

The Dalles Dam Fishway Status Report

5/12/2018

Inspection Period: 05/06/2018-05/12/2018

THE DALLES DAM



The Dalles Project-Fisheries
P.O. Box 564
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| The Dalles Dam | Inspections Out of Criteria | Criteria Limit | Total Number of Inspections: | 21 | Temperature: | 54.5 °F |
|---------------------------------|--------------------------------|-------------------|--|--|--------------|---------|
| | | | Comments | Secchi: 3.0 feet | | |
| 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' | 1.4 | | | |
| Entrance weir N1 | 0 | depth (≥ 8') | 10.8 | | | |
| Entrance weir N2 | 0 | Closed | | | | |
| PUD Intake differential | 0 | ≤ 0.5' | 0 | | | |
| EAST FISHWAY | | | | | | |
| Exit differential | 0 | ≤ 0.5' | | | | |
| Removable weirs 154-157 | 1 | Per forebay | 156 breaker tripped 5/6, repaired | | | |
| Weir 158-159 differential | 5 | 1.0' ± 0.1' | 4 incidents below 0.9, 1 above 1.1 | | | |
| Count station differential | 0 | ≤ 0.3' | | | | |
| 153 Weir crest depth | 4 | 1.1' ± 0.1' | exceeded 5/9 & 5/11, below 5/12; OOC incidents in overnight trend data; Range: 0.8-1.5 | | | |
| Junction pool weir JP6 | 0 | 0.0 | | | | |
| East entrance differential | 0 | 1.0' - 2.0' | 1.6 | | | |
| Entrance weir E1 | 0 | No criteria | | | | |
| Entrance weir E2 | 0 | depth (≥ 8') | 13.6 | | | |
| Entrance weir E3 | 0 | depth (≥ 8') | 13.6 | | | |
| Collection channel velocity | 0 | 1.5 - 4 fps | 2.10 fps | Range: Bay MU 6, 1.32 fps to MU 20, 2.77 fps | | |
| Transportation channel velocity | 0 | 1.5 - 4 fps | 1.94 fps | | | |
| North channel velocity | 1 | 1.5 - 4 fps | 1.43 fps | | | |
| South channel velocity | 0 | 1.5 - 4 fps | 2.34 fps | | | |
| West entrance differential | 0 | 1.0' - 2.0' | 1.5 | | | |
| Entrance weir W1 | 0 | depth (≥ 8') | 10.0 | | | |
| Entrance weir W2 | 0 | depth (≥ 8') | 10.0 | | | |
| Entrance weir W3 | 0 | No criteria | | | | |
| South entrance differential | 0 | 1.0' - 2.0' | 1.5 | Lost automation due to high tailwater. | | |
| Entrance weir S1 | 0 | depth (≥ 8') | 8.5 | | | |
| Entrance weir S2 | 4 | depth (≥ 8') | 8.1 | Raised to 6' to adjust for perceived differential loss. Adjusted back. | | |
| JUVENILE PASSAGE | | | | | | |
| Sluiceway operation | 0 | Units 1, 21 | 1-1,1-2, 1-3,8-1,8-3, 18-2 and endgate open | | | |
| Turbine trashrack drawdown | 0 | <1.5', w/ky | range: 0.1-0.8' | | | |
| Spill volume/pattern | 0 | None | Bays 1-8, + 12, 14-15, 17, 20-22 starting 5/7 Range: 45-64% | | | |
| Turbine Unit Priority | 2 | per FPP | 5/7 am, 5/9 pm | | | |
| Turbine 1% Efficiency | 0 | per FPP | | | | |

OTHER ISSUES:

Birds and Sea lions:

Gull numbers fluctuating daily. USDA hazers working from boat and shore. USDA hazed sea lion from near east and west entrances. It was observed consuming a salmon at the west entrance. USDA reported hazing CO14 within the east entrance directly over the entrance weir.

Operations

Spillway open for fish passage. Tracking spill cap. Refer to spill tab.

North and east fishways in full operation.

