

The Dalles Dam Fishway Status Report

06/14/2020

Inspection Period: 6/7-6/13

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: 21	Temperature: 58.5 °F
			Comments: Increasing spill volume and GULL #.	Weekly Average Secchi: 3.0

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'	1.3
Entrance weir N1	0	depth (≥ 8')	10.0
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	
Weir 158-159 differential	0	1.1' ± 0.1'	
Count station differential	0	≤ 0.3'	
153 Weir crest depth	0	1.3' ± 0.1'	
Junction pool weir JP6	0	> 7.0'	Average for week = 16.4
East entrance differential	1	1.0' - 2.0'	Average for week = 1.4 ~20 minute differential loss on trend after F1 failure
Entrance weir E1	0	No criteria	Average for week = 10.2
Entrance weir E2	0	depth (≥ 8')	Average for week = 12.5
Entrance weir E3	0	depth (≥ 8')	Average for week = 12.5
Collection channel velocity	0	1.5 - 4 fps	3.03 fps, 6/7/2020 Range: 3.74 fps MU20 - 2.16 fps MU10
Transportation channel velocity	0	1.5 - 4 fps	1.8 fps, 5/30/2020
North channel velocity	0	1.5 - 4 fps	1.61 fps, 6/7/2020 High tailwater.
South channel velocity	0	1.5 - 4 fps	1.64 fps, 6/7/2020 High tailwater and strong west wind in channel.
West entrance differential	1	1.0' - 2.0'	Average for week = 1.4 ~15 minute differential loss on trend after F1 failure
Entrance weir W1	0	depth (≥ 8')	Average for week = 12.2
Entrance weir W2	0	depth (≥ 8')	Average for week = 12.2
Entrance weir W3	0	No criteria	
South entrance differential	1	1.0' - 2.0'	Average for week = 1.4 ~10 minute differential loss on trend after F1 failure
Entrance weir S1	0	depth (≥ 8')	Average for week = 8.6
Entrance weir S2	0	depth (≥ 8')	Average for week = 8.6

JUVENILE PASSAGE

Sluiceway operation	0	Units 1, 7, 18	MU8 OOS, MU7 in operation with open sluiceways per FPP.
Turbine trashrack drawdown	0	<1.5', biwkly	6/6/2020 checked, all in criteria.
Spill volume/pattern	0	1 to 8	Spill 40% of total flow.
Turbine Unit Priority	21	per FPP	All available MUs running. MU8 OOS forcing operators to use units on east end out of priority.
Gatewells	0	Weekly	6/6/2020 No mortality, MU-18-1 has significant numbers shad and salmon yearlings.

OTHER ISSUES:

Fishway Operations

F1 forced out of service 6/12 0830. F2 increased to maximum. AWS backup full open 0930. Total flow ~4200cfs. Ladder maintaining criteria.
Spillway open 40% for juvenile passage with Fish Passage Plan pattern
Sluiceway open with 6 sluiceways

Current Unit Outages

T10 (MU19 & 20) forced out of service through 10/28/2021 due to acetylene levels
MU1 and MU2 restricted to 160 MW combined through 1/28/2021
MU8 out of service through 7/10/2020 for Overhaul
F1 forced out 6/12 for turbine pit flooding
MU17 out of service 6/15 - 6/18/2020 For Annual
Line3 out of service 6/15 - 6/18/2020 for ground switch repairs and T3 deficiency correction

Maintenance

No calibration check this week
Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work to resume next week.
East fishway automation replacement underway. PLC box assembly completed. Installing boxes and conduit at entrance and exit locations.
Spillway assessment (MRER); No funding for FY20. Spillgate 9 trunnion pin included.
Onsite maintenance staffing near full with applied COVID precautions.

