

# The Dalles Dam Fishway Status Report

11/09/19

Inspection Period: 11/4-11/09, 2019

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
P.O. Box 564  
The Dalles, OR 97058-9998  
Phone: 541-506-3800

The Dalles Dam	Inspections OOC	Criteria Limit	Total Number of Inspections:	21	Temperature:	52.5 °F
			Comments:	Soft constraint on FB 159.5'		
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 for week =	1.26		
Entrance weir N1	0	depth (≥ 8')	Average for week =	9.3		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'				
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	1	Per forebay	Weir 157 experiencing mechanical brake failure, able to maintain criteria manually.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
153 Weir crest depth	0	1.1' ± 0.1'	occasionally exceeds 1.2			
Junction pool weir JP6	0	0.0	Average for week =	10.1		
East entrance differential	0	1.0' - 2.0'	Average for week =	1.48		
Entrance weir E1	0	No criteria	Opened and adjusted to maintain differential			
Entrance weir E2	0	depth (≥ 8')	Average for week =	11.04		
Entrance weir E3	0	depth (≥ 8')	Average for week =	11.10		
Collection channel velocity	0	1.5 - 4 fps	2.78 fps Average	Range: 1.72 fps MU12 - 3.44 fps MU7 11/4/19		
Transportation channel velocity	0	1.5 - 4 fps	2.31 fps 11/4			
North channel velocity	0	1.5 - 4 fps	2.74 fps 11/4			
South channel velocity	0	1.5 - 4 fps	3.22 fps 11/4			
West entrance differential	0	1.0' - 2.0'	Average for week =	1.5		
Entrance weir W1	0	depth (≥ 8')	Average for week =	0.0	Closed 9/12 due to slack cable	
Entrance weir W2	0	depth (≥ 8')	Average for week =	9.7		
Entrance weir W3	0	1.0' - 2.0'	Average for week =	9.7	Opened 9/12 in place of W1.	
South entrance differential	0	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		
JUVENILE PASSAGE						
Sluiceway operation	0	Units 1, 8, 18				
Turbine trashrack drawdown	0	<1.5', biweekly	Drawdown inspection gatewells 11/10, 2 Juv. shad morts in 13-3.			
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP	Discontinue this value?			

## OTHER ISSUES:

### Operations

East & North fish ladders in full operation  
Ice Trash sluiceway open with 6 gates  
Spillway closed

### Current Outages

T10 (MU19 & 20) FOOS through 10/28/2021 due to acetylene levels  
T5 9/3/2019 - 11/25/2019 for T5 GSU Replacement & MU9 O/H  
MU10 OOS 9/3/2019 - 11/25/2019 for Annual  
MU1 and MU2 restricted to 160 MW combined through 5/28/2020  
MU13 OOS 9/23/2019 - 7/22/2020 for Hydraulic Oil System Repairs

### Maintenance

Calibration check 11/6/19, all within limits.  
Collection channel dewatering pumps 5 and 6 rehab continues. New pump motor ordered.  
Fishway automation replacement planning continues. Labor starting for assembly and sensor install.  
Engineering evaluation of east fishway diffuser valve status/rehab to resume.  
Planning underway to dewater south entrance auxiliary water conduit to repair failed diffuser valves.  
Preparation for improved expansion joint repair on east fishladder.  
Work starting on concrete crack injection for leakage in east count station.  
Spillway assessment (MRER); Funding uncertain for FY20. Importance of spillgate 9 fish priority included.  
Weir 157 secured out of ladder. Manual operation through remainder of the passage season. Forebay soft constraint 159.5' through November.  
West entrance weir W1 closed due to cable problems. Repair during winter outage. Weir E3 operated in its place providing two weirs at >8' depth