Sluiceway open with 6 sluiceway operation

East fishladder exit continues to have problems keeping up to fast forebay fluctuations. Maintenance investigating.

South entrance automation topped out due to extremely high tailwater. Differential perceived to be low and weir depth adjusted to compensate. However, the automation sensor hit upper limit giving false reading. Therefore, actual entrance condition unknown, but likely criteria. Maintenance working on solution.

Current Outages;

MU10 OOS 0730 3/5/2018 - 1700 5/31/2018 for O/H

MU15 Forced OOS through 1700 6/29/2019 GSU transformer replacement

MU16 Forced OOS through 1700 6/29/2019 for GSU transformer, Exciter, Head Cover Upgrade & Strainer

MU19 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production

MU20 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production

Maintenance;

Rebuilding spare gearboxes for entrance and exit weirs.

East exit oil boom - new plan eliminating need for anchor placement. Will involve connection to new AWS peirnose. Plan for early Aug install.

Collection channel dewatering pumps 3 and 4 removed for rehab. Ordering new pump for #4. Plan to cycle through 2 per year for preventative maintenance.

Wheels to be replaced on N1 spare weir, due to excessive wear. Closer guide investigation next winter.

Planning 154 -157 rehab/weir wheel replace next winter outage.

Planning start of diffuser valve rehab next winter. Multiple year job.

Fish related /non-fish funded items; Spillway assessment, spillway crane replace and spillgate 9. All awaiting funding.

All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Charter in place for comprehensive spillway assessment.

Periodic assessment team evaluated spillway deficiencies and found trunnion pins highest on priority list.

Research/Construction/Contractors:

AWS construction - Commissioning testing occurred Apr23-27. Flow testing attempted 4/26 night, but valve could not be fully opened. Reschedule date TBD.

PSMFC weekly sampling completed for the North Wasco County PUD's. No concerns. Planning underway for new sample collection tank. Design in review.

PITAGS North and east fishladder data collection at count stations continues.

Fish Counters - Ongoing.

Pikeminnow dam angling starting first week in May. High walleye and bass by-catches 2017.

Non native bycatch released. Past research shows substantial salmon predation rates. COE staff working on retaining all by catch for diet analysis. FPOM review.

ODFW resumed monthly fishway inspections. No problems reported.

Lamprey minor mods - Rounded entrance weir caps installed south, west and north entrances. East weirs planned for next winter.

Lamprey trapping by tribes to continue at east count station within picket leads. Catch target 1056 lamprey.

