

The Dalles Dam Fishway Status Report

11/14/21

Inspection Period: 11/7 - 11/13/2021

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles, OR 97058-9998
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| | | | | | |
|-----------------------|----------------------------|---------------------------|---|--|--------------------------------|
| The Dalles Dam | Inspections OOC | Criteria Limit | Total Number of Inspections: 18 | | Temperature: 54.3 °F |
| | | | Comments: Fish counting is done. | | Weekly Ave. Secchi: 5.3 |

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 | depth (≥ 8') | Weekly average 9.8 |
| Entrance Differential | 0 | 1.0' - 2.0' | Weekly average 1.3 |
| Entrance weir N2 | 0 | Closed | |
| PUD Intake differential | 0 | ≤ 0.5' | Rake turned over to PUD operations. |

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' | |
| Entrance weir E1 | 0 | No criteria | |
| Entrance weir E2 | 0 | depth (≥ 8') | |
| Entrance weir E3 | 0 | depth (≥ 8') | |
| Collection channel velocity | 1 | 1.5 - 4 fps | east 1.66fps, west 1.46fps 11/4/21 |
| Transportation channel velocity | 1 | 1.5 - 4 fps | east 2.46fps, west 4.66fps 11/4/21 |
| North channel velocity | 0 | 1.5 - 4 fps | 2.62 fps 11/5/21 |
| South channel velocity | 1 | 1.5 - 4 fps | 4.01 fps 11/4/21 |
| West entrance differential | 0 | 1.0' - 2.0' | Old SCADA Week ave. 1.2 |
| Entrance weir W1 | 0 | depth (≥ 8') | Week ave. 10.5 |
| Entrance weir W2 | 0 | depth (≥ 8') | Week ave. 10.5 |
| 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') | Week ave. 7.4 |
| Entrance weir S2 | 0 | depth (≥ 8') | Week ave. 9.3 |

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', biwklly | 10/20/21, all gatewells in criteria. |
| Spill volume/pattern | 0 | 1 to 8 | Spill closed 9/1/21 |
| Turbine Unit Priority | 0 | per FPP | Mus 1-3 OOS due to crane rail replacement work. |
| Gatewells | 0 | Weekly | Large sturgeon present in MU19-3 gatewell. No mortality 11/7/2021. |

OTHER ISSUES:

Current Unit Outages

- MU3 OOS 0630 9/20/2021 – 1700 11/24/2021 for Crane Rail Replacement
- MU2 OOS 0630 9/20/2021 – 1700 11/24/2021 for Crane Rail Replacement
- MU1 OOS 0630 9/20/2021 – 1700 11/24/2021 for Crane Rail Replacement
- MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades
- MU15 OOS 0630 8/2/2021 – 1700 11/18/2021 for Overhaul, Top Plate, Strainer, & T8 Doble Testing
- MU16 OOS 0001 8/2/2021 – 1700 11/18/2021 for Annual, Strainer, & T8 Doble Testing
- MU19 OOS 0630 6/27/2021 – 1700 10/27/2022 for Top Plate Cover Upgrade
- T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels

Maintenance

Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair
Permanent oil boom removed from east exit for repairs. Better attachment brackets to be designed and installed.
5 of 6 east fishway collection channel dewatering pumps installed. Ready for east fishway channel dewatering this winter.
Fishway automation replacement resumes with new fiscal year. East exit, east and south entrances complete. West and north on old system.
Calibrations: All openings in criteria. One east and south entrance gates E-3 and S-2 out of calibration but stable and unable to adjust.
New mechanical velocity meter setup and used in east channels. Velocities slightly out of criteria at three locations.

