
# Township of Southgate

# Dundalk Waterworks

## 2021 Annual Report

**Jim Ellis**
Public Works Manager

# Dundalk Waterworks 2021 Annual Report

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# Dundalk Waterworks - Township of Southgate

# 2021 Annual Water Report

| | |
|---|---|
| **Site:** | Village of Dundalk |
| **Operations Address:** | 75 Dundalk Street,<br>Dundalk, Ontario N0C 1B0 |
| **Waterworks #:** | 220001753 |
| **Municipal Drinking Water Licence:** | 110-101, Issue No. 5 |
| **Drinking Water Works Permit:** | 110-201, Issue No. 5 |
| **Period of this Report:** | January 1- December 31 **Year:** 2021 |

## Description of System

The water system known as Dundalk Water Works is a ground water source consisting of three production wells, one monitoring well and a distribution system. The system is monitored by a SCADA system installed in 2006 which communicates through RF towers and PLC's in the wells to record data and monitor operations.

Well D3 is equipped with a submersible pump, flow meter, two ultra violet sterilization chambers and a chemical feed pump for sodium hypochlorite and is connected to a 1365 $m^3$ baffled storage tank with 2 pax mixers. Two turbine high lift pumps pump from storage through a flow meter into a distribution system and a booster chemical feed pump are connected after the reservoir and starts automatically if the chlorine residual begins to fall. This well has a capacity of 1182 $m^3$/day. This pump house is equipped with two chlorine analyzers, one prior to the reservoir and the second installed prior to entering the distribution system. The entire system is under the control of a PLC system and any failures alarm a dial out system to alert operators. Well D3 is equipped with an 80 kW diesel generator that starts automatically in the event of a power outage and is capable of providing power to maintain this water supply.

Well D4 was constructed in 2004 and is equipped with a submersible pump, flow meter and a chemical feed pump for sodium hypochlorite and is connected to a 187.7 $m^3$ baffled reservoir. Two turbine high lift pumps pump from storage through a flow meter into a distribution system and a booster chemical feed pump is connected after the reservoir that automatically starts if the chlorine residual begins to fall. This well has a 1637 $m^3$/day capacity. This pump house is equipped with two chlorine analyzers, one prior to the reservoir and the second installed prior to entering the distribution system. The entire system is under the control of a PLC system and any failures alarm a dial out system to alert operators. Well D4 is equipped with a 100 kW diesel generator with automatic transfer switch for standby power.

Well D5 was drilled in 2017 with the well house and reservoir built in 2019. It is equipped with a 15hp submersible pump that fills a rectangular baffled reservoir with a capacity of 536 cubic meters. Two turbine high lift pumps pump from storage through a flow meter into a distribution system and a booster chemical feed pump is connected after the reservoir that automatically starts if the chlorine residual begins to fall. This well has a 1961 m3/day capacity. This pump house is equipped with two chlorine analysers, one prior to the reservoir and the second installed prior to entering the distribution system. The entire system is under the control of a PLC system and any failures alarm a dial out system to alert operators. Well D5 is equipped with a 150 kW diesel generator with automatic transfer switch for standby power.

The distribution system is made up of a network of water mains of varying size with 1,318 service connections.

**Summary of all Test Results**

**Treated Water Recap:**

| | |
|---|---|
| No. of Distribution Samples taken | 210 |
| No. of Treated Water Well Samples taken | 158 |
| No. of samples with Total Coliform | 0 |
| No. of samples with E Coli | 0 |
| No. of treated samples with Heterotrophic Plate Count >500 | 1 |

**Raw Water Recap:**

| | |
|---|---|
| No. of Raw Water Well Samples taken | 156 |
| No. of Raw samples with Total Coliform | 5 |
| No. of Raw samples with E Coli | 1 |
| No. of Raw samples with Heterotrophic Plate Count > 500 | 1 |

Heterotrophic Plate Counts are conducted on some treated and distribution system samples. The HPC test is used as a tool to monitor overall quality, but the results are not indicators of water safety. There is not a Drinking Water Quality Standard for HPC.

**Summary of Adverse Test Results Reported: -**

Adverse Sodium results which are not reportable.

**Description of Corrective Action Taken:**

- The Health Unit was advised to notify users and information was put on the back of the water bills.

**Description of Major Equipment Expenses:**

- Rowes Lane watermain upgrade =$128,389.12
- Water Tower design and engineering = $2,974.48
- Victoria Street pre-engineering design $1,836.77
- Glenelg Street watermain upgrade $1,602.72
- Purchased water meters = $25,343.32
- Debt Well D5/ Main St E was $127,001

**New Equipment Installed:**

Nothing to report.

**Equipment Replaced:**

2 – 6” Watermain valves $1,231.30

**Repairs to Equipment:**

Well D3 generator radiator replacement $4,943.67

**Frozen Water:**

Nothing to report.

**Township of Southgate - Dundalk Waterworks**

**Average Day Well Consumption vs. Maximum Flow/Day Allowed Report 2021**

| Month | Average Day Water Consumption Well #3 | Maximum Flow Rate Allowed Well #3/Day | Average Day Water Consumption Well #4 | Maximum Flow Rate Allowed Well #4/Day | Average Day Water Consumption Well #5 | Maximum Flow Rate Allowed Well #5/Day | Average Day Water Consumption All Wells | Maximum Flow Rate Allowed All Wells/Day |
|---|---|---|---|---|---|---|---|---|
| January | 219 | 1,182 | 203 | 1,637 | 221 | 1,961 | 643 | 2,817 |
| February | 215 | 1,182 | 224 | 1,637 | 181 | 1,961 | 620 | 2,817 |
| March | 216 | 1,182 | 211 | 1,637 | 206 | 1,961 | 633 | 2,817 |
| April | 212 | 1,182 | 184 | 1,637 | 202 | 1,961 | 598 | 2,817 |
| May | 219 | 1,182 | 226 | 1,637 | 198 | 1,961 | 643 | 2,817 |
| June | 216 | 1,182 | 321 | 1,637 | 208 | 1,961 | 745 | 2,817 |
| July | 216 | 1,182 | 216 | 1,637 | 200 | 1,961 | 632 | 2,817 |
| August | 222 | 1,182 | 182 | 1,637 | 270 | 1,961 | 674 | 2,817 |
| September | 216 | 1,182 | 198 | 1,637 | 195 | 1,961 | 609 | 2,817 |
| October | 215 | 1,182 | 223 | 1,637 | 206 | 1,961 | 644 | 2,817 |
| November | 217 | 1,182 | 244 | 1,637 | 196 | 1,961 | 657 | 2,817 |
| December | 216 | 1,182 | 304 | 1,637 | 202 | 1,961 | 722 | 2,817 |
| **Annual Monthly Average in $M_3$** | 217 | 1,182 | 228 | 1,637 | 207 | 1,961 | 652 | 2,817 |

**Note: Flow in above chart is in Cubic Meters**

**Certificate of Approval Well Pumping Maximum Flow Rate per Day**

| Well | Maximum Pump Rate in Liters/Min. | Maximum Pump Rate in Liters/Day | Maximum Pump Rate in $m_3$/Day | Maximum Pump Rate in Gallons/Day |
|---|---|---|---|---|
| Well #3 | 820 | 1,180,800 | 1181 | 259,985 |
| Well #4 | 1137 | 1,637,280 | 1636 | 360,149 |
| Well #5 | 1362 | 1,961,280 | 1961 | 431,695 |
| Total | | | 2817 | 620,134 |

**Township of Southgate - Dundalk Waterworks**

**Maximum One Day Well Consumption vs. Maximum Flow Allowed Report 2021**

| Month | Maximum One Day Consumption Well #3 | Maximum Flow Allowed/Day Well #3 | Maximum One Day Consumption Well #4 | Maximum Flow Allowed/Day Well #4 | Maximum One Day Consumption Well #5 | Maximum Flow Allowed/Day Well #5 | Maximum One Day Flow All Wells | Maximum Flow Allowed/Day All Wells |
|---|---|---|---|---|---|---|---|---|
| January | 297 | 1,182 | 512 | 1,637 | 414 | 1,961 | 887 | 2,817 |
| February | 393 | 1,182 | 442 | 1,637 | 379 | 1,961 | 898 | 2,817 |
| March | 313 | 1,182 | 260 | 1,637 | 772 | 1,961 | 772 | 2,817 |
| April | 320 | 1,182 | 251 | 1,637 | 294 | 1,961 | 725 | 2,817 |
| May | 341 | 1,182 | 474 | 1,637 | 254 | 1,961 | 909 | 2,817 |
| June | 331 | 1,182 | 525 | 1,637 | 343 | 1,961 | 1,004 | 2,817 |
| July | 315 | 1,182 | 301 | 1,637 | 252 | 1,961 | 837 | 2,817 |
| August | 345 | 1,182 | 408 | 1,637 | 542 | 1,961 | 910 | 2,817 |
| September | 335 | 1,182 | 255 | 1,637 | 320 | 1,961 | 791 | 2,817 |
| October | 248 | 1,182 | 438 | 1,637 | 517 | 1,961 | 842 | 2,817 |
| November | 330 | 1,182 | 452 | 1,637 | 213 | 1,961 | 889 | 2,817 |
| December | 358 | 1,182 | 501 | 1,637 | 381 | 1,961 | 884 | 2,817 |
| **Annual Maximum for One Day - $m_3$** | 393 | 1182 | 525 | 1637 | 772 | 1961 | 1004 | 2817 |
| **Annual Maximum for One Day - Gal** | 86,515 | 260,205 | 115,574 | 360,369 | 169,948 | 431,695 | 221,021 | 620,134 |

Note: Flow in above chart is in Cubic Meters

**Certificate of Approval Well Pumping Maximum Capacity per Day**

| Well | Maximum Pump Rate in Liters/Min. | Maximum Pump Rate in Liters/Day | Maximum Pump Rate in $m_3$/Day | Maximum Pump Rate in Gallons/Day |
|---|---|---|---|---|
| Well #3 | 822 | 1,183,680 | 1181 | 259,985 |
| Well #4 | 1134 | 1,632,960 | 1636 | 360,149 |
| Well #5 | 1362 | 1,961,280 | 1961 | 431,695 |
| Total | | | 2817 | 620,134 |

