

The Dalles Dam Fishway Status Report

12/15/2014
 Inspection Period: 12/7/2014 to 12/13/2014

THE DALLES DAM



**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: 45.8 F
			Comments		Secchi: > 5.0 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	9.1	
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	0	<1.5', wkly			
Spill volume	0	40% ±1%	Average	On seal.	
Spill Pattern	0	per FPP	Spillbay	On seal.	
Turbine Unit Priority.	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

OTHER ISSUES:

Birds/Sea lions:

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

Operations:

East ladder dewatered to tailwater on December 2. The entrances, junction pool, collection and transportation channels were dewatered on Dec 4.

Fish removed from south entrance pool and released to river Dec 10; one clipped steelhead, one unclipped steelhead, and one whitefish

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 9/14/2017

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

Fish unit 2 out of service 12/1 to 1/15/2014 for annual maintenance

Spill Gates 1-11 out of service 12/3 to 12/8/2014 for spillwall repair dive

Maintenance:

Fish unit 1 cavitation work to begin next week.

Exit weir 158 fabrication final assembly near complete. Installation in progress. Investigating possibility of on site fabrication of new exit weirs 154-157.

Long term repair plans funding dependent; Upgrade east exit weirs 154-157, stabilize north ladder rock walls, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels.

North fish ladder rock wall stabilization project awaiting initiation.

Extensive weir guide damage found on west and east entrances. Preparation underway for repair. Overtime work planned due to increased workload.

Goal is to have 2 of 8 guides complete this year. Guide damage is due to electrolysis from stainless steel wheels and mild steel guides. All weirs wheels will be replaced with plastic composite wheels already tested on a west entrance weir. Three of 7 weirs removed for plastic wheel replacement.

Four collection channel dewatering pumps require rehab. Parts on hand for completion of two. Remaining pumps to be inspected during winter outage.

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

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 Dam. Possible affect to sluiceway operation schedule. To be discussed at FPOM.

Wasco PUD excavating near their powerhouse to make space for transformer. Greater than 50' from fishladder. See pic. Fisheries literature search salmon vs sound avoidance.

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

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

Team site visit Dec 9 to inspect auxiliary water channel adjacent to junction pool.

PUD 'freedom' second turbine proposal underway. Field test proposal for summer 2015 being reviewed. FPOM agenda item for December.

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

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 finished for season. Investigating visibility improvements for video use at north count station. East bathroom upgrades planned.

University of Idaho maintaining antennas and continuing downloads for winter steelhead.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam

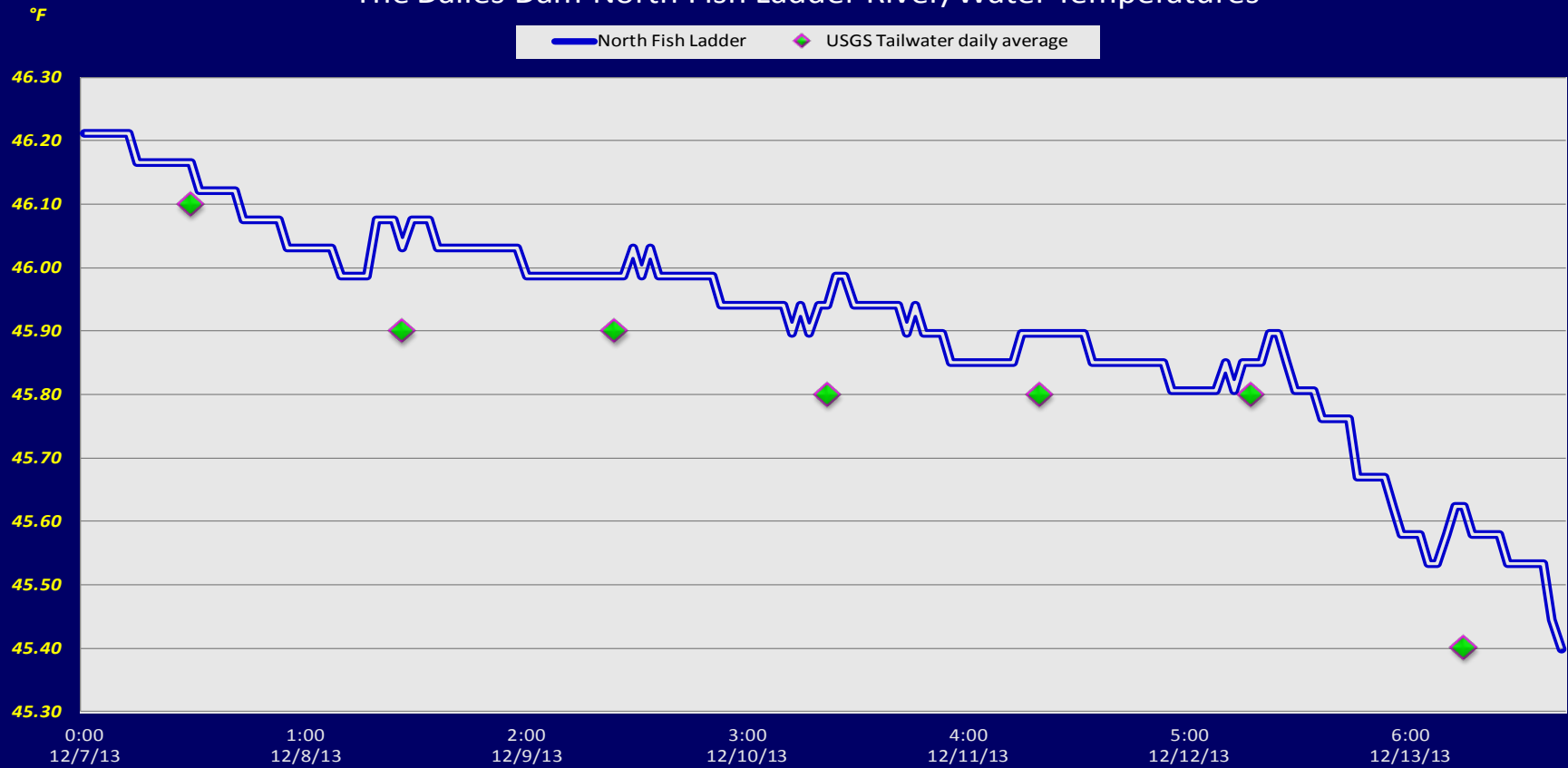


Avian lines in yellow, zones in red.

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		
12/7/14	EHK	9:23	FB	0	0	0	0			0	69	69	other = grebes other = mergansers
		8:56	PH1	3	0	0	39			14	34	90	
		9:06	PH2	1	0	0	0			0	0	1	
		9:26	SW1	0	23	0	1			0	0	24	
		9:12	SW2	0	0	0	0			0	0	0	
		9:13	SW3	0	20	0	49			0	0	69	
		9:28	SW4	0	22	0	6			0	1	29	
12/8/14	JWR	11:02	FB	0	1	1	1			0	95	98	other = bald eagle other = grebes other = mergansers
		10:13	PH1	4	0	56	73			26	35	194	
		10:27	PH2	5	0	0	0			0	0	5	
		10:48	SW1	0	34	0	0			0	0	34	
		10:22	SW2	0	0	0	0			0	0	0	
		10:42	SW3	0	33	0	40			0	0	73	
		10:46	SW4	0	44	0	0			0	0	44	
12/9/14	JWR	10:19	FB	0	1	0	0			0	78	79	other = 1 bald eagle, 76 grebes other = mergansers BAEA
		9:38	PH1	4	0	26	56			18	4	108	
		9:47	PH2	0	0	0	0			0	1	1	
		10:12	SW1	0	0	0	0			0	0	0	
		10:01	SW2	0	0	0	0			0	0	0	
		10:05	SW3	0	17	1	25			0	0	43	
		10:07	SW4	0	54	0	3			0	0	57	
12/10/14	JWR	10:43	FB	0	1	1	1			0	55	58	other = 1 bald eagle, 54 grebes other = mergansers BAEA
		11:01	PH1	9	0	3	102			11	28	153	
		11:10	PH2	0	0	0	0			0	1	1	
		10:32	SW1	0	15	0	0			0	0	15	
		10:45	SW2	0	0	0	0			0	0	0	
		10:47	SW3	0	23	0	88			0	0	111	
		10:51	SW4	0	18	0	5			0	0	23	
12/11/14	PSK	14:33	FB	0	4	0	5			0	60	69	other = 1 bald eagle, 59 grebes NF other = 2 great blue heron, 70 mergansers NF other = 1 bald eagle, 2 great blue herons NF other = 1 great blue heron NF other = 2 mergansers NF
		13:51	PH1	0	0	0	140			0	0	140	
		14:07	PH2	1	1	0	0			0	3	5	
		14:48	SW1	0	103	0	0			0	1	104	
		14:14	SW2	0	3	0	0			0	2	5	
		14:57	SW3	0	0	0	17			0	0	17	
		15:01	SW4	0	34	0	21			0	0	55	
12/12/14	PSK	15:11	FB	0	0	0	4			0	77	81	other = 6 mergansers, 71 grebes NF other = 1 great blue heron, 36 mergansers NF other = 1 bald eagle mergansers NF other = 4 mergansers NF
		14:45	PH1	0	0	0	103			0	37	140	
		14:48	PH2	0	1	0	0			0	1	2	
		15:35	SW1	0	93	0	0			0	0	93	
		14:54	SW2	0	0	0	0			0	5	5	
		15:16	SW3	0	20	0	34			0	4	58	
		15:21	SW4	0	28	0	7			0	0	35	
12/13/14	PSK	14:44	FB	0	0	4	0			0	40	44	other = 3 mergansers and 37 grebes NF other = 26 mergansers NF Gulls resting on spillwall 1 merganser NF
		13:55	PH1	0	0	0	86			0	26	112	
		14:05	PH2	0	0	0	0			0	0	0	
		15:09	SW1	0	93	0	1			0	0	94	
		14:12	SW2	0	3	0	0			0	1	4	
		14:50	SW3	0	30	0	37			0	0	67	
		14:55	SW4	0	50	0	0			0	0	50	

The Dalles Dam North Fish Ladder River/Water Temperatures





Wasco PUD excavating near their powerhouse to make space for transformer. Greater than 50' from north fishladder.