

# The Dalles Dam Fishway Status Report

1/3/2015  
 Inspection Period: 12/28/2014 to 01/03/2015

## 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 once per day during the winter maintenance period.*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 7		Temperature: 43.4 F
			Comments		Secchi: > 4.6 feet
<b>NORTH FISHWAY</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	1.4	
Entrance weir N1	0	depth (≥ 8')	Average	9.3	
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
<b>EAST FISHWAY</b>					
Exit differential	NA	≤ 0.5'			
Removable weirs 154-157	NA	Per forebay	Auto adjusts 1' increments.		
Weir 158-159 differential	NA	1.0' ± 0.1'			
Count station differential	NA	≤ 0.3'			
Weir crest depth	NA	1.0' ± 0.1'			
Junction pool weir JP6	NA	depth (≥ 7')	Average	N/A	
East entrance differential	NA	1.0' - 2.0'	Average	N/A	
Entrance weir E1	NA	No criteria	Average	N/A	Manually adjusted as needed.
Entrance weir E2	NA	depth (≥ 8')	Average	N/A	
Entrance weir E3	NA	depth (≥ 8')	Average	N/A	
Collection channel velocity	NA	1.5 - 4 fps	Average	N/A	
Transportation channel velocity	NA	1.5 - 4 fps	Average	N/A	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	N/A	
South channel velocity	NA	1.5 - 4 fps	Average	N/A	
West entrance differential	NA	1.0' - 2.0'	Average	N/A	
Entrance weir W1	NA	depth (≥ 8')	Average	N/A	
Entrance weir W2	NA	depth (≥ 8')	Average	N/A	
Entrance weir W3	NA	No criteria	Closed		
South entrance differential	NA	1.0' - 2.0'	Average	N/A	
Entrance weir S1	NA	depth (≥ 8')	Average	N/A	
Entrance weir S2	NA	depth (≥ 8')	Average	N/A	
<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. Refer to Avian Zone Map.

**Operations:**

Gateway drawdown completed for the season and will resume March 1, 2015.

**Current Outages:**

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

East Fish Ladder out of service 12/1/2014 through end of Jan for annual maintenance.

Fish unit F1 out of service 12/1/2014 to 1/29/2015 for overhaul maintenance.

Fish unit F2 out of service 12/1/2014 to 1/15/2015 for annual maintenance.

**Maintenance:**

Exit weir 158 fabrication final assembly complete. Both installed in guides. Making final adjustments.

Extensive weir guide damage found on west and east entrances. Repair underway. Likely only one weir guide complete this year due to time constraint.

Three weirs removed for wheel replacement with high density plastic. Will also add plastic side blocks to keep weir alignment. Work began Dec 23.

Three collection channel dewatering pumps needing rehab were pulled on deck. Another is stuck making 2 of 6 not removable for repair.

Permanent east fishway exit boom delivered. Contract underway for installation before March. Further assessment for oil spill protection continues.

*Long term repair plans awaiting funding*; Upgrade east exit weirs 154-157, north fishladder rock stabilization, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels.

North fish ladder rock wall stabilization project assigned PM. Expect kickoff meeting and site visit in Feb.

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:**

Investigating PIT tag 15 mile creek steelhead overshooting The Dalles. Possible need for some winter sluiceway operation. MOC drafted for Jan FPOM.

Investigating de-icing alternatives and sensitive locations near fishways. SOP and area map in progress. Investigating deck drainage modifications.

Investigating north fish count station mods for visibility improvement and use of video to reduce fish counting cost. Equipment purchase underway.

EFL Backup; Plans/Specs 60% review underway. Includes 10' pipe from forebay to AWS. A 1400cfs flow test planned in Feb. Product Development

PUD 'freedom' second turbine proposal underway. Field test proposal for summer 2015 presented at Dec FPOM. Proposal moved to SRWG.

Spill test for more fish passage to north fishladder completed. Results showed benefit. FPOM discussion continues for when to implement.

District working on justification for spillgate 9 repair.

**Research/Contractors:**

PSMFC PIT tag monitoring continues at north count station. Outage maintenance as needed for east count station antenna.

Normandeau fish counters to resume Apr1. East bathroom minor upgrades planned this winter.

