

The Dalles Dam Fishway Status Report

06/7/2020

Inspection Period: 5/31-6/6

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: 58.0 °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') | 10.1 |
| 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 = 18.6 |
| East entrance differential | 0 | 1.0' - 2.0' | Average for week = 1.5 |
| Entrance weir E1 | 0 | No criteria | Average for week = 11.7 |
| 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 | 0 | 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 | No criteria | |
| South entrance differential | 0 | 1.0' - 2.0' | Average for week = 1.6 |
| Entrance weir S1 | 0 | depth (≥ 8') | Average for week = 9.2 |
| Entrance weir S2 | 0 | depth (≥ 8') | Average for week = 9.2 |

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

North and east fish ladders in full operation
Spillway open 40% for juvenile passage with Fish Passage Plan pattern
Sluiceway opened with open sluiceways 1-1,1-2,1-3,7-2,7-3,18-2.

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 5/28/2020
MU8 out of service through 7/10/2020 for Overhaul

Maintenance

Calibration check 6/6/20; W-2, S1 and S2 gates slightly out of calibration but within criteria. Referred to TDE for adjustment.
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 at entrance and exit locations.
Spillway assessment (MRER); No funding for FY20. Spillgate 9 trunnion pin included.
Onsite staffing reduced due to COVID. Making adjustments to accomplish as much workload as possible. Planning phased returning staff back on site.