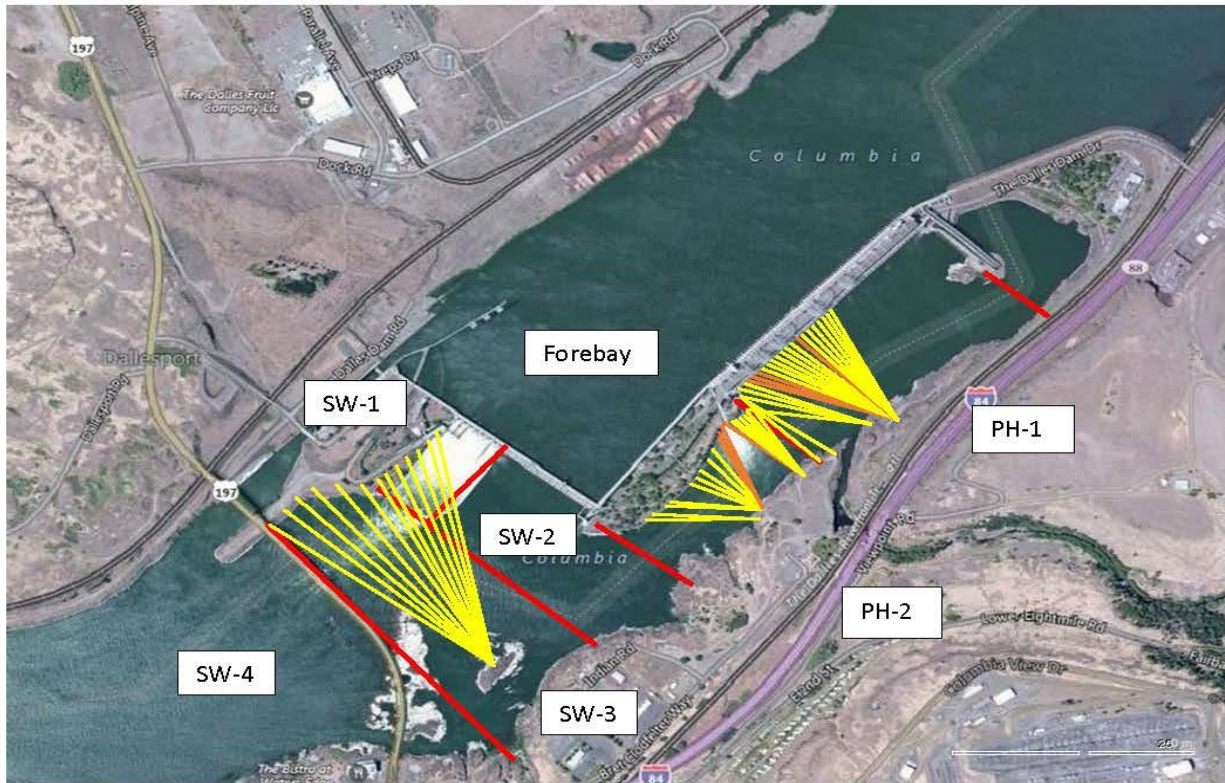
Fish unit breaker replace - Prep work in progress. Installation delayed to next winter outage.

Fish unit rehab - Development plan continues. Alternatives reviewed. Likely selection of increased flow Kaplan units.

Transformer replacement - Install start delayed. Date to be determined.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

| 2018 Piscivorous Bird Counts | | | | | | | | | | | | | | | | | | | |
|------------------------------|----------|-------|------|------|----|-----------|----|--------------|----|-------|----|---------|----|-------|----|---------------------|-----------------------------------|--|----|
| F=foraging, NF=non-foraging | | | | | | | | | | | | | | | | | | | |
| Date | Observer | AM/PM | Zone | Gull | | Cormorant | | Caspian tern | | Grebe | | Pelican | | Other | | Total birds in zone | Notes | | |
| | | | | F | NF | F | NF | F | NF | F | NF | F | NF | F | NF | | | | |
| 5/6 | JED | AM | FB | 0 | 0 | 1 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | osprey Mixed sun, calm | |
| | | | PH1 | 0 | 10 | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 21 |
| | | | PH2 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| | | | SW2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | |
| | | | SW3 | 3 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | | |
| | | | SW4 | 56 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | | |
| 5/7 | JED | PM | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | sunny, warm, calm | |
| | | | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | SW3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | SW4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5/8 | JED | AM | FB | 0 | 0 | 1 | 21 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | Mixed sun, calm CSLion feeding on salmon, C ? | |
| | | | PH1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | | | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | | | SW2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | |
| | | | SW3 | 15 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | | | |
| | | | SW4 | 7 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 102 | | | |
| 5/9 | BC | PM | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | high wind no boat haze | |
| | | | PH1 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | |
| | | | PH2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW2 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | | | |
| | | | SW3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | |
| | | | SW4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | | | |
| 5/10 | CEA | AM | FB | 1 | 0 | 1 | 25 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 35 | CSLion partly cloudy, breezy | | |
| | | | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW2 | 12 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | | | |
| | | | SW3 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | | | |
| 5/11 | CEA | PM | FB | 0 | 0 | 4 | 45 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 52 | windy, sunny successful hazing | | |
| | | | PH1 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | | | |
| | | | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | |
| | | | SW3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | |
| | | | SW4 | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | | | |
| 5/12 | CEA | AM | FB | 0 | 0 | 5 | 58 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 65 | CSLion sunny, calm | | |
| | | | PH1 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | |
| | | | PH2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | SW2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | | | |
| | | | SW3 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | | | |

Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

The Dalles

| Date | All Chinook | Adult Chinook | Jack Chinook | All Steelhead | Clipped Steelhead | Unclipped Steelhead |
|--------------|--------------|---------------|--------------|---------------|-------------------|---------------------|
| 5/6 | 2043 | 1957 | 86 | 0 | 0 | 0 |
| 5/7 | 3012 | 2950 | 62 | 2 | 2 | 0 |
| 5/8 | 3008 | 2905 | 103 | 0 | 0 | 0 |
| 5/9 | 3721 | 3500 | 221 | 11 | 6 | 5 |
| 5/10 | 3210 | 2995 | 215 | 1 | 1 | 0 |
| 5/11 | 2425 | 2204 | 221 | 1 | 0 | 1 |
| 5/12 | 1296 | 1194 | 102 | 1 | 0 | 1 |
| total | 18715 | 17705 | 1010 | 16 | 9 | 7 |

The Dalles

| Date | All Chinook | Adult Chinook | Jack Chinook | All Steelhead | Clipped Steelhead | Unclipped Steelhead |
|----------------|-------------|---------------|--------------|---------------|-------------------|---------------------|
| 5/6 | 13 | 13 | 0 | 0 | 0 | 0 |
| 5/7 | 2 | 2 | 0 | 0 | 0 | 0 |
| 5/8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/10 | 11 | 11 | 0 | 0 | 0 | 0 |
| 5/11 | 20 | 20 | 0 | 0 | 0 | 0 |
| 5/12 | 14 | 14 | 0 | 0 | 0 | 0 |
| total | 60 | 60 | 0 | 0 | 0 | 0 |
| % North | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |

[FISH C](#)

es East

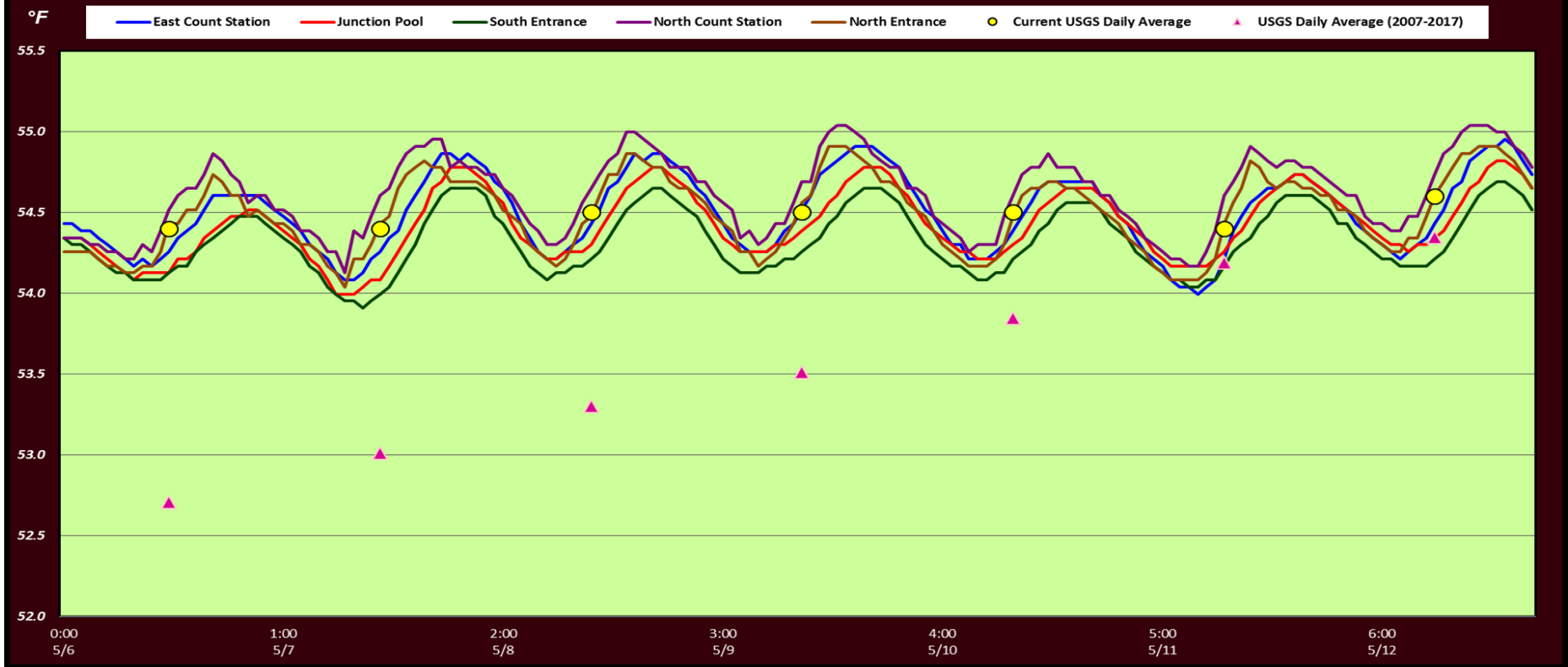
| All Coho | Adult Coho | Jack Coho | Sockeye | Chum | Pink | Lamprey |
|----------|------------|-----------|----------|----------|----------|----------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 |

