

The Dalles Dam Fishway Status Report

12/28/2014
 Inspection Period: 12/21/2014 to 12/27/2014

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: 45.3 F
			Comments		Secchi: > 4.0 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	1.4	
Entrance weir N1	0	depth (≥ 8')	Average	9.2	
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
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	
JUVENILE PASSAGE					
Sluiceway operation	0	1, & 18	December 1 - 15, sluiceways 1-2,1-3, 18-1 & 18-2 are open.		
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. Installation underway.

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

Three weirs removed for wheel replacement with high density plastic. Work began Dec 23. Will complete half of entrance weir wheels.

Three of 4 collection channel dewatering pumps needing rehab were pulled on deck. Repair underway.

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. Awaiting start.

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. Discussed at Dec FPOM. FPOM MOC form being revised with sluiceway winter operation proposal and justification. To be reviewed in Jan.

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

Investigating north fish count station mods for visibility improvement and use of video to reduce fish counting cost. Demo presented at Dec FPOM.

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 being reviewed and presented at Dec FPOM.

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 and continuing downloads for winter steelhead.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Avian lines in yellow, zones in red.

2014 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		
12/21	EHK	10:09	FB	0	0	0	1	0	0	0	37	38	1 BAEA & 36 grebes 21 mergansers 2 BAEA
		9:47	PH1	0	0	0	23	0	0	0	21	44	
		9:52	PH2	0	0	0	0	0	0	0	2	2	
		10:24	SW1	0	0	0	0	0	0	0	0	0	
		9:54	SW2	0	0	0	0	0	0	0	0	0	
		9:56	SW3	0	0	0	46	0	0	0	0	46	
		10:27	SW4	0	11	0	0	0	0	0	1	12	1 BAEA
12/22	EHK	9:32	FB	0	1	0	2	0	0	0	50	53	44 grebes, 3 mergansers, 3 BAEA 16 mergansers 18 BAEA, 4 GBH 2 mergansers, gulls on wing wall 4 BAEA 1 BAEA 1 BAEA
		8:32	PH1	0	0	0	3	0	0	0	16	19	
		8:39	PH2	0	0	4	0	0	0	0	22	26	
		9:19	SW1	0	22	0	0	0	0	0	2	24	
		8:44	SW2	0	0	0	0	0	0	4	0	4	
		8:45	SW3	0	11	0	50	0	0	0	1	62	
		9:13	SW4	0	0	0	1	0	0	0	1	2	
12/23	JWR	13:38	FB	0	2	5	0	0	0	0	38	45	2 BAEA, 36 grebe COME 9 BAEA, 5 GBHE
		12:26	PH1	3	1	16	37	0	0	0	12	69	
		12:33	PH2	1	0	0	0	0	0	0	14	15	
		13:35	SW1	0	8	0	0	0	0	0	0	8	BAEA
		12:39	SW2	0	0	0	0	0	0	0	0	0	
		13:17	SW3	0	1	0	64	0	0	0	1	66	
		13:20	SW4	0	24	0	5	0	0	0	0	29	
12/24	JWR	9:44	FB	0	1	0	12	0	0	0	35	48	4 BAEA, 31 grebe 10 COME, 1 GBHE 11 BAEA, 4 GBHE BAEA
		9:07	PH1	0	0	1	4	0	0	0	11	16	
		9:14	PH2	0	0	0	0	0	0	0	15	15	
		9:40	SW1	0	0	0	0	0	0	0	1	1	BAEA
		9:18	SW2	0	0	0	0	0	0	0	0	0	
		9:28	SW3	0	11	0	43	0	0	0	1	55	
		9:31	SW4	0	12	0	0	0	0	0	0	12	
12/25	JWR	12:59	FB	0	0	6	0	0	0	0	52	58	grebe COME 9 BAEA, 11 GBHE
		12:24	PH1	5	0	0	6	0	0	0	1	12	
		12:30	PH2	5	0	0	0	0	0	0	20	25	
		12:54	SW1	0	63	0	0	0	0	0	0	63	
		12:34	SW2	0	0	0	0	0	0	0	0	0	
		12:48	SW3	0	3	0	45	0	0	0	0	48	
		12:50	SW4	0	9	0	16	0	0	0	25		
12/26	JWR	11:04	FB	1	1	15	0	0	0	0	29	46	1 BAEA, 28 grebe COME 12 BAEA, 2 GBHE BAEA
		10:16	PH1	2	0	0	2	0	0	0	5	9	
		10:24	PH2	0	0	0	0	0	0	0	14	14	
		11:00	SW1	0	0	0	0	0	0	0	3	3	GBHE
		10:32	SW2	0	0	0	0	0	0	0	0	0	
		10:54	SW3	0	12	0	71	0	0	0	1	84	
		10:57	SW4	0	44	0	12	0	0	0	0	56	
12/27	JWR	12:57	FB	1	5	3	5	0	0	0	39	53	4 BAEA, 35 grebe COME 13 BAEA, 3 GBHE BAEA GBHE
		12:25	PH1	0	0	0	7	0	0	0	2	9	
		12:32	PH2	5	0	0	0	0	0	0	16	21	
		12:53	SW1	0	0	0	0	0	0	0	1	1	
		12:44	SW2	0	0	0	0	0	0	0	0	0	
		12:46	SW3	0	12	0	74	0	0	0	1	87	
		12:48	SW4	0	44	0	12	0	0	0	0	56	



Collection channel pumps on tailrace deck for rehab.