

The Dalles Dam Fishway Status Report

02/16/20

Inspection Period: 2/9-2/15, 2020

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections: 10		Temperature: 41.1 °F
			Comments: FISH Units testing		Weekly Average Secchi: 2.6

NORTH FISHWAY - Dewatered -RTS 02/27

EAST FISHWAY

Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay		
Weir 158-159 differential	0	1.0' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	0	1.1' ± 0.1'		
Junction pool weir JP6	0	0.0	Average for week =	13.8
East entrance differential	4	1.0' - 2.0'	Average for week =	1.35
Entrance weir E1	0	No criteria	Opened and adjusted to maintain differential during Fish unit testing operation 2/8 to 2/15	
Entrance weir E2	0	depth (≥ 8')	Average for week =	12.03
Entrance weir E3	0	depth (≥ 8')	Average for week =	12.05
Collection channel velocity	0	1.5 - 4 fps	fps Average	Range:
Transportation channel velocity	0	1.5 - 4 fps	fps	
North channel velocity	0	1.5 - 4 fps	fps	
South channel velocity	0	1.5 - 4 fps	fps	
West entrance differential	4	1.0' - 2.0'	Average for week =	1.6
Entrance weir W1	0	depth (≥ 8')	Average for week =	12.5
Entrance weir W2	0	depth (≥ 8')	Average for week =	12.5
Entrance weir W3	0	1.0' - 2.0'	Average for week =	1.5
South entrance differential	4	1.0' - 2.0'	Average for week =	1.5
Entrance weir S1	0	depth (≥ 8')	Average for week =	8.5
Entrance weir S2	0	depth (≥ 8')	Average for week =	8.5

Fish Units in
operation testing.

JUVENILE PASSAGE

Sluicgate operation	0	Units 1, 8, 18	
Turbine trashrack drawdown	0	<1.5', biwklly	
Spill volume/pattern	0	None	
Turbine Unit Priority	0	per FPP	
Gatewells			

OTHER ISSUES:

Fishway Operations

North fish ladder dewatered 2/5
East fish ladder rewatered Jan30.
Spillway closed

Unit Outages

T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels
MU1 and MU2 restricted to 160 MW combined through 5/28/2020
MU13 OOS 0600 9/23/2019 - 1700 7/22/2020 for Hydraulic Oil System Repairs
MU12 OOS 0001 12/2/2019 - 1700 3/5/2020 T6 GSU Replacement & Annual
MU11 OOS 0400 12/2/2019 - 1700 3/5/2020 T6 GSU Replacement & O/H
MU8 OOS 0630 1/21/2020 - 1700 3/5/2020 for Overhaul.
North Fish Ladder OOS 0630 2/4/2020 - 1700 2/27/2020 for annual

Maintenance

Calibration check, 2/12/20, all but S2 east ladder entrance weirs in calibration.
Five of 6 collection channel dewatering pumps removed for repair/rehab. Awaiting new pump motors for installation.
Fishway automation replacement installation starting. Brackets for sensors installed at east entrance. PLC box assembly start late Feb.
Planning underway for diffuser valve overhauls
Spillway assessment (MRER); No funding for FY20. Spillgate 9 fish priority included.
Planning for north fishway outage in Feb. Maintenance items; ladder vegetation removal, count station diffuser and expansion joint repair, N1 weir wheel/guide repair
ROV inspection Jan 28 of powerhouse intakes found missing vanes on fish unit trashrack 1-1. Corrective action in planning.