University of Idaho maintaining antennas. Continuing downloads of winter steelhead. East exit weir 158 plate touching half duplex antenna. Confirmed OK.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

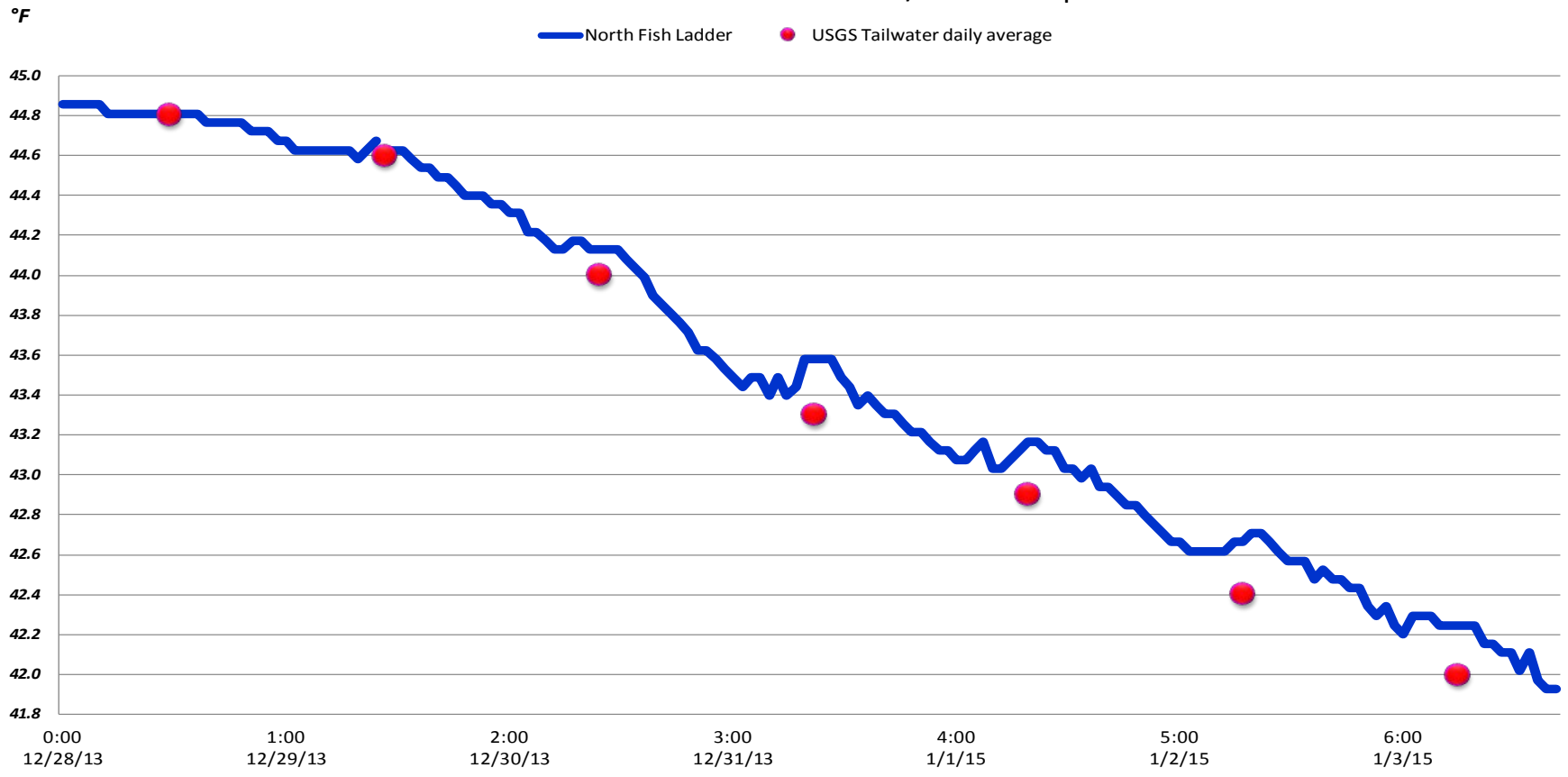


Avian lines in yellow, zones in red.