## Township of Southgate - Dundalk Waterworks
## Total Well Consumption vs. Maximum Flow Allowed Report 2021

| Month | Water Consumption Well #3 | Monthly Flow Allowed Well #3 | Water Consumption Well #4 | Monthly Flow Allowed Well #4 | Water Consumption Well #5 | Monthly Flow Allowed Well #5 | # of Days in Month |
|---|---|---|---|---|---|---|---|
| January | 6,776 | 36,611 | 6,290 | 50,716 | 6,846 | 60,791 | 31 |
| February | 6,015 | 33,068 | 6,259 | 45,808 | 5,060 | 54,908 | 28 |
| March | 6,694 | 36,611 | 6,554 | 50,716 | 6,388 | 60,791 | 31 |
| April | 6,370 | 35,430 | 5,520 | 49,080 | 6,062 | 58,830 | 30 |
| May | 6,777 | 36,611 | 7,018 | 50,716 | 6,136 | 60,791 | 31 |
| June | 6,485 | 35,430 | 9,618 | 49,080 | 6,248 | 58,830 | 30 |
| July | 6,711 | 36,611 | 6,685 | 50,716 | 6,204 | 60,791 | 31 |
| August | 6,870 | 36,611 | 5,636 | 50,716 | 8,364 | 60,791 | 31 |
| September | 6,486 | 35,430 | 5,934 | 49,080 | 5,848 | 58,830 | 30 |
| October | 6,667 | 36,611 | 6,903 | 50,716 | 6,375 | 60,791 | 31 |
| November | 6,499 | 35,430 | 7,319 | 49,080 | 5,875 | 58,830 | 30 |
| December | 6,686 | 36,611 | 9,435 | 50,716 | 6,254 | 60,791 | 31 |
| **Annual Flow in m3** | 79,036 | 431,065 | 83,171 | 597,140 | 75,660 | 715,765 | |

**Certificate of Approval Well Pumping Maximum Flow Rate per Day**

| Well | Maximum Pump Rate in Liters/Min. | Maximum Pump Rate in Liters/Day | Maximum Pump Rate in $m_3$/Day | Maximum Pump Rate in Gallons/Day | Water Consumption in m3 by Well in 2019 | Annual Flow Allowed at each Wells |
|---|---|---|---|---|---|---|
| Well #3 | 822 | 1,183,680 | 1181 | 259,985 | 79,036 | 431,065 |
| Well #4 | 1134 | 1,632,960 | 1636 | 360,149 | 83,171 | 597,140 |
| Well #5 | 1362 | 1,961,280 | 1961 | 431,695 | 75,660 | 715,765 |
| Total | | | 2817 | 620,134 | 237,867 | 1,743,970 |

**OPTIONAL ANNUAL REPORT TEMPLATE**

| | |
|---|---|
| **Drinking-Water System Number:** | **220001753** |
| **Drinking-Water System Name:** | Dundalk Waterworks |
| **Drinking-Water System Owner:** | Township of Southgate |
| **Drinking-Water System Category:** | Large Municipal – Residential |
| **Period being reported:** | January 1 to December 31, 2021 |

| ***Complete if your Category is Large Municipal Residential or Small Municipal Residential*** | ***Complete for all other Categories.*** |
|---|---|
| **Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [x]**<br><br>**Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No [ ]**<br><br>**Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.**<br>• Southgate Municipal Office (near Hopeville) 185667 Grey Road 9, RR 1 Dundalk ON N0C 1B0<br>• Dundalk Works Depot 75 Dundalk St Dundalk ON N0C 1B0<br>• Dundalk Library 80 Proton Street North | **Number of Designated Facilities served:** 3<br><br>**Did you provide a copy of your annual report to all Designated Facilities you serve?**<br>**Yes [x] No [ ]**<br><br>**Number of Interested Authorities you report to:** 3<br><br>**Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?**<br>**Yes [x] No [ ]** |

**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

**List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:**

| Drinking Water System Name | Drinking Water System Number |
|---|---|
| | |

**Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?**
**Yes [ ] No [x]**

**Indicate how you notified system users that your annual report is available, and is free of charge.**

**[x] Public access/notice via the web**
**[x] Public access/notice via Government Office**
**[x] Public access/notice via a newspaper**
**[x] Public access/notice via Public Request**
**[x] Public access/notice via a Public Library**
**[ ] Public access/notice via other method _____**

**Describe your Drinking-Water System**

**Dundalk Waterworks has three operational wells. The Township has a 1306 $m^3$ of storage in an above ground baffled reservoir at Well 3, a 187.7 $m^3$ baffled reservoir at Well D4 and a 536 m3 baffled reservoir at Well D5. The water is pumped by high lift pumps into the distribution system from one of the reservoirs. All wells communicate by RF towers to control which well is in the lead and are monitored by SCADA through the same communications system.**

**List all water treatment chemicals used over this reporting period**

**Sodium Hypochlorite**

**Were any significant expenses incurred to?**

**[ ]** Install required equipment
**[x]** Repair required equipment
**[x]** Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

**Well D3 generator radiator replacement $4,943.67**

- **Rowes Lane watermain upgrade =$128,389.12**
- **Water Tower design and engineering = $2,974.48**
- **Victoria Street pre-engineering design $1,836.77**
- **Glenelg Street watermain upgrade $1,602.72**
- **Purchased water meters = $25,343.32**
- **Debt Well D5/ Main St E was $127,001**

**Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre**

| Incident Date | Parameter | Result | Unit of Measure | Corrective Action | Corrective Action Date |
|---|---|---|---|---|---|
| 12/7/21 | Sodium | 28.5 | Mg/L | N/R | N/A |
| 12/7/21 | Sodium | 30.0 | Mg/L | N/R | N/A |
| 1/3/21 | Sodium | 31.6 | Mg/L | N/R | N/A |
| 1/3/21 | Sodium | 30.2 | Mg/L | N/R | N/A |
| 7/6/20 | Sodium | 31.6 | Mg/L | N/R | N/A |
| 7/6/20 | Sodium | 27.6 | Mg/L | N/R | N/A |
| 3/9/20 | Sodium | 29.5 | Mg/L | N/R | N/A |
| 3/9/20 | Sodium | 30.2 | Mg/L | N/R | N/A |
| 7/2/19 | Sodium | 26.7 | Mg/L | N/R | N/A |
| 7/2/19 | Sodium | 25.0 | Mg/L | N/R | N/A |
| 3/4/19 | Sodium | 23.5 | Mg/L | N/R | N/A |
| 3/4/19 | Sodium | 22.8 | Mg/L | N/R | N/A |
| 3/9/18 | Sodium | 36.3 | Mg/l | Re-sampled | 3/13/18 |
| 3/9/18 | Sodium | 31.9 | Mg/l | Re-sampled | 3/13/18 |
| 3/5/18 | Sodium | 36.3 | mg/l | | |
| 3/6/17 | Sodium | 28.2 | mg/l | N/R | N/A |
| 7/5/16 | Sodium | 28 | mg/l | N/R | N/A |
| 3/10/16 | Sodium | 28.8 | mg/l | Re-sampled | 7/5/16 |
| 3/9/15 | Sodium | 28.7 | mg/l | N/R | N/A |
| 3/3/14 | Sodium | 31.5 | mg/l | Re-sampled | 3/3/14 |
| 3/14/13 | Sodium | 30.2 | mg/l | Re-sampled | 3/14/13 |
| 3/14/13 | Sodium | 23.7 | mg/l | Re-sampled | 3/14/13 |

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

| | Number of Samples | Range of E.Coli Or Fecal Results (min #)-(max #) | Range of Total Coliform Results (min #)-(max #) | Number of HPC Samples | Range of HPC Results (min #)-(max #) |
|---|---|---|---|---|---|
| Raw | 156 | 0-1 | 0-6 | 156 | 0-750 |
| Treated | 159 | 0-0 | 0-0 | 159 | 0-2000 |
| Distribution | 210 | 0-0 | 0-0 | 210 | 0-270 |

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

| | Number of Grab Samples | Range of Results (min #)-(max #) |
|---|---|---|
| **Turbidity** | **36** | **0.04 - 0.11** |
| **Chlorine** | **365**<br>**8760 – D3**<br>**8760 – D4**<br>**8760 – D5** | **Distribution Free 0.34 – 1.45**<br>**Treated Free 0.77 – 1.57**<br>**Treated Free 0.80 – 1.43**<br>**Treated Free 0.70 – 1.30** |
| **Fluoride** (If the DWS provides fluoridation) | | |

***NOTE**: For continuous monitors use 8760 as the number of samples.*

***NOTE**: Record the unit of measure if it is **not** milligrams per litre.*

**Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.**

| Date of legal instrument issued | Parameter | Date Sampled | Result | Unit of Measure |
|---|---|---|---|---|
| **Drinking Water License 110-101 Issue Number 5 (01/28/2021), Permit 110-201 Issue Number 5 (01/28/2021),** | **Sodium** | **12/7/21**<br><br><br>**1/3/21** | **D3-30.0**<br>**D4-28.5**<br>**D5-15.9**<br>**D3-31.6**<br>**D4-30.2**<br>**D5-17.2** | Mg/L |
| | **Radionuclides** | **1/3/21** | | |
| | **D3 Gross Alpha** | **“** | **<0.10** | Bq/L |
| | **D3 Gross Beta** | **“** | **0.15** | Bq/L |
| | **D3 Tritium** | **“** | **<15** | Bq/L |
| | **D4 Gross Alpha** | **“** | **0.12** | Bq/L |
| | **D4 Gross Beta** | **“** | **0.11** | Bq/L |
| | **D4 Tritium** | **“** | **<15** | Bq/L |
| | **D5 Gross Alpha** | **“** | **0.11** | Bg/L |
| | **D5 Gross Beta** | **“** | **0.1** | Bg/L |
| | **D5 Tritium** | **“** | **<15** | Bg/L |
| **Drinking Water License 110-101(01/02/2016), Permit 110-201(02/02/2016)** | **Sodium** | **3/9/20**<br><br><br>**7/6/20** | **D3-29.5**<br>**D4-30.2**<br>**D5-16.3**<br>**D3-31.6**<br>**D4-27.6**<br>**D5-15.7** | mg/l |
| **“** | **Sodium** | **3/8/19** | **D3-22.8**<br>**D4-23.5** | mg/l |
| **“** | **Sodium** | **3/6/17** | **D3-28.2**<br>**D4-26.3** | mg/l |

| | | | | |
|---|---|---|---|---|
| “ | **Sodium** | **July 5/16** | **D3-27.9**<br>**D4-28** | mg/l |
| “ | **Sodium** | **March 8/16** | **D3-28.8**<br>**D4-27.7** | mg/l |
| “ | **Sodium** | **March 9/15** | **D3-28.7** | mg/l |
| “ | **Sodium** | ” | **D4 – 18.1** | mg/l |
| “ | **Radionuclides** | **March 16/19** | | ug/l |
| “ | **D3 Gross Alpha** | ” | **0.13** | “ |
| “ | **D3 Gross Beta** | “ | **<0.10** | “ |
| “ | **D3 Tritium** | “ | **<15** | “ |
| “ | **D4 Gross Alpha** | “ | **0.12** | “ |
| “ | **D4 Gross Beta** | “ | **<0.10** | “ |
| “ | **D4 Tritium** | “ | **<15** | “ |

