

2022 Annual Drinking Water System Quality Report for Schomberg DWS

Prepared by The Regional Municipality of York pursuant to Section 11 of O. Reg. 170/03.

Drinking Water System Number: 220004901

Drinking Water System Name: Schomberg DWS

Drinking Water System Owner: The Regional Municipality of York

Drinking Water System Category: Large Municipal Residential

Drinking Water System Classification: Water Distribution and Supply II, Water Treatment II

Reporting period: Jan 1, 2022 - Dec 31, 2022

The Schomberg DWS serves approximately 2,950 people.

(Population is the most recent available estimate based on Statistics Canada census data and building permits)

List all Drinking Water Systems which receive their drinking water from the Schomberg DWS:

Schomberg Distribution System (260005151)

This annual report is available to the public at no charge on York Region's website (york.ca/drinkingwater) and upon request. Accessible formats or communication supports are also available upon request. Please contact AccessYork@york.ca or call 1-877-464-9675.

A copy of York Region's annual report was provided to all Drinking Water System owners that are connected to and receive drinking water from York Region.

System users were notified that York Region's annual report is available free of charge by public access and notice through:

- Media (internet, social media)
- Public requests at any time

Summary report required under O. Reg. 170/03 Schedule 22 will be available for inspection at:

The Regional Municipality of York
Administrative Centre
Environmental Services Department
17250 Yonge Street, Newmarket ON L3Y 6Z1

Description of the Schomberg DWS

Introduction

Schomberg is located within the Township of King around the intersections of Highway 27 and Highway 9, just south of the border with Simcoe County. Local groundwater is naturally high in minerals. Tests confirm ground water quality. York Region operates the water supply, while King Township maintains water quality and distributes it to users. The Province governs York Region's operations with Acts and Regulations, a Permit to Take Water, a Municipal Drinking Water License and an operating Permit.

Raw water source

Groundwater

Profile of water in distribution system

Groundwater

Water treatment description

Schomberg DWS includes one Water treatment Plant, three wells and one storage/rechloramination facility. Naturally occurring methane is removed through pre-oxidation with chlorine followed by air stripping. Potassium permanganate is added for iron and manganese removal using media filtration. Water is disinfected with UV light, followed by chlorine which combines with naturally occurring ammonia to form chloramines to provide a secondary residual. Operators test the water and inspect the process. Online analyzers continuously monitor the facilities. When analyzers detect a significant process or water quality issue, the system automatically pauses operation until an operator takes action.

List of water treatment chemicals used in this system

Potassium Permanganate; Chlorine gas (forms chloramine when it combines with naturally occurring ammonia)

Brief description and breakdown of monetary expenses incurred

\$78,478 for well rehabilitation, pump maintenance, general maintenance and repairs.

Notices submitted under Section 18(1) of the *Safe Drinking Water Act* or Section 16-4 of Schedule 16 of O. Reg. 170/03 and reported to MECP Spills Action Centre

Not Applicable

Intentionally blank. No notices were submitted for this report period.

Microbiological testing completed under Schedule 10 of O. Reg. 170/03

For additional distribution samples collected under Schedule 10, refer to the local municipality.

Raw Samples

| Test Parameter | Count of Samples | Count of Presence |
|-----------------|------------------|-------------------|
| E. Coli | 144 | 0 |
| Total Coliforms | 144 | 0 |

Treated Samples

| Test Parameter | Count of Samples | Count of Presence |
|---------------------------|------------------|-------------------|
| E. Coli | 52 | 0 |
| Heterotrophic Plate Count | 52 | 15 |
| Total Coliforms | 52 | 0 |

Operational testing completed under Schedule 7 of O. Reg. 170/03 during this reporting period

| Test Parameter | Test Unit | No. of Samples ¹ | Average | Minimum | Maximum |
|---------------------|-----------|-----------------------------|---------|---------|---------|
| Combined Chlorine | mg/L | 8,760 | 3.27 | 0.00 | 4.57 |
| Turbidity (Treated) | NTU | 8,760 | 0.23 | 0.09 | 0.65 |

¹ 8,760 is used as the number of samples for continuous analyzers.