### Predators

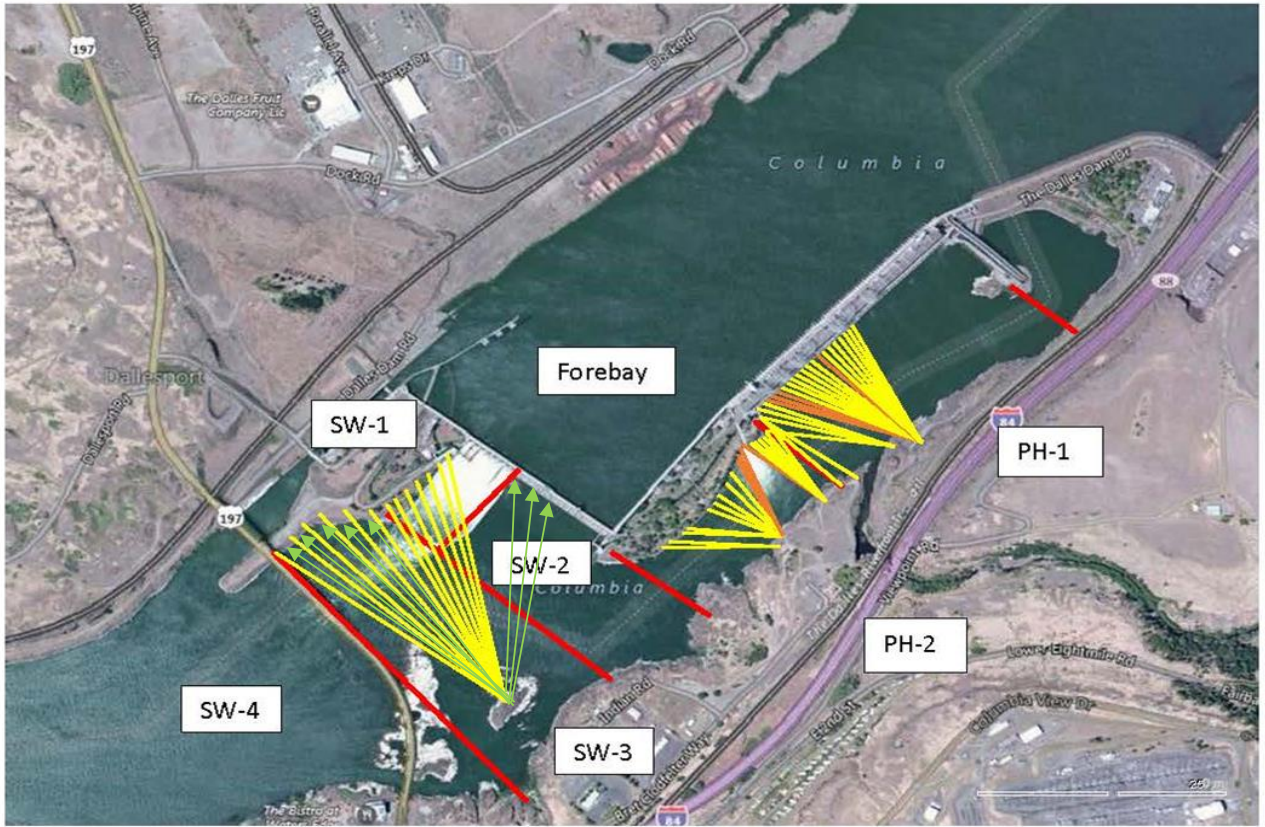
Green laser used to haze piscivorous birds for effectiveness testing. USDA hazing resumes 4/15/20.  
Cormorant and gull numbers fluctuating daily, with expected fall numbers.  
Sea Lions not observed from dam year to date.

### Research/Construction/Contractors

HDC removed temperature string from forebay, data analysis underway  
Four Peaks fish counting concluded October 31.  
For fish count data refer to: [FPC FISH COUNTS](#)  
AWS backup - Follow on contract in progress. Return to service delayed due to parts delivery. Commissioning scheduled third week Feb.  
PSMFC weekly PUD sampling resumes next April.  
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 caught were released.**  
ODFW monthly fishway inspections completed for season.  
Lamprey minor mods - No work planned at this time.  
U of I - Second season of lamprey passage night flow testing complete. Final report show entrance benefit, but not for overall dam passage.  
Lamprey trapping at east count station - Concluded 9/13 with 603 lamprey translocated.  
Fish unit breaker replace.- Planning third season work Dec1-Mid Jan. Return to service Feb1.  
Fish unit rehab - Phase 1A. Planning operation scenario during construction.