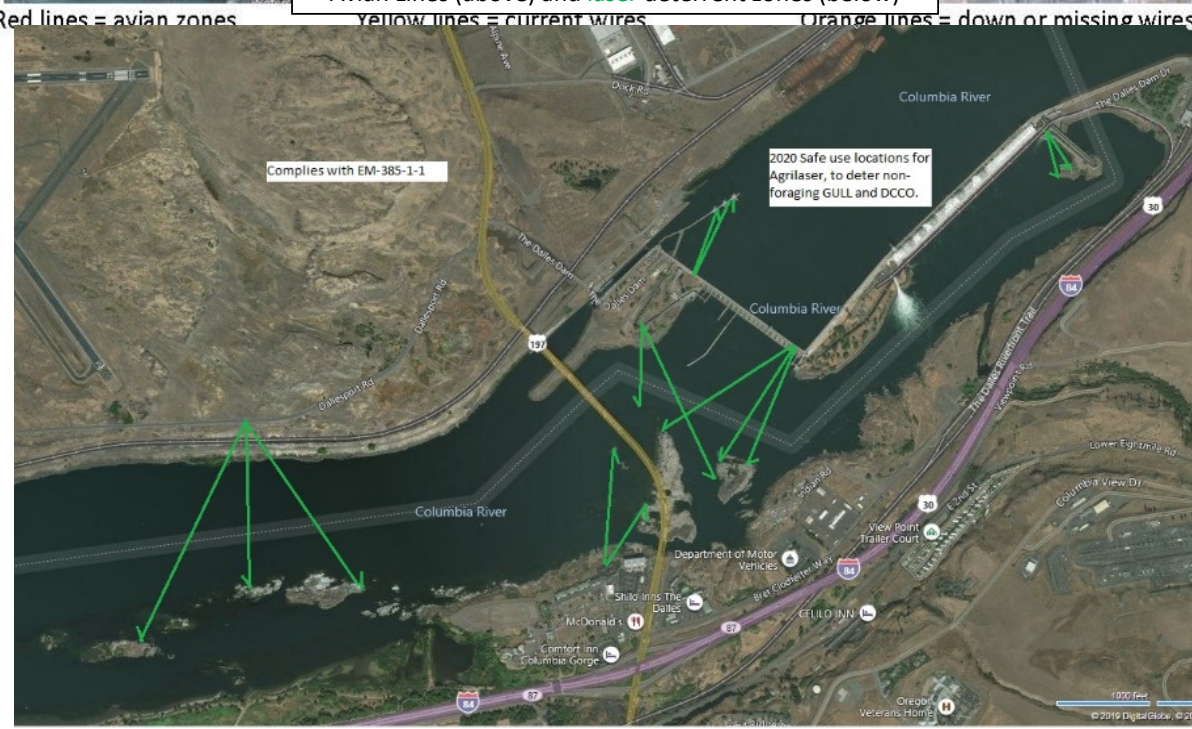
