

# The Dalles Dam Fishway Status Report

3/21/2021

Inspection Period: 03/14-03/20

## THE DALLES DAM



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<b>The Dalles Dam</b>	<b>Inspections OOC</b>	<b>Criteria Limit</b>	<b>Total Number of Inspections:</b> 14	<b>Temperature:</b> 43.4 °F
			<b>Comments:</b> New Automation troubleshooting.	<b>Weekly Ave. Secchi:</b> 4.9

### 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'	9.5
Entrance weir N1	0	depth (≥ 8')	1.2
Entrance weir N2	0	Closed	
PUD Intake differential	0	≤ 0.5'	

### EAST FISHWAY

Exit differential	0	≤ 0.5'	New automation
Removable weirs 154-157	0	Per forebay	New automation
Weir 158-159 differential	0	1.1' ± 0.1'	New automation
Count station differential	0	≤ 0.3'	New automation
153 Weir crest depth	0	1.0' ± 0.1'	New automation
Junction pool weir JP6	0	> 7.0'	
East entrance differential	0	1.0' - 2.0'	2 fish unit operation Week ave. 1.5
Entrance weir E1	0	No criteria	
Entrance weir E2	0	depth (≥ 8')	New automation Week ave. 12.3
Entrance weir E3	0	depth (≥ 8')	New automation Week ave. 12.4
Collection channel velocity	0	1.5 - 4 fps	3.06 fps Range MU5 3.91- MU21 2.46fps
Transportation channel velocity	0	1.5 - 4 fps	
North channel velocity	0	1.5 - 4 fps	2.64 fps, 3/6/2021
South channel velocity	0	1.5 - 4 fps	2.92fps 3/6/21
West entrance differential	0	1.0' - 2.0'	New automation Week ave. 10.5
Entrance weir W1	0	depth (≥ 8')	New automation Week ave. 10.3
Entrance weir W2	0	depth (≥ 8')	New automation Week ave. 10.3
Entrance weir W3	0	No criteria	Closed
South entrance differential	0	1.0' - 2.0'	Week ave. 1.5
Entrance weir S1	0	depth (≥ 8')	2 fish unit operation Week ave. 9.2
Entrance weir S2	7	depth (≥ 8')	2 fish unit operation Week ave. 9.3 Weir 1.6' shallow than value. Working on correction.

### JUVENILE PASSAGE

Sluiceway operation	0	Units 3, 17	Gates over 3-17 open
Turbine trashrack drawdown	0	<1.5', biwkly	
Spill volume/pattern	0	1 to 8	OFF
Turbine Unit Priority	0	per FPP	MU 3 and MU 17 given priority.
Gatewells	0	Weekly	No mortality. 3/21/2021

## OTHER ISSUES:

### Current Unit Outages

Navlock out for maintenance through 4/1/2021  
MU13 forced out through 4/8/2021 for Turbine Bearing Cooler Repairs  
T10 (MU19 and 20) OOS 10/27/22 acetylene levels  
MU22 out 3/1/2021 – 5/20/2021 for Top Plate Cover Upgrades

### Maintenance

PUD intake rake out of service due to power track damage. Temporary repair in progress.  
Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Work to resume FY21.  
Fishway automation replacement on hold. East exit, east and south entrances complete. West and north operating old system. Working calibration issues.  
Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair  
Calibrations indicate significant deviations at east and south entrance gates with new automation. Working on corrections.

### Predators

Moderate gull numbers. Cormorants 30 to 40 per day mostly loafing in SW3, not on BPA towers. 2 bald eagles persist in Westrick.  
Green laser use for piscivorous bird hazing testing continues. Effective moving cormorants out of SW3 during low light.  
Testing owl predator "scare crow" for forebay tower cormorants.  
Pikeminnow dam angling resumes next May. **All invasive bass/walleye by-catch release to continue per state requirement for past 5 years.**  
Planning PIT scanning in SW3. No tags recovered on Klickitat sandbar 1/19/21. Processing tag data recovered. Avian predator investigation continues.