Approved by: Mike Colesar  
Operation Project Manager The Dalles Dam

In



Red lines = avian zones

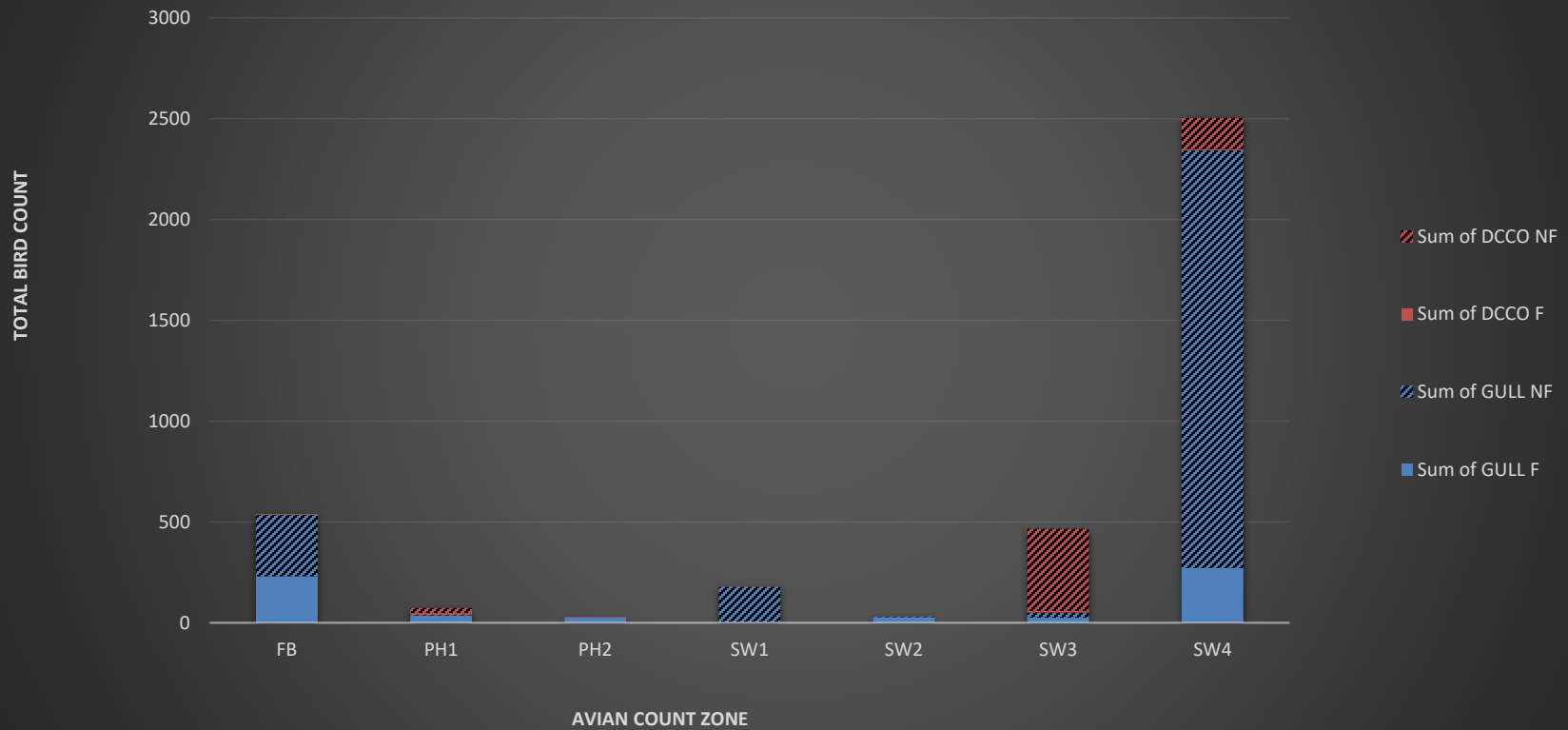
Yellow lines = current wires

Orange lines = down or missing wires

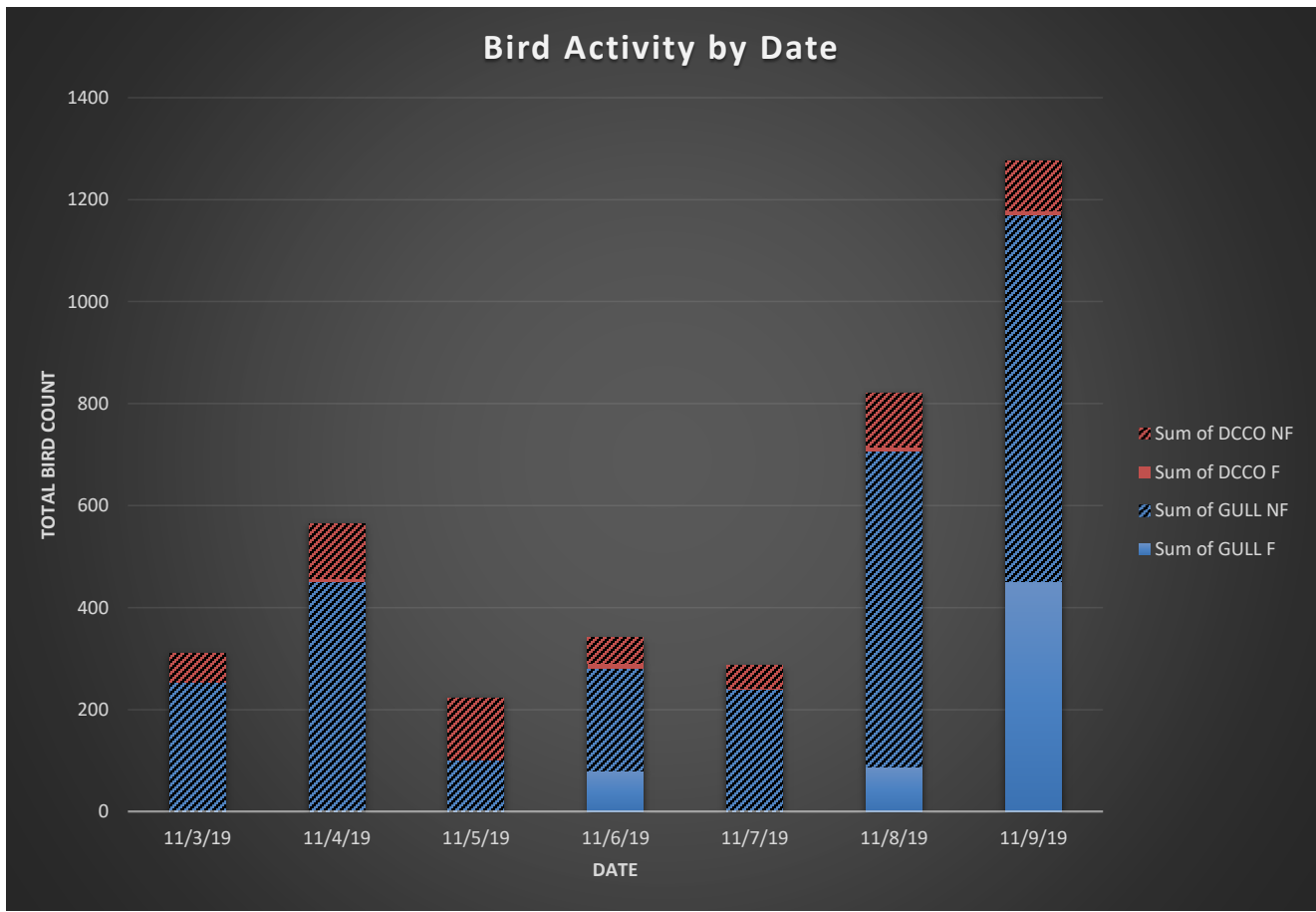


Additional avian lines installed 9/2018