Predators

Cormorants fishing entrances, PH1 and in SW2 & 3, Mergansers also a regular as expected during fall migration.
Western, california and ringbill gulls foraging at nav lock on shad and lamprey hotspot in PH2,

Research/Construction/Contractors

[TD-USGS °F](#)

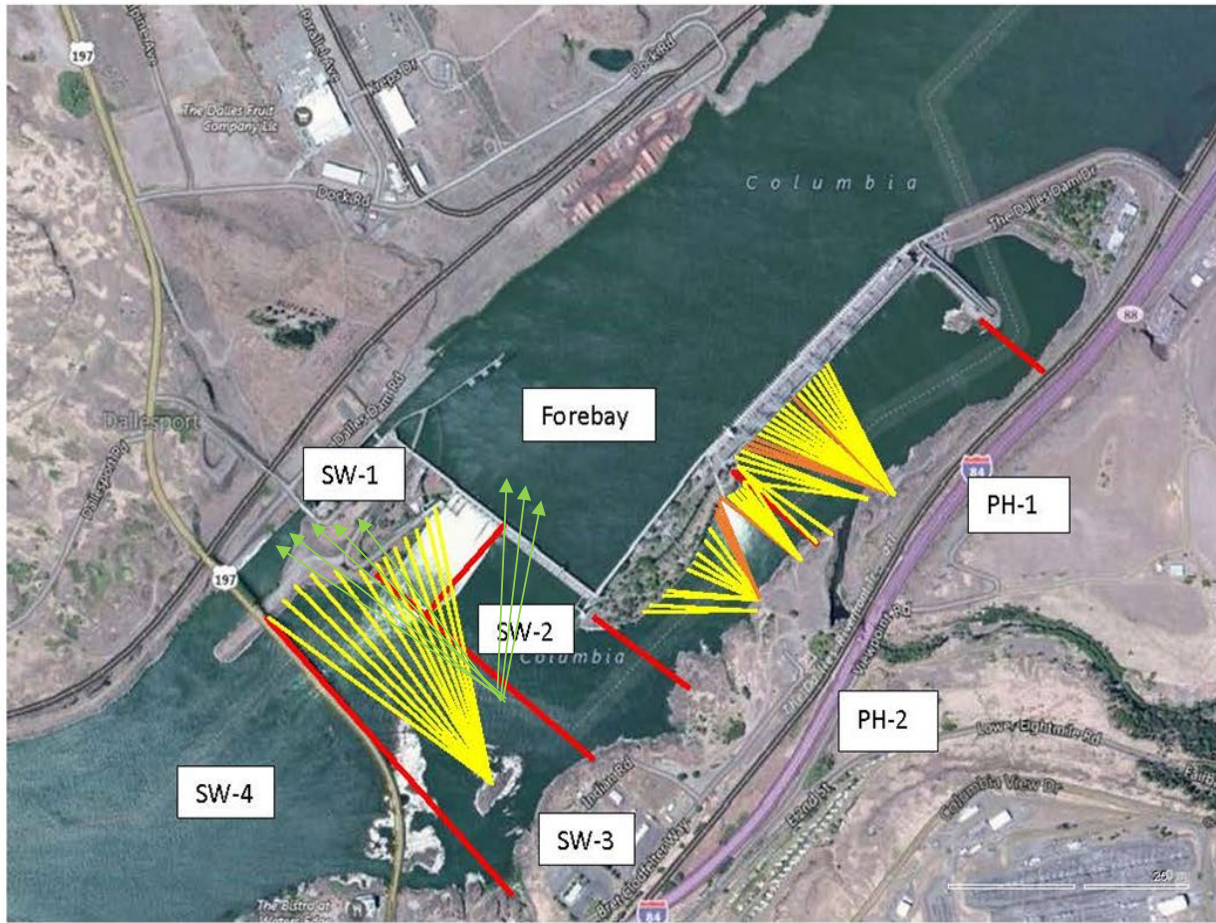
AWS intake trashrack/trash rake- No funding FY22.
Fish Accords Lamprey Passage plan for The Dalles ongoing at 30% DDR junction pool
PITAGS north and east fishladder data collection at count stations continues.
Fish unit rehab - Phase 1A on hold. Date to be determined. Planning operation with AWS backup water supply during construction.
Northern Pikeminnow Management Program season concluded w/1384 native pikeminnow removed YTD
PUD removing debris from location where a new juvenile sampling facility will be constructed prior to upcoming fish season 2021/2022
Crane rail replacement underway on intake deck units 1-4. Sluiceways unit 1 moved to unit 4 open.

