

Attachment-1

2023 Water Services' Annual Report

January 1 to December 31, 2023

Guelph Drinking Water System

Corporation of the City of Guelph

Gazer Mooney Subdivision Distribution System

Township of Guelph/Eramosa



Water Services
Environmental Services Department

Last Revision:0

This document is a Province of Ontario form.
To request the information on this form in an accessible format, please
contact (add the waterservices@guelph.ca or by calling 519-837-5627; TTY:
519-837-5688 or text 226-821-2132.as the information is our info, not
belonging to the province.)

Guelph Distribution System Annual Report

Drinking Water System Number: 220000095

Drinking Water System Name: Guelph Drinking Water System

Drinking Water System Owner: The Corporation of the City of Guelph

Drinking Water System Category: Large Municipal Residential

Period being reported: January 1, 2023, through December 31, 2023

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking Water System serve more than 10,000 people?

Yes.

Is your annual report available to the public at no charge on a web site on the Internet?

Yes.

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

An electronic copy of the Summary Report will be provided to MECP upon request.

Complete for all other Categories

Number of Designated Facilities served:

Not applicable.

Did you provide a copy of your annual report to all Designated Facilities you serve?

Not applicable.

Number of Interested Authorities you report to:

Not applicable.

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Not applicable.

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

Drinking Water System Name: Gazer Mooney Subdivision Distribution System (Guelph Eramosa Township).

Drinking Water System Number: 260057967

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 drinking water?

Yes.

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

Public access/notice via the web: Yes.
Public access/notice via Government Office: No.
Public access/notice via a newspaper: No.
Public access/notice via Public Request: Yes.
Public access/notice via a Public Library: No.
Public access/notice via other: No.

City of Guelph Drinking Water System Description:

All water provided to the Guelph Drinking Water System was treated via Water Services' 12 active water treatment Facilities for: primary disinfection using chlorine solution (10 sites) or ultraviolet irradiation (2 sites); secondary disinfection using chlorine solution for a free chlorine residual (12 sites); sequestration using sodium silicate for dissolved iron (2 sites); and manganese removal using green-sand filtration (1 site).

The City of Guelph has 15 active pumping stations; three (3) elevated storage tanks; four (4) major underground storage reservoirs; approximately 563 Kilometres of underground watermain, and a population of approximately 146,175.

List all water treatment chemicals used over this reporting period:

Sodium Hypochlorite (chlorine solution for disinfection).
Sodium Silicate (for iron sequestration).

Were any significant expenses incurred to?

Install required equipment: No.
Repair required equipment: No.
Replace required equipment: No.

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

Capital Projects: The following amounts relate to projects completed in 2023. These numbers do not include the normal operating and maintenance costs.

Project Name: Paisley Station and Reservoir Upgrades

Description: Upgrade booster pumping station and complete reservoir repairs.

Monetary Expense: \$8.6M

Project Name: Calico Station Groundwater Well Upgrades

Description: Complete replacement of the groundwater well. Preliminary design for the new facility was completed. Project paused based on budget deferrals

Monetary Expense: \$900K

Project Name: Membro Facility Upgrades

Description: Complete upgrades to the facility to accommodate the use of the Rocco Well and to take Membro Well offline.

Monetary Expense: \$1.4M

Project Name: Security upgrades to Edinburgh Well

Description: Decommissioning of the Well house; capping and securing the groundwater well.

Monetary Expense: \$40K

Project Name: Watermain Replacement

Description: 1,261.10 meter of watermain replaced on Silvercreek Parkway N/Speedvale Ave/ Woolwich Street/ Metcalfe Street/ York Road-phase 3.

Monetary Expense: \$795.5K

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:

In 2023, there were no Adverse Water Quality Incidents (AWQIs).

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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 Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	891	0-2	0-35	0	Not applicable.
Treated	550.	0-0	0-0	550	0-300
Distribution	1646	0 - 0	0 - 0	749	0-110

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 #)	Unit of Measure
Turbidity	881	0.05-0.39	NTU
Chlorine	791	0.40-1.46	mg/L
Fluoride (If the DWS provides fluoridation)	Not applicable.	Not applicable.	Not applicable.

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

The Micro Particulate Analysis (MPA) below is an ongoing assessment/confirmation of the water quality at the Arkell Collectors shallow groundwater infiltration system. The data is used to confirm adequate disinfection of this source water at F.M. Woods. In 2023 the Arkell Collector source water was fully disinfected and sampled/analyzed as per the Municipal Drinking Water Licence (MDWL 017-101 – 2021/07/06).