### Bird Activity by Zone 11/3 - 11/9

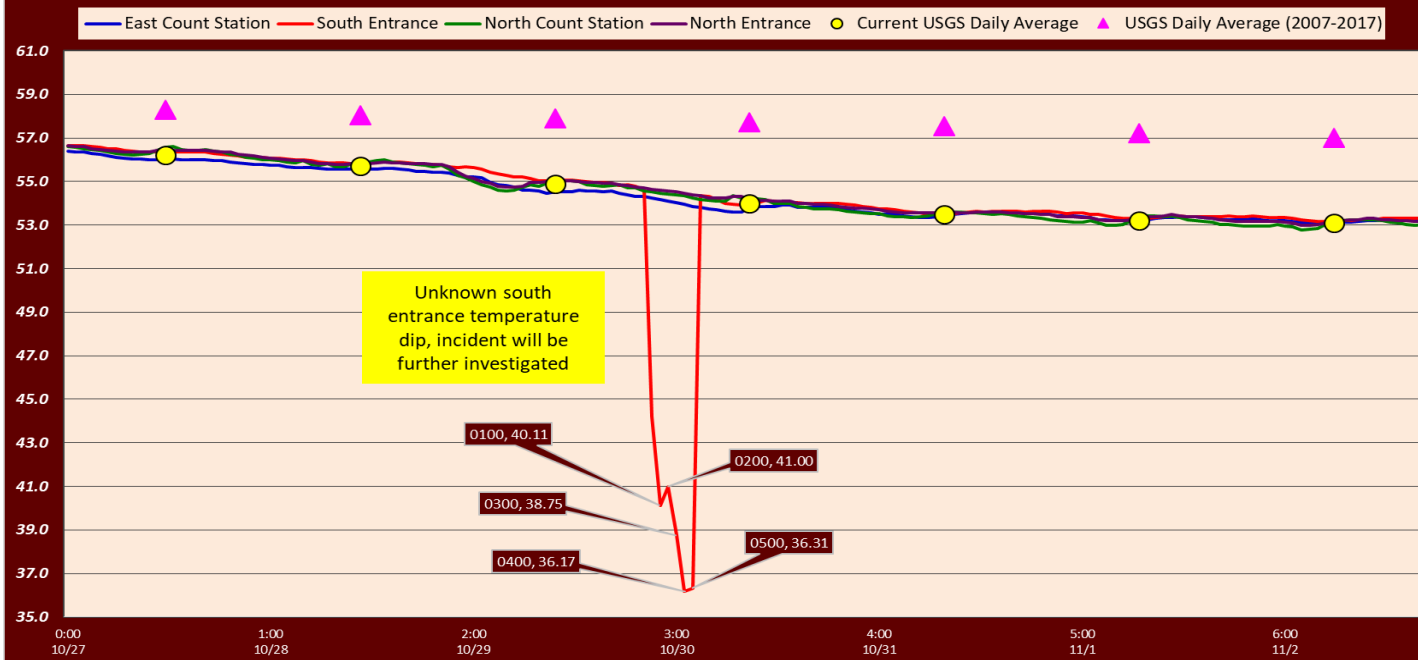


Gulls and cormorants (DCCO) continue to show the highest numbers in SW4



Gull activity varies by date; cormant (DCCO) numbers remain fairly stable.

### The Dalles Dam Adult Fish Ladder(s)-River Temperatures



USGS:		
