

The Dalles Dam Fishway Status Report

Date: 12/15/2013
 Inspection Period: 12/8/13 to 12/14/2013

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
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Fishways are inspected once daily during the winter.

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 6	Temperature: 41.4 F
			Comments	Secchi: 5.5 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 3.0	
Entrance weir N1	0	depth (≥ 8')	Average 9.2	
Entrance weir N2		Closed	Bulkhead installed.	
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY			East Fishladder dewatered for annual maintenance	
Exit differential		≤ 0.5'		
Removable weirs 154-157		Per forebay		
Weir 158-159 differential		1.0' ± 0.1'		
Count station differential		≤ 0.3'		
Weir crest depth		1.0' ± 0.1'		
Junction pool weir JP6		depth (≥ 7')		
East entrance differential		1.0' - 2.0'		
Entrance weir E1		No criteria		
Entrance weir E2		depth (≥ 8')		
Entrance weir E3		depth (≥ 8')		
Collection channel velocity		1.5 - 4 fps		
Transportation channel velocity		1.5 - 4 fps		
North channel velocity		1.5 - 4 fps		
South channel velocity		1.5 - 4 fps		
West entrance differential		1.0' - 2.0'		
Entrance weir W1		depth (≥ 8')		
Entrance weir W2		depth (≥ 8')		
Entrance weir W3		No criteria		
South entrance differential		1.0' - 2.0'		
Entrance weir S1		depth (≥ 8')		
Entrance weir S2		depth (≥ 8')		
JUVENILE PASSAGE				
Sluiceway operation	0	units 1 & 18	Sluiceway operating 1-2, 1-3, 18-2 and 18-3 for kelt passage until Dec 15	
Turbine trashrack drawdown		<1.5', wkly	Winter Operating Season	
Spill volume		40%, 24hr		
Spill Pattern		per FPP		
Turbine Unit Priority		per FPP		
Turbine 1% Efficiency		per FPP		

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

Bird observation data collected twice daily. There are mostly gulls and cormorants around the project, with grebes in the forebay. Most foraging occurring at west end of the powerhouse (PHT2) and downstream of sluiceway outfall (PHT3).

See avian zones map and distribution tabs. One California sea lion was observed in the forbay near Main Unit 15 on 12/9/2013.

Bald eagles have started to return to Westrick Park.

Operations:

The east ladder upper section was dewatered Dec3; one adult Chinook and three juveniles, nine juvenile steelhead, and three adult lamprey were released to tailwater. (179 adult shad released to tailwater, mostly morts).

The east fishway channels (below tailwater) was dewatered Dec4. One adult Chinook, 2 coho, 47 adult lamprey, 21 sturgeon captured and released.

Current Outages:

Transformer 8 (Main Unit 15 and MU16) de-rated to 120 MW & +/-50 MVAR through 9/14/2017.

East Fish Ladder OOS 0600 12/3/2013 to 2/3/2013 for annual maintenance.

Fish Unit 1 OOS 0600 12/2/2013 to 1700 1/16/2013 for annual.

F2 OOS 0600 12/2/2013 to 1700 1/30/2013 for O/H and Digital Governor.

MU1 and MU2 OOS 12/9/2013 1000 to 12/17/2013 1700 for Kirk Key interlock installation on FZJ0, FZJ1, FZJ2, FZJ3, FXJ1 and FXJ2

MU15 - MU20 synchronous condensing unavailable 12/9/2013 1000 to 12/17/2013 1700 due to Kirk Key interlock installation on FZJ0, FZJ1, FZJ2, FZJ3, FZJ1, and FXJ2.

Maintenance:

Fishway winter maintenance dewatering schedule has been changed due to lamprey plating installation issues in the lower section of the east ladder; east fishway Dec 3 to Feb 3. North fishway Feb 4 through end of Feb. All parties have been notified.

Winter maintenance work; west entrance grating attachment upgrade, east exit weir upgrades, east exit water leak over electrical panel repair, west entrance wheel replacement, north ladder brush removal. North entrance sill dive Jan 8 to remove gravel buildup.

Studies:

PIT - Temporary Thin Wall PIT tag Antenna continues to work successfully. North antenna to be repositioned late Jan. PSMFC investigating feasibility for PIT installation on ice trash sluiceway channel. Project providing prints for review.

Biomark planning site visit to the north ladder first week Feb to adjust an antenna that was installed crooked. They anticipate needing two days in the ladder to perform necessary adjustments to the thin walled pit tag antenna.

EFL - Plan is for 10' dia. pipe through dam to AWS conduit under east fishladder. PDT members site visit and access dewatered fishway Dec10.

Team considering project proposal of putting water into fishway from fishlock approach channel due to concerns of AWS diffuser leakage.

PUD - Modification of original FERC license underway for additional north turbine. No new developments this week.

Lamprey - Plating modifications in 14 lower east ladder weir orifices was to start Dec 9. Objective is to improve lamprey passage at weir orifices.

Plating was cut too small. Team decided to fabricate new ones and use these for Bonneville fishladders.

IAPWG - Westrick Center reserved for Monday 12/16 for NWW/NWP Inland Avian Predation Work Group Meeting.

Research/Contractors:

The University of Idaho is moving into the overwintering steelhead portion of their study. They will be monitoring the downstream migration of summer steelhead through the powerhouse, spillway and ice and trash sluiceway at The Dalles Dam through the winter. The study will continue into the spring when they begin when they begin tagging next years fish, roughly April/May.