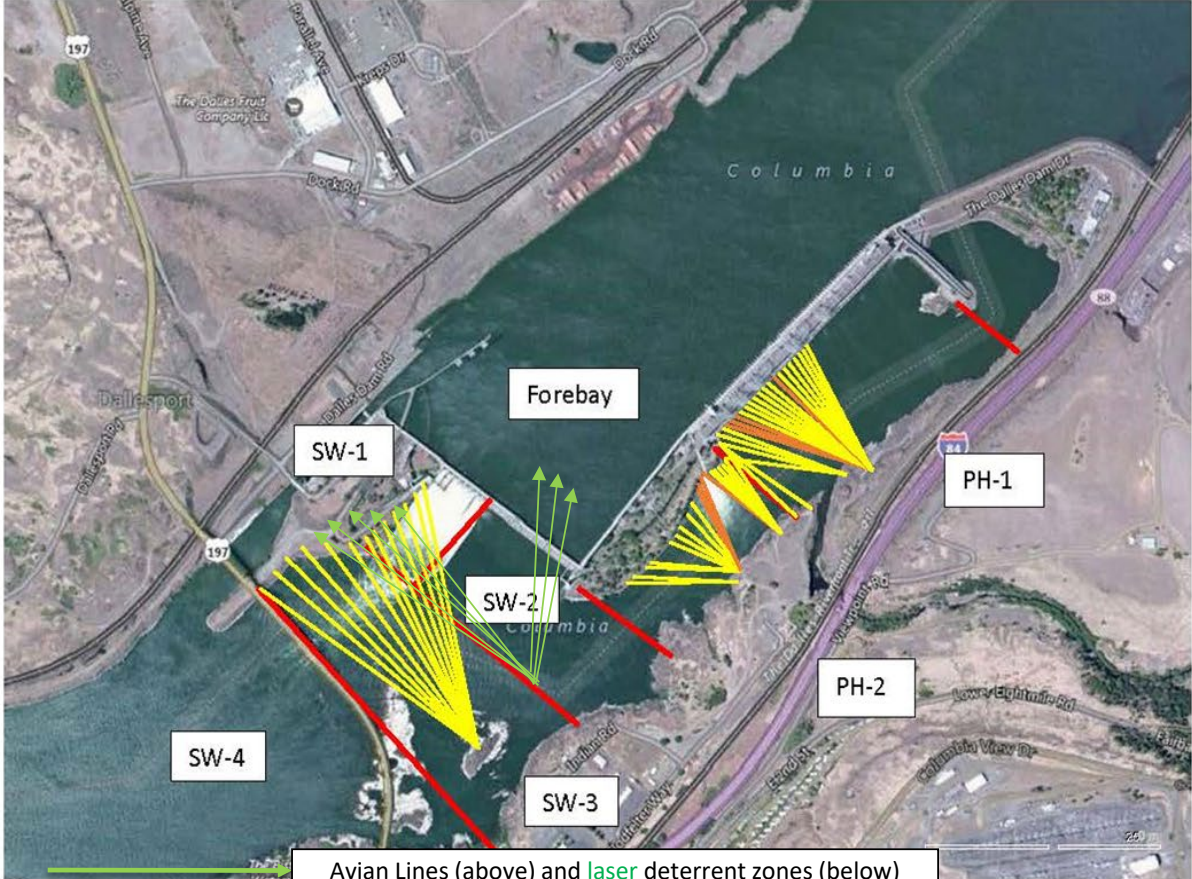
Predators