## Piscivorous Bird Counts

F=foraging, NF=non-foraging													
Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Other		Total birds in zone	Notes
				F	NF	F	NF	F	NF	F	NF		
12/28/14	JWR	9:29	FB	0	1	0	16	0	0	0	43	60	5 BAEA, 38 grebe COME 15 BAEA, 4 GBHE  BAEA BAEA
		9:08	PH1	0	0	0	0	0	0	0	14	14	
		9:16	PH2	0	0	0	0	0	0	0	19	19	
		9:31	SW1	0	9	0	0	0	0	0	0	9	
		9:19	SW2	0	2	0	0	0	0	1	0	3	
		9:21	SW3	0	1	0	86	0	0	0	3	90	
		9:24	SW4	4	0	0	4	0	0	0	0	8	
12/29/14	PSK	14:54	FB	0	0	0	16	0	0	0	6	22	4 GREBE, 2 AWPE 17 COME 15 BAEA, 1BAEA GULL on spillwall COME
		13:51	PH1	0	0	0	11	0	0	0	17	28	
		13:59	PH2	0	0	0	0	0	0	1	15	16	
		15:11	SW1	0	88	0	0	0	0	0	0	88	
		14:05	SW2	0	0	0	0	0	0	0	1	1	
		14:11	SW3	0	18	0	72	0	0	0	0	90	
		15:24	SW4	0	19	0	9	0	0	0	0	28	
12/30/14	PSK	15:00	FB	0	0	0	7	0	0	3	54	64	3 BAEA , 54 GREBE NF COME BAEA 2 COME, 1 GBHE
		13:46	PH1	0	0	0	5	0	0	0	13	18	
		14:02	PH2	0	3	0	0	0	0	0	20	23	
		15:17	SW1	0	99	0	0	0	0	0	3	102	
		14:12	SW2	0	6	0	1	0	0	0	0	7	
		15:28	SW3	0	25	0	47	0	0	0	0	72	
		15:32	SW4	0	10	0	2	0	0	0	0	12	
12/31/14	PSK	11:18	FB	0	0	0	11	0	0	0	14	25	2 BAEA, 12 BREBE COME BAEA Resting on spillwall COME 1 GBHE, 8 COME
		9:17	PH1	0	0	0	11	0	0	0	2	13	
		9:31	PH2	0	0	0	0	0	0	0	31	31	
		11:16	SW1	0	20	0	0	0	0	0	0	20	
		9:36	SW2	0	1	0	0	0	0	0	1	2	
		9:40	SW3	0	11	0	64	0	0	0	9	84	
		11:36	SW4	0	5	0	0	0	0	0	0	5	
1/1/15	JWR	10:32	FB	0	2	4	9	0	0	0	34	49	10 BAEA, 24 grebe COME 16 BAEA, 2 GBHE BAEA
		10:03	PH1	2	0	0	2	0	0	0	3	7	
		10:15	PH2	2	0	0	0	0	0	0	18	20	
		10:26	SW1	0	18	0	0	0	0	0	1	19	
		10:16	SW2	0	0	0	0	0	0	0	0	0	
		10:18	SW3	0	14	0	67	0	0	0	0	81	
		10:23	SW4	0	0	0	1	0	0	0	0	1	
1/2/15	PSK	13:42	FB	0	7	0	0	0	0	44	51	1 BAEA, 43 GREBE COME 2 GBHE, 34 BAEA GBHE COME	
		13:12	PH1	0	0	1	1	0	0	0	10		12
		13:19	PH2	0	0	0	0	0	0	0	36		36
		13:44	SW1	0	1	0	0	0	0	0	1		2
		13:24	SW2	0	0	0	0	0	0	0	1		1
		13:28	SW3	0	0	0	21	0	0	0	0		21
		14:00	SW4	0	12	0	42	0	0	0	0		54
1/3/15	EHk	11:48	FB	0	0	0	5	0	0	0	5	10	5 BAEA  35 BAEA & 7 GBH Feeding
		11:30	PH1	0	0	0	2	0	0	0	0	2	
		11:31	PH2	0	1	0	0	0	0	7	35	43	
		11:46	SW1	0	0	0	0	0	0	0	0	0	
		11:35	SW2	0	0	0	0	0	0	0	0	0	
		11:36	SW3	0	5	0	57	0	0	0	0	62	
		12:08	SW4	0	43	0	4	0	0	0	0	47	

### The Dalles Dam Adult Fish Ladder River/Water Temperatures







Newly installed 158 weir. Side plate touching half duplex antenna. Ogee crest cap still needs to be installed.