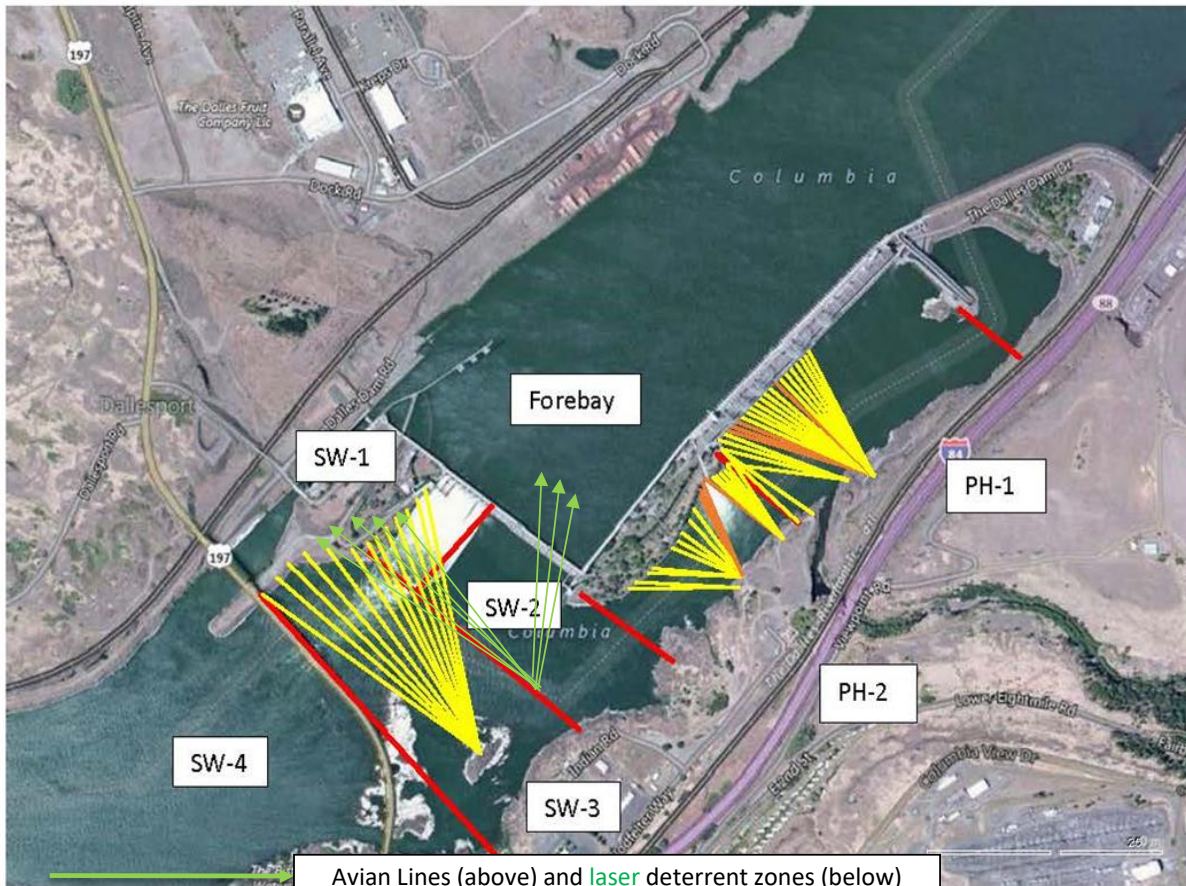
Predators

USDA hazing underway. Gulls and Pelicans foraging heavily below spillway. Cormorants ~40 nests on forebay powerline towers.
Sea Lions, None to report. Large strurgeon aggressively 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 - Ready for operation if needed. Discussions continue about need for trashrack rake. Debris loading will be investigated. Alarm system planning underway.
PITAGS north and east fishladder data collection at count stations continues.
Pikeminnow dam angling started. 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 operation scenario with AWS backup water supply during construction. Finishing up final report until funding becomes available.

