

# The Dalles Dam Fishway Status Report

9/20/21

Inspection Period:9/12-9/19/2021

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
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<b>The Dalles Dam</b>	<b>Inspections OOC</b>	<b>Criteria Limit</b>	<b>Total Number of Inspections:</b> 18		<b>Temperature:</b> 68.5 °F
			<b>Comments:</b> East ladder passing most fish.		<b>Weekly Ave. Secchi:</b> 5.0

### NORTH FISHWAY

Exit differential	0	≤ 0.5'		
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.0' ± 0.1'		
Entrance weir N1	0	1.0' - 2.0'	Weekly average	9.6
Entrance Differential	0	depth (≥ 8')	Weekly average	1.4
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	1.0' ± 0.1'		
Junction pool weir JP6	0	> 7.0'		
East entrance differential	0	1.0' - 2.0'	Week ave.	1.5
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')	Week ave.	12.1
Entrance weir E3	0	depth (≥ 8')	Week ave.	11.3
Collection channel velocity	0	1.5 - 4 fps	2.69 fps 9/18/21 fps, fastest 3.37 MU8, slowest 2.0 MU5	
Transportation channel velocity	0	1.5 - 4 fps	2.26 fps 9/19/21	
North channel velocity	0	1.5 - 4 fps	2.74 fps 9/19/21	
South channel velocity	0	1.5 - 4 fps	3.81 fps 9/19/21	
West entrance differential	0	1.0' - 2.0'	Old SCADA	Week ave. 1.5
Entrance weir W1	0	depth (≥ 8')		Week ave. 10.2
Entrance weir W2	0	depth (≥ 8')		Week ave. 10.2
Entrance weir W3	0	No criteria	Closed	
South entrance differential	0	1.0' - 2.0'		Week ave. 1.6
Entrance weir S1	0	depth (≥ 8')		Week ave. 9.0
Entrance weir S2	0	depth (≥ 8')		Week ave. 9.4

### JUVENILE PASSAGE

Sluiceway operation	0	Units 1,8, 18	Gates over MU1/1-2-3, moved to MU4, MU8/1-3,MU18-2 open	
Turbine trashrack drawdown	0	<1.5', biwkly	9/12/21, all gatewells in criteria.	
Spill volume/pattern	0	1 to 8	Spill closed 9/1/21	
Turbine Unit Priority	0	per FPP		
Gatewells	0	Weekly	No fish present or mortality 9/12/2021	

## OTHER ISSUES:

### Current Unit Outages

- T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels
- MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades
- MU15 OOS 0630 8/2/2021 – 1700 10/7/2021 for Overhaul, Top Plate, Strainer, & T8 Doble Testing
- MU16 OOS 0001 8/2/2021 – 1700 9/9/2021 for Annual, Strainer, & T8 Doble Testing
- MU19 OOS 0630 6/27/2021 – 1700 10/27/2022 for Top Plate Cover Upgrade
- MU21 OOS 0630 7/12/2021 – 1700 9/9/2021 for Crane Rail Replacement
- MU22 OOS 0630 7/12/2021 – 1700 9/9/2021 for Crane Rail Replacement

### Maintenance

Contractor completed work on fish unit bus overheating problem. Initial test results show improvements. Operational testing to verify continues. Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair PUD intake rake in service with temporary power. Transferring rake operation and maintenance to N Wasco PUD in progress. Five of 6 east fishway collection channel dewatering pumps removed for repair/rehab. Repair and install planned last week of Sept. Fishway automation replacement on hold. East exit, east and south entrances complete. West and north on old system. Resume this winter. North fish differential sending invalid signal to SCADA at intermittent times. Should be upgraded this winter. Calibrations of fishway entrance gates. 9/14, all gates within criteria. Gate S2 out of calibration. East gate limit switches fixed by TDE.