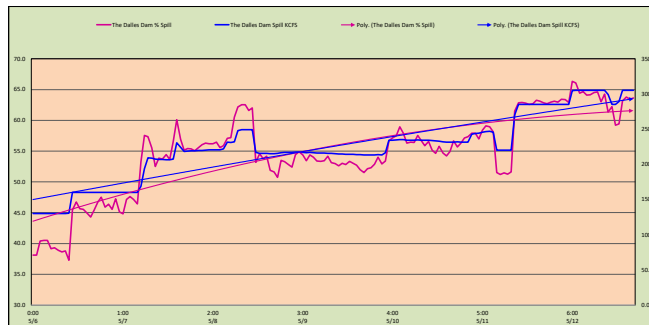
es North

| All Coho | Adult Coho | Jack Coho | Sockeye | Chum | Pink | Lamprey |
|------------|------------|------------|------------|------------|------------|------------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

COUNT

The Dalles Dam Adult Fish Ladder(s) River Temperatures





| | | |
|------------|------|-------|
| 5/7 11:00 | 53.8 | 207.1 |
| 5/7 12:00 | 53.7 | 207.0 |
| 5/7 13:00 | 54.4 | 206.6 |
| 5/7 14:00 | 53.7 | 206.4 |
| 5/7 15:00 | 56.6 | 207.3 |
| 5/7 16:00 | 60.1 | 230.4 |
| 5/7 17:00 | 56.9 | 224.0 |
| 5/7 18:00 | 55.2 | 218.4 |
| 5/7 19:00 | 55.4 | 218.7 |
| 5/7 20:00 | 56.4 | 219.1 |
| 5/7 21:00 | 55.1 | 218.1 |
| 5/7 22:00 | 56.6 | 219.5 |
| 5/7 23:00 | 56.1 | 219.7 |
| 5/8 0:00 | 56.3 | 220.1 |
| 5/8 1:00 | 56.2 | 220.4 |
| 5/8 2:00 | 56.2 | 220.4 |
| 5/8 3:00 | 56.4 | 220.7 |
| 5/8 4:00 | 55.6 | 220.7 |
| 5/8 5:00 | 55.9 | 222.0 |
| 5/8 6:00 | 57.1 | 231.3 |
| 5/8 7:00 | 57.2 | 231.0 |
| 5/8 8:00 | 60.5 | 231.7 |
| 5/8 9:00 | 62.2 | 247.8 |
| 5/8 10:00 | 62.5 | 249.0 |
| 5/8 11:00 | 62.5 | 249.2 |
| 5/8 12:00 | 61.6 | 248.1 |
| 5/8 13:00 | 62.0 | 249.4 |
| 5/8 14:00 | 53.2 | 216.8 |
| 5/8 15:00 | 54.6 | 215.4 |
| 5/8 16:00 | 53.7 | 215.6 |
| 5/8 17:00 | 54.1 | 215.4 |
| 5/8 18:00 | 51.9 | 215.2 |
| 5/8 19:00 | 51.6 | 215.2 |
| 5/8 20:00 | 50.7 | 215.4 |
| 5/8 21:00 | 50.0 | 216.5 |
| 5/8 22:00 | 53.3 | 216.9 |
| 5/8 23:00 | 52.8 | 216.7 |
| 5/9 0:00 | 52.4 | 216.7 |
| 5/9 1:00 | 54.4 | 217.2 |
| 5/9 2:00 | 54.9 | 217.2 |
| 5/9 3:00 | 54.4 | 217.1 |
| 5/9 4:00 | 53.5 | 216.6 |
| 5/9 5:00 | 54.4 | 216.7 |
| 5/9 6:00 | 54.0 | 216.6 |
| 5/9 7:00 | 53.4 | 216.2 |
| 5/9 8:00 | 53.3 | 215.9 |
| 5/9 9:00 | 53.5 | 215.8 |
| 5/9 10:00 | 54.2 | 215.7 |
| 5/9 11:00 | 53.1 | 215.6 |
| 5/9 12:00 | 53.0 | 215.2 |
| 5/9 13:00 | 52.5 | 214.8 |
| 5/9 14:00 | 53.0 | 214.6 |
| 5/9 15:00 | 52.8 | 214.3 |
| 5/9 16:00 | 53.3 | 214.2 |
| 5/9 17:00 | 53.0 | 214.1 |
| 5/9 18:00 | 52.7 | 213.8 |
| 5/9 19:00 | 52.0 | 213.6 |
| 5/9 20:00 | 51.5 | 213.2 |
| 5/9 21:00 | 52.1 | 213.4 |
| 5/9 22:00 | 52.3 | 213.3 |
| 5/9 23:00 | 52.9 | 213.3 |
