways are inspected once per day during the winter maintenance period.*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7	Temperature: 42.1 F
			Comments	Secchi: 3.1 feet
<b>NORTH FISHWAY - Out of Service Feb 2, 2015 through Feb 24, 2015 for winter maintenance.</b>				
Exit differential	NA	≤ 0.5'		
Count station differential	NA	≤ 0.3'		
Weir crest depth	NA	1.0' ± 0.1'		
Entrance differential	NA	1.0' - 2.0'	Average	Daily differentials and weir depths, see AVGS tab.
Entrance weir N1	NA	depth (≥ 8')	Average	
Entrance weir N2	NA	Closed		Bulkhead installed.
PUD Intake differential	NA	≤ 0.5'	Average	
<b>EAST FISHWAY</b>				
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'		
Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	depth (≥ 7')	Average	12.7
East entrance differential	0	1.0' - 2.0'	Average	1.6
Entrance weir E1	0	No criteria	Average	3.1 Manually adjusted as needed.
Entrance weir E2	0	depth (≥ 8')	Average	11.7
Entrance weir E3	0	depth (≥ 8')	Average	11.6
Collection channel velocity	NA	1.5 - 4 fps	Average	
Transportation channel velocity	NA	1.5 - 4 fps	Average	Fishway velocities concluded Dec 1 and will resume Mar 1, 2015 as per Fish Passage Plan.
North channel velocity	NA	1.5 - 4 fps	Average	
South channel velocity	NA	1.5 - 4 fps	Average	
West entrance differential	0	1.0' - 2.0'	Average	1.6
Entrance weir W1	0	depth (≥ 8')	Average	10.6
Entrance weir W2	0	depth (≥ 8')	Average	10.6
Entrance weir W3	0	No criteria	Average	2.5 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	11.7
<b>JUVENILE PASSAGE</b>				
Sluicgate operation	0	per FPP		Sluicgates 1-1 and 18-3 are open to forebay, endgate is closed
Turbine trashrack drawdown	NA	<1.5', wkly		Resume on March 1
Spill volume	NA	40% ±1%	Average	On seal.
Spill Pattern	NA	per FPP	Spillbay	On seal.
Turbine Unit Priority.	NA	per FPP		Fish passage season resumes March1
Turbine 1% Efficiency	NA	per FPP		Fish passage season resumes March1

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

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

**Operations:**

Gateway drawdown and routine weir calibrations to resume March 1, 2015.

**Current Outages:**

T8 (MU15 & MU16) de-rated to single unit full load ops through 9/14/2017.

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

North fish ladder out of service 2/3/2015 to 2/26/2015 for Annual.

**Maintenance:**

East exit weirs calibrated.

Half of east fishway entrance weirs rehabbed with new wheels. 1 of 8 east entrance weir guides rehabbed.

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. Installation planned for next outage season.

North fishway tree removal from ladder walls in progress. Expect completion week of Feb 23.

PMs complete on north count station equipment.

*Future repair plans*; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel 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 development team site visit completed Feb 18. Alternatives for repair to follow. Will be provided to FPOM.

Investigating PIT tag 15 mile creek steelhead overshooting The Dalles. FPOM discussion continues.

Investigating north fish count station mods for visibility improvement and use of video. Equipment purchase underway. Install Feb for testing in March.

EFL Backup; Plans/Specs underway. Includes 10' pipe from forebay to AWS. A 1400cfs flow test planned Feb 23. Coordinated through FPOM.

PUD 'freedom' second turbine; Field test proposal summer 2015 proposed through FPOM and SRWG. Rock plunge pool inspection Feb 16

Spill test for more fish passage to north fishladder completed using fish counts. Potential benefit. FPOM discussion to continue for when to implement.

**Research/Contractors:**

PSMFC PIT tag monitoring continues at north count station.

Normandeau fish counters to resume Apr1.