Green laser use continues for piscivorous bird hazing testing. Refer to Avian zones tab.
USDA hazing resumes 4/15/20
Eagle numbers in normal range and locations. River very turbid. Cormorants at winter low #s and gulls very few daily, within expected ranges.
No sea lion observations this week.

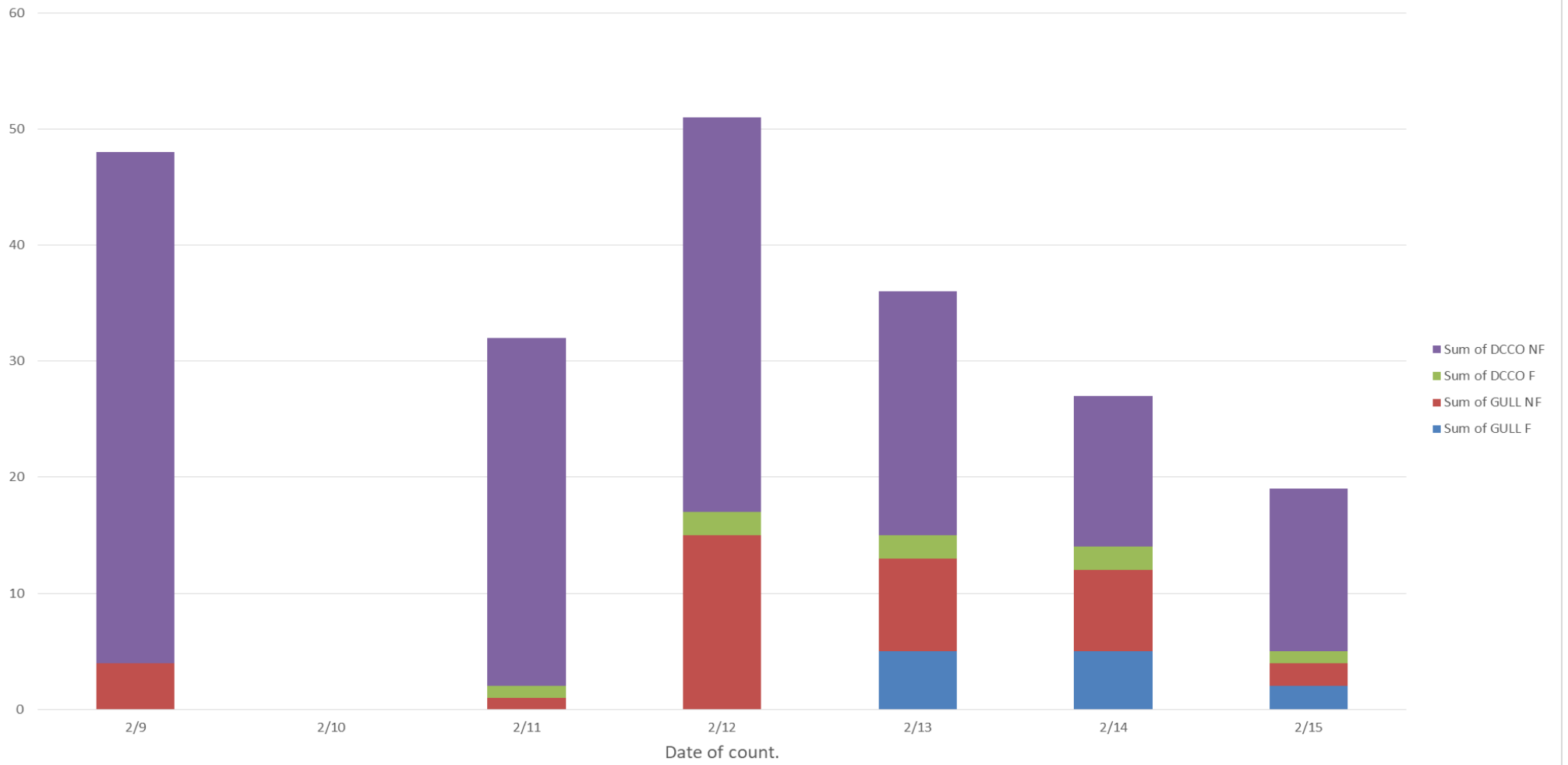
Research/Construction/Contractors

Four Peaks fish counting concluded October 31. Cleaning count stations
AWS backup - Follow on contract in progress. Valve actuator commissioning last week of Feb
PITAGS north and east fishladder data collection at count stations continues.
Dam angling 2019 total 2228 pikeminnow, 98 smallmouth bass and 6 walleye caught. **Bass/Walleye released due to state classification of game species.**
Fish unit breaker replace.- Work near complete. Potential anchoring concerns being discussed. Commissioning still planned first week of Feb.
Fish unit rehab - Phase 1A. Planning operation scenario with AWS backup water supply during construction. No funding.