### Research/Construction/Contractors

Fish counters start Apr1. Completing access logistics and orientation.  
AWS intake trashrack - EDR funded for FY21 to investigate solution for debris plugging issue. Team site visit Mar31.  
PITAGS north and east fishladder data collection at count stations continues.  
Fish unit rehab - Phase 1A on hold. Planning operation with AWS backup water supply during construction.

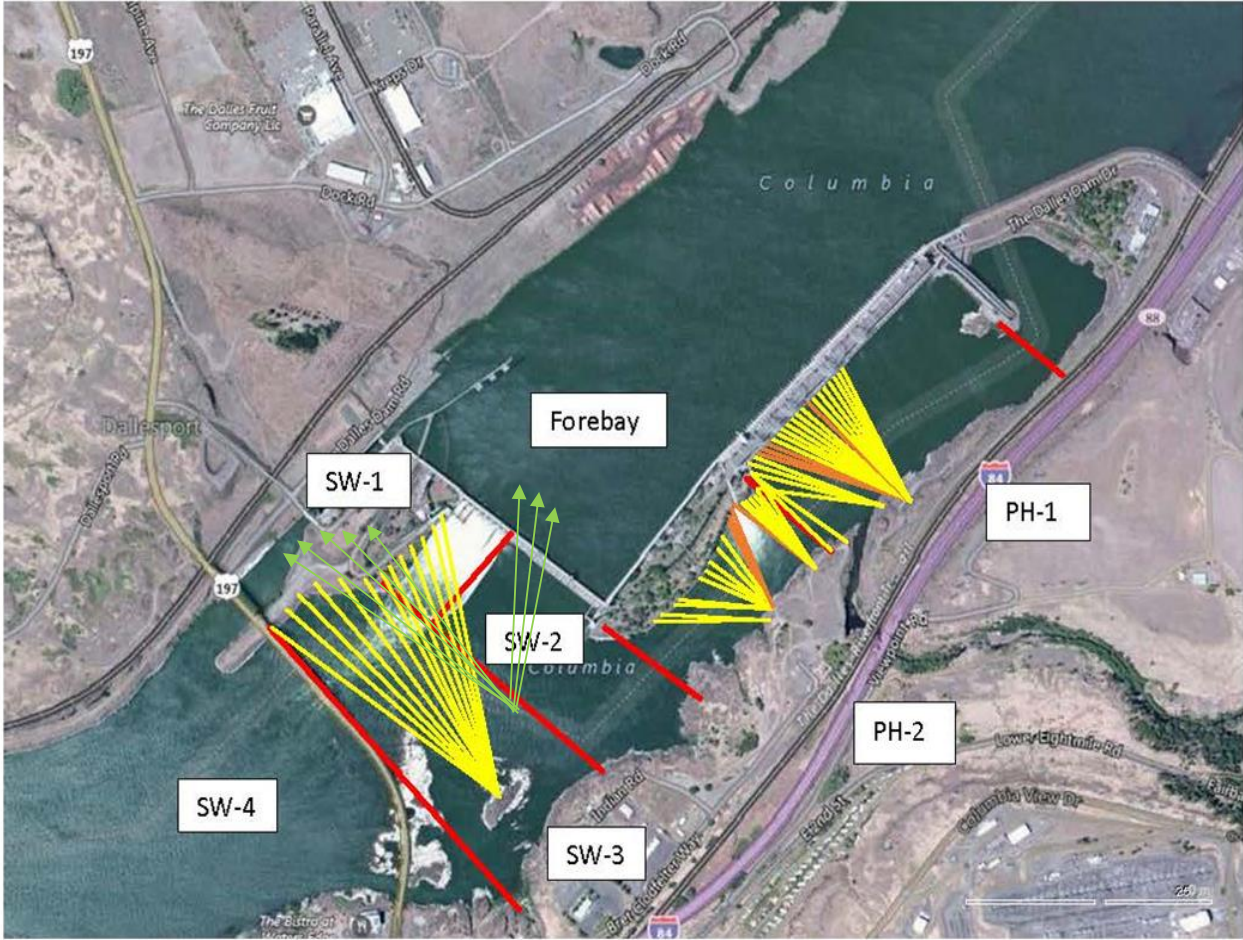
### Fishway Operations

Ice Trash sluiceway opened with 4 sluiceways 24/7. Chain gates 3/2-3 and 17/1-2 open. Unit priority on MU3 and 17.  
East and north fishladders in full operation per Fish Passage Plan.

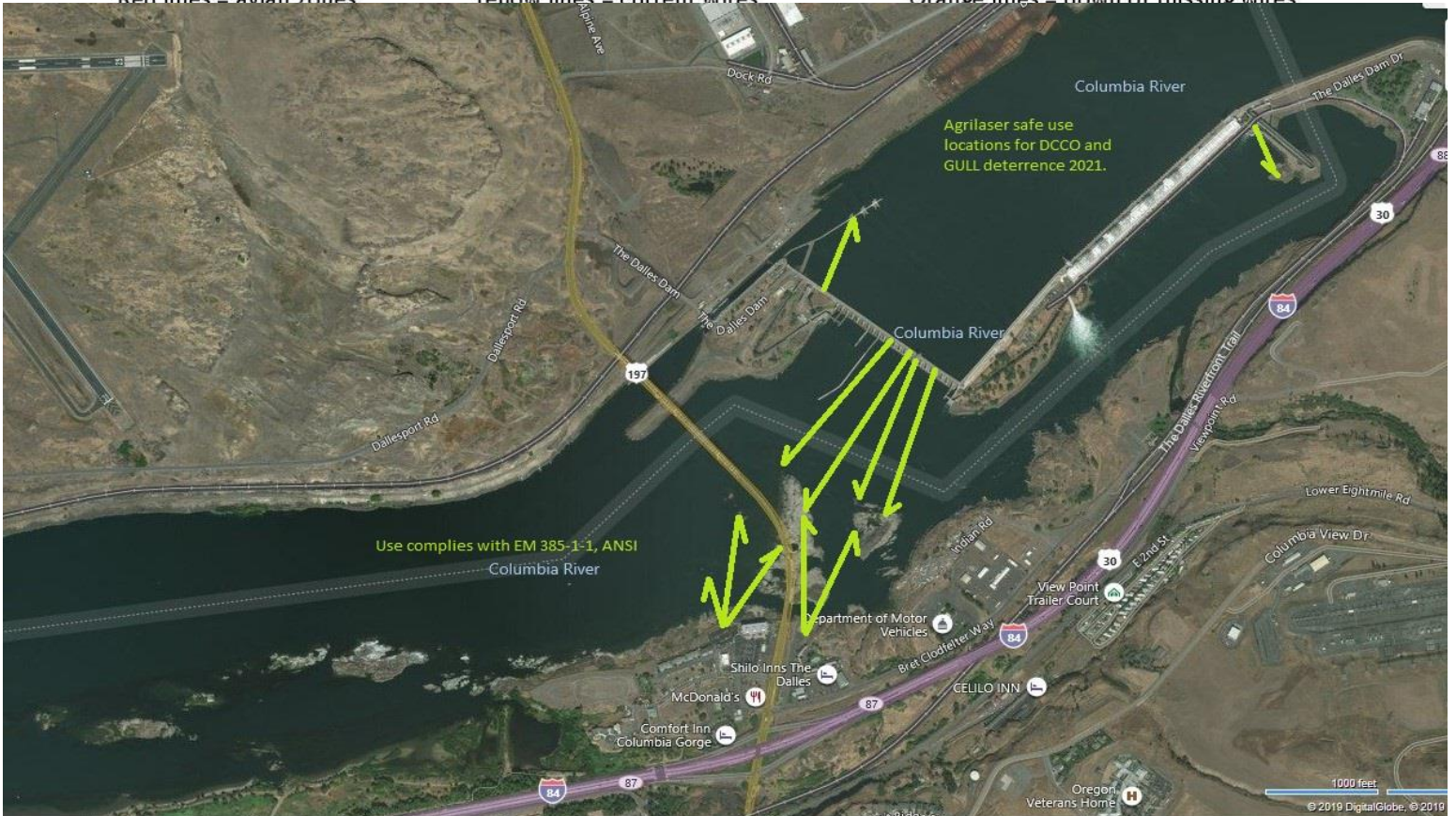
Approved by: Ron Twiner, Operation Project Manager, The Dalles Dam