Fishway Operations

Ice Trash sluiceway opened 24/7. MU4/1-2-3, MU 8/1-2, MU18/2 Sluice openings move to 4 due to concrete-crainrail removal
East and north fish ladders in full operation per Fish Passage Plan.

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

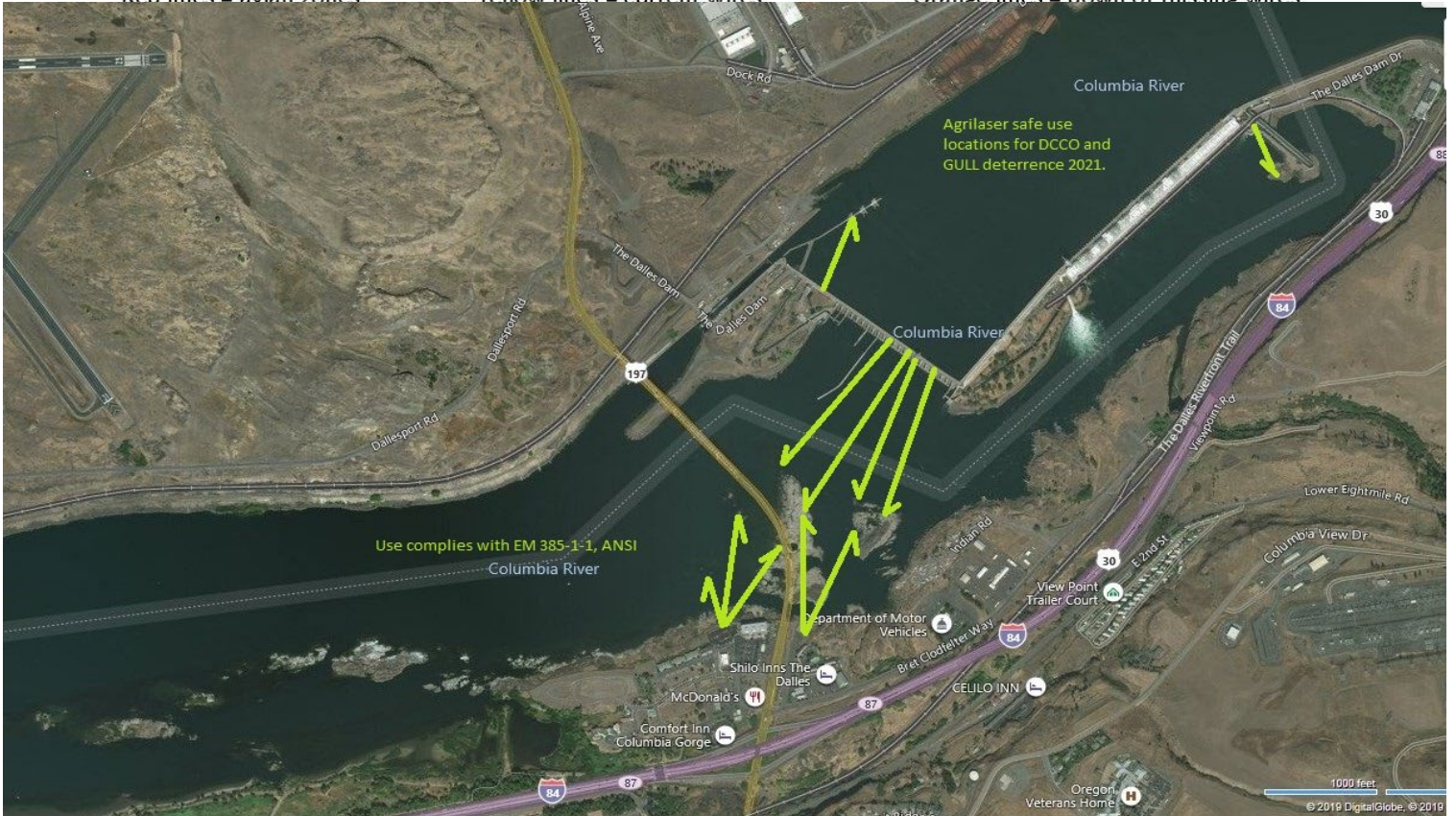
New Avian Lines and laser deterrent zones



