

The Dalles Dam Fishway Status Report

11/30/2014
 Inspection Period: 11/23/2014 to 11/29/2014

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 twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:	21	Temperature:	47.4 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	9.2		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
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'	Window cleaned as needed.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Average	10.5		
East entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir E1	0	No criteria	Average	5.1	Manually adjusted as needed.	
Entrance weir E2	0	depth (≥ 8')	Average	11.9		
Entrance weir E3	0	depth (≥ 8')	Average	11.8		
Collection channel velocity	N/A	1.5 - 4 fps	Average			
Transportation channel velocity	N/A	1.5 - 4 fps	Average			
North channel velocity	N/A	1.5 - 4 fps	Average			
South channel velocity	N/A	1.5 - 4 fps	Average			
West entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir W1	0	depth (≥ 8')	Average	9.7		
Entrance weir W2	0	depth (≥ 8')	Average	10.1		
Entrance weir W3	0	No criteria	Closed			
South entrance differential	0	1.0' - 2.0'	Average	1.5		
Entrance weir S1	0	depth (≥ 8')	Average	9.4		
Entrance weir S2	0	depth (≥ 8')	Average	9.4		
JUVENILE PASSAGE						
Sluiceway operation	0	1, 8, 18				
Turbine trashrack drawdown	0	<1.5', wkly	Range	0.2-0.5'		
Spill volume	0	40% ±1%	Average	On seal.		
Spill Pattern	0	per FPP	Spillbay	On seal.		
Turbine Unit Priority.	3	per FPP	Problems with MU 15 and 16			
Turbine 1% Efficiency	0	per FPP				

Fishway velocities discontinued Dec 1 as per Fish Passage Plan.

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

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

Operations:

Entrance weir E3 in manual due to sticking. E1 and E2 set in auto. All maintaining criteria depth.

Entrance weir W1 in manual also due to sticking. Maintaining depth criteria.

Gatewell drawdown completed on 11/22/14. All differentials were within the criteria of less than 1.5'.

Current Outages:

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

Maintenance:

East fishway winter maintenance starts Dec1. Fish units off Dec1. Fishladder dewatered Dec2. Below tailwater dewatering Dec3.

Dive repair planned for spillwall repair 12/03 - 12/08/2014.

Dive planned to inspect/clear north and south entrance bulkhead sill postponed. ROV inspection planned for Dec1 instead.

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

Weirs E3 and W1 sticking in guide. Repair during winter fishway outage with wheel replacement and guide repair. Does not affect criteria operation.

Permanent east fishway exit boom delivered. Contractor install before March. Further assessment for oil spill protection continues.

Charter approved for repair of north fishway rock walls. PM assigned. Awaiting start. Planning for winter inspection/assessment.

Exit weir 158 fabrication complete. Staged at exit for winter install. Investigating possible on site fabrication of new exit weirs for 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.

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:

EFL Backup; Plans/Specs 60% review underway. Includes 10' pipe from forebay to AWS. A 1400cfs flow test planned during this winter outage.

PIT data showing potential 15mi creek and mill creek steelhead overshooting The Dalles. Data reviewed by FPOM. Possible winter sluiceway operation.

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

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 count stations.

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

Dreissenid sampling via monthly plankton tows discontinued due to water temperatures < 50°F.

University of Idaho maintaining antennas and continuing downloads.

Approved by: Mike Colesar for Ron Twiner
Operation Project Manager The Dalles Dam