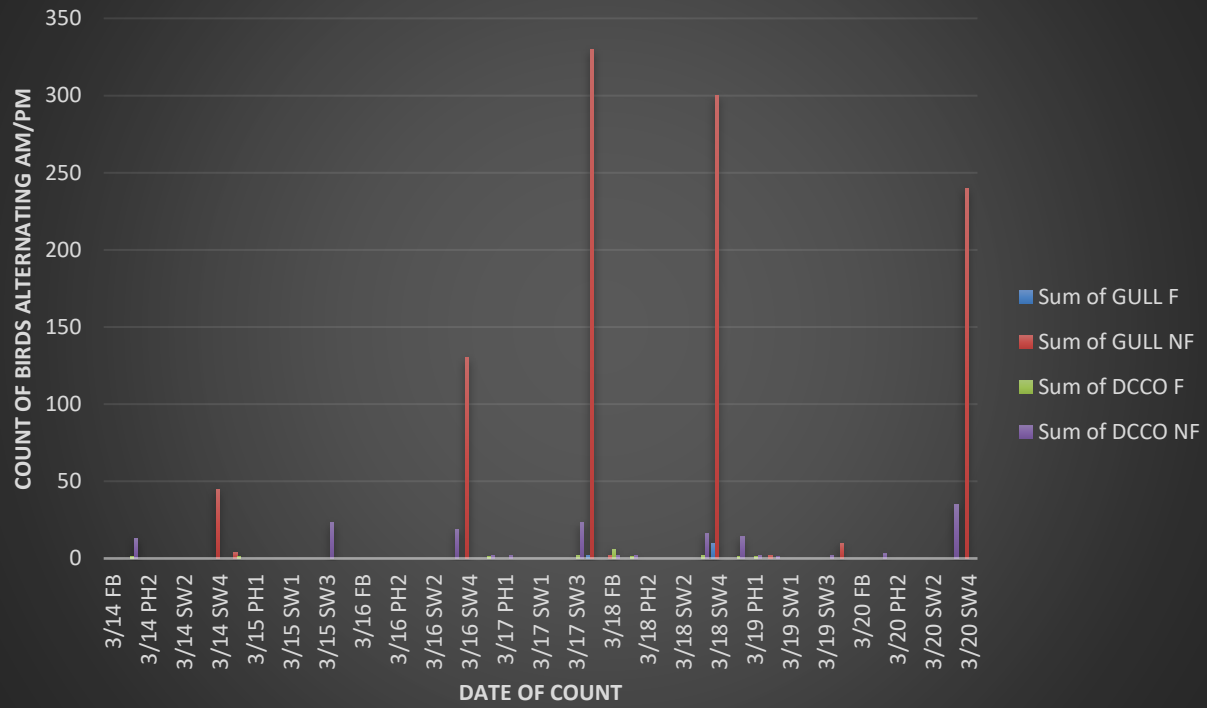
New Avian Lines and laser deterrent zones



