

## **Water Services' Annual Report**

**January 1, 2022 to December 31, 2022**

### **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: 2023-02-21

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](mailto: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.)

The Guelph Drinking Water 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, 2022 through December 31, 2022

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking Water System serve more than 10,000 people? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>An electronic copy of the Summary Report will be provided to MECP upon request.</p> </div>	<p><b><u>Complete for all other Categories</u></b></p> <p>Number of Designated Facilities served: <input type="text" value="n/a"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input type="text" value="n/a"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
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List all Drinking Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Gazer Mooney Subdivision Distribution System (Guelph Eramosa Township).	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  No

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

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method \_\_\_\_\_

**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; 3 elevated storage tanks; 4 major underground storage reservoirs; approximately 560.8 kilometres of underground water mains, and a population of approximately 144,800.

**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
- Repair required equipment
- Replace required equipment

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

Capital Projects - The following amounts relate to projects completed in 2022. These numbers do not include the normal operating and maintenance costs.

No.	Project Name	Description	Monetary Expense
1	Calico Well Rehabilitation	Replacement of the existing water well on-site.	\$575,800
2	Membro Facility Upgrades	Upgrades of the vertical station assets to incorporate the replacement water well (Rocco Well).	\$1,311,364
3	Eramosa Road	Eramosa Road Watermain Replacement of 300 mm PVC	\$144,000
4	Baker Street	New watermain on Baker Street from Quebec Street to Woolwich Street, 300 mm diameter PVC.	\$487,044
5	Paisley Feedermain PH III (Ryde Road Pumping Station to Paisley Road~ 60m East of Stephanie Drive)	Installed new trunk watermain pipe 400 mm diameter CPP C303 CL 160 on Paisley Road and Ryde Road to Pumping Station	\$968, 184

**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.**

**NOTE:** "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
2022/09/07	Secondary Disinfection Free Chlorine Residual	0.00	mg/L	Flushed to restore secondary residual. Resampled. Results met microbiological standards.	2022/09/07

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	832	0-1	0-9	0	n/a
Treated	507	0 -0	0 -0	507	0 - 360
Distribution	1649	0 -0	0-0	762	0 - 43

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	823	0.04 - 0.38	NTU
Chlorine	791	0.40 - 1.46	mg/L
Fluoride (If the DWS provides fluoridation)	n/a	n/a	n/a

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 2022, the Arkell Collector source water was fully disinfected and sampled/analyzed as per the Municipal Drinking Water Licence (MDWL 017-101).

Date of legal instrument issued	Parameter	Date Sampled	Result (adjusted to reflect 100L of original sample volume)	*Relative Risk Factor
MDWL 017-101 2022/07/15	cryptosporidium	22/04/12	0	Due to non-detects for all parameters, the <b>Relative Risk Factor is 0 (low risk)</b> .
	giardia	22/04/12	0	
	diatoms	22/04/12	0	
	other algae (pigment bearing)	22/04/12	0	
	rotifers, eggs	22/04/12	0	
MDWL 017-101 2022/07/15	cryptosporidium	22/05/16	0	Due to the detection of rotifers, the <b>Relative Risk Factor</b>
	giardia	22/05/16	0	
	diatoms	22/05/16		
	other algae (pigment bearing)	22/05/16	0	

	rotifers, eggs	22/05/16	0.9	<b>is 1 (low risk).</b>
MDWL 017-101 2022/07/15	cryptosporidium	22/11/04	0	Due to non-detects for all parameters, the <b>Relative Risk Factor is 0 (low risk).</b>
	giardia	22/11/04	0	
	diatoms	22/11/04	0	
	other algae (pigment bearing)	22/11/04	0	
	rotifers, eggs	22/11/04	0	

\*Relative Risk Factor of surface water contamination as per the USEPA Consensus Method (1992, EPA 910/9-92-029)

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

Under O.Reg. 170/03; Schedule 13-2, treated groundwater sources are assessed on a 3-year sampling schedule and last sampled in 2022; treated GUDI sources are on an annual schedule and last sampled in 2022. 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 (min.) - (max.)	Unit of Measure	Exceedance
Antimony	2022	0 – 0.00085	mg/L	No
Arsenic	2022	0 – 0.0032	mg/L	No
Barium	2022	0.037 – 0.092	mg/L	No
Boron	2022	0.013 – 0.045	mg/L	No
Cadmium	2022	0 – 0.00014	mg/L	No
Chromium	2022	0 – 0	mg/L	No
Mercury	2022	0 - 0	mg/L	No
Lead	2022	0 – 0	mg/L	No
Selenium	2022	0 - 0	mg/L	No
Sodium	Jan 2019 - Dec 2022	23 - 170	mg/L	No
Uranium	2022	0.00043 – 0.0019	mg/L	No
Fluoride	2019	0 – 0.73	mg/L	No
Nitrite	2022	0 – 0.028	mg/L	No
Nitrate	2022	0 – 2.39	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.