## Summary of Inorganic parameters tested during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|---|---|---|---|---|
| **Antimony** | **March/1/21** | **<0.0001** | mg/l | |
| **Arsenic** | **March/1/21** | **D3-0.0012**<br>**D4-0.0003**<br>**D5-0.0008** | “ | |
| **Barium** | **March/1/21** | **D3-0.105**<br>**D4-0.096**<br>**D5-0.105** | “ | |
| **Boron** | **March/1/21** | **D3-0.054**<br>**D4-0.040**<br>**D5-0.048** | “ | |
| **Cadmium** | **March/1/21** | **D3-<0.000015**<br>**D4-<0.000015**<br>**D5-<0.000015** | “ | |
| **Chromium** | **March/1/21** | **D3-<0.002**<br>**D4-<0.002**<br>**D5-<0.002** | “ | |
| ***Lead** | **March 16-18/21**<br><br>**Sept 23/21 to Oct 4/21** | **Low-0.00009**<br>**High-0.00093**<br>**Low-0.00009**<br>**High-0.00117** | mg/l | |
| **Mercury** | **March/1/21** | **D3-<0.00002**<br>**D4-<0.00002**<br>**D5-<0.00002** | “ | |
| **Selenium** | **March/1/21** | **D3-<0.001**<br>**D4-<0.001**<br>**D5-<0.001** | “ | |
| **Sodium** | **July 6/20** | **D3-31.6**<br>**D4-27.6**<br>**D5-15.7** | mg/l | |
| **Uranium** | **March/1/21** | **D3-0.00193**<br>**D4-0.00175**<br>**D5-0.00035** | mg/l | |

| | | | | |
|---|---|---|---|---|
| **Fluoride** | **March 6/17<br>Jan 20/20<br>Jan 23/20** | **0.86<br>D5-2.0<br>D5-2.5** | mg/l | |
| **Nitrite** | **October 5/21** | **D3-0.1<br>D4-<0.1<br>D5-<0.1** | " | |
| **Nitrate** | **October 5/21** | **D3-1.1<br>D4-1.9<br>D5-<0.1** | " | |

*Only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

**Summary of lead testing under Schedule 15.1 during this reporting period**

(Applicable to the following drinking water systems; large municipal residential systems**,** small municipal residential systems, and non-municipal year-round residential systems)

*Note: Municipality is on reduced sampling schedule currently.

| Location Type | Number of Samples | Range of Lead Results (min#) – (max #) | Number of Exceedances |
|---|---|---|---|
| **Residential** | **20** | **0.00009 – 0.00093** | **0** |
| **Non-Residential** | **2** | **0.00023 – 0.00117** | **0** |
| **Distribution** | **4** | **0.00015 – 0.00032** | **0** |

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|---|---|---|---|---|
| **Alachlor** | March 5/18 | **0.02** | **ug/l** | |
| **Aldicarb** | March 9/15 | **0.01** | **"** | |
| **Aldrin + Dieldrin** | March 9/15 | **0.01** | **"** | |
| **Atrazine + N-dealkylated metobolites** | March 5/18 | **0.01** | **"** | |
| **Azinphos-methyl** | March 5/18 | **0.05** | **ug/l** | |
| **Bendiocarb** | March 9/15 | **0.01** | **"** | |
| **Benzene** | March 1/21 | **<0.5** | **"** | |
| **Benzo(a)pyrene** | March 5/18 | **0.004** | " | |
| **Bromoxynil** | March 5/18 | **0.33** | " | |
| **Carbaryl** | March 5/18 | **0.05** | " | |
| **Carbofuran** | March 5/18 | **0.01** | " | |
| **Carbon Tetrachloride** | March 1/21 | **<0.2** | " | |
| **Chlordane (Total)** | March 9/15 | **0.01** | " | |
| **Chlorpyrifos** | March 5/18 | **0.02** | " | |
| **Cyanazine** | March 9/15 | **0.03** | " | |
| **Diazinon** | March 5/18 | **0.02** | " | |

| | | | | |
|---|---|---|---|---|
| **Dicamba** | March 5/18 | **0.20** | " | |
| **1,2-Dichlorobenzene** | March 1/21 | **<0.5** | " | |
| **1,4-Dichlorobenzene** | March 1/21 | **<0.5** | " | |
| **Dichlorodiphenyltrichloroethane (DDT) + metabolites** | March 9/15 | **0.01** | " | |
| **1,2-Dichloroethane** | March 1/21 | **<0.5** | " | |
| **1,1-Dichloroethylene (vinylidene chloride)** | March 1/21 | **<0.5** | " | |
| **Dichloromethane** | March 1/21 | **<5** | " | |
| **2-4 Dichlorophenol** | March 5/18 | **0.15** | " | |
| **2,4-Dichlorophenoxy acetic acid (2,4-D)** | March 5/18 | **0.19** | " | |
| **Diclofop-methyl** | March 5/18 | **0.40** | " | |
| **Dimethoate** | March 5/18 | **0.03** | " | |
| **Dinoseb** | March 9/15 | **0.36** | " | |
| **Diquat** | March 5/18 | **1.00** | " | |
| **Diuron** | March 5/18 | **0.03** | " | |
| **Glyphosate** | March 5/18 | **1.00** | " | |
| **Heptachlor + Heptachlor Epoxide** | March 9/15 | **0.01** | " | |
| **Haloacetic Acids (Bromoacetic Acid, Chloroacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid, and Trichloroacetic Acid)** | October 5/21 | **5.3** | " | |
| **Lindane (Total)** | March 9/15 | **0.01** | " | |
| **Malathion** | March 5/18 | **0.02** | " | |
| **Methoxychlor** | March 5/18 | **0.03** | " | |
| **2-methyl-4-chlorophenoxyacetuc acid** | March 5/18 | **0.00012** | mg/l | |
| **Metolachlor** | March 9/15 | **0.06** | ug/l | |
| **Metribuzin** | March 5/18 | **0.02** | " | |
| **Monochlorobenzene** | March 5/18 | **0.3** | " | |
| **Paraquat** | March 5/18 | **1.00** | " | |
| **Parathion** | March 9/15 | **0.02** | " | |
| **Pentachlorophenol** | March 5/18 | **0.15** | " | |
| **Phorate** | March 5/18 | **0.01** | " | |
| **Picloram** | March 5/18 | **1.0** | " | |
| **Polychlorinated Biphenyls(PCB)** | March 5/18 | **0.04** | " | |
| **Prometryne** | March 5/18 | **0.03** | " | |
| **Simazine** | March 5/18 | **0.01** | " | |
| **THM** (NOTE: show latest running annual average) | October 5/21 | **16.75** | ug/l | |
| **Temephos** | March 9/15 | **0.01** | " | |
| **Terbufos** | March 5/18 | **0.01** | " | |
| **Tetrachloroethylene** | March 1/21 | **<0.5** | " | |
| **2,3,4,6-Tetrachlorophenol** | March 5/18 | **0.20** | " | |
| **Triallate** | March 5/18 | **0.01** | " | |
| **Trichloroethylene** | March 5/18 | **0.44** | " | |

| | | | | |
|---|---|---|---|---|
| **2,4,6-Trichlorophenol** | March 5/18 | **0.25** | " | |
| **2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)** | March 9/15 | **0.22** | " | |
| **Trifluralin** | March 5/18 | **0.02** | " | |
| **Vinyl Chloride** | March 1/21 | **<0.2** | " | |

**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

| Parameter | Result Value | Unit of Measure | Date of Sample |
|---|---|---|---|
| | | | |

**Annual Sampling Results 2021**

Year: 2021

| Parameter | Ecoli | | | | | | Total Coliform | | | | | | HPC | | | | | | Background | | Raw Water Turbidity | | Treated Chlorine Free | | Treated Turbidity | | Distribution Chlorine Free | | Distribution Turbidity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw | | Treated | | Distribution | | Raw | | Treated | | Distribution | | RW-Raw | | TW-Treated | | DW-Distribution | | | | | | | | | | | | | |
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High |
| January | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 10 | 0 | 20 | | | 0.05 | 0.11 | 0.87 | 1.27 | 0.05 | 0.28 | 0.50 | 1.26 | 0.06 | 0.23 |
| February | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 10 | 0 | <10 | | | 0.06 | 0.07 | 0.90 | 1.25 | 0.05 | 0.29 | 0.58 | 1.22 | 0.08 | 0.27 |
| March | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 20 | 0 | 20 | | | 0.07 | 0.07 | 0.72 | 1.42 | 0.05 | 0.24 | 0.68 | 1.29 | 0.06 | 0.27 |
| April | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | >2000 | 0 | 30 | | | 0.06 | 0.08 | 0.70 | 1.31 | 0.05 | 0.21 | 0.61 | 1.24 | 0.06 | 0.24 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 20 | 0 | 10 | | | 0.05 | 0.06 | 1.01 | 1.33 | 0.05 | 0.25 | 0.68 | 1.17 | 0.07 | 0.29 |
| June | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 10 | 0 | 50 | | | 0.05 | 0.06 | 0.82 | 1.32 | 0.04 | 0.24 | 0.52 | 1.21 | 0.06 | 0.21 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 130 | 0 | 10 | 0 | 30 | | | 0.05 | 0.10 | 0.77 | 1.23 | 0.04 | 0.26 | 0.34 | 1.02 | 0.08 | 0.24 |
| August | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 180 | 0 | 200 | 0 | 90 | | | 0.05 | 0.08 | 0.75 | 1.43 | 0.05 | 0.28 | 0.37 | 1.22 | 0.06 | 0.31 |
| September | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0 | 430 | 0 | 270 | | | 0.08 | 0.11 | 0.82 | 1.21 | 0.08 | 0.28 | 0.42 | 0.99 | 0.12 | 0.27 |
| October | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 20 | 0 | 10 | | | 0.09 | 0.11 | 0.81 | 1.33 | 0.04 | 0.28 | 0.43 | 1.12 | 0.07 | 0.27 |
| November | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 750 | 0 | 360 | 0 | 120 | | | 0.04 | 0.06 | 0.80 | 1.44 | 0.05 | 0.24 | 0.46 | 1.29 | 0.07 | 0.23 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 10 | 0 | 10 | | | 0.05 | 0.08 | 0.90 | 1.57 | 0.05 | 0.29 | 0.81 | 1.45 | 0.08 | 0.21 |
| Recap for Year | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 750 | 0 | 430 | 0 | >2000 | - | - | 0.04 | 0.11 | 0.70 | 1.57 | 0.04 | 0.29 | 0.34 | 1.45 | 0.06 | 0.31 |

