

The Dalles Dam Fishway Status Report

3/28/2015

Inspection Period: 3/22/2015 to 3/28/2015

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

Fishways are inspected twice daily plus one SCADA inspection

| The Dalles Dam | Inspections Out of Criteria | Criteria Limit | Total Number of Inspections: 14 | | Temperature: 47.3 F |
|---------------------------------|--------------------------------|-------------------|--|--|---------------------|
| | | | Comments | | Secchi: 4.9 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' | Daily differentials and weir depths, see AVGS tab. | | |
| Entrance weir N1 | 0 | depth (≥ 8') | Average | 9.4 | |
| Entrance weir N2 | 0 | Closed | Bulkhead installed. | | |
| PUD Intake differential | 0 | ≤ 0.5' | | | |
| EAST FISHWAY | | | | | |
| Exit differential | 0 | ≤ 0.5' | | | |
| Removable weirs 154-157 | 1 | Per forebay | Auto adjusts 1' increments. out at forebay 158.3' | | |
| Weir 158-159 differential | 6 | 1.0' ± 0.1' | range 0.4-1.5'. Automation corrected 3/25. | | |
| Count station differential | 0 | ≤ 0.3' | | | |
| Weir crest depth | 2 | 1.0' ± 0.1' | 0.8 & 1.2' | | |
| Junction pool weir JP6 | 0 | depth (≥ 7') | Average | 12.5 | |
| East entrance differential | 0 | 1.0' - 2.0' | Average | 1.5 | |
| Entrance weir E1 | 0 | No criteria | Average | Manually adjusted as needed. | |
| Entrance weir E2 | 0 | depth (≥ 8') | Average | 11.8 | |
| Entrance weir E3 | 0 | depth (≥ 8') | Average | 12.3 | |
| Collection channel velocity | 0 | 1.5 - 4 fps | Average | 3.7 | |
| Transportation channel velocity | 0 | 1.5 - 4 fps | Average | 3.4 | |
| North channel velocity | 0 | 1.5 - 4 fps | Average | 3.1 | |
| South channel velocity | 0 | 1.5 - 4 fps | Average | 4.2 | |
| West entrance differential | 0 | 1.0' - 2.0' | Average | 1.6 | |
| Entrance weir W1 | 0 | depth (≥ 8') | Average | 11.7 | |
| Entrance weir W2 | 0 | depth (≥ 8') | Average | 11.7 | |
| Entrance weir W3 | 0 | No criteria | Average | No criteria Manually adjusted as needed. | |
| South entrance differential | 0 | 1.0' - 2.0' | Average | 1.5 | |
| Entrance weir S1 | 0 | depth (≥ 8') | Average | 9.5 | |
| Entrance weir S2 | 0 | depth (≥ 8') | Average | 9.5 | |
| JUVENILE PASSAGE | | | | | |
| Sluiceway operation | 0 | Units 1, 18 | Sluiceways 3-2,3-3,18-1, &18-2 are open | | |
| Turbine trashrack drawdown | 0 | <1.5', wkly | Range: 0.3-0.9' | | |
| Spill volume | On Seal. | | | | |
| Spill Pattern | | | | | |
| Turbine Unit Priority. | 0 | per FPP | West to east block priority starts Apr 1 | | |
| Turbine 1% Efficiency | 0 | per FPP | | | |

OTHER ISSUES:**Birds/Sea lions:**

Bird observation data collected once daily. Refer to Avian Zone Map.

Sealion sighting on 3/25/15

Operations:

Calibration check 3/17. East exit weir 158 found out, E2,E3, South differential and tail water numbers off. Maintenance corrected

Gatewell drawdown completed on 3/27. All values were within criteria.

SCADA computer repair underway.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through 2017

MU1 out 3/23 to 4/2/2015 for Annual

MU2 out 3/23 to 4/2/2015 for Annual

T1 out 3/23 to 4/2/2015 for 3 Year Doble Testing

Maintenance:

Entrance weir wheel and guide work to resume next winter outage.