Red lines = avian zones

Yellow lines = current wires

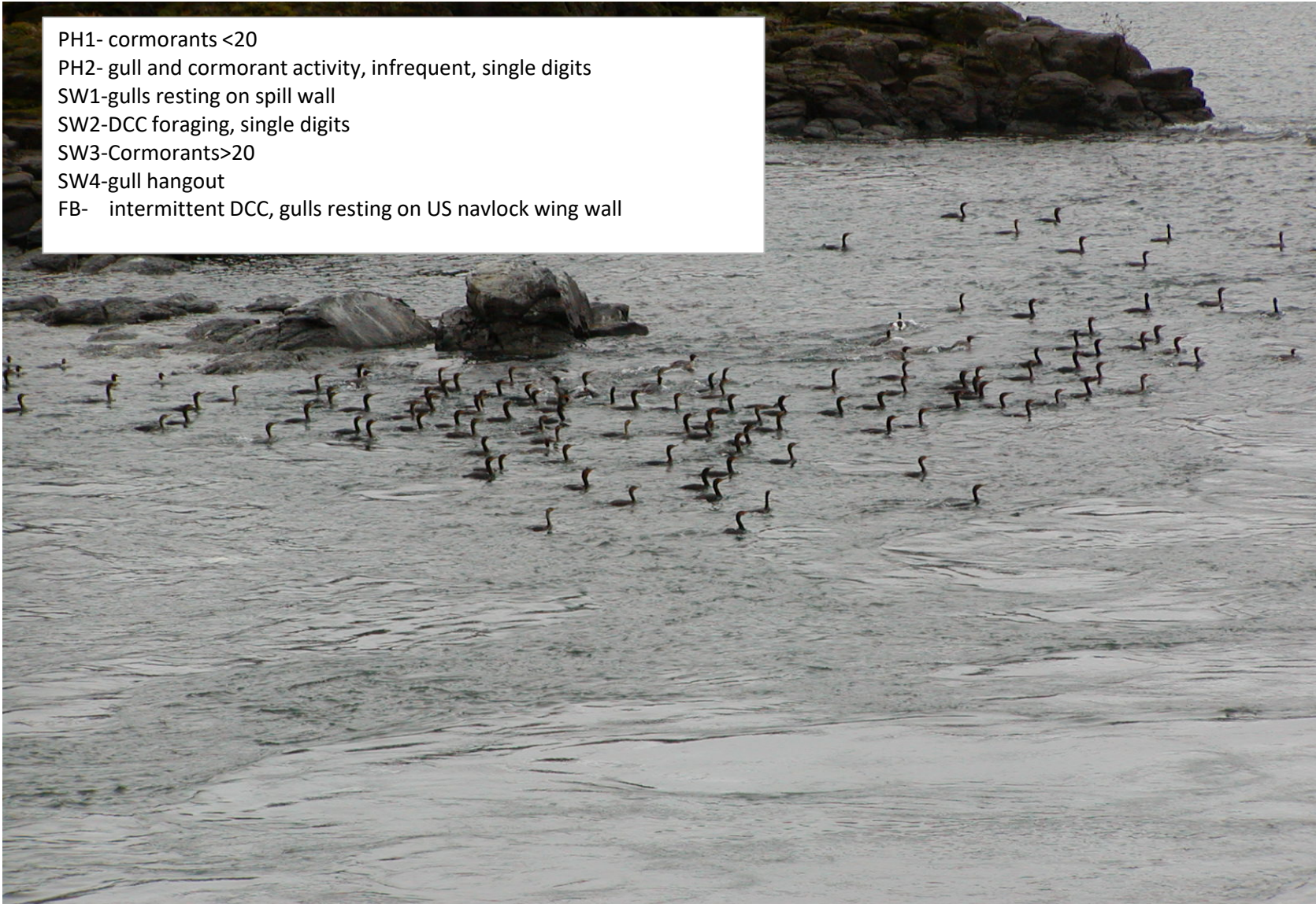
Orange lines = down or missing wires



Use complies with EM 385-1-1, ANSI

Agrilaser safe use locations for DCCO and GULL deterrence 2021.