### Predators

Cormorants successfully foraging, gulls present with little foraging, mergansers present-we speculate are here for the emerging juvenile shad

### Research/Construction/Contractors

4 Peaks fishcount continues  
AWS intake trashrack- No funding FY22.  
Investigating MOP operation at fishways. Information provided to Reservoir Control site group during site visit.  
Fish Accords Lamprey Passage plan for The Dalles ongoing at 30% DDR. Looking at feasibility of Lamprey Passage Structure at junction pool, with holding tank.  
PITAGS north and east fishladder data collection at count stations continues.  
Fish unit rehab - Phase 1A on hold. Date to be determined. Planning operation with AWS backup water supply during construction.  
Northern Pikeminnow Management Program season concluded w/1382 native pikeminnow removed YTD  
PSMFC concluded juvenile sampling  
USDA concluded Piscivorous bird hazing  
Crane rail replacement underway on intake deck units 20-22. Plans to start on units 1-4 last Sept 20. Sluiceways unit 1 to move to unit 4 open.

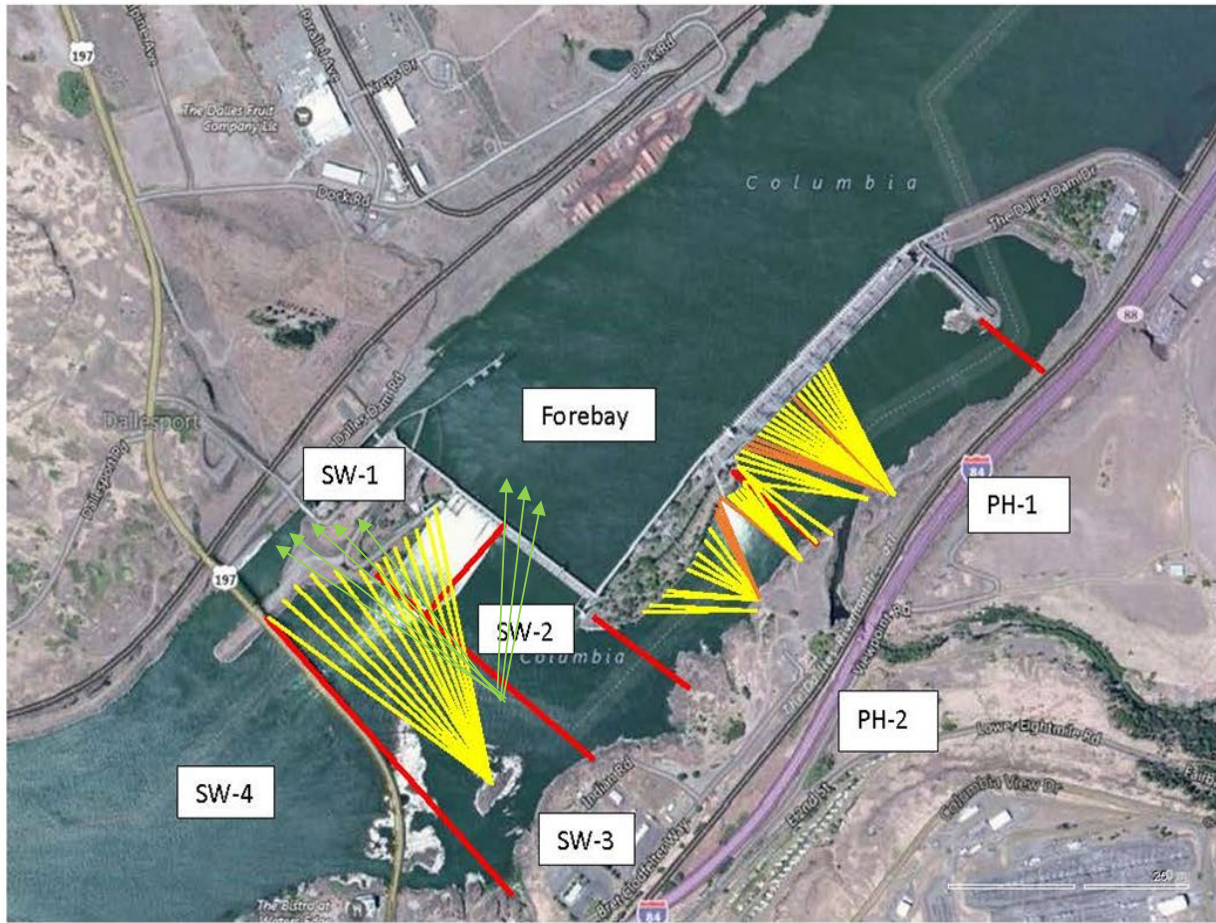
### Fishway Operations

Ice Trash sluiceway opened 24/7. MU1/1-2-3, MU 8/1-2, MU18/2  
East and north fish ladders in full operation per Fish Passage Plan.  
New automation installed at east exit, east entrance and south entrance working well with minor adjustments.

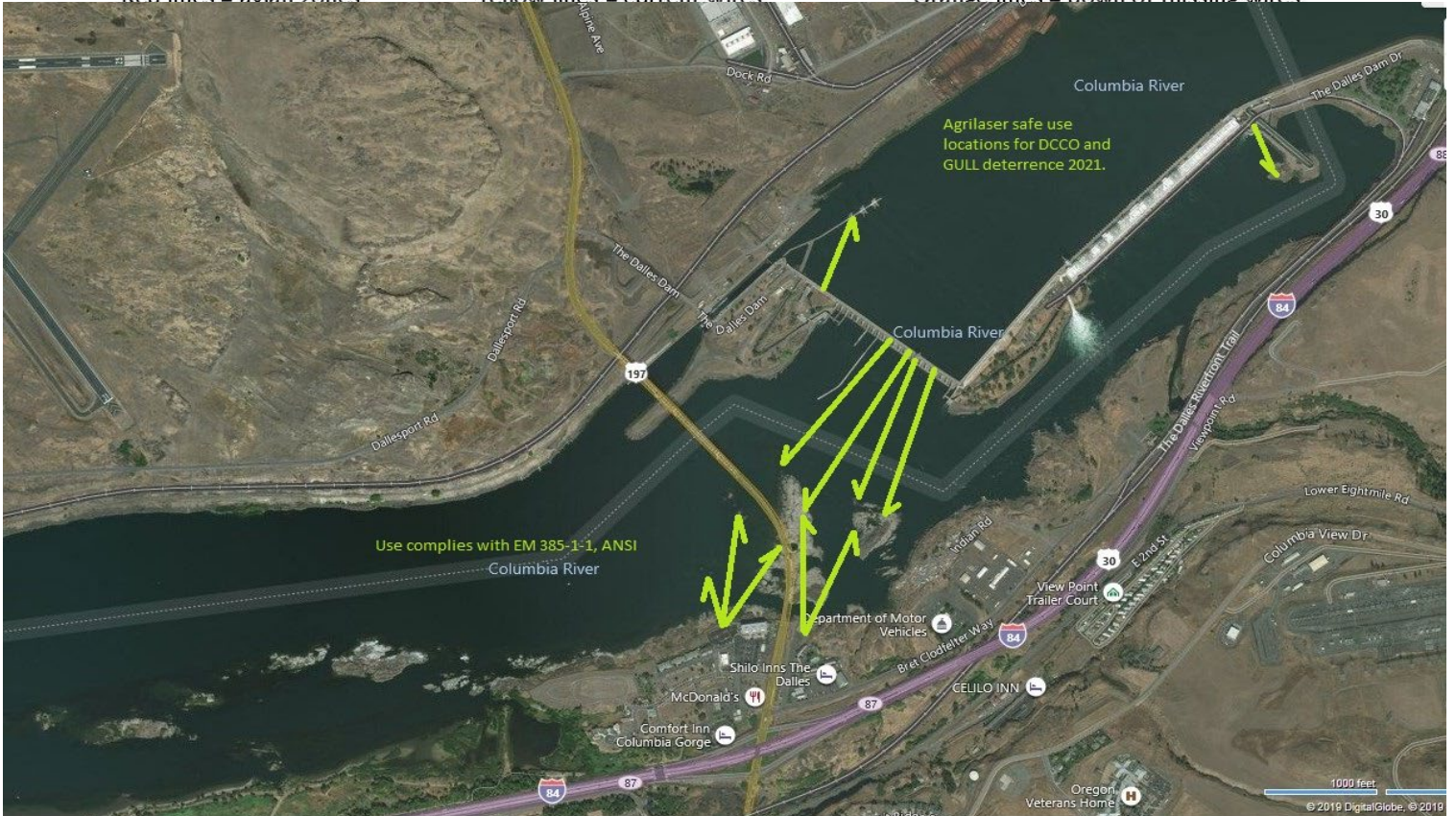
Approved by: Ron Twiner, Operation Project Manager, The Dalles Dam