Three collection channel dewatering pumps on deck for rehab, repair delayed due to lack of funding. Two of 6 collection channel pumps remain stuck.

FCQ7 electrical panel for east exit upgrade prep work completed. Planning and parts purchase underway for installation next outage season.

Future repair plans; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,

Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 wire rope replacement, HDC update fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Studies:

North fishladder rock stabilization project. No new development.

North fish count station mods completed for visibility improvement. March video recording underway. Evaluation to follow.

East AWS backup (auxiliary water system) plans and specifications underway. Hydroacoustic survey of the forebay wall Apr 9

PUD 'freedom' second turbine study proposal cancelled until further notice.

Research/Contractors:

ODFW monthly fishway inspection completed Mar 24.

Normandea fish counters to start Apr 1. Pre-season meeting completed Mar 24.

USGS TDG equipment installed Wednesday, Mar 18.

University of Idaho maintaining antennas. Continuing downloads of winter steelhead.

Research approval letters forwarded for; ODFW forbay Northern Pikeminnow Management Program, PSMFC sampling at PUD intake structure, University of Idaho monitoring fallback movements of steelhead outfitted with radio tags and adult Pacific Lamprey outfitted with half-duplex PIT tags, PSMFC for monitoring and maintaining thin walled PIT tag antennas and computer equipment and USGS total dissolved gas monitoring .

Scheduling for EFL AWS backup, crane rail rehab and deck rail replacement being determined for next winter. FPOM coordination expected.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



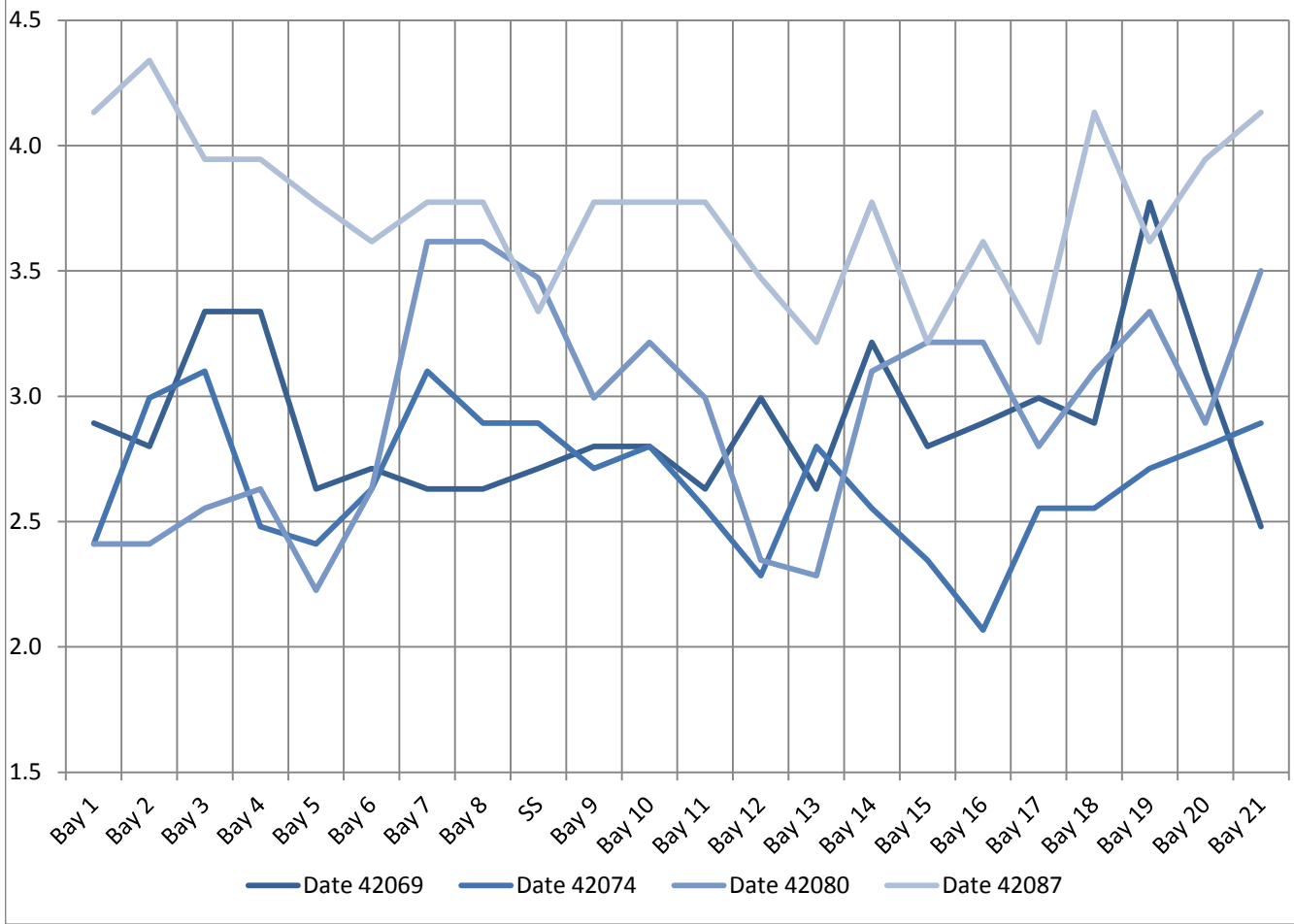
Avian lines in yellow, zones in red, river flow in blue.