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
MDWL 017-101 2022/07/15	cryptosporidium	23/04/03	0	Relative Risk Factor is 0 (low risk).
	giardia	23/04/03	0	
	diatoms	23/04/03	0	
	other algae (pigment bearing)	23/04/03	0	
	rotifers, eggs	23/04/03	0.6	
MDWL 017-101 2022/07/15	cryptosporidium	23/05/08	0	Relative Risk Factor is 1 (low risk).
	giardia	23/05/08	0	
	diatoms	23/05/08	0	
	other algae (pigment bearing)	23/05/08	0	
	rotifers, eggs	23/05/08	0	
MDWL 017-101 2022/07/15	cryptosporidium	23/09/11	0	Relative Risk Factor is 1 (low risk).
	giardia	23/09/11	0	
	diatoms	23/09/11	0	
	other algae (pigment bearing)	23/09/11	0	
	rotifers, eggs	23/09/11	0	

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

The required three year sampling for ground water sources was done in 2022 and is included in the results in the table below. The table also includes the annual 2023 sampling for surface water sources.

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	2023	0 – 0.0009	mg/L	No
Arsenic	2023	0 – 0.0034	mg/L	No
Barium	2023	0.034 – 0.093	mg/L	No
Boron	2023	0.013 – 0.049	mg/L	No
Cadmium	2023	0 – 0.00096	mg/L	No
Chromium	2023	0 – 0	mg/L	No
Mercury	2023	0 - 0	mg/L	No
Lead	2023	0 – 0	mg/L	No
Selenium	2023	0 - 0	mg/L	No
Sodium	Jan 2019 - Dec 2022	23 - 170	mg/L	No
Uranium	2023	0.00037 – 0.0020	mg/L	No
Fluoride	2019	0 – 0.73	mg/L	No
Nitrite	2023	0 – 0.037	mg/L	No
Nitrate	2023	0 – 2.37	mg/L	No

Summary of lead testing under MDWL 017-101 – Lead Regulatory Relief during this reporting period.

The table below includes all samples/analysis required by the MDWL 017-101, Lead Reduction Plan.

Number of Locations	Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
11	Private Plumbing	15	0 – 0.027	mg/L	11
10	Distribution	10	0 - 0	mg/L	0

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

Under O.Reg. 170/03; Schedule 13-4, treated groundwater sources are assessed on a 3-year sampling schedule and last sampled in 2019; treated GUDI sources are on an annual schedule and last sampled in 2021. Sampling/analysis occurred as required with value results covering both source characterizations, below.

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2023	0 - 0	mg/L	No
Atrazine + N-dealkylated metabolites	2023	0 - 0	mg/L	No
Azinphos-methyl	2023	0 - 0	mg/L	No
Benzene	2023	0 - 0	mg/L	No
Benzo(a)pyrene	2023	0 - 0	mg/L	No
Bromoxynil	2023	0 - 0	mg/L	No
Carbaryl	2023	0 - 0	mg/L	No
Carbofuran	2023	0 - 0	mg/L	No
Carbon Tetrachloride	2023	0 - 0	mg/L	No
Chlorobenzene	2023	0 - 0	mg/L	No
Chlorpyrifos	2023	0 - 0	mg/L	No
Diazinon	2023	0 - 0	mg/L	No
Dicamba	2023	0 - 0	mg/L	No
1,2-Dichlorobenzene	2023	0 - 0	mg/L	No
1,4-Dichlorobenzene	2023	0 - 0	mg/L	No
1,2-Dichloroethane	2023	0 - 0	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2023	0 - 0	mg/L	No
Dichloromethane	2023	0 - 0	mg/L	No
2-4 Dichlorophenol	2023	0 - 0	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2023	0 - 0	mg/L	No
Diclofop-methyl	2023	0 - 0	mg/L	No
Dimethoate	2023	0 - 0	mg/L	No
Diquat	2023	0 - 0	mg/L	No
Diuron	2023	0 - 0	mg/L	No
Glyphosate	2023	0 - 0	mg/L	No
HAAs (<i>Note: show latest running annual average</i>)	2023	0.014	mg/L	No
Malathion	2023	0 - 0	mg/L	No
2-methyl-4-chlorophenoxyacetic acid / MCPA	2023	0 - 0	mg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Metolachlor	2023	0 - 0	mg/L	No
Metribuzin	2023	0 - 0	mg/L	No
Paraquat	2023	0 - 0	mg/L	No
Pentachlorophenol	2023	0 - 0	mg/L	No
Phorate	2023	0 - 0	mg/L	No
Picloram	2023	0 - 0	mg/L	No
Polychlorinated Biphenyls(PCB)	2023	0 - 0	mg/L	No
Prometryne	2023	0 - 0	mg/L	No
Simazine	2023	0 - 0	mg/L	No
Terbufos	2023	0 - 0	mg/L	No
Tetrachloroethylene (perchloroethylene)	2023	0 - 0	mg/L	No
2,3,4,6-Tetrachlorophenol	2023	0 - 0	mg/L	No
THMs (Note: show latest running annual average)	2023	0.031	mg/L	No
Triallate	2023	0 - 0	mg/L	No
Trichloroethylene	2023	0 - 0.00024	mg/L	No
2,4,6-Trichlorophenol	2023	0 - 0	mg/L	No
Trifluralin	2023	0 - 0	mg/L	No
Vinyl Chloride	2023	0 - 0	mg/L	No