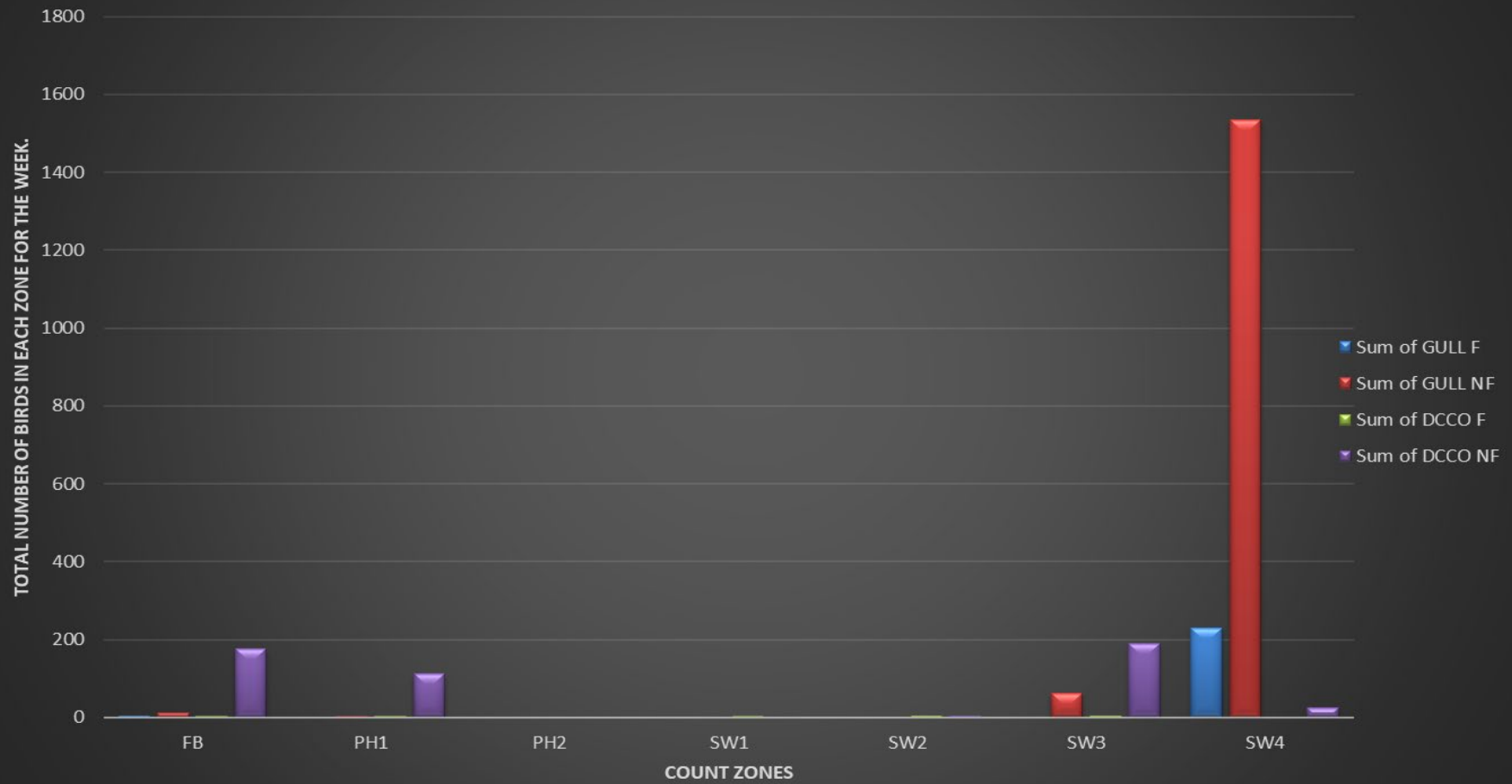
New Avian Lines and laser deterrent zones



