The Dalles Dam Fishway Status Report

THE DALLES DAM

2/9/2015
Inspection Period: 2/1/2015 to 2/7/2015

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: 7 / Comments			Temperature: 40.0 F / Secchi: 4.8 feet
NORTH FISHWAY - Out of Service Feb 2, 2015 through Feb 26, 2015 for winter maintenance.						
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	Daily differentials and weir depths, see AVGS tab.	
Entrance weir N1	0	depth (≥ 8')	Average	9.3		
Entrance weir N2	NA	Closed	Bulkhead installed.			
PUD Intake differential	0	≤ 0.5'	Average	0.4		
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.			
Weir 158-159 differential	1	1.0' ± 0.1'	Out of criteria at 1.3'.			
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	Average	12.0		
East entrance differential	1	1.0' - 2.0'	Average	1.2	Out of criteria at 0.2'; 2/2/15 Fish Unit 1 out of service.	
Entrance weir E1	0	No criteria	Average	7.3	Manually adjusted as needed.	
Entrance weir E2	0	depth (≥ 8')	Average	10.9		
Entrance weir E3	0	depth (≥ 8')	Average	10.9		
Collection channel velocity	NA	1.5 - 4 fps	Average		Fishway velocities concluded Dec 1 and will resume Mar 1, 2015 as per Fish Passage Plan.	
Transportation channel velocity	NA	1.5 - 4 fps	Average			
North channel velocity	NA	1.5 - 4 fps	Average			
South channel velocity	NA	1.5 - 4 fps	Average			
West entrance differential	1	1.0' - 2.0'	Average	1.4	Out of criteria at 0.5'; 2/2/15, Fish Unit 1 out of service.	
Entrance weir W1	0	depth (≥ 8')	Average	9.6		
Entrance weir W2	0	depth (≥ 8')	Average	9.5		
Entrance weir W3	0	No criteria	Average	8.3	Manually adjusted as needed.	
South entrance differential	2	1.0' - 2.0'	Average	1.1	Out of criteria at 0.8', -0.2'; 2/2/15, Fish Unit 1 out of service.	
Entrance weir S1	0	depth (≥ 8')	Average	12.7		
Entrance weir S2	0	depth (≥ 8')	Average	11.9		
JUVENILE PASSAGE						
Sluicegate operation	0	per FPP	Sluicegates 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. Eagle numbers appear decreasing. Refer to Avian Zone Map.

Operations:
North fish ladder dewatered Feb 3 below tailwater. Two juvenile Chinook and 4 adult lamprey released to the river. Planned return to service Feb 26.
Main Unit 8 scroll case and draft tube were dewatered on Feb 2 and 3; there were no fish found.
East fishway was returned to full service on Feb 2. Entrance and exit weir calibration underway.
Gatewell drawdown and routine weir calibrations to resume March 1, 2015.

Current Outages:
T8 (MU15 & MU16) de-rated to single unit full load ops through 9/14/2017.
MU13 out of service 1/20/2015 to 2/11/2015 for oil leak repairs.
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:
East exit weirs calibrated.
Weir guide repair work completed on W2 and test epoxy repair on E2. Repair on remaining weir guides scheduled for next year.
Half of east entrance weirs have new high density plastic wheels. All entrance weirs functioning.
Three collection channel dewatering pumps on deck for rehab, repair delayed due to funding shortage. Two of 6 collection channel pumps remain stuck.
Permanent east fishway exit boom delivered. Contract delay resulted in missing in water work window. Install planned for next winter.
FCQ7 electrical panel for east exit upgrade prep work completed. Planning and parts purchase underway. Installation planned for next outage season.
One of 6 east entrance diffuser valves in need of repair. Valve opened for remainder of passage season. Repair planned for next outage period.
North fishway tree removal from ladder walls in progress. Expect completion week fo Feb 17.
PMs underway on north count station equipment.
Future repair plans ; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel 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 Feb 17. Alternatives for repair of vulnerable areas to be determined.
Investigating PIT tag 15 mile creek steelhead overshooting The Dalles. Coordination discussion underway for potential sdditional sluiceway operation. .
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 60% review underway. Includes 10'pipe from forebay to AWS. A 1400cfs flow test planned in Feb. coordination underway.
PUD 'freedom' second turbine; Field test proposal summer 2015 proposed through FPOM and SRWG. Rock plunge pool inspection Feb 16
Spill test for more fish passage to north fishladder completed. Results showed 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.