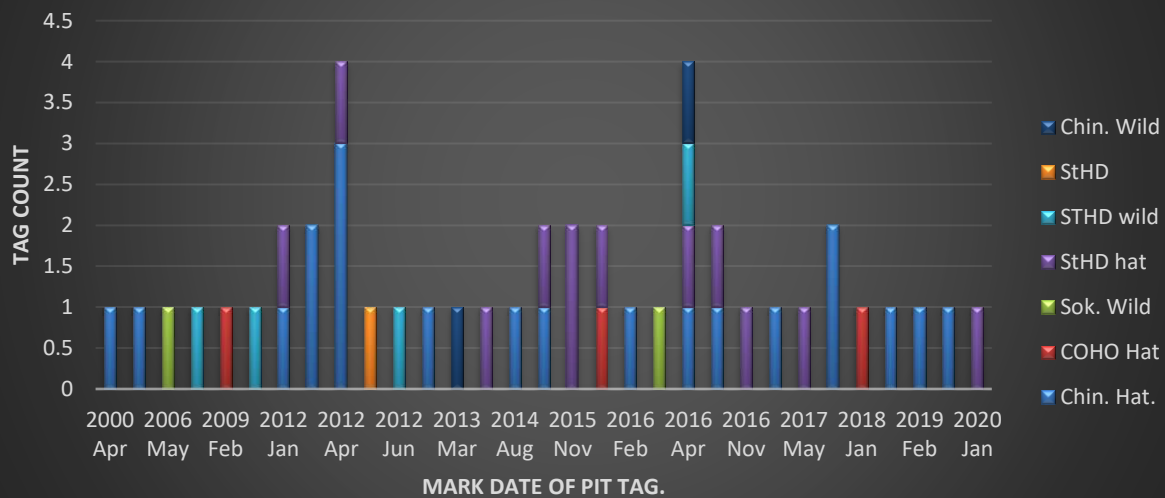
Red lines = avian zones      Yellow lines = current wires      Orange lines = down or missing wires