Lab Reports

## Annual Summary - Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Distribution System**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | | HPC or MF | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" |
| January | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| February | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| March | 20 | 20 | 0 | 20 | 20 | 0 | 20 | 20 | 0 |
| April | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 |
| May | 20 | 20 | 0 | 20 | 20 | 0 | 20 | 20 | 0 |
| June | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| July | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| August | 20 | 20 | 0 | 20 | 20 | 0 | 20 | 20 | 0 |
| September | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| October | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| November | 20 | 20 | 0 | 20 | 20 | 0 | 20 | 20 | 0 |
| December | 16 | 16 | 0 | 16 | 16 | 0 | 16 | 16 | 0 |
| **Total** | 210 | 210 | 0 | 210 | 210 | 0 | 210 | 210 | 0 |

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well #3
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | | HPC or MF | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" |
| January | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| March | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| July | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| August | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| **Total** | 52 | 52 | 0 | 52 | 52 | 0 | 52 | 52 | 0 |

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 4
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | | HPC or MF | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" |
| January | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| March | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| July | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| August | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| **Total** | 54 | 54 | 0 | 54 | 54 | 0 | 54 | 54 | 0 |

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 5
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | | HPC or MF | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" | No. of Samples Collected | No. of Samples "Safe" | No. of Samples "Unsafe" |
| January | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| March | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| July | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| August | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 |
| **Total** | 53 | 53 | 0 | 53 | 53 | 0 | 53 | 53 | 0 |

## Annual Summary - Raw Water (A Separate Sheet Should Be Completed For Each Raw Water Input To The Treatment Works) Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 3
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Raw Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | |
|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples 0 Organisms/100 ml | No. of Samples > 0 Organisms/100ml | No. of Samples Collected | No. of Samples 0 Org./100 ml | No. of Samples > 0 Organisms/100ml |
| January | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 4 | 4 | 0 | 4 | 4 | 0 |
| March | 5 | 4 | 1 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 3 | 1 | 4 | 3 | 1 |
| July | 4 | 2 | 2 | 4 | 4 | 0 |
| August | 5 | 4 | 1 | 5 | 5 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 3 | 1 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 4 | 0 | 4 | 4 | 0 |
| **Total** | 52 | 46 | 6 | 52 | 51 | 1 |

## Annual Summary - Raw Water (A Separate Sheet Should Be Completed For Each Raw Water Input To The Treatment Works) Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 4
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Raw Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | |
|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples 0 Organisms/100 ml | No. of Samples > 0 Organisms/100ml | No. of Samples Collected | No. of Samples 0 Org./100 ml | No. of Samples > 0 Organisms/100ml |
| January | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 4 | 4 | 0 | 4 | 4 | 0 |
| March | 5 | 5 | 0 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 4 | 0 | 4 | 4 | 0 |
| July | 4 | 4 | 0 | 4 | 4 | 0 |
| August | 5 | 5 | 0 | 5 | 5 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 4 | 0 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 3 | 1 | 4 | 4 | 0 |
| **Total** | 52 | 51 | 1 | 52 | 52 | 0 |

## Annual Summary - Raw Water (A Separate Sheet Should Be Completed For Each Raw Water Input To The Treatment Works) Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 5
**Year:** 2021
**Serviced Population:** 2431
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Raw Water**

| Month | Total Coliform | | | Fecal Coliform/Escherichia Coli | | |
|---|---|---|---|---|---|---|
| | No. of Samples | No. of Samples 0 Organisms/100 ml | No. of Samples > 0 Organisms/100ml | No. of Samples Collected | No. of Samples 0 Org./100 ml | No. of Samples > 0 Organisms/100ml |
| January | 4 | 4 | 0 | 4 | 4 | 0 |
| February | 4 | 4 | 0 | 4 | 4 | 0 |
| March | 5 | 5 | 0 | 5 | 5 | 0 |
| April | 4 | 4 | 0 | 4 | 4 | 0 |
| May | 5 | 5 | 0 | 5 | 5 | 0 |
| June | 4 | 4 | 0 | 4 | 4 | 0 |
| July | 4 | 4 | 0 | 4 | 4 | 0 |
| August | 5 | 5 | 0 | 5 | 5 | 0 |
| September | 4 | 4 | 0 | 4 | 4 | 0 |
| October | 4 | 4 | 0 | 4 | 4 | 0 |
| November | 5 | 5 | 0 | 5 | 5 | 0 |
| December | 4 | 4 | 0 | 4 | 4 | 0 |
| **Total** | 52 | 52 | 0 | 52 | 52 | 0 |

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 3
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Treated Water Flow | | | Influent | Treated Water Turbidity | | | Treated Disinfectant | | Dist. System Disinfectant | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average m3 | Maximum Day m3 | Monthly Total m3 | Wastewater Monthly Total m3 | No. of Samples Collected | No. of Samples > 1 NTU | Average Turbidity NTU | No. of Treated Samples Collected | Average Free Residual (mg/L) | No. of Dist. Samples | No. of Samples without Required Chlorine Residual |
| January | 219 | 297 | 6309 | 32176 | 31 | 0 | 0.21 | 31 | 1.08 | 31 | 0 |
| February | 201 | 282 | 5631 | 20911 | 28 | 0 | 0.23 | 28 | 1.10 | 28 | 0 |
| March | 200 | 275 | 6196 | 57667 | 31 | 0 | 0.2 | 31 | 1.28 | 31 | 0 |
| April | 200 | 239 | 5986 | 36273 | 30 | 0 | 0.18 | 30 | 1.12 | 30 | 0 |
| May | 200 | 230 | 6192 | 32544 | 31 | 0 | 0.20 | 31 | 1.12 | 31 | 0 |
| June | 201 | 277 | 6035 | 20557 | 30 | 0 | 0.21 | 30 | 1.12 | 30 | 0 |
| July | 200 | 248 | 6208 | 40489 | 31 | 0 | 0.22 | 31 | 0.98 | 31 | 0 |
| August | 199 | 274 | 6177 | 25646 | 31 | 0 | 0.22 | 31 | 1.09 | 31 | 0 |
| September | 216 | 335 | 6028 | 39590 | 30 | 0 | 0.24 | 30 | 1.04 | 30 | 0 |
| October | 201 | 272 | 6239 | 40783 | 31 | 0 | 0.21 | 31 | 1.10 | 31 | 0 |
| November | 217 | 330 | 5964 | 45034 | 30 | 0 | 0.21 | 30 | 1.22 | 30 | 0 |
| December | 216 | 358 | 6179 | 55049 | 31 | 0 | 0.23 | 31 | 1.34 | 31 | 0 |
| **Total** | | | 73144 | 446719 | 365 | 0 | | 365 | | 365 | 0 |
| **Average** | 205.833 | | | | | | 0.21 | | 1.13 | | |
| **Maximum** | | 358.000 | | | | | | | | | |

Disinfectant Compound Used:
(eg. Chlorine Gas, NaOCl, Etc.) **NaOCl**

Form of Residual Displayed on Above Table:
(I. E. Free, Combined, or Total) **Free**

Distribution System Target Residual (mg./L): **> 0.2 Free**

Recap for Month
Recap for Month

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 4
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Treated Water Flow | | | Influent | Treated Water Turbidity | | | Treated Disinfectant | | Dist. System Disinfectant | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average m3 | Maximum Day m3 | Monthly Total m3 | Wastewater Monthly Total m3 | No. of Samples Collected | No. of Samples > 1 NTU | Average Turbidity NTU | No. of Treated Samples Collected | Average Free Residual (mg/L) | No. of Dist. Samples Collected | No. of Samples without Required Chlorine Residual |
| January | 203 | 512 | 6277 | 32176 | 31 | 0 | 0.08 | 31 | 1.16 | 31 | 0 |
| February | 225 | 458 | 6291 | 20911 | 28 | 0 | 0.09 | 28 | 1.07 | 28 | 0 |
| March | 211 | 272 | 6556 | 57667 | 31 | 0 | 0.08 | 31 | 1.08 | 31 | 0 |
| April | 185 | 257 | 5553 | 36273 | 30 | 0 | 0.08 | 30 | 1.15 | 30 | 0 |
| May | 228 | 450 | 7055 | 32544 | 31 | 0 | 0.08 | 31 | 1.15 | 31 | 0 |
| June | 321 | 507 | 9618 | 20577 | 30 | 0 | 0.07 | 30 | 1.10 | 30 | 0 |
| July | 217 | 296 | 6727 | 40489 | 31 | 0 | 0.07 | 31 | 1.04 | 31 | 0 |
| August | 176 | 304 | 5446 | 25646 | 31 | 0 | 0.07 | 31 | 1.00 | 31 | 0 |
| September | 198 | 255 | 5953 | 39590 | 30 | 0 | 0.10 | 30 | 0.97 | 30 | 0 |
| October | 224 | 441 | 6931 | 40783 | 31 | 0 | 0.08 | 31 | 0.93 | 31 | 0 |
| November | 244 | 452 | 7348 | 45034 | 30 | 0 | 0.08 | 30 | 0.99 | 30 | 0 |
| December | 304 | 501 | 9502 | 55049 | 31 | 0 | 0.08 | 31 | 1.11 | 31 | 0 |
| **Total** | | | 83257 | 446739 | 365 | 0 | | 365 | | 365 | 0 |
| **Average** | 228.000 | | | | | | 0.08 | | 1.06 | | |
| **Maximum** | | 512.000 | | | | | | | | | |