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

Number of Locations	Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
10	Private Plumbing	10	0 – 0.0021	mg/L	0
10	Distribution	20	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 2022. 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	2022	0 - 0	mg/L	No
Atrazine + N-dealkylated metabolites	2022	0 - 0	mg/L	No
Azinphos-methyl	2022	0 - 0	mg/L	No
Benzene	2022	0 - 0	mg/L	No
Benzo(a)pyrene	2022	0 - 0	mg/L	No
Bromoxynil	2022	0 - 0	mg/L	No
Carbaryl	2022	0 - 0	mg/L	No
Carbofuran	2022	0 - 0	mg/L	No
Carbon Tetrachloride	2022	0 - 0	mg/L	No
Chlorobenzene	2022	0 - 0	mg/L	No
Chlorpyrifos	2022	0 - 0	mg/L	No
Diazinon	2022	0 - 0	mg/L	No
Dicamba	2022	0 - 0	mg/L	No
1,2-Dichlorobenzene	2022	0 - 0	mg/L	No
1,4-Dichlorobenzene	2022	0 - 0	mg/L	No
1,2-Dichloroethane	2022	0 - 0	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2022	0 - 0	mg/L	No
Dichloromethane	2022	0 - 0	mg/L	No
2-4 Dichlorophenol	2022	0 - 0	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2022	0 - 0	mg/L	No

Diclofop-methyl	2022	0 - 0	mg/L	No
Dimethoate	2022	0 - 0	mg/L	No
Diquat	2022	0 - 0	mg/L	No
Diuron	2022	0 - 0	mg/L	No
Glyphosate	2022	0 - 0	mg/L	No
HAA <sub>s</sub> (Note: show latest running annual average)	2022/10/20	0.014	mg/L	No
Malathion	2022	0 - 0	mg/L	No
2-methyl-4-chlorophenoxyacetic acid / MCPA	2022	0 - 0	mg/L	No
Metolachlor	2022	0 - 0	mg/L	No
Metribuzin	2022	0 - 0	mg/L	No
Paraquat	2022	0 - 0	mg/L	No
Pentachlorophenol	2022	0 - 0	mg/L	No
Phorate	2022	0 - 0	mg/L	No
Picloram	2022	0 - 0	mg/L	No
Polychlorinated Biphenyls(PCB)	2022	0 - 0	mg/L	No
Prometryne	2022	0 - 0	mg/L	No
Simazine	2022	0 - 0	mg/L	No
Terbufos	2022	0 - 0	mg/L	No
Tetrachloroethylene (perchloroethylene)	2022	0 - 0	mg/L	No
2,3,4,6-Tetrachlorophenol	2022	0 - 0	mg/L	No
THMs (Note: show latest running annual average)	2022	0.036	mg/L	No
Triallate	2022	0 - 0	mg/L	No
Trichloroethylene	2022/10/20	0 - 0.00162	mg/L	No
2,4,6-Trichlorophenol	2022	0 - 0	mg/L	No
Trifluralin	2022	0 - 0	mg/L	No
Vinyl Chloride	2022	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 parameter sample results exceeding half the standard in 2022.

Parameter	Result Value	Unit of Measure	Date of Sample
n/a	n/a	n/a	n/a



**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, 2022 through December 31, 2022

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking Water System serve more than 10,000 people? Yes [ ] No [ x ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ x ] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>An electronic copy of the Summary Report will be provided to MECP upon request.</p> </div>	<p><b><u>Complete for all other Categories</u></b></p> <p>Number of Designated Facilities served: <input type="text" value="n/a"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to: <input type="text" value="n/a"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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**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 their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
n/a	n/a

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 [ x ] No [ ]

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

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method \_\_\_\_\_

**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
- Repair required equipment
- Replace required equipment

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

No significant expenses were incurred in 2022 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 2022, 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
n/a	n/a	n/a	n/a	n/a	n/a

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	n/a	n/a	n/a	n/a	n/a
Treated	n/a	n/a	n/a	n/a	n/a
Distribution	52	0 - 0	0 - 0	52	0 - 1

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	n/a	n/a	n/a
Chlorine	106	0.90 – 1.31	mg/L
Fluoride (If the DWS provides fluoridation)	n/a	n/a	n/a

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
n/a	n/a	n/a	n/a	n/a

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
<b>HAAs</b> (Note: show latest running annual average)	Jan - Dec 2022	0	mg/L	0
<b>THMs</b> (Note: show latest running annual average)	Jan - Dec 2022	0.02	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 2022, 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 2022 in the Gazer Mooney Subdivision System or the Guelph Drinking Water System.