### Avian count TDA 3/14 to 3/20/21

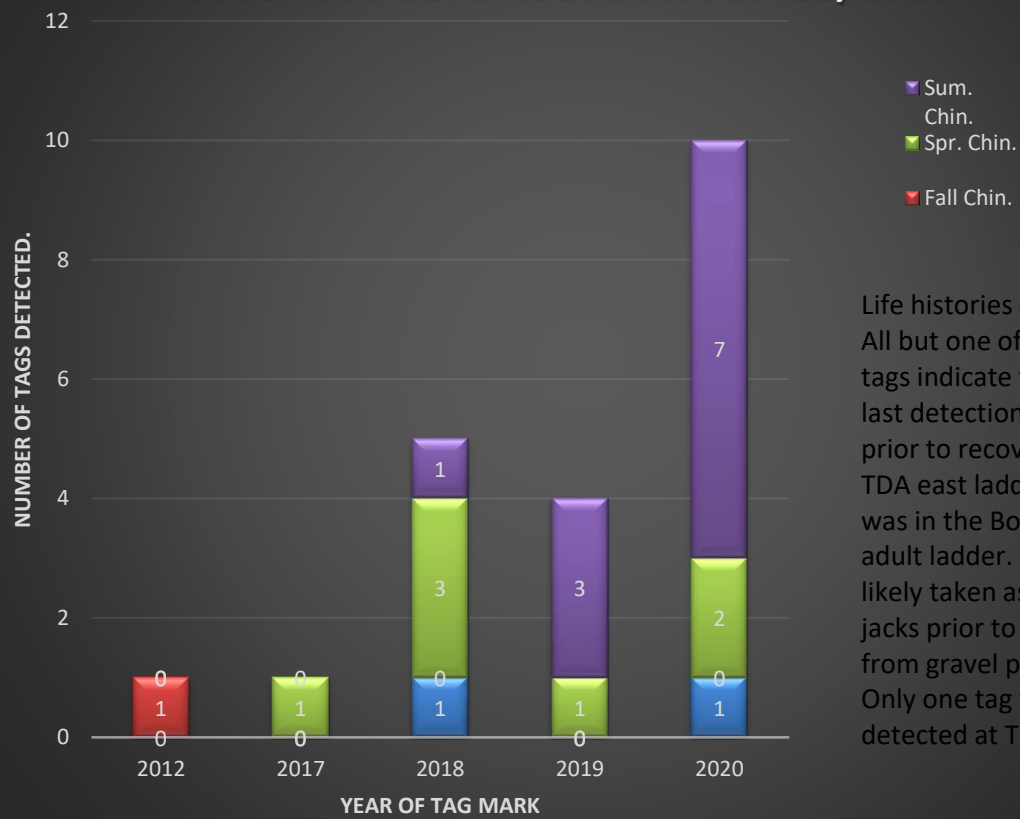


## TDA PIT tag recoveries from Lewis island west of SW4 1/13/2021





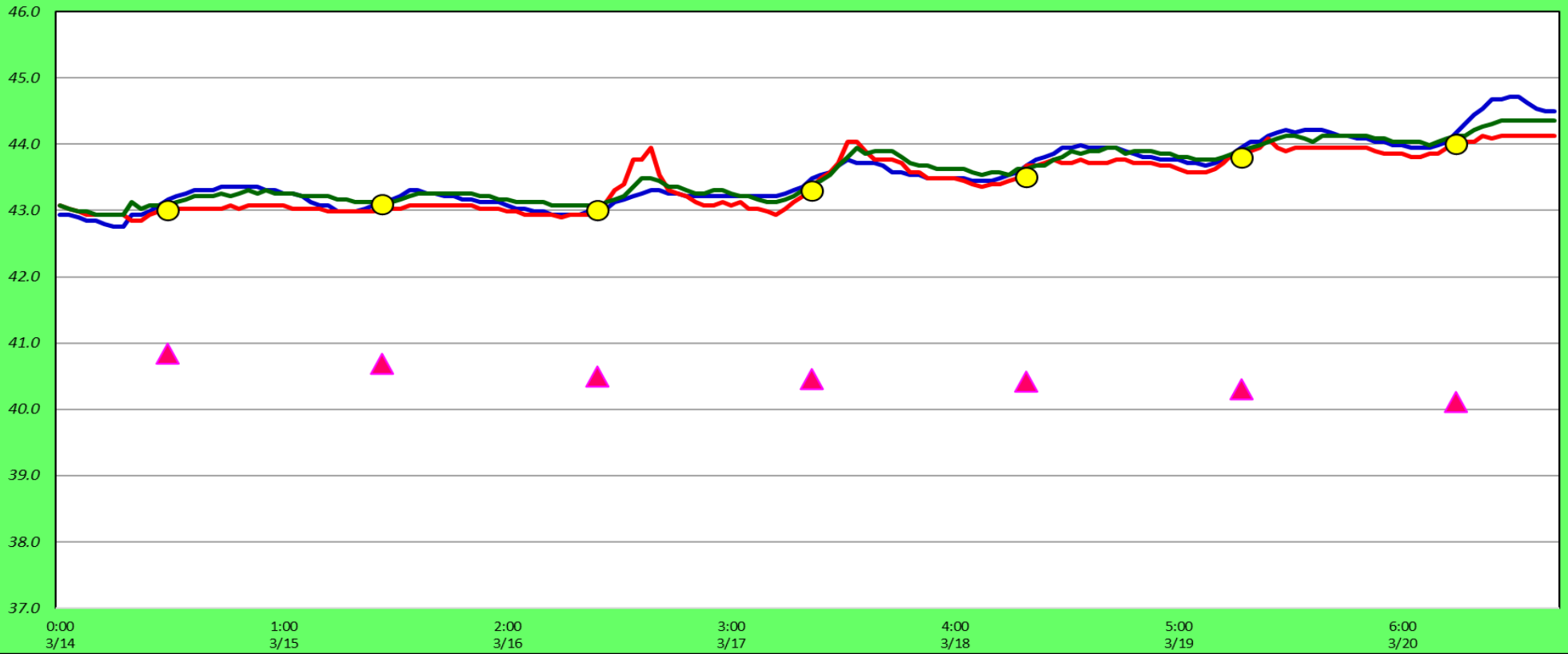
## PIT tag recoveries from inside TDA East fish ladder 180 bend count station 12/2020