Disinfectant Compound Used:
(eg. Chlorine Gas, NaOCl, Etc.) **NaOCl**

Form of Residual Displayed on Above Table:
(I. E. Free, Combined, or Total) **Free**

Distribution System Target Residual (mg./L): **> 0.2 Free**

Water Consumption Report
Recap for Month

## Input into the Distribution System Bacteriological Data

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 5
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water**

| Month | Treated Water Flow | | | Influent | Treated Water Turbidity | | | Treated Disinfectant | | Dist. System Disinfectant | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average m3 | Maximum Day m3 | Monthly Total m3 | Wastewater Monthly Total m3 | No. of Samples Collected | No. of Samples > 1 NTU | Average Turbidity NTU | No. of Treated Samples Collected | Average Free Residual (mg/L) | No. of Dist. Samples Collected | No. of Samples without Required Chlorine Residual |
| January | 221 | 414 | 6912 | 32176 | 31 | 0 | 0.09 | 31 | 1.07 | 31 | 0 |
| February | 189 | 294 | 5283 | 20911 | 28 | 0 | 0.09 | 28 | 0.98 | 28 | 0 |
| March | 206 | 381 | 6391 | 57667 | 31 | 0 | 0.09 | 31 | 0.99 | 31 | 0 |
| April | 206 | 356 | 6188 | 36273 | 30 | 0 | 0.08 | 30 | 1.12 | 30 | 0 |
| May | 203 | 258 | 6278 | 32544 | 31 | 0 | 0.08 | 31 | 1.16 | 31 | 0 |
| June | 213 | 374 | 6393 | 20577 | 30 | 0 | 0.07 | 30 | 1.04 | 30 | 0 |
| July | 205 | 261 | 6369 | 40489 | 31 | 0 | 0.08 | 31 | 1.00 | 31 | 0 |
| August | 276 | 548 | 8556 | 25646 | 31 | 0 | 0.07 | 31 | 0.94 | 31 | 0 |
| September | 195 | 320 | 5967 | 39590 | 30 | 0 | 0.10 | 30 | 0.95 | 30 | 0 |
| October | 211 | 527 | 6535 | 40783 | 31 | 0 | 0.09 | 31 | 0.99 | 31 | 0 |
| November | 196 | 213 | 6023 | 45034 | 30 | 0 | 0.09 | 30 | 1.09 | 30 | 0 |
| December | 202 | 381 | 6389 | 55049 | 31 | 0 | 0.09 | 31 | 1.16 | 31 | 0 |
| **Total** | | | 77284 | 446739 | 365 | 0 | | 365 | | 365 | 0 |
| **Average** | 210.250 | | | | | | 0.09 | | 1.04 | | |
| **Maximum** | | 548.000 | | | | | | | | | |

Disinfectant Compound Used:
(eg. Chlorine Gas, NaOCl, Etc.) **NaOCl**

Form of Residual Displayed on Above Table:
(I. E. Free, Combined, or Total) **Free**

Distribution System Target Residual (mg./L): **> 0.2 Free**

Water Consumption Report
Recap for Month

## Annual Report - Flouride, Nitrite, Nitrate, and Colour

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 3
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

| Month | Treated Water Fluoride | | | Treated Water Nitrite | | | Treated Water Nitrate | | | Colour | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples Collected | Average Residual (mg/L) | Maximum Residual (mg/L) | No. of Samples Collected | Average Nitrite (mg/L) | Maximum Nitrite (mg/L) | No. of Samples Collected | Average Nitrate (mg/L) | Maximum Nitrate (mg/L) | Average Raw (TCU) | Average Treated (TCU) |
| January | | | | 1 | <0.1 | <0.1 | 1 | 1 | 1 | | |
| February | | | | | | | | | | | |
| March | | | | | | | | | | | |
| April | | | | 1 | <0.1 | <0.1 | 1 | 1.1 | 1.1 | | |
| May | | | | | | | | | | | |
| June | | | | | | | | | | | |
| July | | | | 1 | <0.1 | <0.1 | 1 | 0.9 | 0.9 | | |
| August | | | | | | | | | | | |
| September | | | | | | | | | | | |
| October | | | | 1 | 0.1 | 0.1 | 1 | 1.1 | 1.1 | | |
| November | | | | | | | | | | | |
| December | | | | | | | | | | | |
| **Total** | 0 | | | 4 | | | 4 | | | | |
| **Average** | | #DIV/0! | | | 0.025 | | | 1.025 | | | |
| **Maximum** | | | 0.000 | | | 0.100 | | | 1.100 | | |
| **ODWO** | | | 1.5 | | 0.1 | 1 | | 1 | 10 | | |

Where Nitrate and Nitrite are present, the total of the two should not exceed 10mg/L.

Flouride levels above 1.5mg/L should be reported to the Medical Officer of Health.

## Annual Report - Flouride, Nitrite, Nitrate, and Colour

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 4
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

| Month | Treated Water Fluoride | | | Treated Water Nitrite | | | Treated Water Nitrate | | | Colour | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples Collected | Average Residual (mg/L) | Maximum Residual (mg/L) | No. of Samples Collected | Average Nitrite (mg/L) | Maximum Nitrite (mg/L) | No. of Samples Collected | Average Nitrate (mg/L) | Maximum Nitrate (mg/L) | Average Raw (TCU) | Average Treated (TCU) |
| January | | | | 1 | <0.1 | <0.1 | 1 | 1.7 | 1.7 | | |
| February | | | | | | | | | | | |
| March | | | | | | | | | | | |
| April | | | | 1 | <0.1 | <0.1 | 1 | 2.0 | 2.0 | | |
| May | | | | | | | | | | | |
| June | | | | | | | | | | | |
| July | | | | 1 | <0.1 | <0.1 | 1 | 1.8 | 1.8 | | |
| August | | | | | | | | | | | |
| September | | | | | | | | | | | |
| October | | | | 1 | <0.1 | <0.1 | 1 | 1.9 | 1.9 | | |
| November | | | | | | | | | | | |
| December | | | | | | | | | | | |
| **Total** | 0 | | | 4 | | | 4 | | | | |
| **Average** | | #DIV/0! | | | 0.000 | | | 1.850 | | | |
| **Maximum** | | | 0 | | | 0 | | | 2 | | |
| **ODWO** | | | 1.5 | | 0.1 | 1 | | 1 | 10 | | |

Where Nitrate and Nitrite are present, the total of the two should not exceed 10mg/L.

Flouride levels above 1.5mg/L should be reported to the Medical Officer of Health.

## Annual Report - Flouride, Nitrite, Nitrate, and Colour

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well # 5
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

| Month | Treated Water Fluoride | | | Treated Water Nitrite | | | Treated Water Nitrate | | | Colour | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Samples Collected | Average Residual (mg/L) | Maximum Residual (mg/L) | No. of Samples Collected | Average Nitrite (mg/L) | Maximum Nitrite (mg/L) | No. of Samples Collected | Average Nitrate (mg/L) | Maximum Nitrate (mg/L) | Average Raw (TCU) | Average Treated (TCU) |
| January | | | | 1 | <0.1 | <0.1 | 1 | <0.1 | <0.1 | | |
| February | | | | | | | | | | | |
| March | | | | | | | | | | | |
| April | | | | 1 | <0.1 | <0.1 | 1 | <0.1 | <0.1 | | |
| May | | | | | | | | | | | |
| June | | | | | | | | | | | |
| July | | | | 1 | <0.1 | <0.1 | 1 | <0.1 | <0.1 | | |
| August | | | | | | | | | | | |
| September | | | | | | | | | | | |
| October | | | | 1 | <0.1 | <0.1 | 1 | <0.1 | <0.1 | | |
| November | | | | | | | | | | | |
| December | | | | | | | | | | | |
| **Total** | 0 | | | 4 | | | 4 | | | | |
| **Average** | | 0.000 | | | 0.000 | | | 0.000 | | | |
| **Maximum** | | | 0 | | | 0 | | | 0 | | |
| **ODWO** | | | 1.5 | | 0.1 | 1 | | 1 | 10 | | |

Where Nitrate and Nitrite are present, the total of the two should not exceed 10mg/L.

Flouride levels above 1.5mg/L should be reported to the Medical Officer of Health.

## Annual Data Summary - Treated Water Volatile Organic & Inorganic Data

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works
**Well No.** (If applicable) Well #3
**Year:** 2021
**Serviced Population:** 2431
**Design Capacity:** 1636 m3/Day
**Laboratories Which Performed Analyses:** Lakefield Research Ltd.
Caduceon Labs