Secchi:		Temperatures
11/3	5.0	Sun 53.0
11/4	5.0	Mon 53.0
11/5	5.0	Tue 52.9
11/6	5.0	Wed 52.7
11/7	5.0	Thurs 52.4
11/8	5.0	Fri 52.0
11/9	5.0	Sat 51.4
	5.0	AVG 52.5

**Nov Temps**

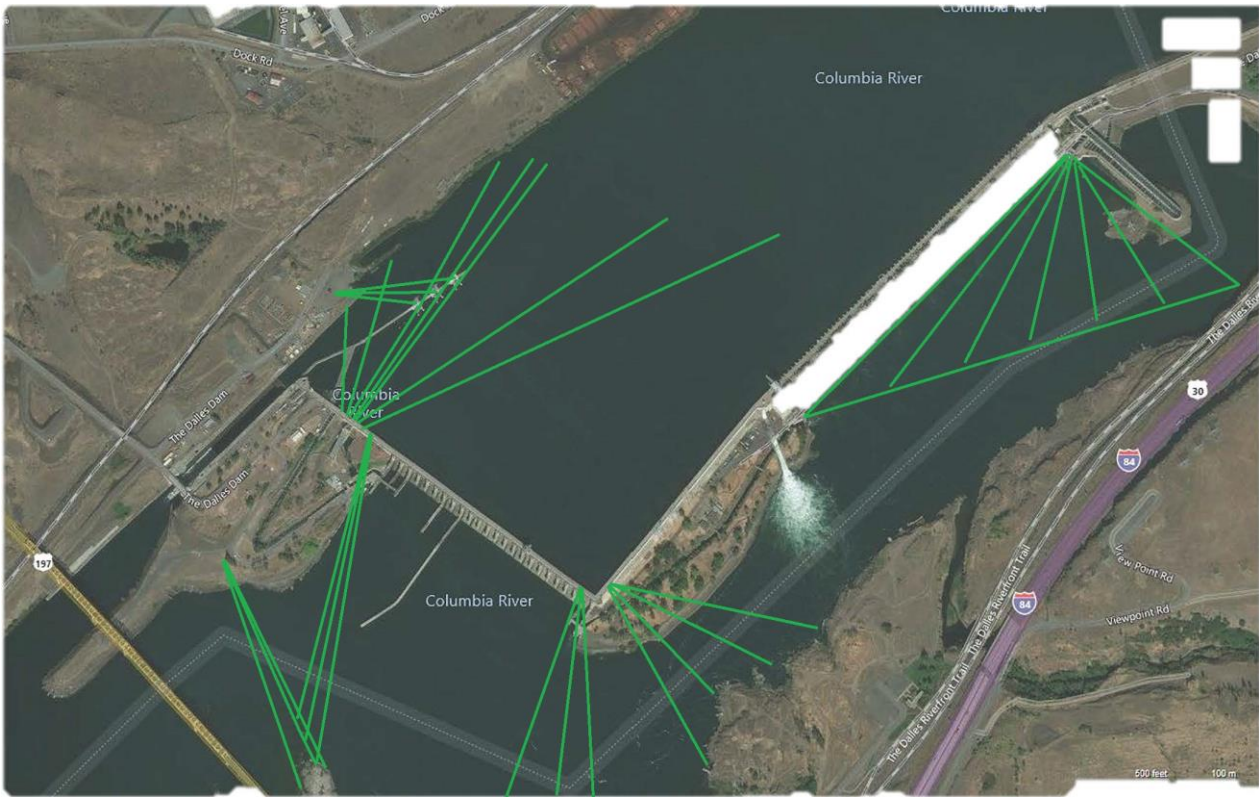
The Dalles Dam Daily Readings and Averages for  
Temperatures, Secchi, Entrances, and Spill