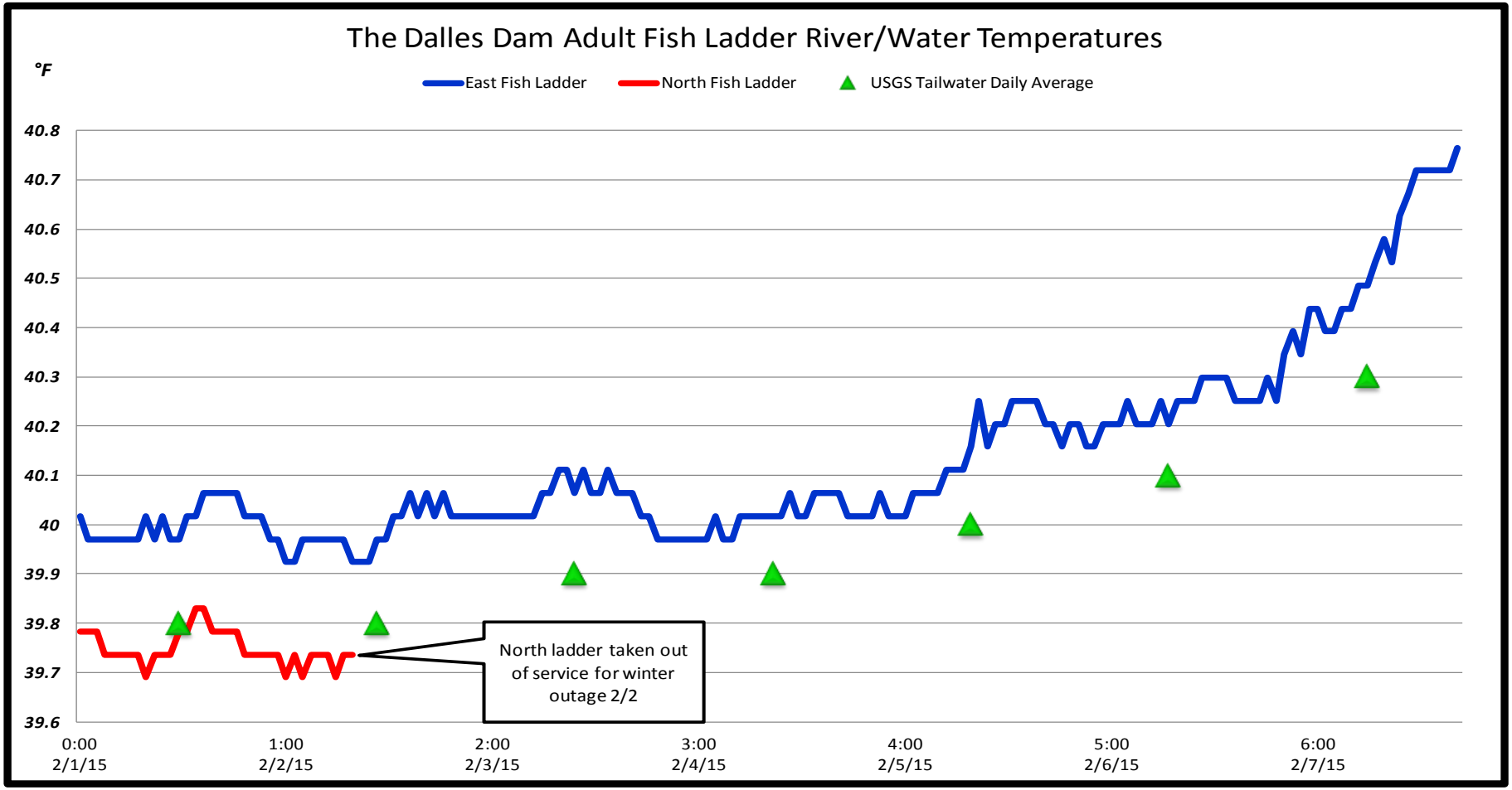
Approved by: Ron Twiner
Operation Project Manager The Dalles Dam