**Treated Water (except for Lead, THM's and HAA's which should be sampled for in the distribution system)**

| Parameters | Analysis No. 1 | | Analysis No. 2 | | Analysis No. 3 | | Analysis No. 4 | | Sampling | Last Date | ODWO |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results | Date | Results | Date | Results | Date | Results | Frequency | Parameter | MAC/IMAC/AO |
| **TABLE B** VOLATILE ORGANICS | | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | | Tested | (ug/L) |
| Benzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.32 | 9-Mar-15 | 0.32 | 5-Mar-18 | 0.32 | 3 years | 1-Mar-21 | 1 |
| Carbon Tetrachloride | 1-Mar-21 | <0.2 | 5-Mar-12 | 0.16 | 9-Mar-15 | 0.16 | 5-Mar-18 | 0.16 | 3 years | 1-Mar-21 | 2 |
| 1, 2 - Dichlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.41 | 9-Mar-15 | 0.41 | 5-Mar-18 | 0.41 | 3 years | 1-Mar-21 | 200 |
| 1, 4 - Dichlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.36 | 9-Mar-15 | 0.36 | 5-Mar-18 | 0.36 | 3 years | 1-Mar-21 | 5 |
| 1, 2 - Dichloroethane | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.35 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 5 |
| 1, 1 - Dichloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.33 | 9-Mar-15 | 0.33 | 5-Mar-18 | 0.33 | 3 years | 1-Mar-21 | 14 |
| Dichloromethane | 1-Mar-21 | <5 | 5-Mar-12 | 0.35 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 50 |
| Ethybenzene | 1-Nov-00 | <0.0024 | | | | | | | Aesthetic Objective | 1-Nov-00 | 140 |
| Monochlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.3 | 9-Mar-15 | 0.3 | 5-Mar-18 | 0.3 | 3 years | 1-Mar-21 | 80 |
| Tetrachloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.35 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 10 |
| ToluneneTrichloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.44 | 9-Mar-15 | 0.44 | 5-Mar-18 | 0.44 | 3 years | 1-Mar-21 | 60 |
| Vinyl Chloride | 1-Mar-21 | <0.2 | 5-Mar-12 | 0.17 | 9-Mar-15 | 0.17 | 5-Mar-18 | 0.17 | 3 years | 1-Mar-21 | 1 |
| Xylene | 1-Nov-00 | 0.005 | | | | | | | Aesthetic Objective | 1-Nov-00 | 90 |
| **TABLE C** - INORGANICS | | | | | | | | | | | |
| Arsenic | 1-Mar-21 | 0.00120 | 5-Mar-12 | 2.60 | 9-Mar-15 | 2.2 | 5-Mar-18 | 2.6 | 3 years | 1-Mar-21 | 10 |
| Barium | 1-Mar-21 | 0.10500 | 5-Mar-12 | 122 | 9-Mar-15 | 116 | 5-Mar-18 | 126 | 3 years | 1-Mar-21 | 1000 |
| Boron | 1-Mar-21 | 0.05400 | 5-Mar-12 | 48 | 9-Mar-15 | 57.6 | 5-Mar-18 | 55 | 3 years | 1-Mar-21 | 5000 |
| Cadmium | 1-Mar-21 | <0.000015 | 5-Mar-12 | 0.003 | 9-Mar-15 | 0.005 | 5-Mar-18 | 0.003 | 3 years | 1-Mar-21 | 5 |
| Chromium | 1-Mar-21 | <0.002 | 5-Mar-12 | 0.50 | 9-Mar-15 | 0.03 | 5-Mar-18 | 0.21 | 3 years | 1-Mar-21 | 50 |
| Copper | 1-Nov-00 | <0.005 | | | | | | | Aesthetic Objective | 1-Nov-00 | 1000 |
| Iron | 18-Jul-12 | 10 | 10-Sep-12 | 8 | 20-Dec-12 | 10 | 13-Jan-13 | 15 | Aesthetic Objective | 13-Jan-13 | 300 |
| Lead | 17-Mar-16 | 3.68 | 15-Sep-16 | 0.33 | 14-Mar-17 | 0.43 | 20-Sep-17 | 1.33 | 3 years | 20-Sep-17 | 10 |
| Manganese | 12-Apr-08 | 7.0 | 20-Dec-12 | 6 | 13-Jan-13 | 5.6 | | | Aesthetic Objective | 13-Jan-13 | 20 |
| Mercury | 1-Mar-21 | <0.00002 | 5-Mar-12 | 0.02 | 9-Mar-15 | 0.01 | 5-Mar-18 | 0.01 | 3 years | 1-Mar-21 | 1 |
| Selenium | 1-Mar-21 | <0.001 | 5-Mar-12 | 1.00 | 9-Mar-15 | 1 | 5-Mar-18 | 0.07 | 3 years | 1-Mar-21 | 50 |
| Uranium | 1-Mar-21 | 0.001930 | 5-Mar-12 | 2.13 | 9-Mar-15 | 2.1 | 5-Mar-18 | 1.53 | 3 years | 1-Mar-21 | 20 |
| Zinc | 1-Jan-01 | <0.01 | | | | | | | Aesthetic Objective | 23-Jan-01 | 5000 |

## Annual Data Summary - Treated Water Volatile Organic & Inorganic Data

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works

**Well No.** (If applicable) Well # 4

**Year:** 2021

**Serviced Population:** 2431

**Design Capacity:** 1636 $m^3$/Day

**Laboratories Which Performed Analyses:** Lakefield Research Ltd.

Caduceon Labs

**Treated Water (except for lead, THM's and HAA's which should be sampled for in the distribution system)**

| **Parameters** | **Analysis No. 1** | | **Analysis No. 2** | | **Analysis No. 3** | | **Analysis No. 4** | | **Sampling** | **Last Date** | **ODWO** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results | Date | Results | Date | Results | Date | Results | **Frequency** | **Parameter** | **MAC/IMAC/AO** |
| **TABLE B** | | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | | **Tested (year)** | (ug/L) |
| VOLATILE ORGANICS | | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<< | <<<<<<< | <<<<<<<<<<< |
| Benzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.32 | 9-Mar-15 | 0.32 | 5-Mar-18 | 0.32 | 3 years | 1-Mar-21 | 1 |
| Carbon Tetrachloride | 1-Mar-21 | <0.2 | 5-Mar-12 | 0.16 | 9-Mar-15 | 0.16 | 5-Mar-18 | 0.16 | 3 years | 1-Mar-21 | 2 |
| 1, 2 - Dichlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.41 | 9-Mar-15 | 0.41 | 5-Mar-18 | 0.41 | 3 years | 1-Mar-21 | 200 |
| 1, 4 - Dichlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.36 | 9-Mar-15 | 0.36 | 5-Mar-18 | 0.36 | 3 years | 1-Mar-21 | 5 |
| 1, 2 - Dichloroethane | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.43 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 5 |
| 1, 1 - Dichloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.33 | 9-Mar-15 | 0.33 | 5-Mar-18 | 0.33 | 3 years | 1-Mar-21 | 14 |
| Dichloromethane | 1-Mar-21 | <5 | 5-Mar-12 | 0.35 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 50 |
| Ethybenzene | 22-Dec-04 | 0.47 | 1-Jun-02 | <0.0005 | | | | | Aesthetic Objective | 22-Dec-04 | 140 |
| Monochlorobenzene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.3 | 9-Mar-15 | 0.3 | 5-Mar-18 | 0.3 | 3 years | 1-Mar-21 | 80 |
| Tetrachloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.35 | 9-Mar-15 | 0.35 | 5-Mar-18 | 0.35 | 3 years | 1-Mar-21 | 10 |
| ToluneneTrichloroethylene | 1-Mar-21 | <0.5 | 5-Mar-12 | 0.44 | 9-Mar-15 | 0.44 | 5-Mar-18 | 0.44 | 3 years | 1-Mar-21 | 60 |
| Vinyl Chloride | 1-Mar-21 | <0.2 | 5-Mar-12 | 0.17 | 9-Mar-15 | 0.17 | 5-Mar-18 | 0.17 | 3 years | 1-Mar-21 | 1 |
| Xylene | 1-Jun-02 | <0.0015 | | | | | | | Aesthetic Objective | 1-Jun-02 | 90 |
| **TABLE C** - INORGANICS | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< |
| Arsenic | 1-Mar-21 | 0.00030 | 5-Mar-12 | 0.70 | 9-Mar-15 | 0.6 | 5-Mar-18 | 0.5 | 3 years | 1-Mar-21 | 10 |
| Barium | 1-Mar-21 | 0.09600 | 5-Mar-12 | 96.9 | 9-Mar-15 | 103 | 5-Mar-18 | 113 | 3 years | 1-Mar-21 | 1000 |
| Boron | 1-Mar-21 | 0.04000 | 5-Mar-12 | 32 | 9-Mar-15 | 44.7 | 5-Mar-18 | 40 | 3 years | 1-Mar-21 | 5000 |
| Cadmium | 1-Mar-21 | <0.000015 | 3.5/12 | 0.003 | 9-Mar-15 | 0.007 | 5-Mar-18 | 0.006 | 3 years | 1-Mar-21 | 5 |
| Chromium | 1-Mar-21 | <0.002 | 5-Mar-12 | 0.50 | 9-Mar-15 | 0.03 | 5-Mar-18 | 0.14 | 3 years | 1-Mar-21 | 50 |
| Copper | 22-Dec-04 | 1.2 | 1-Jun-02 | <0.001 | | | | | Aesthetic Objective | 22-Dec-04 | 1000 |
| Iron | 22-Dec-04 | <10 | | | | | | | Aesthetic Objective | 22-Dec-04 | 300 |
| Lead | 17-Mar-16 | 4.72 | 14-Sep-16 | 1.34 | 14-Mar-17 | 0.57 | 20-Sep-17 | 0.77 | 3 years | 20-Sep-17 | 10 |
| Manganese | 22-Dec-04 | 22 | | | | | | | Aesthetic Objective | 22-Dec-04 | 20 |
| Mercury | 1-Mar-21 | <0.00002 | 5-Mar-12 | 0.02 | 9-Mar-15 | 0.01 | 5-Mar-18 | 0.01 | 3 years | 1-Mar-21 | 1 |
| Selenium | 1-Mar-21 | <0.001 | 5-Mar-12 | 1.00 | 9-Mar-15 | 1 | 5-Mar-18 | 0.26 | 3 years | 1-Mar-21 | 50 |
| Uranium | 1-Mar-21 | 0.001750 | 5-Mar-12 | 1.76 | 9-Mar-15 | 1.39 | 5-Mar-18 | 1.52 | 3 years | 1-Mar-21 | 20 |
| Zinc | 22-Dec-04 | 3 | 1-Jun-02 | 0.006 | | | | | Aesthetic Objective | 22-Dec-04 | 5000 |