PH1- cormorants <20
PH2- gull and cormorant activity, infrequent, single digits
SW1-gulls resting on spill wall
SW2-DCC foraging, single digits
SW3-Cormorants>20
SW4-gull hangout
FB- intermittent DCC, gulls resting on US navlock wing wall



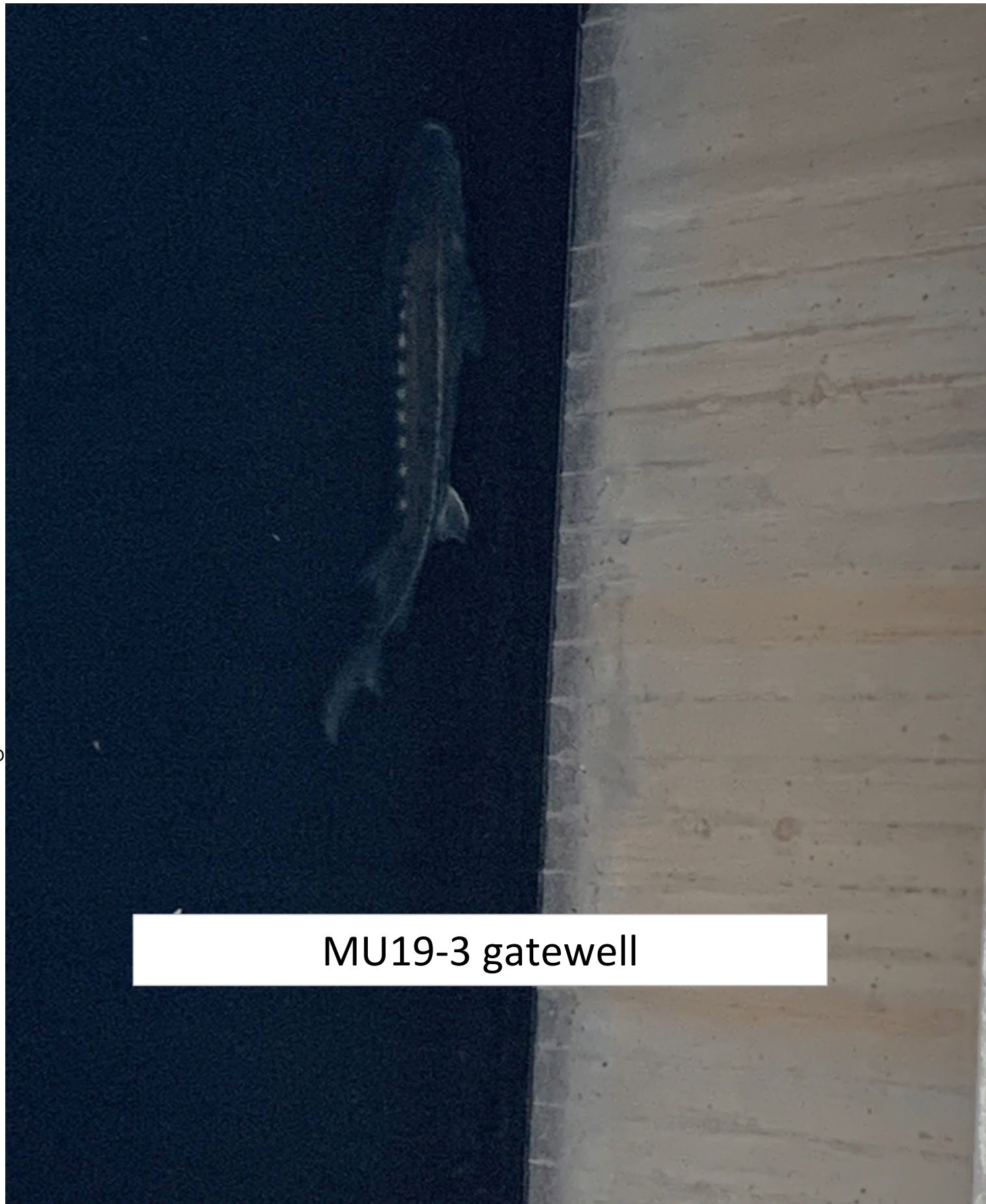
| Secchi: | | USGS°F |
|---------|--------|--------|
| 5.0 | Sun | 55.3 |
| 5.0 | Mon | 55.0 |
| 5.0 | Tue | 54.7 |
| 5.0 | Wed | 54.3 |
| 5.0 | Thurs | 54.1 |
| 6.0 | Fri | 54.0 |
| 6.0 | Sat | 53.8 |
| 5.3 | median | 54.3 |