SCADA INSPECTION  
out of criteria

Date:	North Ladder Entrance		East Ladder											
			East Entrance					West Entrance			South Entrance			
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
11/3			1.3		11.0	11.0	10.5	1.5		9.8	9.8	1.4	8.5	8.5
	1.24	9.25	1.3		10.9	10.9	9.6	1.4		9	9	1.5	8.5	8.5
	1.3	9.3	1.5		11.0	11.0	9.8	1.5		9.3	9.3	1.5	8.4	8.4
11/4			2.0		11.0	11.0	12.0	1.8		10.0	10.0	1.6	8.5	8.5
	1.3	9.5	1.4		12.0	12.0	11.5	1.5		10.3	10.3	1.6	8.5	8.4
	1.2	9.5	1.4		11.2	11.3	10.3	1.4		10.1	10.0	1.5	8.5	8.5
11/5			1.4		10.5	11.5	9.9	1.4		9.8	9.8	1.4	8.5	8.5
	1.3	9.1	1.5		11.0	11.0	9.7	1.4		9.9	9.8	1.4	8.5	8.5
	1.3	9.1	1.5		11.1	11.1	9.6	1.4		9.9	9.8	1.4	8.5	8.5
11/6			1.4		11.0	11.0	8.8	1.3		9.9	9.9	1.4	8.5	8.5
	1.2	9.2	1.5		11.0	11.0	9.5	1.3		9.8	9.9	1.4	8.5	8.5
	1.3	9.1	1.4		11.1	11.1	10.8	1.6		9.9	9.9	1.5	8.9	8.6
11/7			1.5		11.1	11.1	10.1	1.5		9.8	9.8	1.6	8.4	8.4
	1.3	9.2	1.6		11.0	11.0	10.0	1.5		9.8	9.8	1.5	8.6	8.6
	1.2	9.1	1.4		10.9	11.1	9.4	1.3		9.8	9.8	1.6	8.4	8.3
11/8			1.5		11.0	10.9	9.2	1.5		9.3	9.4	1.6	8.4	8.3
	1.3	10.0	1.5		11.0	10.9	10.2	1.6		9.4	9.4	1.6	8.4	8.5
	1.3	9.1	1.5		11.0	11.0	10.5	1.6		9.5	9.6	1.5	8.6	8.6
11/9			1.4		11.0	11.1	9.4	1.4		9.6	9.6	1.5	8.4	8.4
	1.2	9.9	1.5		11.1	11.0	10.1	1.5		9.5	9.4	1.5	8.5	8.5
	1.3	9.2	1.5		11.0	11.0	10.4	1.5		9.6	9.5	1.4	9.2	8.7
<b>AVG:</b>	<b>1.3</b>	<b>9.3</b>	<b>1.5</b>		<b>11.0</b>	<b>11.1</b>	<b>10.1</b>	<b>1.5</b>		<b>9.7</b>	<b>9.7</b>	<b>1.5</b>	<b>8.5</b>	<b>8.5</b>

***Fishways are inspected twice daily plus one SCADA inspection.***





Green light agrilaser bird deterrent test areas at the Dalles Dam.