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



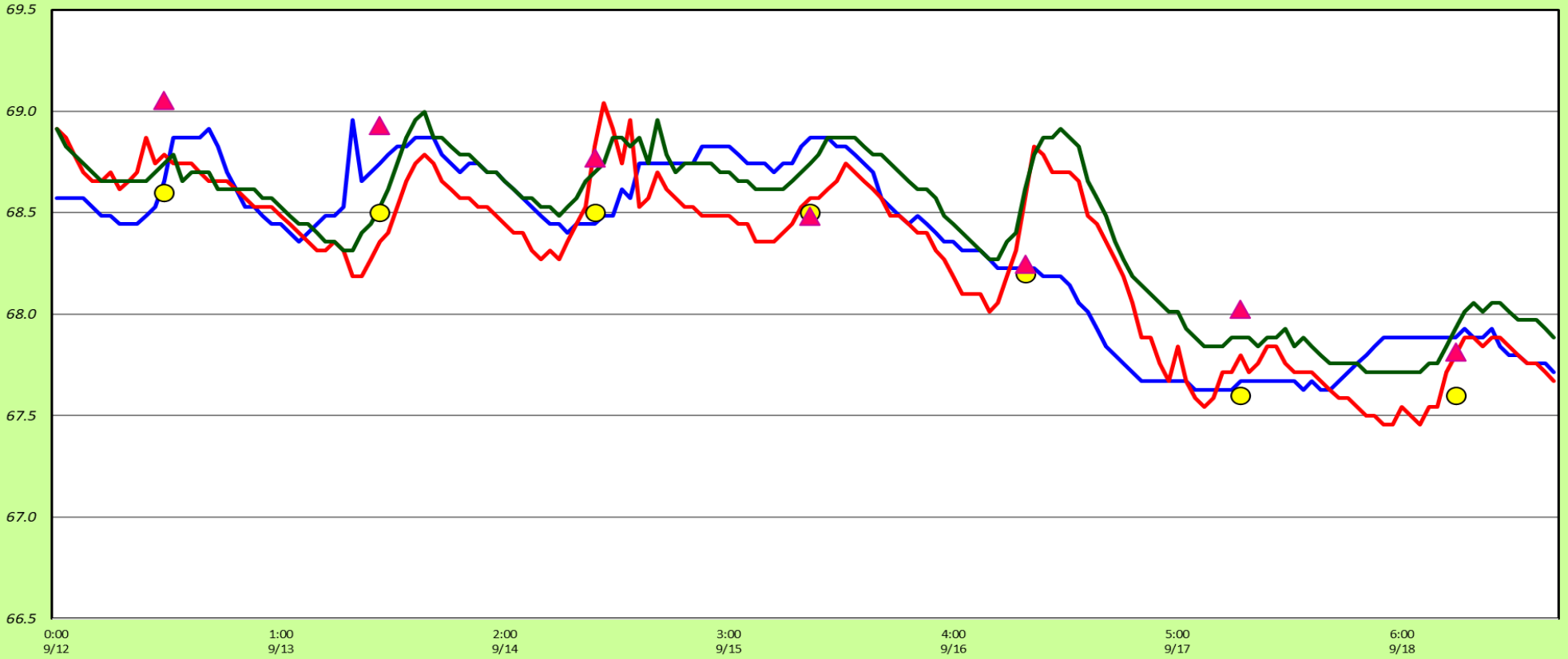
## Avian predators at The Dalles Project 9/12 to 9/18