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



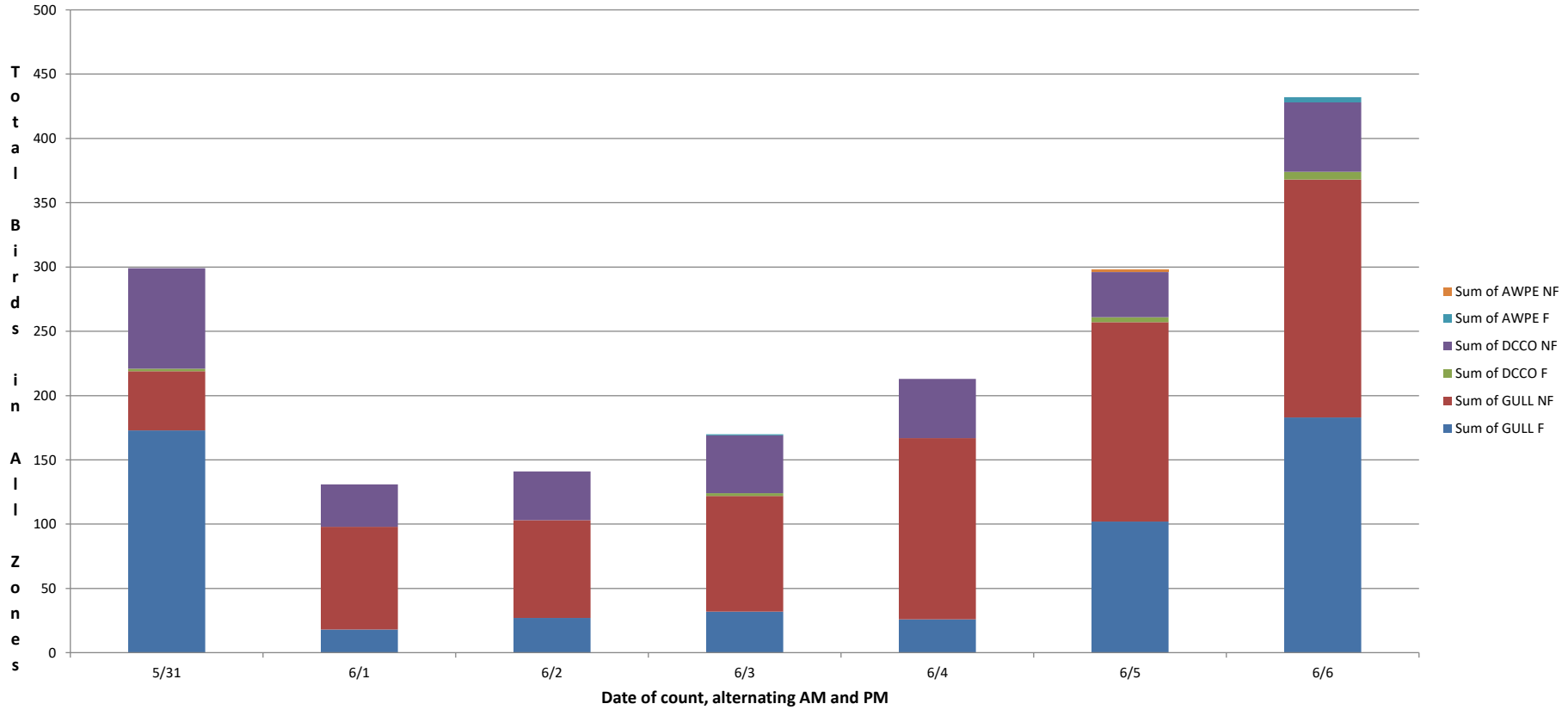
Red lines = avian zones

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

Yellow lines = current wires

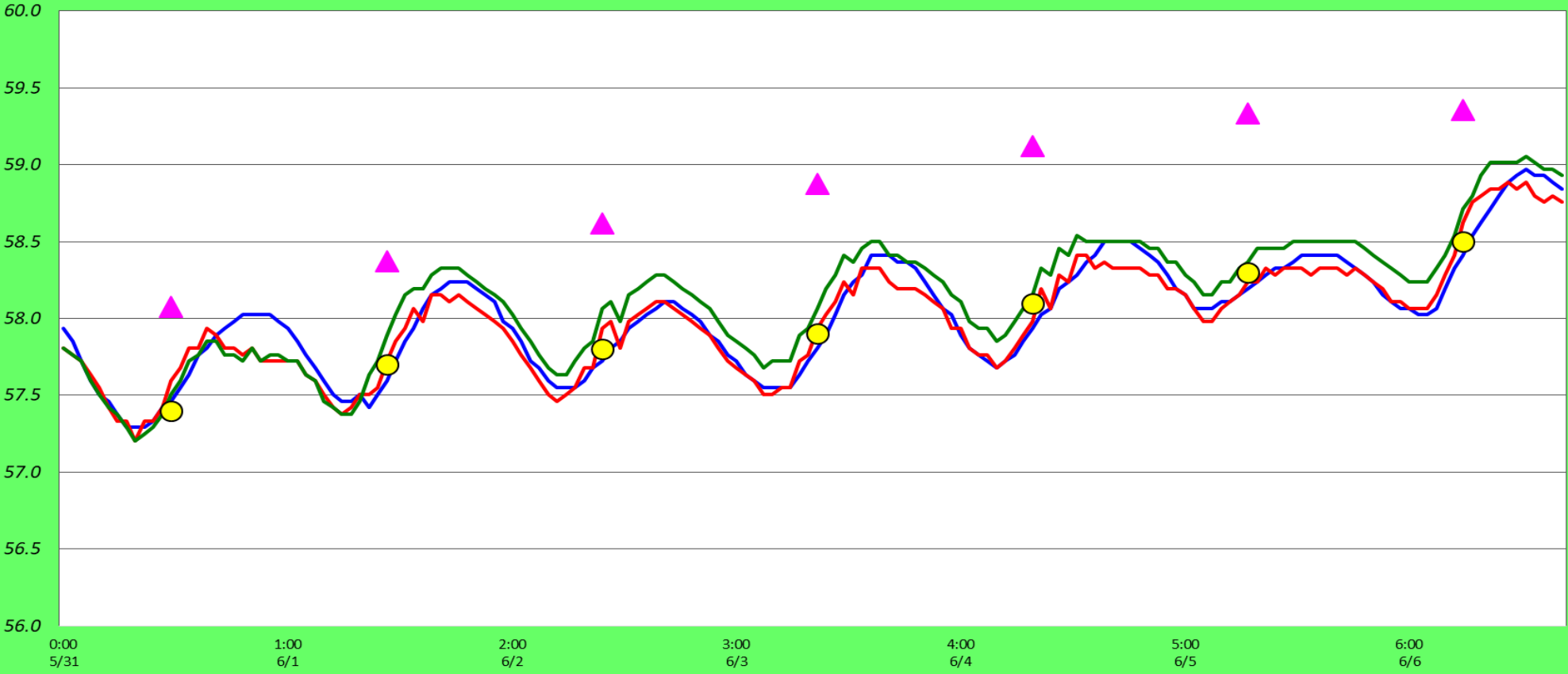
Orange lines = down or missing wires

Daily Bird Counts, 5/31 to 6/6/2020 The Dalles Dam



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 |
|------|---------|-------|------|---------------------------|
| 5/31 | 3.0 | Sun | 57.4 | |
| 6/1 | 3.0 | Mon | 57.7 | |
| 6/2 | 3.0 | Tue | 57.8 | |
| 6/3 | 3.0 | Wed | 57.9 | |
| 6/4 | 3.0 | Thurs | 58.1 | |
| 6/5 | 3.0 | Fri | 58.3 | |
| 6/6 | 3.0 | Sat | 58.5 | |
| | 3.0 | AVG | 58.0 | |