2015 Piscivorous Bird Counts

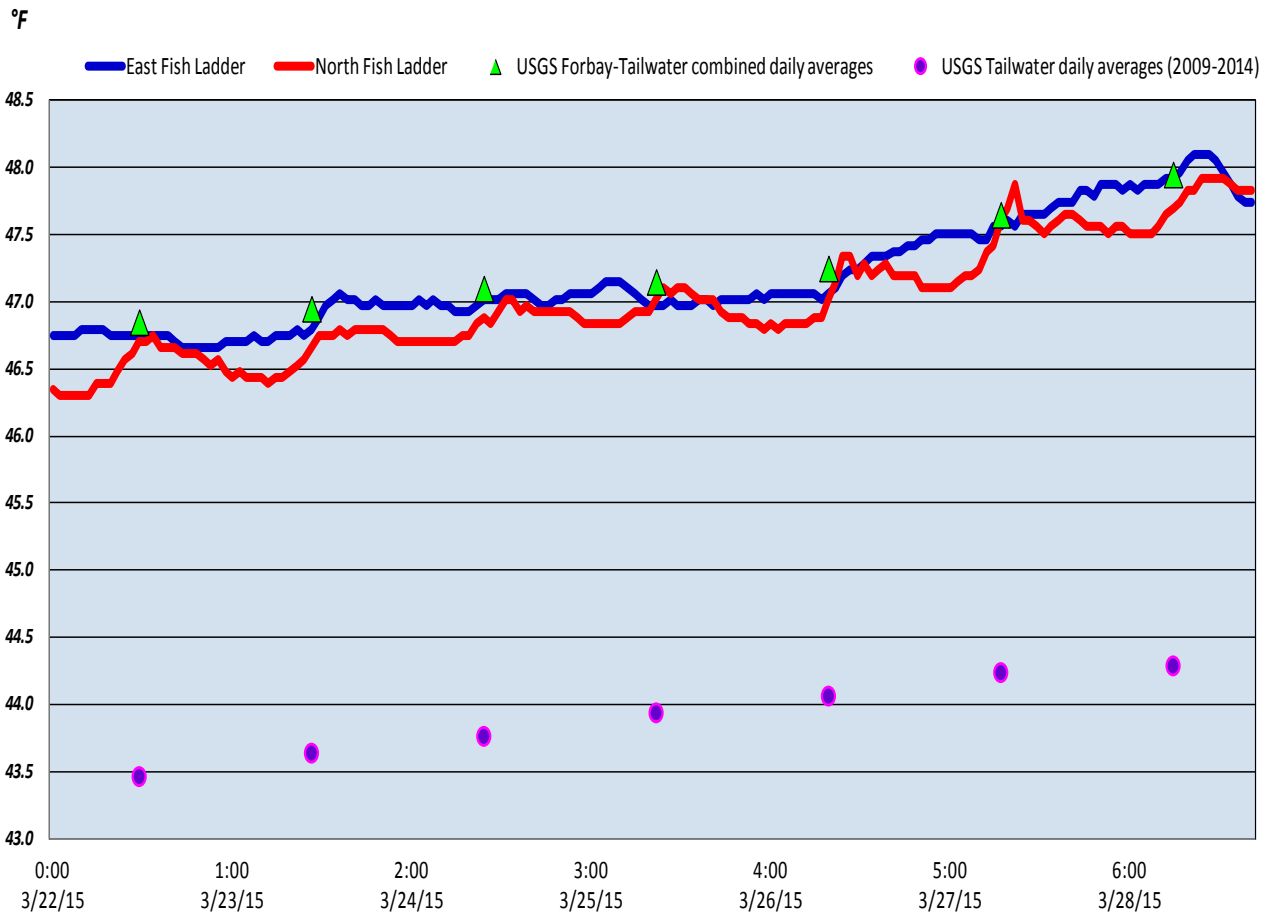
F=foraging, NF=non-foraging

| Date | Observer | Time (24 hr) | Zone | Gull | | Cormorant | | Caspian tern | | Other | | Total birds in | Notes |
|---------|----------|-----------------|------|------|----|-----------|----|--------------|----|----------|----|-------------------|-------|
| | | | | F | NF | F | NF | F | NF | F | NF | | |
| 3/22/15 | JWR | 12:43 | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 12:10 | PH1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6-Jan-00 | |
| | | 12:17 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 12:38 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 12:21 | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 12:22 | SW3 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 21-Jan-00 | |
| | | 12:23 | SW4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| 3/23/15 | JWR | 11:14 | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:29 | PH1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2-Jan-00 | |
| | | 10:40 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 11:06 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:42 | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:43 | SW3 | 0 | 0 | 2 | 8 | 0 | 0 | 0 | 0 | 10-Jan-00 | |
| | | 10:44 | SW4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2-Jan-00 | |
| 3/24/15 | PSK | 15:14 | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 13:45 | PH1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5-Jan-00 | |
| | | 14:37 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 15:31 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 14:41 | SW2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1-Jan-00 | |
| | | 14:43 | SW3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 14:47 | SW4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2-Jan-00 | |
| 3/25/15 | JWR | 10:32 | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:03 | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:11 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:36 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:17 | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 10:18 | SW3 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10-Jan-00 | |
| | | 10:19 | SW4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| 3/26/15 | BC | No times | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | | SW3 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9-Jan-00 | |
| | | | SW4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| 3/27/15 | PSK | 10:41 | FB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 9:07 | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 9:22 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 11:04 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 9:29 | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 9:31 | SW3 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14-Jan-00 | |
| | | 9:35 | SW4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| 3/28/15 | EHK | 14:02 | FB | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 9-Jan-00 | |
| | | 13:19 | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 13:31 | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 13:34 | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 14:11 | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-Jan-00 | |
| | | 13:35 | SW3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1-Jan-00 | |
| 13:36 | SW4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1-Jan-00 | | | |

The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)