| 5/10 0:00 | 54.0 | 213.6 |
| 5/10 1:00 | 52.9 | 213.1 |
| 5/10 2:00 | 53.4 | 216.4 |
| 5/10 3:00 | 56.6 | 234.2 |
| 5/10 4:00 | 57.1 | 234.1 |
| 5/10 5:00 | 57.5 | 234.5 |
| 5/10 6:00 | 59.0 | 235.1 |
| 5/10 7:00 | 57.9 | 235.0 |
| 5/10 8:00 | 56.3 | 234.3 |
| 5/10 9:00 | 56.5 | 234.2 |
| 5/10 10:00 | 56.4 | 234.0 |
| 5/10 11:00 | 57.5 | 234.5 |
| 5/10 12:00 | 56.7 | 234.4 |
| 5/10 13:00 | 55.9 | 234.1 |
| 5/10 14:00 | 56.5 | 234.3 |
| 5/10 15:00 | 55.1 | 233.9 |
| 5/10 16:00 | 54.6 | 233.1 |
| 5/10 17:00 | 55.8 | 232.7 |
| 5/10 18:00 | 54.7 | 232.1 |
| 5/10 19:00 | 54.2 | 231.3 |
| 5/10 20:00 | 55.0 | 231.3 |
| 5/10 21:00 | 56.7 | 231.4 |
| 5/10 22:00 | 56.7 | 231.7 |
| 5/10 23:00 | 56.3 | 231.6 |
| 5/11 0:00 | 57.1 | 231.4 |
| 5/11 1:00 | 57.3 | 231.3 |
| 5/11 2:00 | 57.9 | 242.7 |
| 5/11 3:00 | 57.9 | 243.7 |
| 5/11 4:00 | 57.0 | 244.0 |
| 5/11 5:00 | 58.4 | 245.4 |
| 5/11 6:00 | 58.1 | 245.5 |
| 5/11 7:00 | 59.0 | 247.0 |
| 5/11 8:00 | 58.1 | 245.6 |
| 5/11 9:00 | 51.5 | 220.0 |
| 5/11 10:00 | 51.2 | 220.0 |
| 5/11 11:00 | 51.4 | 220.0 |
| 5/11 12:00 | 51.3 | 220.0 |
| 5/11 13:00 | 51.6 | 220.1 |
| 5/11 14:00 | 61.5 | 270.2 |
| 5/11 15:00 | 62.9 | 285.0 |
| 5/11 16:00 | 62.9 | 285.0 |
| 5/11 17:00 | 62.8 | 285.0 |
| 5/11 18:00 | 62.6 | 285.0 |
| 5/11 19:00 | 62.7 | 285.0 |
| 5/11 20:00 | 63.3 | 285.0 |
| 5/11 21:00 | 63.1 | 285.0 |
| 5/11 22:00 | 62.8 | 285.0 |
| 5/11 23:00 | 62.7 | 285.0 |
| 5/12 0:00 | 63.0 | 285.0 |
| 5/12 1:00 | 63.1 | 285.0 |
| 5/12 2:00 | 63.0 | 285.0 |
| 5/12 3:00 | 63.4 | 285.0 |
| 5/12 4:00 | 63.3 | 285.0 |
| 5/12 5:00 | 62.9 | 285.0 |
| 5/12 6:00 | 66.3 | 304.5 |
| 5/12 7:00 | 66.1 | 305.0 |
| 5/12 8:00 | 64.4 | 305.0 |
| 5/12 9:00 | 64.6 | 305.0 |
| 5/12 10:00 | 64.1 | 305.0 |
| 5/12 11:00 | 64.1 | 305.0 |
| 5/12 12:00 | 64.5 | 305.0 |
| 5/12 13:00 | 64.6 | 305.0 |
| 5/12 14:00 | 63.0 | 305.0 |
| 5/12 15:00 | 64.2 | 305.0 |
| 5/12 16:00 | 61.4 | 298.1 |
| 5/12 17:00 | 62.2 | 285.0 |
| 5/12 18:00 | 59.2 | 285.0 |
| 5/12 19:00 | 59.4 | 285.3 |
| 5/12 20:00 | 63.1 | 305.0 |
| 5/12 21:00 | 63.8 | 305.0 |
| 5/12 22:00 | 63.4 | 305.0 |
| 5/12 23:00 | 63.6 | 305.0 |