Summary of testing pursuant to Schedule 13 of O. Reg. 170/03 and sampling carried out in accordance with the requirement of an approval, order or other legal instrument

Values with a less than sign ("<") indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect (i.e. the "<" is omitted) and are rounded to three decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater.

| Test Parameter ^{2 3} | Test Unit | No. of Samples ¹ | Average | Minimum | Maximum |
|--|-----------|-----------------------------|---------|---------|---------|
| Fluoride | mg/L | 8 | 0.161 | 0.16 | 0.17 |
| Haloacetic Acids (Distribution) | ug/L | 4 | 9.075 | <8 | 12 |
| Nitrate (Treated) | mg/L | 4 | 0.500 | <0.5 | <0.5 |
| Nitrate (Distribution) | mg/L | 4 | 0.500 | <0.5 | <0.5 |
| Nitrite (Treated) | mg/L | 4 | 0.148 | 0.11 | 0.19 |
| Nitrite (Distribution) | mg/L | 4 | 0.365 | 0.3 | 0.44 |
| N-Nitrosodimethylamine (NDMA) (Treated) | ug/L | 1 | 0.001 | <0.0009 | <0.0009 |
| N-Nitrosodimethylamine (NDMA) (Distribution) | ug/L | 4 | 0.001 | <0.0009 | 0.0011 |
| Sodium | mg/L | 2 | 20.650 | 20.2 | 21.1 |
| Trihalomethanes (Treated) | ug/L | 1 | 6.300 | 6.30 | 6.30 |
| Trihalomethanes (Distribution) | ug/L | 4 | 5.000 | 4.80 | 5.20 |

*Lead testing under Schedule 15.1 is conducted by the local municipality - refer to local municipality reports for results. York Region occasionally collects samples tested for lead for non-regulatory research purposes.

¹ 8,760 is used as the number of samples for continuous analyzers.

² The Average for Haloacetic Acids and Trihalomethanes is calculated as the running annual average of quarterly results in accordance with O. Reg 170/03. The Minimum and Maximum values reflect individual test results.

³ Where sampling for 'N-Nitrosodimethylamine (NDMA)' is required, locations were selected to represent the farthest points in the distribution system. For York DWS and sub-systems, representative sample locations were selected from across the interconnected sub-systems, therefore not all sub-systems were chosen for NDMA sampling. Additional sample points were added in September 2022 to include at least one facility from every subsystem.

Organic and inorganic parameter(s), from Schedule 23 and 24, that exceeded half the standard prescribed in Schedule 2 of O. Reg. 169/03 Ontario Drinking Water Quality Standards

Not Applicable
Intentionally blank. There were no applicable test results.

Summary of inorganic parameters tested pursuant to Schedule 23 of O. Reg. 170/03

Values with a less than sign ("<") indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect and are rounded to four decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater.

| Test Parameter | Test Unit | No. of Samples | Average | Minimum | Maximum | ODWS Limit |
|----------------|-----------|----------------|---------|---------|---------|------------|
| Antimony | mg/L | 2 | 0.0005 | <0.0005 | <0.0005 | 0.0060 |
| Arsenic | mg/L | 2 | 0.0007 | 0.0007 | 0.0007 | 0.01 |
| Barium | mg/L | 2 | 0.1130 | 0.106 | 0.12 | 1 |
| Boron | mg/L | 2 | 0.0755 | 0.0656 | 0.0853 | 5 |
| Cadmium | mg/L | 2 | 0.0005 | <0.0005 | <0.0005 | 0.0050 |
| Chromium | mg/L | 2 | 0.0005 | <0.0005 | <0.0005 | 0.05 |
| Mercury | ug/L | 2 | 0.0500 | <0.05 | <0.05 | 1 |
| Selenium | mg/L | 2 | 0.0005 | <0.0005 | <0.0005 | 0.05 |
| Uranium | mg/L | 2 | 0.0005 | <0.0005 | <0.0005 | 0.02 |

Summary of organic parameters tested pursuant to Schedule 24 of O. Reg. 170/03

Values with a less than sign ("<") indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect and are rounded to three decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater.