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

There were no instances of organic or inorganic parameter sample results exceeding half the standard from January 2023 through December 2023.

The Gazer Mooney Subdivision Distribution System ANNUAL REPORT

Drinking Water System Number: 260057967

Drinking Water System Name: Gazer Mooney Subdivision Distribution System

Drinking Water System Owner: The Corporation of the Township of
Guelph/Eramosa

Drinking Water System Category: Small Municipal Residential

Period being reported: January 1, 2023, through December 31, 2023

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking Water System serve more than 10,000 people?

No.

**Is your annual report available to the public at no charge on a web site on
the Internet?**

Yes.

**Location where Summary Report required under O. Reg. 170/03 Schedule
22 will be available for inspection.**

An electronic copy of the Summary Report will be provided to MECP upon request.

Complete for all other Categories

Number of Designated Facilities served:

Not applicable.

**Did you provide a copy of your annual report to all Designated Facilities
you serve?**

Not applicable.

Number of Interested Authorities you report to:

Not applicable.

**Did you provide a copy of your annual report to all Interested Authorities
you report to for each Designated Facility?**

Not applicable.

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

Drinking Water System Name: Not applicable.

Drinking Water System Number: Not applicable.

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 drinking water?

Yes.

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

Public access/notice via the web: Yes.

Public access/notice via Government Office: No.

Public access/notice via a newspaper: No.

Public access/notice via Public Request: Yes.

Public access/notice via a Public Library: No.

Public access/notice via other: No.

Gazer-Mooney Subdivision Drinking Water System

The Gazer Mooney Subdivision has approximately 72 fully metered water service connections; 2 kilometres of underground watermains, and an approximate population of 209 people.

All water provided to the Gazer Mooney Subdivision Distribution System is supplied by the Guelph Drinking Water System.

List all water treatment chemicals used over this reporting period:

Treated drinking water was supplied in its entirety from the Guelph Drinking Water System. Please refer to the Guelph Drinking Water System Annual Report for a list of water treatment chemicals used in the drinking water treatment process.

Were any significant expenses incurred to?

Install required equipment: No.

Repair required equipment: No.

Replace required equipment: No.

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

No significant expenses were incurred in 2023 to maintain the Gazer Mooney Subdivision Distribution System.

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:

In 2023, there were no Adverse Water Quality Incidents (AWQIs) in the Gazer Mooney Subdivision Distribution System.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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 Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Treated	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Distribution	51	0 - 0	0 - 0	51	0 - 4

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 #)	Unit of Measure
Turbidity	Not applicable.	Not applicable.	Not applicable.
Chlorine	105	0.91 – 1.34	mg/L
Fluoride (If the DWS provides fluoridation)	Not applicable.	Not applicable.	Not applicable.

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
Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.

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

Please refer to the Guelph Drinking Water System Annual Report for treated drinking water summary inorganic water quality results.

Summary of lead testing under “Approved Relief” during this reporting period:

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Distribution	2	0 - 0	mg/L	0

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

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAAs - Haloacetic acids (Note: show latest running annual average)	Jan - Dec 2023	0	mg/L	0
THMs - trihalomethanes (Note: show latest running annual average)	Jan - Dec 2023	0.025	mg/L	0

The above table are sample results from the Gazer Mooney Subdivision Distribution System. For organic water quality results from the Guelph Drinking Water System, please refer to the Guelph Drinking Water System Annual Report; in 2023, there were no exceedances related to organic parameters in the Guelph Drinking Water System.

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

There were no instances of organic parameter sample results exceeding half the standard in 2023 in the Gazer Mooney Subdivision System or the Guelph Drinking Water System.