USGS: USGS river temp May

| | Secchi: | | Temperatures |
|------|---------|-------|--------------|
| 5/6 | 3.5 | Sun | 54.4 |
| 5/7 | 3.5 | Mon | 54.4 |
| 5/8 | 3.0 | Tue | 54.5 |
| 5/9 | 2.0 | Wed | 54.5 |
| 5/10 | 3.0 | Thurs | 54.5 |
| 5/11 | 3.0 | Fri | 54.4 |
| 5/12 | 3.0 | Sat | 54.6 |
| | 3.0 | AVG | 54.5 |

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

= Out of criteria

| Date: | North Ladder | | | East Ladder | | | | | | | | | | |
|-------------|----------------|-------------|--------------|---------------|-------------|-------------|-------------|---------------|-------------|-------------|----------------|--------------|------------|------------|
| | North Entrance | | Differential | East Entrance | | | | West Entrance | | | South Entrance | | | |
| | Differential | N1 Depth | | E1 Depth | E2 Depth | E3 Depth | JP 6 | Differential | W1 Depth | W2 Depth | W3 Depth | Differential | S1 Depth | S2 Depth |
| 5/6 | SCADA | | 1.6 | | 13.0 | 13.0 | 17.2 | 1.6 | 10.0 | 10.0 | | 1.5 | 8.5 | 8.5 |
| | 1.4 | 10.1 | 1.5 | | 13.0 | 13.0 | 17.2 | 1.5 | 10.0 | 10.0 | | 1.6 | 8.4 | 8.4 |
| | 1.4 | 10.3 | 1.6 | | 13.0 | 12.9 | 17.2 | 1.6 | 9.9 | 9.9 | | 1.5 | 8.6 | 8.6 |
| 5/7 | SCADA | | 1.6 | | 12.9 | 13.0 | 15.6 | 1.4 | 10.0 | 10.0 | | 1.4 | 8.5 | 8.6 |
| | 1.4 | 10.4 | 1.6 | | 13.3 | 13.3 | 18.3 | 1.5 | 10.1 | 10.1 | | 1.7 | 8.4 | 8.4 |
| | 1.3 | 11.0 | 1.6 | | 13.4 | 13.4 | 18.2 | 1.6 | 10.1 | 10.1 | | 1.7 | 8.6 | 8.6 |
| 5/8 | SCADA | | 1.6 | | 13.9 | 13.9 | 18.8 | 1.5 | 9.9 | 9.9 | | 1.5 | 8.5 | 8.5 |
| | 1.3 | 10.8 | 1.5 | | 14.0 | 14.0 | 18.3 | 1.5 | 10.0 | 10.0 | | 1.5 | 8.4 | 8.4 |
| | 1.6 | 10.8 | 1.6 | | 13.5 | 13.5 | 19.0 | 1.5 | 9.9 | 9.9 | | 1.6 | 8.8 | 8.8 |
| 5/9 | SCADA | | 1.6 | | 13.5 | 13.5 | 19.5 | 1.6 | 10.0 | 10.0 | | 1.6 | 8.9 | 8.9 |
| | 1.3 | 11.0 | 1.6 | | 13.5 | 13.6 | 19.7 | 1.6 | 9.9 | 9.9 | | 1.6 | 8.8 | 8.8 |
| | 1.5 | 11.0 | 1.6 | | 13.5 | 13.6 | 20.1 | 1.5 | 10.2 | 10.1 | | 1.5 | 8.9 | 8.9 |
| 5/10 | SCADA | | 1.8 | 13.5 | 13.5 | 19.6 | 1.5 | 10.2 | 10.2 | 1.5 | 9.0 | 9.0 | | |
| | 1.2 | 11.0 | 1.6 | 13.4 | 13.5 | 20.1 | 1.5 | 9.9 | 9.9 | 1.4 | 8.7 | 8.7 | | |
| | 1.2 | 11.0 | 1.7 | 13.5 | 13.5 | 20.2 | 1.5 | 10.1 | 10.1 | 1.2 | 8.7 | 8.7 | | |
| 5/11 | SCADA | | 1.7 | 13.5 | 13.5 | 20.7 | 1.6 | 10.1 | 10.1 | NA | 8.9 | 8.9 | | |
| | 1.2 | 10.9 | 1.6 | 14.3 | 14.3 | 21.1 | 1.6 | 10.1 | 10.1 | NA | 8.1 | 8.0 | | |
| | 1.3 | 10.9 | 1.8 | 14.0 | 14.1 | 20.8 | 1.6 | 10.1 | 10.1 | NA | 8.0 | 5.9 | | |
| 5/12 | SCADA | | 1.8 | 14.2 | 14.3 | 20.9 | 1.6 | 10.0 | 10.0 | NA | 8.0 | 6.1 | | |
| | 1.3 | 10.9 | 1.8 | 14.5 | 14.4 | 21.4 | 1.7 | 10.0 | 10.0 | NA | 8.0 | 6.1 | | |
| | 1.4 | 11.1 | 1.4 | 14.5 | 14.4 | 22.2 | 1.5 | 10.1 | 10.1 | NA | 8.0 | 6.1 | | |
| AVG: | 1.4 | 10.8 | 1.6 | | 13.6 | 13.6 | 19.3 | 1.5 | 10.0 | 10.0 | | 1.5 | 8.5 | 8.1 |

Fishways are inspected twice daily plus one SCADA inspection.



Recirculation eddy downstream of spillbay 9.