Operation Project Manager The Dalles Dam

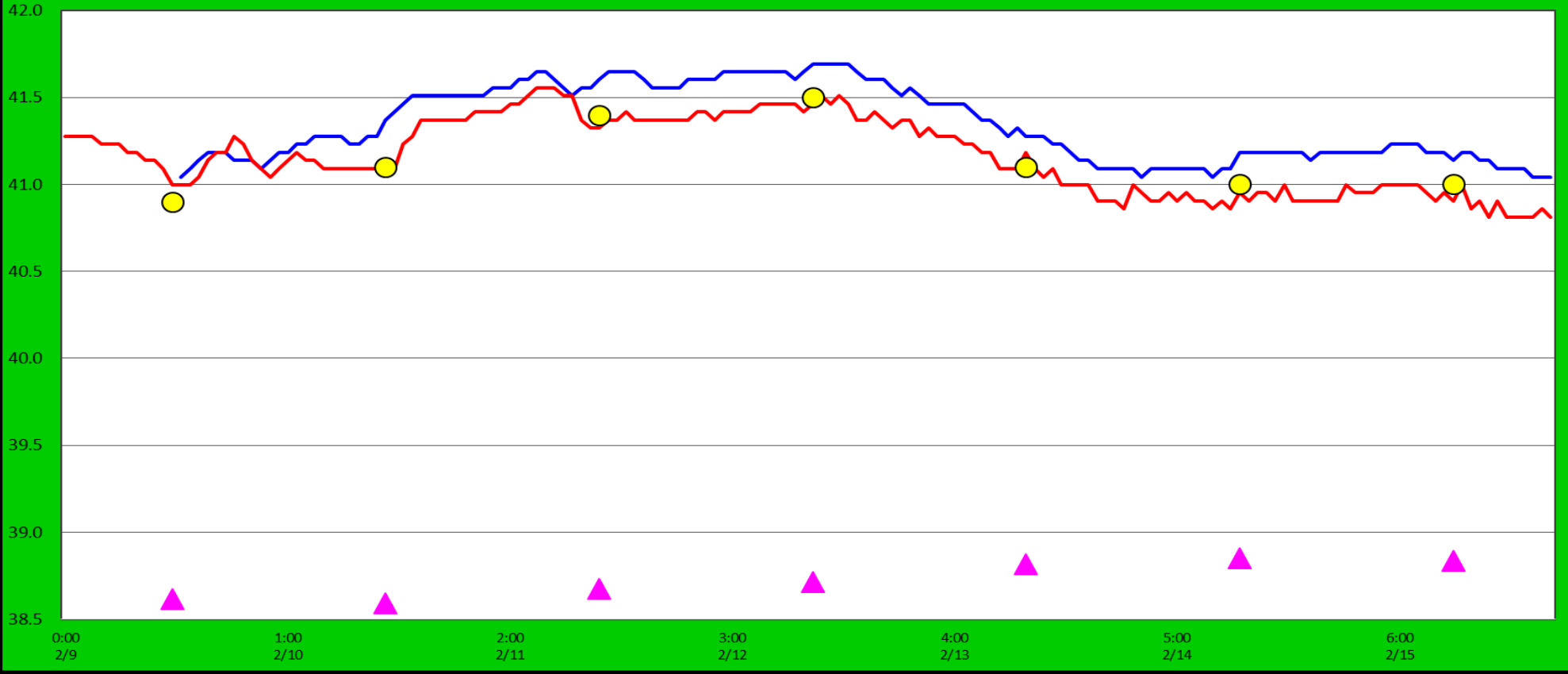


Gull and Cormorant activity



The Dalles Dam Fish Ladder-River Temperatures

— East Count Station — South Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2019)



	Secchi:		USGS: °F
2/9	4.0	Sun	40.9
2/10	4.0	Mon	41.1
2/11	4.0	Tue	41.4
2/12	3.0	Wed	41.5
2/13	1.0	Thurs	41.1
2/14	1.0	Fri	41.0
2/15	1.0	Sat	41.0
	2.6	AVG	41.1

Feb. Temps

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

SCADA INSPECTION
out of criteria

Date:	North Ladder		East Ladder											
	Differential	N1 Depth	East Entrance					West Entrance			South Entrance			
			Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
2/9	PUD		1.8	-1.5	8.3	8.3	14.4	3.3	-1.2	-1.2	-1.2	3.3	-1.4	-1.4
2/10	SHUT DOWN		-0.2					0.9				1.1		
2/11			0.4	-1.5	9.6	9.6	13.0	0.7	9.1	9.1	-1.8	0.9	-2.2	9.0
2/12	North Ladder Dewatered to tailwater		-0.7	-1.4	8.9	8.9	13.1	0.2	8.9	8.9	-2.3	0.2	8.0	10.0
2/13			1.4	8.0	12.1	12.1	13.8	1.6	12.6	12.6	1.5	1.4	8.5	8.5
			1.3	8.0	12.0	12.0	13.7	1.6	12.6	12.6	1.4	1.4	8.4	8.4
2/14			1.4	8.1	12.1	12.0	14.1	1.7	12.6	12.6	1.6	1.5	8.5	8.5
			1.3	7.9	12.1	12.1	13.7	1.6	12.4	12.4	1.4	1.4	8.5	8.5
2/15			1.4	8.0	11.9	12.1	13.7	1.6	12.5	12.5	1.5	1.5	8.4	8.4
			1.3	7.9	12.0	12.0	13.6	1.6	12.4	12.4	1.5	1.5	8.5	8.5
AVG:			1.4	8.0	12.0	12.1	13.8	1.6	12.5	12.5	1.5	1.5	8.5	8.5