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 |
| 11/7 | 1.4 | 9.7 | 1.6 | 8.5 | 11.2 | 12.3 | 11.5 | 1.4 | 10.6 | 10.6 | -1.7 | 1.5 | 9.4 | 9.5 |
| | 1.3 | 9.8 | 1.6 | 7.8 | 10.8 | 12.0 | 10.8 | 1.5 | 10.5 | 10.5 | -1.8 | 1.3 | 9.6 | 9.7 |
| 11/8 | 1.3 | 9.7 | 1.4 | 8.3 | 11.7 | 12.9 | 11.3 | 1.5 | 10.5 | 10.5 | -1.7 | 1.4 | 9.6 | 9.6 |
| | 1.3 | 9.9 | 1.5 | 8.1 | 11.6 | 12.7 | 11.1 | 1.5 | 10.6 | 10.6 | -1.6 | 1.4 | 9.5 | 9.7 |
| 11/9 | 1.3 | 9.9 | 1.5 | 8.6 | 11.1 | 12.6 | 11.6 | 1.6 | 10.5 | 10.5 | -1.4 | 1.6 | 9.3 | 9.2 |
| | 1.2 | 10.0 | 1.6 | 7.8 | 10.9 | 11.5 | 10.8 | 1.5 | 10.4 | 10.4 | -1.8 | 1.6 | 8.9 | 8.8 |
| 11/10 | | | | | | | | 0.0 | | | | | | |
| | 1.3 | 9.7 | 1.5 | 8.2 | 10.6 | 12.2 | 11.2 | 1.4 | 10.5 | 10.5 | -1.7 | 1.5 | 9.3 | 9.2 |
| 11/11 | 1.3 | 9.9 | 1.5 | 8.3 | 8.7 | 12.3 | 11.3 | 1.5 | 10.5 | 10.5 | -1.7 | 1.5 | 0.0 | 9.3 |
| | 1.3 | 9.7 | 1.4 | 7.8 | 10.7 | 12.5 | 10.7 | 1.3 | 10.5 | 10.5 | -2.1 | 1.5 | 0.0 | 8.9 |
| 11/12 | | | | | | | | 0.0 | | | | | | |
| | 1.3 | 9.7 | 1.6 | 7.8 | 10.8 | 12.6 | 10.8 | 1.4 | 10.6 | 10.6 | -1.8 | 1.5 | 9.5 | 9.3 |
| 11/13 | 1.4 | 9.6 | 1.4 | 8.3 | 11.3 | 13.1 | 11.3 | 1.5 | 10.5 | 10.5 | -1.3 | 1.4 | 10.0 | 9.8 |
| | 1.3 | 9.9 | 1.7 | 7.5 | 10.4 | 12.3 | 10.4 | 1.4 | 10.4 | 10.4 | -2.1 | 1.5 | 9.3 | 9.1 |
| AVG: | 1.3 | 9.8 | 1.5 | 8.1 | 10.6 | 12.4 | 11.1 | 1.2 | 10.5 | 10.5 | -1.8 | 1.5 | 7.4 | 9.3 |

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



MU19-3 gatewell