

# The Dalles Dam Fishway Status Report

# THE DALLES DAM

2/28/2015  
 Inspection Period: 2/22/2015 to 2/28/2015



**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: 6		Temperature: 42.0 F
			Comments		Secchi: 2.9 feet
<b>NORTH FISHWAY - Out of Service Feb 2, 2015 through Feb 26, 2015 for winter maintenance.</b>					
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	1.3	Daily differentials and weir depths, see AVGS tab.
Entrance weir N1	0	depth (≥ 8')	Average	9.9	
Entrance weir N2	0	Closed	Bulkhead installed.		
PUD Intake differential	0	≤ 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	11.9	
East entrance differential	0	1.0' - 2.0'	Average	1.7	
Entrance weir E1	0	No criteria	Average	4.2	Manually adjusted as needed.
Entrance weir E2	0	depth (≥ 8')	Average	11.4	
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	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	11.5	
Entrance weir W2	0	depth (≥ 8')	Average	11.5	
Entrance weir W3	0	No criteria	Average	0.0	Manually adjusted as needed.
South entrance differential	0	1.0' - 2.0'	Average	1.4	
Entrance weir S1	0	depth (≥ 8')	Average	13.1	
Entrance weir S2	5	depth (≥ 8')	Average	12.9	S2 auto failure, maintenance notified. S1 maintaining diff criteria
<b>JUVENILE PASSAGE</b>					
Sluiceway operation	0	per FPP	Sluiceways 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:**

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

S2 automation failed. S1 is running deeper at ~14' and the entrance is maintaining criteria differential.

**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:**

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 completed.

PMs complete on north count station equipment.

*Future repair plans*; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair 6 east and 7 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 development team site visit completed. Alternatives for repair to follow. Updates to be provided to FPOM.

Investigating PIT tag 15 mile creek steelhead overshooting The Dalles. Possible affect from Feb 19 sluiceway operation. 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 inspected.

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

Temperatures

42.1
41.9
41.9
42.1
42.1
42.1
41.9
AVG: 42.0

Secchi:

2.5
3.0
3.0
3.0
3.0
AVG 2.9

**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	
2/22/15			1.6	2.8	11.8	11.8	13.3	1.7	11.2	11.4		1.6	8.9	12.9	
2/23/15															
2/24/15			1.9	3.0	12.0	12.0	11.7	1.6	11.6	11.4		1.3	14.3		
2/25/15			1.6	4.9	11.4	11.5	12.4	1.5	11.4	11.4		1.2	14.4		
2/26/15			1.5	4.8	11.4	11.4	10.9	1.3	11.5	11.5		1.5	12.9		
2/27/15	1.3	10.0	1.7	5.0	11.5	11.6	12.1	1.6	11.5	11.6		1.3	14.3		
2/28/15	1.3	9.8	1.7	4.9	10.2	11.3	10.9	1.5	11.5	11.5		1.3	13.7		
AVG:	1.3	9.9	1.7	4.2	11.4	11.6	11.9	1.5	11.5	11.5		1.4	13.1	12.9	

**North ladder out of service for winter maintenance Feb 3, 2015 to Feb 26, 2016**

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**Fishways are inspected once per day during the winter maintenance period.**



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

## 2015 Piscivorous Bird Counts

<i>F=foraging, NF=non-foraging</i>													
Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Other		Total birds in	Notes
				F	NF	F	NF	F	NF	F	NF		
2/22/15	JWR	8:50	FB	0	0	0	0	0	0	0	2	2	BAEA    GBHE
		8:17	PH1	0	0	0	0	0	0	0	0	0	
		8:24	PH2	0	0	0	0	0	0	0	0	0	
		8:46	SW1	0	0	0	0	0	0	0	0	0	
		8:26	SW2	0	0	0	0	0	0	0	0	0	
		8:27	SW3	0	0	0	18	0	0	0	0	1	
8:28	SW4	0	0	0	0	0	0	0	0	0	0		
2/24/15	JWR	13:14	FB	0	0	0	0	0	0	0	2	2	BAEA
		12:51	PH1	0	1	0	0	0	0	0	0	1	
		12:58	PH2	0	0	1	0	0	0	0	0	1	
		13:08	SW1	0	0	0	0	0	0	0	0	0	
		13:02	SW2	0	0	0	0	0	0	0	0	0	
		13:04	SW3	0	16	0	22	0	0	0	0	0	
13:05	SW4	0	0	0	0	0	0	0	0	0	0		
2/25/15	JWR	10:46	FB	0	0	0	0	0	0	0	1	1	BAEA
		9:45	PH1	0	0	0	0	0	0	0	0	0	
		9:49	PH2	0	0	0	0	0	0	0	0	0	
		10:32	SW1	0	0	0	0	0	0	0	0	0	
		9:53	SW2	0	0	0	0	0	0	0	0	0	
		9:54	SW3	0	0	0	20	0	0	0	0	0	
9:55	SW4	0	0	0	0	0	0	0	0	0	0		
2/25/15	PSK	14:34	FB	0	0	0	0	0	0	0	1	1	BAEA
		14:11	PH1	0	1	0	0	0	0	0	0	1	
		14:16	PH2	0	0	0	0	0	0	0	0	0	
		14:30	SW1	0	1	0	0	0	0	0	0	1	
		14:22	SW2	0	0	0	0	0	0	0	0	0	
		14:24	SW3	0	0	0	0	0	0	0	0	0	
14:46	SW4	0	0	0	0	0	0	0	0	0			
2/26/15	JWR	9:19	FB	0	0	0	0	0	0	0	0	0	minimal piscivorous present
		8:58	PH1	0	0	0	0	0	0	0	0	0	
		9:02	PH2	0	0	0	0	0	0	0	0	0	
		9:16	SW1	0	0	0	0	0	0	0	0	0	
		9:03	SW2	0	0	0	0	0	0	0	0	0	
		9:04	SW3	0	0	0	23	0	0	0	0	0	
9:05	SW4	0	0	0	0	0	0	0	0	0	0		
2/27/15	PSK	14:04	FB	0	0	0	0	0	0	0	0	0	
		13:00	PH1	0	0	0	1	0	0	0	0	1	
		13:19	PH2	0	0	0	0	0	0	0	0	0	
		14:08	SW1	0	0	0	0	0	0	0	0	0	
		13:19	SW2	0	0	0	0	0	0	0	0	0	
		13:22	SW3	0	0	0	9	0	0	0	0	0	
14:25	SW4	0	0	0	0	0	0	0	0	0	0		
2/28/15	EHK	9:29	FB	0	0	0	0	0	0	0	0	0	2 GBHE
		8:54	PH1	0	0	0	0	0	0	0	0	0	
		9:05	PH2	0	0	0	0	0	0	0	2	2	
		9:33	SW1	0	0	0	0	0	0	0	0	0	
		9:09	SW2	0	0	0	0	0	0	0	0	0	
		9:11	SW3	0	0	0	16	0	0	0	0	0	
9:12	SW4	0	0	0	0	0	0	0	0	0	0		

BAEA = Bald Eagle  
GBHE = Great Blue Heron

### The Dalles Dam Adult fish ladder and River/Water Temperatures