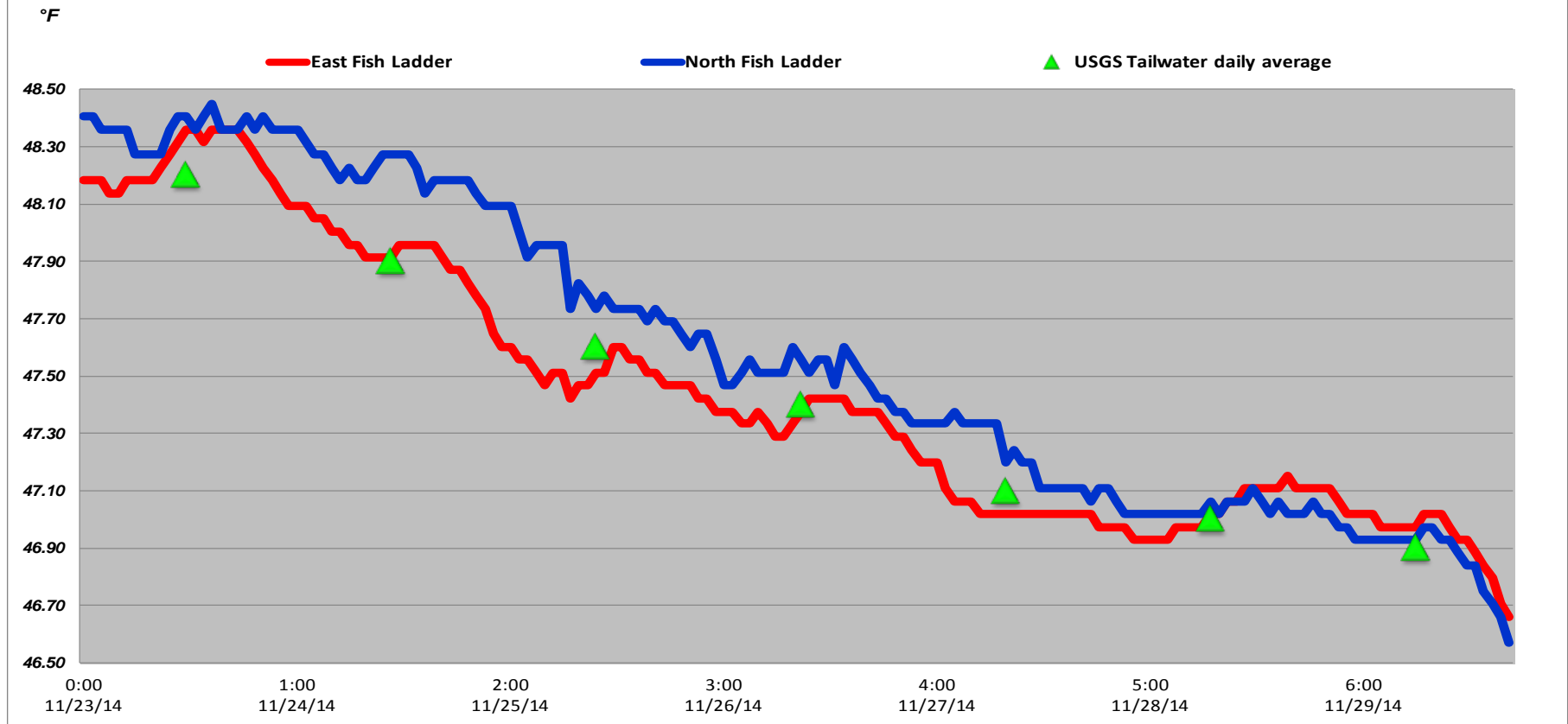
Avian lines in yellow, zones in red.

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		
11/23	ehk	9:37	FB	0	0	0	7	0	0	0	105	112	grebes
		8:20	PH1	0	0	0	36	0	0	0	12	48	mergansers
		8:49	PH2	0	0	0	0	0	0	0	0	0	
		9:20	SW1	0	0	0	0	0	0	0	0	0	
		8:52	SW2	0	0	0	0	0	0	0	0	0	
		8:54	SW3	0	0	0	13	0	0	0	0	13	
		9:33	SW4	0	108	0	35	0	0	0	0	143	
11/24	ehk	14:52	FB	0	73	0	0	0	0	0	5	78	grebes
		14:16	PH1	0	0	0	36	0	0	0	56	92	mergansers
		14:32	PH2	0	0	0	0	0	0	0	0	0	
		14:56	SW1	0	56	0	0	0	0	0	0	56	on spill wall
		14:35	SW2	0	0	0	0	0	0	0	0	0	
		14:36	SW3	0	0	0	38	0	0	0	0	38	
		14:54	SW4	0	0	0	7	0	0	0	0	7	
11/25	JWR	11:03	FB	0	9	1	1	0	0	0	110	121	other = grebes
		10:25	PH1	0	0	17	102	0	0	9	47	175	other = mergansers
		10:30	PH2	0	0	0	0	0	0	0	0	0	
		10:55	SW1	0	0	0	0	0	0	0	0	0	gulls resting on spillwall
		10:33	SW2	0	0	0	0	0	0	0	0	0	
		10:36	SW3	0	24	0	46	0	0	0	0	70	
		10:40	SW4	0	81	0	34	0	0	0	0	115	
11/26	JWR	13:31	FB	0	16	3	4	0	0	0	111	134	other = grebes
		12:57	PH1	2	1	27	62	0	0	15	39	146	other = mergansers
		13:07	PH2	0	0	0	0	0	0	0	0	0	
		13:27	SW1	0	51	0	0	0	0	0	0	51	gulls resting on spillwall
		13:12	SW2	1	0	0	0	0	0	0	0	1	
		13:14	SW3	0	75	0	41	0	0	0	0	116	
		13:17	SW4	0	10	0	5	0	0	0	0	15	
11/27	JWR	9:43	FB	0	18	4	9	0	0	0	122	153	other = grebes
		8:44	PH1	3	0	25	32	0	0	14	18	92	other = mergansers
		8:51	PH2	4	0	0	0	0	0	0	0	4	
		9:29	SW1	0	22	1	0	0	0	0	0	23	gulls resting on spillwall
		8:56	SW2	1	4	0	0	0	0	0	0	5	
		8:58	SW3	1	21	5	38	0	0	0	0	65	
		9:24	SW4	0	57	0	16	0	0	0	0	73	
11/28	JWR	13:29	FB	0	1	0	0	0	0	0	122	123	other = grebes
		12:34	PH1	3	1	48	114	0	0	8	49	223	other = mergansers
		12:41	PH2	2	0	0	0	0	0	0	0	2	
		13:17	SW1		32	0	0	0	0	0	0	32	gulls resting on spillwall
		12:46	SW2	0	0	0	0	0	0	0	0	0	
		13:10	SW3	0	41	0	60	0	0	0	0	101	
		13:14	SW4	0	64	0	10	0	0	0	0	74	
11/29	JWR	11:06	FB	1	7	0	0	0	0	0	124	132	other = grebes
		9:55	PH1	1	0	26	82	0	0	9	74	192	other = mergansers
		10:04	PH2	1	0	0	0	0	0	0	0	1	
		10:44	SW1	0	44	0	0	0	0	0	0	44	gulls resting on spillwall
		10:06	SW2	3	0	0	0	0	0	0	0	3	
		10:09	SW3	1	59	0	112	0	0	0	0	172	
		10:42	SW4	0	0	0	2	0	0	0	0	2	