**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 |
| 5/31 | | | 1.5 | 12.5 | 12.6 | 12.5 | 18.7 | 1.6 | 12.6 | 12.6 | 11.0 | 1.6 | 8.7 | 8.7 |
| | 1.4 | 9.9 | 1.4 | 12.6 | 12.4 | 12.6 | 18.8 | 1.6 | 12.6 | 12.6 | 11.0 | 1.6 | 8.7 | 8.7 |
| | 1.3 | 9.9 | 1.5 | 12.4 | 12.5 | 12.4 | 18.8 | 1.7 | 12.5 | 12.5 | 11.4 | 1.6 | 8.6 | 8.6 |
| 6/1 | | | 1.6 | 12.5 | 12.5 | 12.5 | 19.2 | 1.2 | 12.5 | 12.5 | 12.6 | 1.3 | 8.5 | 8.5 |
| | 1.4 | 10.0 | 1.5 | 12.5 | 12.5 | 12.5 | 19.1 | 1.7 | 12.5 | 12.5 | 12.5 | 1.6 | 8.7 | 8.7 |
| | 1.3 | 10.1 | 1.5 | 12.4 | 12.7 | 12.7 | 19.5 | 1.6 | 12.5 | 12.5 | 12.6 | 1.6 | 8.7 | 8.7 |
| 6/2 | | | 1.8 | 12.5 | 12.5 | 12.5 | 19.4 | 1.6 | 12.6 | 12.6 | 12.6 | 1.7 | 8.6 | 8.6 |
| | 1.3 | 10.3 | 1.4 | 12.6 | 12.6 | 12.6 | 19.9 | 1.6 | 12.5 | 12.5 | 12.6 | 1.7 | 9.0 | 9.0 |
| | 1.2 | 9.8 | 1.4 | 12.5 | 12.5 | 12.5 | 20.0 | 1.7 | 12.5 | 12.5 | 12.5 | 1.5 | 9.4 | 9.4 |
| 6/3 | | | 1.5 | 12.4 | 12.4 | 12.4 | 18.6 | 1.5 | 12.4 | 12.4 | 12.3 | 1.4 | 9.3 | 9.3 |
| | 1.4 | 9.9 | 1.5 | 12.5 | 12.5 | 12.5 | 18.5 | 1.4 | 12.4 | 12.4 | 12.5 | 1.5 | 9.3 | 9.3 |
| | 1.4 | 10.0 | 1.5 | 12.5 | 12.5 | 12.5 | 18.4 | 1.5 | 12.6 | 12.6 | 12.5 | 1.9 | 10.5 | 10.5 |
| 6/4 | | | 1.3 | 12.4 | 12.5 | 12.5 | 15.7 | 1.0 | 12.5 | 12.5 | 12.5 | 1.7 | 10.3 | 10.3 |
| | 1.2 | 11.2 | 1.7 | 7.1 | 12.7 | 12.7 | 16.3 | 1.5 | 12.8 | 12.8 | 4.3 | 1.6 | 11.5 | 11.5 |
| | 1.2 | 10.1 | 1.7 | 10.5 | 12.4 | 12.4 | 16.9 | 1.6 | 12.4 | 12.4 | 6.5 | 1.6 | 9.0 | 9.0 |
| 6/5 | | | 1.5 | 10.5 | 12.7 | 12.7 | 18.5 | 1.9 | 12.4 | 12.4 | 6.5 | 1.5 | 9.1 | 9.1 |
| | 1.4 | 9.9 | 1.5 | 10.5 | 12.4 | 12.4 | 18.4 | 1.6 | 12.4 | 12.4 | 9.1 | 1.6 | 9.0 | 9.0 |
| | 1.3 | 10.0 | 1.5 | 10.5 | 12.4 | 12.4 | 18.5 | 1.5 | 12.6 | 12.6 | 9.6 | 1.6 | 9.0 | 9.0 |
| 6/6 | | | 1.6 | 11.5 | 12.5 | 12.5 | 18.7 | 1.6 | 12.5 | 12.5 | 11.5 | 1.5 | 9.0 | 9.0 |
| | 1.2 | 10.0 | 1.5 | 11.6 | 12.6 | 12.6 | 19.1 | 1.6 | 12.6 | 12.6 | 11.5 | 1.5 | 9.0 | 9.0 |
| | 1.3 | 10.0 | 1.5 | 11.6 | 12.5 | 12.6 | 18.7 | 1.6 | 12.6 | 12.6 | 12.2 | 1.5 | 9.0 | 9.0 |
| AVG: | 1.3 | 10.1 | 1.5 | 11.7 | 12.5 | 12.5 | 18.6 | 1.6 | 12.5 | 12.5 | 10.9 | 1.6 | 9.2 | 9.2 |

Fishways are inspected once daily plus one SCADA inspection.



Hungry gulls are doing their thing despite continued hazing efforts.