## Annual Data Summary - Treated Water Volatile Organic & Inorganic Data

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works

**Well No.** (If applicable) Well # 5

**Year:** 2021

**Serviced Population:** 2431

**Design Capacity:** 1636 m3/Day

**Laboratories Which Performed Analyses:** Lakefield Research Ltd.

Caduceon Labs

**Treated Water (except for lead, THM's and HAA's which should be sampled for in the distribution system)**

| **Parameters** | **Analysis No. 1** | | **Analysis No. 2** | | **Analysis No. 3** | | **Analysis No. 4** | | **Sampling** | **Last Date** | **ODWO** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results | Date | Results | Date | Results | Date | Results | **Frequency** | **Parameter** | **MAC/IMAC/AO** |
| **TABLE B** | | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | (DD/MMM/YY) | (ug/L) | | **Tested (year)** | (ug/L) |
| VOLATILE ORGANICS | | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<< | <<<<<<< | <<<<<<<<<<< |
| Benzene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 1 |
| Carbon Tetrachloride | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.2 | 1-Mar-21 | <0.2 | 3 years | 1-Mar-21 | 2 |
| 1, 2 - Dichlorobenzene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 200 |
| 1, 4 - Dichlorobenzene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 5 |
| 1, 2 - Dichloroethane | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 5 |
| 1, 1 - Dichloroethylene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 14 |
| Dichloromethane | 17-Oct-16 | <2.0 | 27-Jan-17 | <2.0 | 22-Jan-20 | <5 | 1-Mar-21 | <5 | 3 years | 1-Mar-21 | 50 |
| Ethybenzene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | | | | | Aesthetic Objective | 27-Jan-17 | 140 |
| Monochlorobenzene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 80 |
| Tetrachloroethylene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 10 |
| ToluneneTrichloroethylene | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.5 | 1-Mar-21 | <0.5 | 3 years | 1-Mar-21 | 60 |
| Vinyl Chloride | 17-Oct-16 | <0.5 | 27-Jan-17 | <0.5 | 22-Jan-20 | <0.2 | 1-Mar-21 | <0.2 | 3 years | 1-Mar-21 | 1 |
| Xylene | 17-Oct-16 | <1.1 | 27-Jan-17 | <1.1 | | | | | Aesthetic Objective | 27-Jan-17 | 90 |
| **TABLE C** - INORGANICS | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< | <<<<<<< | <<<<<<<<<<< | <<<<<<<<<<< |
| Arsenic | 17-Oct-16 | <0.0010 | 27-Jan-17 | <0.0010 | 21-Jan-20 | 0.0004 | 1-Mar-21 | 0.00080 | 3 years | 1-Mar-21 | 10 |
| Barium | 17-Oct-16 | 0.106 | 27-Jan-17 | 0.095 | 21-Jan-20 | 0.098 | 1-Mar-21 | 0.10500 | 3 years | 1-Mar-21 | 1000 |
| Boron | 17-Oct-16 | 0.053 | 27-Jan-17 | <0.050 | 21-Jan-20 | 0.048 | 1-Mar-21 | 0.04800 | 3 years | 1-Mar-21 | 5000 |
| Cadmium | 17-Oct-16 | <0.00010 | 27-Jan-17 | <0.00010 | 21-Jan-20 | <0.000015 | 1-Mar-21 | <0.000015 | 3 years | 1-Mar-21 | 5 |
| Chromium | 17-Oct-16 | <0.0010 | 27-Jan-17 | <0.0010 | 21-Jan-20 | <0.002 | 1-Mar-21 | <0.002 | 3 years | 1-Mar-21 | 50 |
| Copper | 17-Oct-16 | <0.0010 | 27-Jan-17 | <0.0010 | | | | | Aesthetic Objective | 27-Jan-17 | 1000 |
| Iron | 17-Oct-16 | 0.062 | 27-Jan-17 | 0.051 | | | | | Aesthetic Objective | 27-Jan-17 | 300 |
| Lead | 17-Oct-16 | <0.00062 | 27-Jan-17 | <0.00050 | | | | | 3 years | 27-Jan-17 | 10 |
| Manganese | 17-Oct-16 | 0.0023 | 27-Jan-17 | 0.001 | | | | | Aesthetic Objective | 27-Jan-17 | 20 |
| Mercury | 17-Oct-16 | <0.10 | 27-Jan-17 | <0.10 | 23-Jan-20 | <0.00002 | 1-Mar-21 | <0.00002 | 3 years | 1-Mar-21 | 1 |
| Selenium | 17-Oct-16 | <0.0050 | 27-Jan-17 | <0.0050 | 21-Jan-20 | <0.001 | 1-Mar-21 | <0.001 | 3 years | 1-Mar-21 | 50 |
| Uranium | 17-Oct-16 | <0.0050 | 27-Jan-17 | <0.0050 | 21-Jan-20 | 0.00016 | 1-Mar-21 | 0.000350 | 3 years | 1-Mar-21 | 20 |
| Zinc | 17-Oct-16 | 0.0102 | 27-Jan-17 | <0.0030 | | | | | Aesthetic Objective | 27-Jan-17 | 5000 |

## Annual Data Summary - Parameters Not Listed in the Minimum Sampling Program

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works

**Well No.** (If applicable) Well # 3

**Year:** 2021

**Serviced Population:** 2431

**Design Capacity:** 1636 $m_3$/Day

**Laboratories Which Performed Analyses:** Lakefield Research Ltd.

Caduceon Labs

**Treated Water (Except for Lead Which Should Be Sampled For in the Distribution System)**

| Parameters | Analysis No. 1 | | Analysis No. 2 | | Analysis No. 3 | | Analysis No. 4 | | Sampling Frequency | Last Date Parameter Tested | ODWO MAC/IMAC/AO (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results (mg/L) | Date (DD/MMM/YY) | Results (mg/L) | Date (DD/MMM/YY) | Results (mg/L) | Date (DD/MMM/YY) | Results (mg/L) | | | |
| OTHER PARAMETERS (List as Required) | | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<< <<<<<<< | <<<<<<< <<<<<<< | <<<<<<<<<<< <<<<<<<<<<< |
| Hardness | 12-Apr-08 | 268 | 20-Dec-12 | 288 | 13-Jan-13 | 281 | | | Operational Objective | 13-Jan-13 | 80 - 100 |
| Sodium | 12-Jul-21 | 30 | 9-Mar-20 | 29.5 | 6-Jul-20 | 31.6 | 1-Mar-21 | 31.6 | Annually | 1-Mar-21 | 20 |
| Flouride | 6-Jun-10 | 0.57 | 5-Mar-12 | 0.06 | 6-Mar-17 | 0.86 | | | 5 years | 6-Mar-17 | 1.5 |
| Hydrogen Sulphide | | | | | | | | | Aesthetic Objective | 23-Jan-01 | 0.05 |
| Alkalinity as Ca $CO_3$ | 20-Dec-12 | 264 | 13-Jan-13 | 251 | | | | | Operational Objective | 13-Jan-13 | 30 - 500 |
| Chloride | 14-Jan-19 | 45 | 13-Jan-20 | 49.4 | 12-Jul-21 | 44.6 | 9-Jan-18 | 36 | Operational Objective | 12-Jul-21 | 250 |
| Sulphate | 20-Dec-12 | 17 | 13-Jan-13 | 17 | | | | | Aesthetic Objective | 13-Jan-13 | 500 |
| Organic Nitrogen 6 | 20-Dec-12 | 0.05 | 13-Jan-13 | 0.14 | | | | | Operational Objective | 13-Jan-13 | 0.15 |
| Dissolved Organic C | 12-Apr-08 | 0.8 | | | | | | | Aesthetic Objective | 12-Apr-08 | 5 |
| Nitrilotriacetic Acid | 23-Jan-01 | <0.3 | | | | | | | | 23-Jan-01 | 0.4 |
| Total Dissolved Solids | 12-Apr-08 | 334 | 13-Jan-13 | 409 | | | | | Aesthetic Objective | 13-Jan-13 | 500 |
| Total Cynanide | 10-Jan-01 | 0.2 | | | | | | | | 23-Jan-01 | 0.2 |
| Benzo (a) Pyrenene | 1-Mar-21 | <0.006 | 5-Mar-12 | 0.004 | 11-Mar-15 | 0.004 | 5-Mar-18 | 0.004 | 3 years | 1-Mar-21 | 0.01 ug/l |
| N-Nitrosodimethylamine | 23-Jan-01 | <.000007 | | | | | | | | 23-Jan-01 | 0.000009 |
| Ammonia | 11-Apr-16 | 0.71 | 10-Oct-16 | 0.7 | 11-Apr-17 | 0.35 | 16-Oct-17 | 0.3 | | 16-Oct-17 | |
| Nitrates | 4-Jan-21 | 1 | 6-Apr-21 | 1.1 | 5-Jul-21 | 0.9 | 5-Oct-21 | 1.1 | Quarterly | 5-Oct-21 | 10 |
| Nitrites | 4-Jan-21 | <0.1 | 6-Apr-21 | <0.1 | 5-Jul-21 | <0.1 | 5-Oct-21 | 0.1 | Quarterly | 5-Oct-21 | 1 |
| Pesticides & PCB's | 1-Nov-00 | 0.001 | 5-Mar-12 | 0.04 | 9-Mar-15 | 0.04 | 1-Mar-21 | <0.05 | | 1-Mar-21 | 3 |
| | | | | | | | | | | | |
| pH | 20-Dec-12 | 8.01 | 13-Jan-13 | 7.98 | 31-Dec-15 | 7.58 | | | Operational Objective | 31-Dec-15 | 6.5 - 8.5 |
| Radionuclides-Gross Alpha | 4-Mar-19 | 0.13 | 23-Mar-20 | <0.10 | 1-Mar-21 | <0.10 | 5-Mar-18 | 0.14 | Annually | 1-Mar-21 | 0.1 bq/l |
| Radionuclides-Gross Beta | 4-Mar-19 | <0.10 | 23-Mar-20 | <0.10 | 1-Mar-21 | 0.15 | 5-Mar-18 | 0.17 | Annually | 1-Mar-21 | 0.5 bq/l |
| Radionuclides-Tritium | 4-Mar-19 | <15 | 23-Mar-20 | <15 | 1-Mar-21 | <15 | 5-Mar-18 | 0 | Annually | 1-Mar-21 | 7000 bq/l |
| True Colour (TCU) | | | | | | | | | Aesthetic Objective | 23-Jan-01 | 5 TCU |