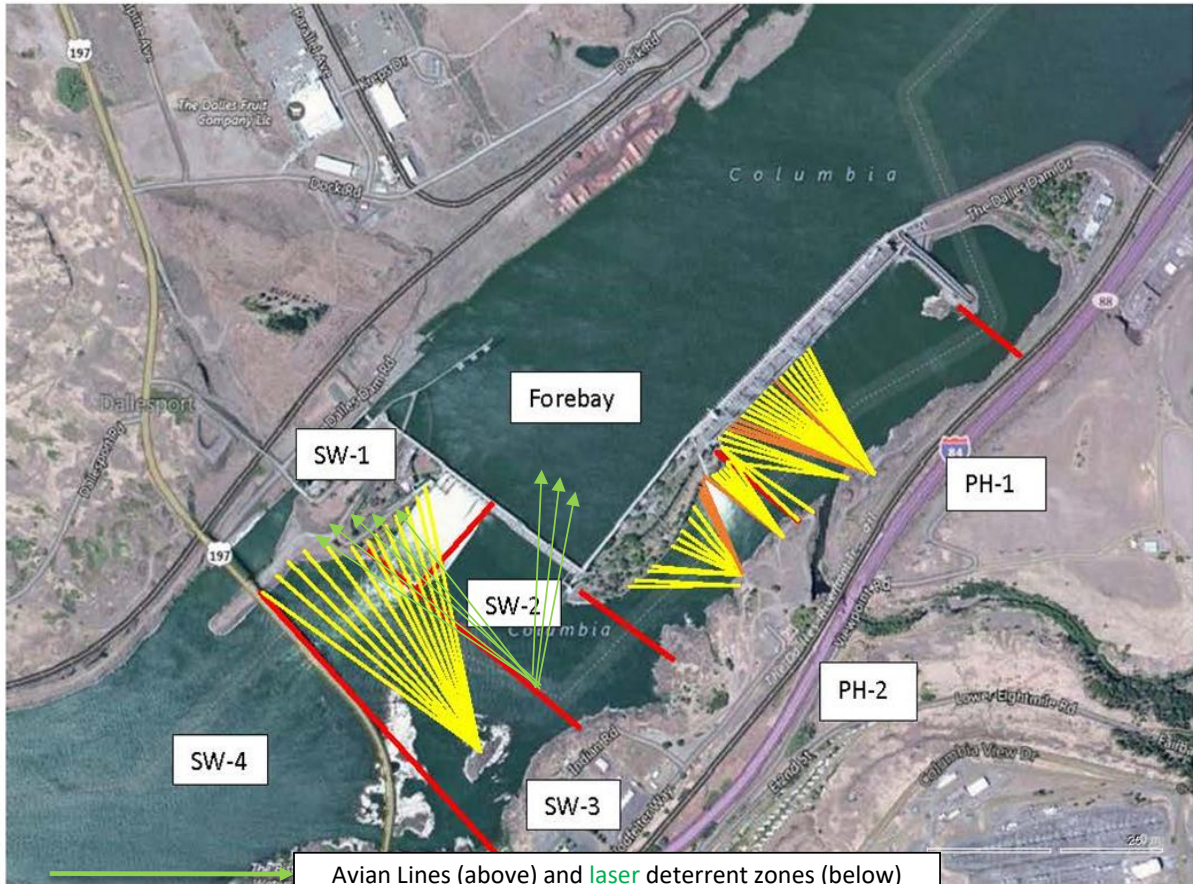
Predators

USDA hazing underway. High gull and pelican foraging below spillway. Cormorants ~40 nests on forebay powerline towers.
No Sea Lions observed this week. Large sturgeon feeding on shad in transportation channel.
Green laser use for piscivorous bird hazing testing on hold. Potential safety concerns being addressed.

Research/Construction/Contractors

Four Peaks fish counting ongoing.
AWS backup - Open since 6/12 F1 failure. Investigating need for a trashrack rake. Alarm system completion planning underway.
PITAGS north and east fishladder data collection at count stations continues.
Pikeminnow dam angling underway. Low catch rate. Possible bass/walleye GBT testing may be included.
Fish unit breaker replacement completed. Contractor back on site mid June for finishing touches. No fish unit outage required.
Fish unit rehab - Phase 1A. Planning single fish unit operation during rehab. Finalizing report until funding becomes available.