The Dalles Dam Adult Fish Ladder-River/Water Temperatures



Temperatures

| |
|-----------|
| 46.9 |
| 47.0 |
| 47.1 |
| 47.2 |
| 47.3 |
| 47.7 |
| 48.0 |
| AVG: 47.3 |

Sun
Mon
Tue
Wed
Thurs
Fri
Sat
AVG

Secchi:

| |
|----------|
| 5.0 |
| 5.0 |
| 5.0 |
| 5.0 |
| 5.0 |
| 5.0 |
| 4.5 |
| AVG 4.93 |

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

= Out of criteria

| North Ladder | | | East Ladder | | | | | | | | | | | | Spill KCFS |
|---------------------|--------------|---------------|--------------------|----------|----------|----------|------|---------------|----------|----------|----------------|--------------|----------|----------|------------|
| North Entrance | | East Entrance | | | | | | West Entrance | | | South Entrance | | | | |
| Date: | Differential | N1 Depth | Differential | E1 Depth | E2 Depth | E3 Depth | JP 6 | Differential | W1 Depth | W2 Depth | W3 Depth | Differential | S1 Depth | S2 Depth | |
| 3/22/15 | 1.5 | 9.4 | 1.3 | | 11.0 | 13.5 | 12.6 | 1.7 | 11.4 | 11.4 | | 1.5 | 9.5 | 9.5 | |
| | 1.5 | 9.4 | 1.5 | | 11.1 | 13.4 | 12.5 | 1.6 | 11.5 | 11.5 | | 1.4 | 9.5 | 9.6 | |
| 3/23/15 | 1.4 | 9.6 | 1.5 | | 11.9 | 11.3 | 11.4 | 1.5 | 11.9 | 12.1 | | 1.5 | 9.5 | 9.4 | |
| | 1.5 | 9.4 | 1.3 | | 10.9 | 13.4 | 12.5 | 1.7 | 11.4 | 11.4 | | 1.6 | 9.5 | 9.4 | |
| 3/24/15 | 1.4 | 9.4 | 1.7 | | 12.0 | 11.2 | 10.3 | 1.3 | 10.9 | 10.9 | | 1.5 | 9.4 | 9.5 | |
| | 1.5 | 9.4 | 1.4 | | 12.0 | 12.2 | 11.3 | 1.6 | 11.1 | 11.2 | | 1.6 | 9.5 | 9.4 | |
| 3/25/15 | 1.4 | 9.6 | 1.6 | | 12.0 | 11.7 | 12.8 | 1.7 | 11.9 | 11.9 | | 1.5 | 9.4 | 9.5 | |
| | 1.5 | 9.4 | 1.5 | | 11.9 | 13.2 | 12.3 | 1.6 | 11.9 | 12.0 | | 1.5 | 9.5 | 9.4 | |
| 3/26/15 | 1.5 | 9.4 | 1.5 | | 12.1 | 12.1 | 13.3 | 1.7 | 12.1 | 12.0 | | 1.5 | 9.5 | 9.4 | |
| | 1.5 | 9.3 | 1.7 | | 11.9 | 11.9 | 13.1 | 1.8 | 12.0 | 12.0 | | 1.5 | 9.5 | 9.5 | |
| 3/27/15 | 1.5 | 9.4 | 1.6 | | 11.9 | 12.1 | 13.8 | 1.8 | 11.9 | 11.9 | | 1.7 | 9.4 | 9.4 | |
| | 1.5 | 9.4 | 1.5 | | 12.1 | 12.1 | 14.0 | 1.6 | 12.1 | 12.1 | | 1.6 | 9.5 | 9.5 | |
| 3/28/15 | 1.5 | 9.4 | 1.4 | | 12.0 | 12.2 | 11.9 | 1.5 | 12.2 | 12.1 | | 1.5 | 9.6 | 9.6 | |
| | 1.4 | 9.4 | 1.5 | | 11.9 | 11.9 | 12.6 | 1.5 | 11.9 | 11.9 | | 1.5 | 9.7 | 9.6 | |
| AVG: | 1.5 | 9.4 | 1.5 | #DIV/0! | 11.8 | 12.3 | 12.5 | 1.6 | 11.7 | 11.7 | No criteria | 1.5 | 9.5 | 9.5 | |

O
n
s
e
a
l

Fishways are inspected twice daily plus one SCADA inspection; SCADA OOS, TDE working on repair.