## Annual Data Summary - Parameters Not Listed in the Minimum Sampling Program

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works

**Well No.** (If applicable) Well # 4

**Year:** 2021

**Serviced Population:** 2431

**Design Capacity:** 1636 $m^3$/Day

**Laboratories Which Performed Analyses:** Lakefield Research Ltd.

Caduceon Labs

**Treated Water (Except for Lead Which Should Be Sampled For in the Distribution System)**

| Parameters | Analysis No. 1 | | Analysis No. 2 | | Analysis No. 3 | | Analysis No. 4 | | Sampling Frequency | Last Date Parameter Tested | ODWO MAC/IMAC/AO (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | | | |
| OTHER PARAMETERS (List as Required) | | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<< <<<<<<< | <<<<<<< <<<<<<< | <<<<<<<<<<< <<<<<<<<<<< |
| Hardness | 22-Dec-04 | 236 | | | | | | | Operational Objective | 22-Dec-04 | 80 - 100 |
| Sodium | 12-Jul-21 | 28.5 | 9-Mar-20 | 30.2 | 6-Jul-20 | 27.6 | 1-Mar-21 | 30.2 | Annually | 1-Mar-21 | 20 |
| Flouride | 6-Jul-10 | 1.2 | 1-Mar-11 | 1.19 | 5-Mar-12 | 0.71 | 6-Mar-17 | 0.75 | 5 years | 6-Mar-17 | 1.5 |
| Hydrogen Sulphide | | | | | | | | | Aesthetic Objective | 12/22/04 | 0.05 |
| Alkalinity as Ca $CO_3$ | 22-Dec-04 | 247 | | | | | | | Operational Objective | 12/22/04 | 30 - 500 |
| Chloride | 14-Jan-19 | 46 | 13-Jan-20 | 54.7 | 12-Jul-21 | 43.1 | 9-Jan-18 | 43 | Operational Objective | 12-Jul-21 | 250 |
| Sulphate | 22-Dec-04 | 9.8 | | | | | | | Aesthetic Objective | 22-Dec-04 | 500 |
| Organic Nitrogen 6 | 22-Dec-04 | 0.05 | | | | | | | Operational Objective | 22-Dec-04 | 0.15 |
| Dissolved Organic C | 22-Dec-04 | 0.2 | | | | | | | Aesthetic Objective | 22-Dec-04 | 5 |
| Nitrilotriacetic Acid | 22-Dec-04 | 0.03 | | | | | | | | 22-Dec-04 | 0.4 |
| Total Dissolved Solids | 22-Dec-04 | 303 | | | | | | | Aesthetic Objective | 22-Dec-04 | 500 |
| Total Cynanide | 22-Dec-04 | 0.2 | | | | | | | | 22-Dec-04 | 0.2 |
| Benzo (a) Pyrenene | 1-Mar-21 | <0.006 | 5-Mar-12 | 0.32 | 11-Mar-15 | 0.004 | 5-Mar-18 | 0.004 | 3 years | 1-Mar-21 | 0.01 ug/l |
| N-Nitrosodimethylamine | 22-Dec-04 | 0.0012 | | | | | | | | 22-Dec-04 | 0.000009 |
| Ammonia | 22-Dec-04 | 0.06 | | | | | | | | 22-Dec-04 | |
| Nitrates | 4-Jan-21 | 1.700 | 6-Apr-21 | 2.000 | 5-Jul-21 | 1.8 | 5-Oct-21 | 1.9 | Quarterly | 5-Oct-21 | 10 |
| Nitrites | 4-Jan-21 | <0.1 | 6-Apr-21 | <0.1 | 5-Jul-21 | <0.1 | 5-Oct-21 | <0.1 | Quarterly | 5-Oct-21 | 1 |
| Pesticides & PCB's | 3-Feb-09 | 0.04 | 5-Mar-12 | 0.004 | 9-Mar-15 | 0.04 | 1-Mar-21 | <0.05 | | 1-Mar-21 | 3 |
| | | | | | | | | | | | |
| pH | 31-Dec-15 | 7.5 | | | | | | | Operational Objective | 31-Dec-15 | 6.5 - 8.5 |
| Radionuclides-Gross Alpha | 4-Mar-19 | 0.12 | 23-Mar-20 | <0.10 | 1-Mar-21 | 0.12 | 5-Mar-18 | 0.17 | Annually | 1-Mar-21 | 0.1 bq/l |
| Radionuclides-Gross Beta | 4-Mar-19 | <0.10 | 23-Mar-20 | <0.10 | 1-Mar-21 | 0.11 | 5-Mar-18 | <0.10 | Annually | 1-Mar-21 | 0.5 bq/l |
| Radionuclides-Tritium | 4-Mar-19 | <15 | 23-Mar-20 | <15 | 1-Mar-21 | <15 | 5-Mar-18 | <15 | Annually | 1-Mar-21 | 7000 bq/l |
| True Colour (TCU) | 22-Dec-04 | 3 | | | | | | | Aesthetic Objective | 22-Dec-04 | 5 TCU |

## Annual Data Summary - Parameters Not Listed in the Minimum Sampling Program

(A Separate Sheet Should Be Completed for Each Input into the Distribution System)

**Water Works Name:** Dundalk Water Works

**Well No.** (If applicable) Well # 5

**Year:** 2021

**Serviced Population:** 2431

**Design Capacity:** 1636 $m_3$/Day

**Laboratories Which Performed Analyses:** Lakefield Research Ltd.

Caduceon Labs

**Treated Water (Except for Lead Which Should Be Sampled For in the Distribution System)**

| Parameters | Analysis No. 1 | | Analysis No. 2 | | Analysis No. 3 | | Analysis No. 4 | | Sampling Frequency | Last Date Parameter Tested | ODWO MAC/IMAC/AO (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | Date (MM/DD/YY) | Results (mg/L) | | | |
| OTHER PARAMETERS (List as Required) | | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<<<<<< <<<<<<<<<<< | <<<<<<< <<<<<<< | <<<<<<< <<<<<<< | <<<<<<<<<<< <<<<<<<<<<< |
| Hardness | | | | | 17-Oct-16 | 265000 | 27-Jan-17 | 231000 | Operational Objective | 27-Jan-17 | 80000-100000 |
| Sodium | 9-Mar-20 | 16.3 | 6-Jul-20 | 15.7 | 1-Mar-21 | 17.2 | 12-Jul-21 | 15.9 | Annually | 1-Mar-21 | 20 |
| Flouride | 20-Jan-20 | 2 | 23-Jan-20 | 2.5 | 17-Oct-16 | 1.69 | 27-Jan-17 | 1.75 | 5 years | 27-Jan-17 | 1.5 |
| Hydrogen Sulphide | | | | | 17-Oct-16 | 0.22 | 27-Jan-17 | <0.21 | Aesthetic Objective | 27-Jan-17 | 0.05 |
| Alkalinity as Ca $CO_3$ | | | | | 17-Oct-16 | 248 | 27-Jan-17 | 243 | Operational Objective | 27-Jan-17 | 30 - 500 |
| Chloride | 13-Jan-20 | 22.7 | 12-Jul-21 | 18.9 | 17-Oct-16 | 16.5 | 27-Jan-17 | 15.2 | Operational Objective | 12-Jul-21 | 250 |
| Sulphate | | | | | 17-Oct-16 | 0.021 | 27-Jan-17 | <0.020 | Aesthetic Objective | 27-Jan-17 | 500 |
| Organic Nitrogen 6 | | | | | | | 27-Jan-17 | <0.15 | Operational Objective | 27-Jan-17 | 0.15 |
| Dissolved Organic C | | | | | 17-Oct-16 | 1.7 | 27-Jan-17 | 1.4 | Aesthetic Objective | 27-Jan-17 | 5 |
| Nitrilotriacetic Acid | | | | | 17-Oct-16 | <0.20 | 27-Jan-17 | <0.20 | | 27-Jan-17 | 0.4 |
| Total Dissolved Solids | | | | | 17-Oct-16 | 281 | 27-Jan-17 | 279 | Aesthetic Objective | 27-Jan-17 | 500 |
| Total Cynanide | | | | | 17-Oct-16 | <0.0020 | 27-Jan-17 | <0.0020 | | 27-Jan-17 | 0.2 |
| Benzo (a) Pyrenene | | | 1-Mar-21 | <0.006 | 17-Oct-16 | <0.010 | 27-Jan-17 | <0.010 | 3 years | 1-Mar-21 | 0.01 ug/l |
| N-Nitrosodimethylamine | | | | | 17-Oct-16 | 0.71 | 27-Jan-17 | 1.8 | | 27-Jan-17 | 9 |
| Ammonia | | | | | 17-Oct-16 | 0.051 | 27-Jan-17 | 0.056 | | 27-Jan-17 | |
| Nitrates | 6-Apr-21 | <0.1 | 5-Jul-21 | <0.1 | 5-Oct-21 | <0.1 | 4-Jan-21 | <0.1 | Quarterly | 5-Oct-21 | 10 |
| Nitrites | 6-Apr-21 | <0.1 | 5-Jul-21 | <0.1 | 5-Oct-21 | <0.1 | 4-Jan-21 | <0.1 | Quarterly | 5-Oct-21 | 1 |
| Pesticides & PCB's | | | | | | | 1-Mar-21 | <0.05 | | 1-Mar-21 | 3 |
| | | | | | | | | | | | |
| pH | | | | | 17-Oct-16 | 8 | 27-Jan-17 | 7.4 | Operational Objective | 0-Jan-00 | 6.5 - 8.5 |
| Radionuclides-Gross Alpha | 23-Mar-20 | <0.10 | 1-Mar-21 | 0.11 | | | 27-Jan-17 | 0.14 | Annually | 1-Mar-21 | 0.5 bq/l |
| Radionuclides-Gross Beta | 23-Mar-20 | <0.10 | 1-Mar-21 | 0.1 | | | 27-Jan-17 | <0.10 | Annually | 1-Mar-21 | 1.0 bq/l |
| Radionuclides-Tritium | 23-Mar-20 | <15 | 1-Mar-21 | <15 | | | 27-Jan-17 | <15 | Annually | 1-Mar-21 | 7000 bq/l |
| True Colour (TCU) | | | | | 17-Oct-16 | <2.0 | 27-Jan-17 | <2.0 | Aesthetic Objective | 27-Jan-17 | 5 TCU |

## Annual Data Summary - Distribution System Volatile Organic Compounds Data

**Total Haloacetic (HAA) Annual Average Results**

| Quarter | Quarter Dates | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Quarterly Average (ug/L) | **MAC** (maximum allowable concentration) |
|---|---|---|---|---|---|---|---|
| 1-2020 | 04-Jan-21 | 5.3 | 5.3 | | | 5.3 | |
| 2-2020 | 06-Apr-21 | 5.3 | 5.3 | | | 5.3 | |
| 3-2020 | 05-Jul-21 | 5.3 | 5.3 | | | 5.3 | |
| 4-2020 | 05-Oct-21 | 5.3 | 5.3 | | | 5.3 | |
| | | | | | **(RAA) Running Annual Average** | 5.3 | 80 ug/L |

**Total Trihalmethane (THM) Annual Average Results**

| Quarter | Quarter Dates | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Quarterly Average (ug/L) | **MAC** (Maximum allowable concentration) |
|---|---|---|---|---|---|---|---|
| 1-2020 | 04-Jan-21 | 22 | 12 | | | 17 | |
| 2-2020 | 06-Apr-21 | 23 | 11 | | | 17 | |
| 3-2020 | 05-Jul-21 | 6 | 25 | | | 15.5 | |
| 4-2020 | 05-Oct-21 | 12 | 23 | | | 17.5 | |
| | | | | | **(RAA) Running Annual Average** | 16.75 | 100 ug/L |