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

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



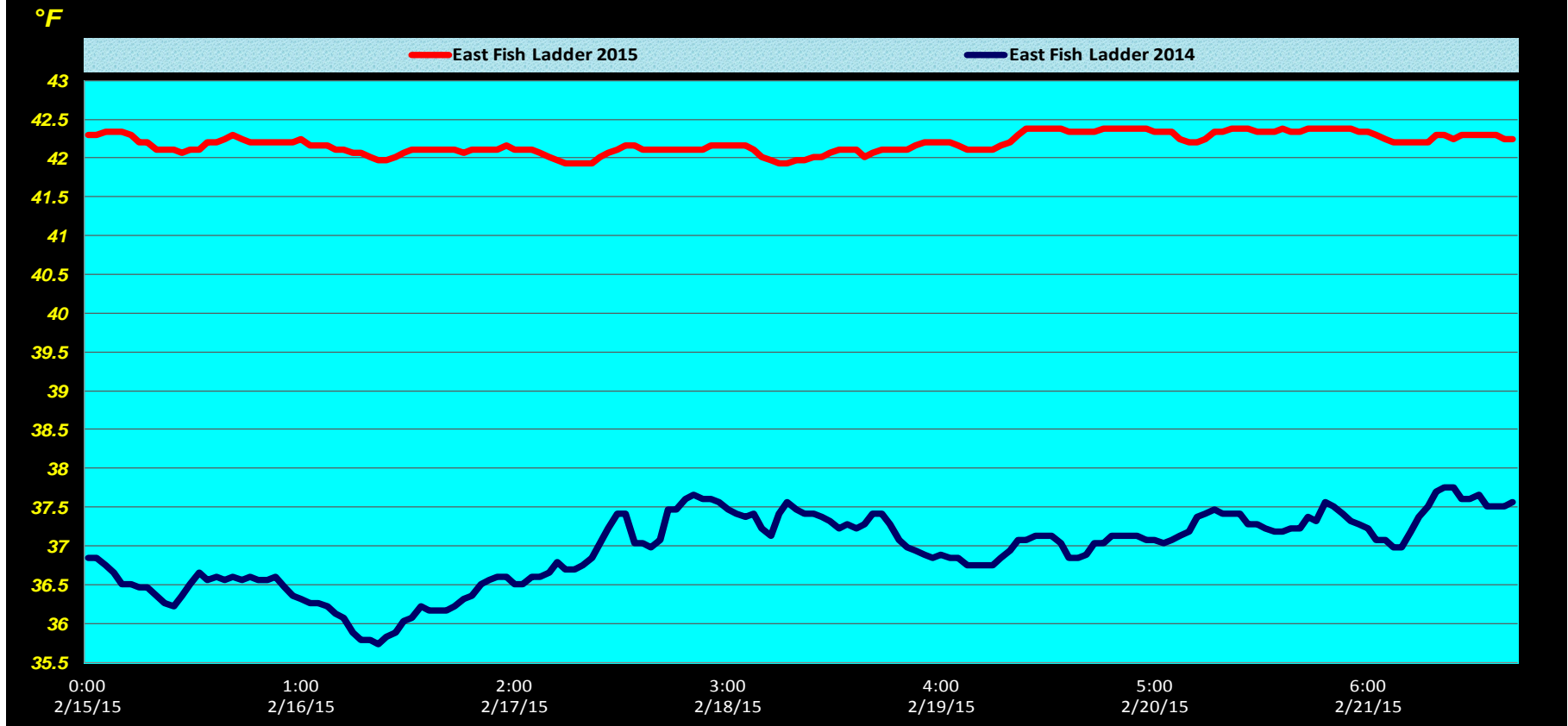
Avian lines in yellow, zones in red, river flow in blue.