| Test Parameter | Test Unit | No. of Samples | Average | Minimum | Maximum | ODWS Limit |
|--|-----------|----------------|---------|---------|---------|------------|
| 1,1-dichloroethylene (vinylidene chloride) | ug/L | 1 | 0.300 | <0.3 | <0.3 | 14 |
| 1,2-(o-dcb) Dichlorobenzene | ug/L | 1 | 0.100 | <0.1 | <0.1 | 200 |
| 1,2-Dichloroethane | ug/L | 1 | 0.100 | <0.1 | <0.1 | 5 |
| 1,4-(p-dcb) Dichlorobenzene | ug/L | 1 | 0.100 | <0.1 | <0.1 | 5 |
| 2,3,4,6-Tetrachlorophenol | ug/L | 1 | 0.500 | <0.5 | <0.5 | 100 |
| 2,4,6-Trichlorophenol | ug/L | 1 | 0.500 | <0.5 | <0.5 | 5 |
| 2,4-Dichlorophenol | ug/L | 1 | 0.700 | <0.7 | <0.7 | 900 |
| 2,4-dichlorophenoxyacetic acid (2,4-D) | ug/L | 1 | 0.800 | <0.8 | <0.8 | 100 |
| 2-methyl-4-chlorophenoxyacetic acid | ug/L | 1 | 5.000 | <5 | <5 | 100 |
| Alachlor | ug/L | 1 | 0.400 | <0.4 | <0.4 | 5 |
| Atrazine + N-dealkylated metabolites | ug/L | 1 | 0.200 | <0.2 | <0.2 | 5 |
| Azinphos-methyl | ug/L | 1 | 0.300 | <0.3 | <0.3 | 20 |
| Benzene | ug/L | 1 | 0.100 | <0.1 | <0.1 | 1 |
| Benzo(a)pyrene | ug/L | 1 | 0.010 | <0.01 | <0.01 | 0.01 |
| Bromoxynil | ug/L | 1 | 0.400 | <0.4 | <0.4 | 5 |
| Carbaryl | ug/L | 1 | 3.000 | <3 | <3 | 90 |
| Carbofuran | ug/L | 1 | 3.000 | <3 | <3 | 90 |
| Carbon Tetrachloride | ug/L | 1 | 0.200 | <0.2 | <0.2 | 2 |
| Chlorpyrifos | ug/L | 1 | 0.200 | <0.2 | <0.2 | 90 |
| Diazinon | ug/L | 1 | 0.200 | <0.2 | <0.2 | 20 |
| Dicamba | ug/L | 1 | 0.400 | <0.4 | <0.4 | 120 |
| Dichloromethane | ug/L | 1 | 2.000 | <2 | <2 | 50 |
| Diclofop-methyl | ug/L | 1 | 0.400 | <0.4 | <0.4 | 9 |
| Dimethoate | ug/L | 1 | 0.300 | <0.3 | <0.3 | 20 |
| Diquat | ug/L | 1 | 1.000 | <1 | <1 | 70 |
| Diuron | ug/L | 1 | 3.000 | <3 | <3 | 150 |
| Glyphosate | ug/L | 1 | 25.000 | <25 | <25 | 280 |
| Malathion | ug/L | 1 | 0.200 | <0.2 | <0.2 | 190 |
| Metolachlor | ug/L | 1 | 0.200 | <0.2 | <0.2 | 50 |
| Metribuzin | ug/L | 1 | 0.300 | <0.3 | <0.3 | 80 |
| Monochlorobenzene | ug/L | 1 | 0.100 | <0.1 | <0.1 | 80 |
| Paraquat | ug/L | 1 | 1.000 | <1 | <1 | 10 |
| Pentachlorophenol | ug/L | 1 | 0.400 | <0.4 | <0.4 | 60 |
| Phorate | ug/L | 1 | 0.200 | <0.2 | <0.2 | 2 |
| Picloram | ug/L | 1 | 0.700 | <0.7 | <0.7 | 190 |
| Polychlorinated Biphenyls (PCBs) | ug/L | 1 | 0.020 | <0.02 | <0.02 | 3 |
| Prometryne | ug/L | 1 | 0.180 | <0.18 | <0.18 | 1 |
| Simazine | ug/L | 1 | 0.200 | <0.2 | <0.2 | 10 |
| Terbufos | ug/L | 1 | 0.200 | <0.2 | <0.2 | 1 |
| Tetrachloroethylene (perchloroethylene) | ug/L | 1 | 0.300 | <0.3 | <0.3 | 10 |
| Triallate | ug/L | 1 | 4.000 | <4 | <4 | 230 |
| Trichloroethylene | ug/L | 1 | 0.100 | <0.1 | <0.1 | 5 |
| Trifluralin | ug/L | 1 | 0.006 | <0.006 | <0.006 | 45 |
| Vinyl Chloride | ug/L | 1 | 0.200 | <0.2 | <0.2 | 1 |