Life histories of PIT tags: All but one of these tags indicate that the last detection event prior to recovery in TDA east ladder, was in the Bonneville adult ladder. These likely taken as mini-jacks prior to recovery from gravel pile at TDA. Only one tag was detected at TDA adult

### Adult Fish Ladders-River Temperatures

— East Count Station    — North Count Station    — North Entrance    ● Current USGS Daily Average    ▲ USGS Daily Average (2007-2020)



Secchi:		°F	
3/14	4.0	Sun	43.0
3/15	5.0	Mon	43.1
3/16	5.0	Tue	43.0
3/17	5.0	Wed	43.3
3/18	5.0	Thurs	43.5
3/19	5.0	Fri	43.8
3/20	5.0	Sat	44.0
	4.9	AVG	43.4

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

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
3/14	1.2	9.6	1.4	6.7	13.1	13.1	10.7	10.7	10.2	10.2	-2.9	1.0	9.0	9.0
	1.2	9.6	1.4	6.6	13.0	13.0	10.6	10.6	10.2	10.2	-3.0	1.0	9.0	9.0
3/15	1.2	9.6	1.5	6.4	12.7	12.7	10.5	10.5	10.2	10.2	-3.1	1.6	9.1	9.0
	1.2	9.5	1.4	6.5	9.8	9.8	10.5	10.5	10.4	10.4	-2.9	1.6	9.4	9.4
3/16	1.2	9.5	1.7	6.1	11.9	11.9	10.2	10.2	10.4	10.4	-3.2	1.6	9.1	9.1
	1.2	9.5	1.7	5.7	12.0	12.0	9.8	9.8	10.3	10.3	-3.5	1.6	8.9	8.9
3/17	1.4	9.3	1.4	7.4	12.9	12.9	11.4	11.4	10.2	10.2	-2.2	1.5	9.8	9.8
	1.4	9.4	1.8	6.6	11.9	12.0	10.6	10.6	10.3	10.3	-2.9	1.5	9.5	9.6
3/18	1.2	9.6	1.4	6.9	13.0	13.0	10.9	10.9	10.4	10.4	-2.7	1.5	9.7	9.7
	1.2	9.4	1.7	6.0	11.9	12.1	10.0	10.0	10.3	10.4	-3.3	1.6	9.2	9.2
3/19	1.3	9.4	1.4	6.5	12.5	12.8	10.5	10.5	10.4	10.4	-3.0	1.6	9.3	9.3
	1.2	9.6	1.4	6.7	12.7	13.0	10.7	10.7	10.3	10.3	-2.9	1.6	9.5	9.5
3/20	1.2	9.6	1.2	6.4	12.8	13.0	10.5	10.5	10.4	10.4	-3.2	1.6	9.2	9.2
	1.2	9.5	1.5	5.8	12.1	12.4	9.9	9.9	10.2	10.2	-3.6	1.7	8.8	8.9
<b>AVG:</b>	<b>1.2</b>	<b>9.5</b>	<b>1.5</b>	<b>6.4</b>	<b>12.3</b>	<b>12.4</b>	<b>10.5</b>	<b>10.5</b>	<b>10.3</b>	<b>10.3</b>	<b>-3.1</b>	<b>1.5</b>	<b>9.2</b>	<b>9.3</b>

*Fishways are inspected once daily.*

\*S2 value 1.6' more than actual. Therefore labelled out of criteria.





Tying something new for cormorant tower nesting. Head even rotates.