Planning underway to remove last set of 3 derelict Vertical Barrier Screens (VBS) from 90's research remains in MU 12 gatewell slot.

Plans underway for dive removal of remaining pier nose antennas this winter.

USFWS camera lamprey monitoring at both count stations completed. Equipment removal this winter.

Approved by;
Ron D. Twiner
Operation Project Manager
The Dalles Dam

The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

SW-T2

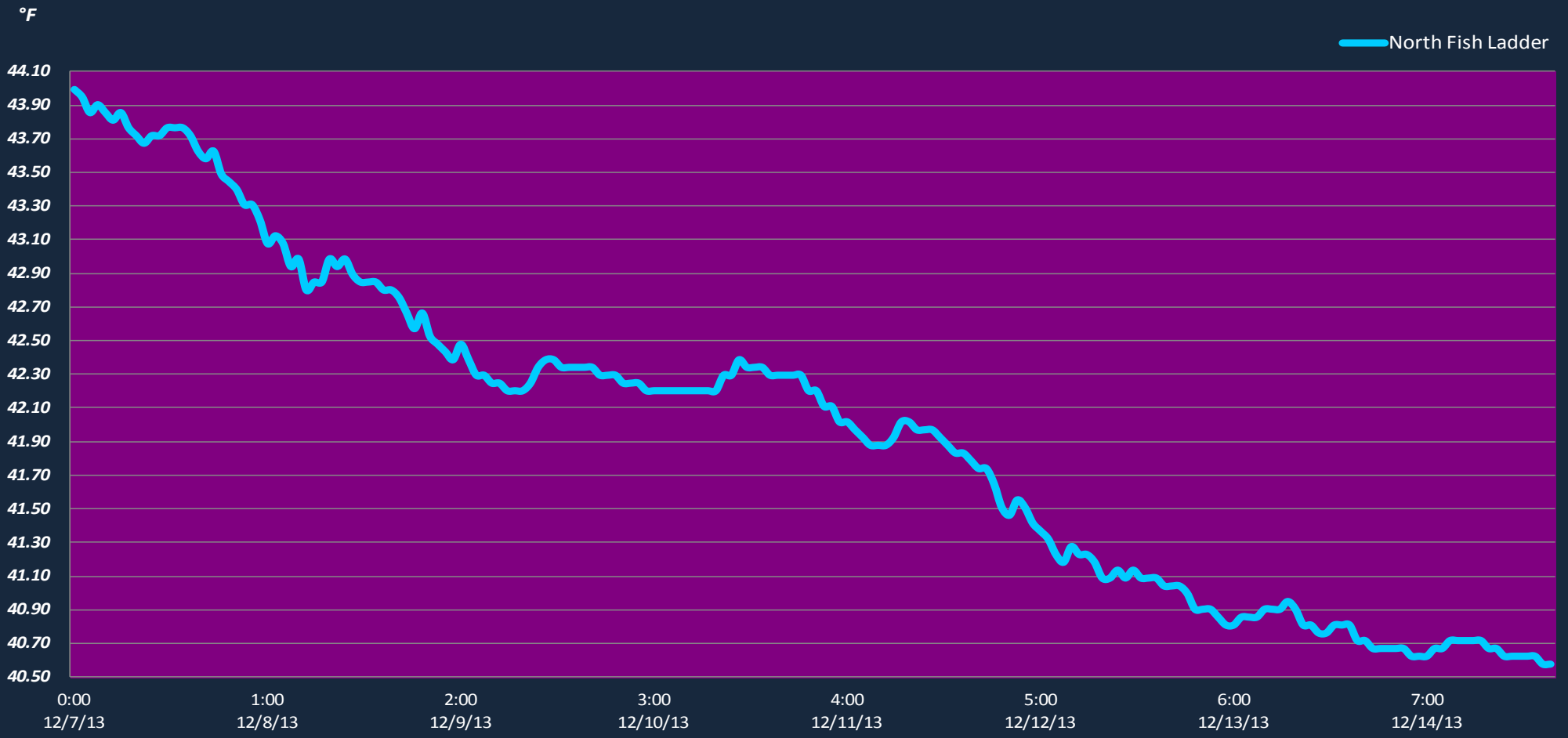
SW-T4

SW-T5

Oregon Shore



The Dalles Dam River/Adult Fish Ladder Water Temperatures



Temp:		Secchi:	
	42.6	SUN	5.5
	42.1	MON	5.5
	42.0	TUES	5.5
	41.6	WED	5.5
	40.8	THUR	5.5
	40.5	FRI	5.5
	40.4	SAT	5.5
AVG:	41.4	AVG:	5.5

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

= out of criteria

North Fish Ladder			East Fish Ladder											S P I L L O N S E A L	
North Entrance			East Entrance				West Entrance				South Entrance				
Date:	Differential	N1 Depth	Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential	S1 Depth		S2 Depth
8-Dec-13	1.5	9.1													
9-Dec-13	1.3	9.1													
10-Dec-13	1.4	9.1													
11-Dec-13	1.3	9.1													
12-Dec-13	1.3	9.2													
13-Dec-13	12.6	9.3													
14-Dec-13	1.3	9.2													
AVG:	3.0	9.2									closed				



Misfit lamprey plating. New plating to be fabricated and installed this year.
This plating to be saved for future Bonneville fishladder installation.