Approved by: Mike Colesar, Operation Project Manager, The Dalles Dam



Red lines = avian zones

Avian Lines (above) and laser deterrent zones (below)

Yellow lines = current wires

Orange lines = down or missing wires

Adult Fish Ladders-River Temperatures

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



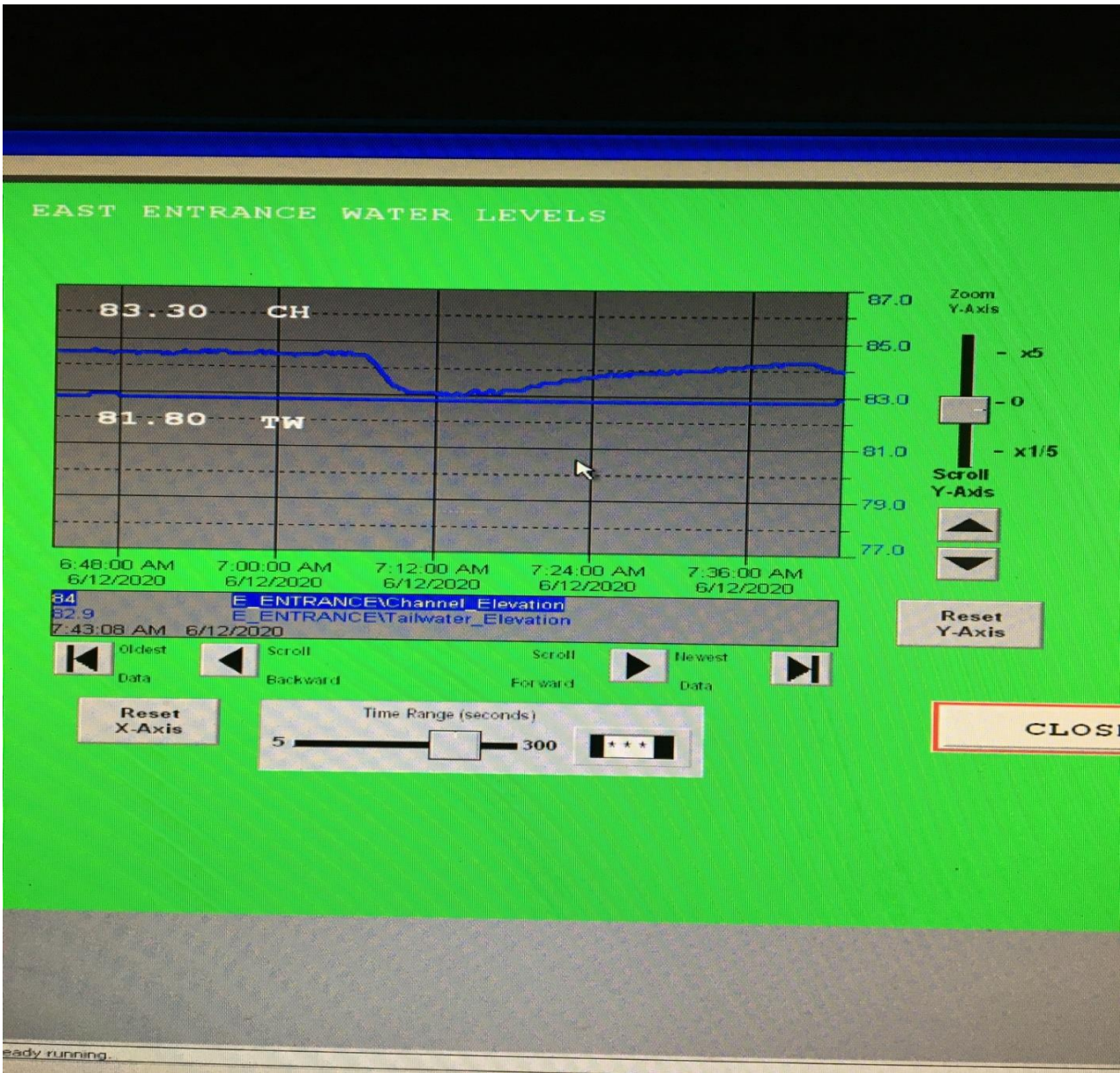
	Secchi:		°F	USGS link
6/7	3.0	Sun	58.7	
6/8	3.0	Mon	58.3	
6/9	3.0	Tue	58.3	
6/10	3.0	Wed	58.4	
6/11	3.0	Thurs	58.7	
6/12	3.0	Fri	58.7	
6/13	3.0	Sat	58.5	
	3.0	AVG	58.5	