## 2015 Piscivorous Bird Counts

*F=foraging, NF=non-foraging*

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Other		Total birds in	Notes
				F	NF	F	NF	F	NF	F	NF		
2/15/15	EK	9:49	FB	0	0	0	0	0	0	0	1	1	1 BAEA
		8:34	PH1	0	1	0	0	0	0	0	0	1	1 GBH & 1 BAEA
		8:48	PH2	0	0	0	0	0	0	0	2	2	
		9:50	SW1	0	10	0	0	0	0	0	0	10	1 BAEA
		8:53	SW2	0	0	0	0	0	0	0	0	0	
		8:56	SW3	0	4	0	28	0	0	0	1	33	
		10:12	SW4	0	10	0	0	0	0	0	0	10	
2/16/15	EK	13:38	FB	0	2	0	0	0	0	0	1	3	1 BAEA
		13:01	PH1	0	0	0	0	0	0	0	0	0	
		13:18	PH2	0	0	0	0	0	0	0	0	0	
		15:51	SW1	0	69	0	0	0	0	0	0	69	
		13:21	SW2	0	0	0	0	0	0	0	0	0	
		13:23	SW3	0	0	0	22	0	0	0	0	22	
		13:24	SW4	0	28	0	3	0	0	0	0	31	
2/17/15	PSK	15:36	FB	0	2	0	0	0	0	0	3	5	3 ducks
		13:58	PH1	0	0	0	0	0	0	0	0	0	1 GBHE ducks
		13:12	PH2	0	0	0	0	0	0	0	0	0	
		15:34	SW1	0	26	0	0	0	0	0	1	27	
		14:20	SW2	0	0	0	0	0	0	0	21	21	
		14:22	SW3	0	0	0	24	0	0	0	0	24	
		15:43	SW4	0	35	0	1	0	0	0	0	36	
2/18/15	PSK		FB	0	0	0	0	0	0	0	13	13	ducks
			PH1	0	0	0	2	0	0	0	1	3	duck
			PH2	0	0	0	0	0	0	0	0	0	ducks 3 GBHE
			SW1	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	36	36	
			SW3	0	0	0	13	0	0	0	3	16	
			SW4	0	0	0	0	0	0	0	0	0	
2/21/15	JWR	10:11	FB	0	0	1	0	0	0	0	2	3	BAEA
		8:37	PH1	0	0	0	0	0	0	0	0	0	
		8:44	PH2	0	0	0	0	0	0	0	0	0	
		10:09	SW1	0	13	0	0	0	0	0	0	13	
		9:03	SW2	0	0	1	0	0	0	0	0	1	
		9:05	SW3	0	2	0	18	0	0	0	0	20	
		10:05	SW4	0	28	0	0	0	0	0	0	28	

# The Dalles Dam East Fish Ladder River/Water Temperatures



Early start to river temp increases.

Temperatures

42.1
42.0
42.0
42.0
42.2
42.4
42.3
AVG: 42.1

Secchi:

3.0
3.0
3.5
3.0
3.0
AVG 3.1

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

= Out of criteria

<b>North Ladder</b>		<b>East Ladder</b>													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	
2/15/15			1.7	3.0	11.5	11.4	14.1	1.8	10.1	10.1	5.1	1.4	10.8	12.8	
2/16/15			1.7	3.0	11.4	11.4	12.6	1.6	10.1	10.0		1.6	9.8	11.8	
2/17/15			1.6	3.1	11.5	11.5	11.7					1.7	9.0	9.0	
2/18/15		<b>North ladder out of service for winter maintenance Feb 3, 2015 to Feb 26, 2016</b>	1.5	3.0	11.6	11.5	11.8	1.4	9.7	9.7	4.6	1.5	8.9	10.9	
2/19/15			1.6	3.1	11.6	11.5	10.8	1.5	10.1	10.1	1.0	1.5	8.7	10.7	
2/20/15			1.7	3.1	11.7	11.6	14.4	1.6	12.1	12.1	1.0	1.3	11.7	13.7	
2/21/15			1.7	3.1	12.4	12.4	13.5	1.6	11.5	11.5	1.0	1.6	8.8	12.8	
AVG:				1.6	3.1	11.7	11.6	12.7	1.6	10.6	10.6	2.5	1.5	9.7	11.7

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