### Adult Fish ladders-River Temperatures

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



Secchi:		°F	
9/12	5.0	Sun	68.6
9/13	5.0	Mon	68.5
9/14	5.0	Tue	68.5
9/15	5.0	Wed	68.5
9/16	5.0	Thurs	68.2
9/17	5.0	Fri	67.6
9/18	6.0	Sat	67.6
	5.0	median	68.5

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

E1 and W3 no criteria  
out of criteria

Date:	North Ladder		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
9/12	1.5	9.4	1.6	6.9	12.4	11.7	10.9	1.5	10.0	10.0	-1.7	1.3	9.7	9.9
	1.4	9.5	1.5	7.0	12.4	11.8	11.0	1.6	10.0	10.0	-1.8	1.5	9.8	10.1
9/13	1.3	9.7	1.6	6.6	12.5	11.2	10.6	1.6	9.9	9.9	-2.0	1.5	9.0	9.2
	1.4	9.7	1.1	7.3	13.2	11.9	11.3	1.7	9.9	9.9	-1.6	1.6	10.0	10.5
9/14	1.4	9.5	1.6	12.4	12.2	8.1	11.1	1.6	10.0	10.0	-1.7	1.4	9.4	9.9
	1.3	9.7	1.3	8.3	12.4	12.0	11.4	1.6	10.0	10.0	-1.5	2.4	9.4	9.9
9/15	1.3	9.5	1.7	7.7	11.6	11.3	10.6	1.6	10.1	10.1	-2.0	1.5	9.0	9.5
	1.4	9.5	1.6	7.8	11.9	11.6	10.7	1.5	10.4	10.4	-2.0	1.4	9.1	9.6
9/16	1.3	9.7	1.5	8.0	12.0	11.7	10.9	1.5	10.3	10.3	-2.0	1.5	8.8	9.3
	1.3	9.6	1.5	7.5	11.8	11.5	10.5	1.5	10.4	10.4	-2.2	1.4	8.7	9.4
9/17	1.3	9.6	1.6	7.6	11.8	11.6	10.6	1.4	10.4	10.4	-2.1	1.6	8.6	7.2
	1.3	9.6	1.6	7.4	11.6	11.4	10.4	1.5	10.3	10.3	-2.2	1.6	8.4	8.9
9/18	1.2	9.7	1.7	7.3	11.7	11.4	10.2	1.5	10.4	10.4	-2.2	1.6	8.2	8.7
	1.6	9.4	1.6	7.4	11.7	11.5	10.3	1.5	10.3	10.3	-2.1	1.6	8.4	8.9
<b>AVG:</b>	<b>1.4</b>	<b>9.6</b>	<b>1.5</b>	<b>7.8</b>	<b>12.1</b>	<b>11.3</b>	<b>10.8</b>	<b>1.5</b>	<b>10.2</b>	<b>10.2</b>	<b>-1.9</b>	<b>1.6</b>	<b>9.0</b>	<b>9.4</b>

Fishways are inspected twice daily. Overnight trend monitored via Old SCADA operating at west entrance.



Great blue heron grabbing a shad out of the east ladder prior to putting netting over part of the area.