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

2014 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern		Other		Total birds in zone	Observer	Notes
			F	NF	F	NF	F	NF	F	NF			
	13:04	FB	0	0	0	6	0	0	0	1	7		1 BAEA
	12:31	PH1	0	0	0	0	0	0	0	0	0		
	12:57	PH2	0	0	0	0	0	0	0	10	10		10 BAEA
2/1/15	13:02	SW1	0	15	0	0	0	0	0	3	18	EK	3 GBH
	12:39	SW2	0	0	0	0	0	0	0	0	0		
	12:43	SW3	0	0	0	41	0	0	0	3	44		3 GBH
	13:05	SW4	0	7	0	12	0	0	0	0	19		
	9:10	FB	0	0	6	0	0	0	0	2	8		BAEA
	8:36	PH1	0	0	0	0	0	0	0	0	0		
	8:43	PH2	0	0	0	0	0	0	0	2	2		BAEA
2/2/15	9:05	SW1	0	0	0	0	0	0	0	3	3	*JWR*	1 BAEA, 2 GBHE
	8:44	SW2	0	0	0	0	0	0	0	0	0		
	8:45	SW3	0	0	0	29	0	0	0	0	29		
	8:47	SW4	0	0	0	0	0	0	0	0	0		
	14:45	FB	0	0	0	6	0	0	0	0	6		
	14:06	PH1	0	0	0	0	0	0	0	0	0		
	14:14	PH2	0	0	0	0	0	0	0	5	5		BAEA
2/3/15	14:51	SW1	0	0	0	0	0	0	0	0	0	PSK	
	14:16	SW2	0	0	0	0	0	0	0	33	33		
	14:17	SW3	0	0	0	24	0	0	0	2	26		GBHE
	14:29	SW4	0	42	0	9	0	0	0	0	51		
	8:49	FB	0	0	0	1	0	0	0	7	8		BAEA
	7:42	PH1	0	0	0	1	0	0	0	0	1		
	7:48	PH2	0	0	0	0	0	0	0	2	2		BAEA
2/4/15	8:44	SW1	0	0	0	0	0	0	0	1	1	*JWR*	BAEA
	8:31	SW2	0	0	0	0	0	0	0	0	0		
	8:33	SW3	0	0	0	23	0	0	0	0	23		
	8:41	SW4	0	0	0	0	0	0	0	0	0		
	13:16	FB	0	0	0	0	0	0	0	5	5		4 BAEA, 1 GBHE
	13:23	PH1	0	0	0	0	0	0	0	0	0		
	12:56	PH2	0	0	0	0	0	0	0	7	7		BAEA
2/5/15	13:14	SW1	0	76	0	0	0	0	0	3	79	*JWR*	BAEA
	12:59	SW2	0	2	0	0	0	0	0	0	2		
	13:03	SW3	0	0	0	30	0	0	0	0	30		
	13:05	SW4	0	29	0	6	0	0	0	0	35		
	10:27	FB	0	0	2	2	0	0	0	11	15		BAEA
	9:33	PH1	0	0	0	0	0	0	0	13	13		11 BAEA, 2 GBHE
	9:37	PH2	0	0	0	0	0	0	0	0	0		
2/6/15	10:16	SW1	0	0	0	0	0	0	0	2	2	*JWR*	GBHE
	9:38	SW2	0	0	0	0	0	0	0	0	0		
	9:39	SW3	0	0	0	19	0	0	0	0	19		
	9:40	SW4	0	1	0	1	0	0	0	0	2		
	15:37	FB	0	0	0	6	0	0	0	0	6		
	14:35	PH1	0	0	0	0	0	0	0	0	0		
	14:50	PH2	0	0	0	0	0	0	0	1	1		BAEA
2/7/15	15:35	SW1	0	84	0	0	0	0	0	0	84	PSK	
	15:00	SW2	0	0	0	0	0	0	0	38	38		Scaup
	15:03	SW3	0	0	0	28	0	0	0	0	28		
	15:43	SW4	0	0	0	0	0	0	0	0	0		


The Dalles Dam Adult Fish Ladder River/Water Temperatures
°F
East Fish Ladder
North Fish Ladder
USGS Tailwater Daily Average
40.8
40.7
40.6
40.5
40.4
40.3
40.2
40.1
40
39.9
39.8
39.7
39.6
North ladder taken out of service for winter outage 2/2
0:00 2/1/15
1:00 2/2/15
2:00 2/3/15
3:00 2/4/15
4:00 2/5/15
5:00 2/6/15
6:00 2/7/15

Temperatures	Secchi:
39.8	5.0
39.8	5.0
39.9	3.5
39.9	5.0
40.0	5.0
40.1	5.0
40.3	5.0
AVG: 40.0	AVG 4.8

The Dalles Dam Daily Readings and Averages for

Temperatures, Secchi, Entrances, and Spill

= Out of criteria

	North Ladder		***East Ladder***												
	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	Spill KCFS
2/1/15	1.4	9.3	1.2	10.6	10.5	10.5	12.2	1.4	9.5		9.6	1.4	13.1	12.1	
2/2/15			0.2	9.3	10.5	10.6	11.9	0.5	9.7		10.0	0.8	13.0	12.0	
2/3/15			1.4	8.7	10.5	10.5	11.5	1.6	9.4		9.5	1.4	12.5	11.5	
2/4/15			1.5	8.8	10.5	10.6	12.0	1.6	9.4		9.0	-0.2	13.1	12.1	
2/5/15			1.5	9.3	10.3	10.5	11.9	1.5	9.5	9.5	6.0	1.3	12.6	11.6	
2/6/15			1.4	3.4	11.8	11.9	12.8	1.5	9.4	9.3	7.0	1.4	11.7	11.6	
2/7/15			1.5	0.9	12.1	11.9	11.5	1.5	10.1	9.6	7.1	1.6	12.7	12.6	
AVG:	1.4	9.3	1.2	7.3	10.9	10.9	12.0	1.4	9.6	9.5	8.3	1.1	12.7	11.9	

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

TDE working on weir.

On seal

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

Note: On 2/2/2015, north fish ladder out of service, Fish Unit 1 out of service, TDE working on east exit weir control section and entrance weir W2 .

PUD auxiliary water rock plunge pool. To be engineering and geotech inspected Feb 16.