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



Temperatures

48.2
47.9
47.6
47.4
47.1
47.0
46.9
AVG: 47.4

Secchi:

5.0
5.0
5.0
5.0
5.0
5.0
5.0
AVG: 5.0

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

= out of criteria

Date:	North Ladder		East Ladder												
	North Entrance		East Entrance					West Entrance				South Entrance			Spill KCFS
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
11/23	SCADA		1.2	5.4	12.1	11.6	9.9	1.5	9.9	9.8	Closed	1.3	9.7	9.7	On seal
	1.3	9.2	1.4	4.5	11.7	11.8	10.1	1.4	10.0	10.2		1.4	9.8	9.8	
	1.4	9.1	1.6	4.4	11.6	11.9	10.2	1.4	10.1	10.1		1.4	9.6	9.6	
11/24	SCADA		1.4	5.5	11.7	12.2	10.5	1.5	9.9	10.0		1.4	9.6	9.6	
	1.4	9.2	1.4	5.5	11.3	12.2	10.5	1.5	10.0	10.0		1.4	9.6	9.6	
	1.4	9.2	1.5	5.7	11.7	12.2	10.5	1.6	10.0	10.1		1.3	9.8	9.8	
11/25	SCADA		1.4	3.9	11.5	13.4	11.7					1.5	9.6	9.6	
	1.5	9.1	1.5	4.1	11.5	13.6	11.9	1.5	11.1	10.0		1.4	9.9	9.8	
	1.5	9.1	1.6	4.3	12.0	13.1	12.1	1.5	11.2	10.1		1.5	9.7	9.7	
11/26	SCADA		1.6	4.7	12.1	11.8	10.8	1.6	10.0	10.1		1.3	9.9	9.9	
	1.4	9.2	1.5	5.5	12.0	12.1	11.1	1.5	10.1	10.5		1.6	9.3	9.3	
	1.4	9.1	1.6	5.5	12.0	11.9	10.9	1.5	10.1	10.5		1.5	9.3	9.3	
11/27	SCADA		1.3	5.5	12.1	11.5	9.5	1.5	8.7	10.4		1.3	9.5	9.5	
	1.3	9.1	1.7	4.0	12.0	11.0	10.0	1.5	9.1	9.5		1.6	9.0	9.0	
	1.3	9.2	1.5	4.0	12.0	11.4	10.4	1.6	9.2	10.4		1.6	8.9	8.9	
11/28	SCADA		1.6	4.0	11.9	10.9	9.9	1.5	8.9	10.4	1.6	9.0	9.0		
	1.3	9.2	1.6	6.0	12.0	10.8	9.8	1.6	9.1	10.2	1.6	8.9	9.0		
	1.3	9.2	1.5	7.6	12.1	10.9	9.9	1.6	9.1	10.0	1.4	9.1	9.2		
11/29	SCADA		1.4	7.4	11.9	10.5	9.5	1.7	8.5	9.9	1.5	9.0	9.0		
	1.3	9.3	1.5	5.0	12.0	11.5	10.5	1.6	9.3	10.0	1.6	9.0	9.0		
AVG:	1.4	9.2	1.5	5.1	11.9	11.8	10.5	1.5	9.7	10.1	Closed	1.5	9.4	9.4	On seal