**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
6/7			1.5	11.5	12.7	12.6	16.1	1.1	12.5	12.5	12.0	1.3	9.2	9.2
	1.4	9.9	1.5	12.5	12.6	12.5	16.8	1.5	12.6	12.6	7.0	1.5	8.8	8.9
	1.4	10.0	1.5	12.3	12.3	12.4	16.3	1.5	12.4	12.4	6.8	1.5	8.8	8.7
6/8			1.4	12.6	12.8	12.7	17.6	1.6	12.7	12.5	7.8	1.6	8.8	8.8
	1.4	10.0	1.5	12.4	12.5	12.5	17.5	1.6	12.5	12.5	7.9	1.6	8.7	8.7
	1.3	10.0	1.4	12.5	12.5	12.5	17.3	1.6	12.3	12.3	7.8	1.5	8.7	8.7
6/9			1.5	12.5	12.4	12.5	16.9	1.5	12.6	12.6	8.1	1.6	8.7	8.7
	1.3	10.0	1.6	12.6	12.5	12.6	17.2	1.5	12.5	12.5	8.0	1.5	8.8	8.8
	1.3	9.9	1.4	12.6	12.5	12.5	17.2	1.5	12.5	12.5	8.1	1.5	8.8	8.7
6/10			1.4	12.5	12.5	12.5	15.4	1.3	12.5	12.5	8.1	1.4	8.7	8.6
	1.3	9.9	1.5	12.5	12.5	12.5	15.4	1.5	12.6	12.6	5.6	1.4	8.8	8.8
	1.2	10.1	1.3	12.6	12.5	12.5	16.0	1.5	12.4	12.4	5.4	1.5	8.8	8.8
6/11			1.4	12.5	12.5	12.5	16.8	1.5	12.4	12.4	7.9	1.5	8.7	8.7
	1.3	9.9	1.6	10.6	12.5	12.5	15.9	1.6	12.6	12.6	3.5	1.4	8.9	8.9
	1.3	10.0	1.4	10.3	12.5	12.5	15.6	1.5	12.4	12.4	3.4	1.4	8.9	8.9
6/12			0.3	10.5	12.4	12.5	16.8	0.8	12.6	12.6	3.5	0.9	8.9	8.8
	1.3	10.0	1.5	7.0	12.4	12.4	17.0	1.6	11.1	11.1	2.1	1.4	8.0	8.0
	1.3	10.0	1.6	3.4	12.3	12.3	17.0	1.4	12.5	12.5	2.1	1.4	8.1	8.1
6/13			1.6	4.0	12.5	12.5	14.9	1.5	10.5	10.5	0.7	1.2	8.0	8.1
	1.3	10.0	1.4	3.6	12.5	12.4	14.9	1.3	10.5	10.7	0.3	1.2	8.0	8.2
	1.3	9.9	1.6	3.9	12.4	12.4	15.0	1.5	10.6	10.6	0.8	1.3	8.2	8.2
AVG:	1.3	10.0	1.4	10.2	12.5	12.5	16.4	1.4	12.2	12.2	5.6	1.4	8.6	8.6

Fishways are inspected once daily plus one SCADA inspection.



~20 minute loss of east entrance differential after F1 forced outage