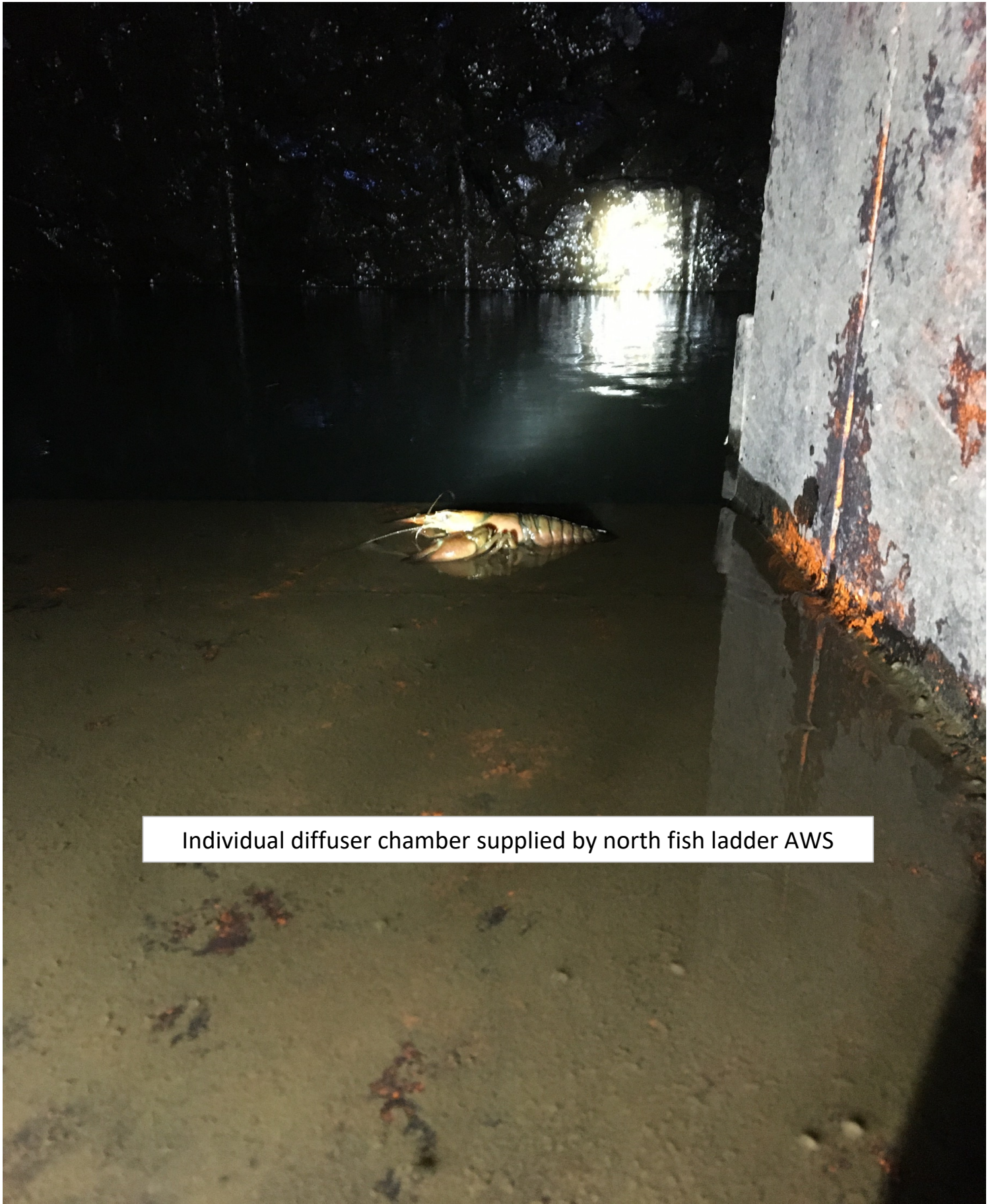
Numbers not used in average

Fishways are inspected once daily plus one SCADA inspection.



View of PUD plunge pool used in turbine bypass
Engineers-PUD-TDM-TDF North ladder AWS inspection





Individual diffuser chamber supplied by north fish ladder AWS