



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260001458
Drinking-Water System Name:	Kitchener Distribution System
Drinking-Water System Owner:	City of Kitchener
Drinking-Water System Category:	Distribution
Period being reported:	January 1 to 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 [X] No []

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []

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

Kitchener Operations Facility
131 Goodrich Drive, Kitchener

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] 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
Breslau (Elroy Acres) Distribution System	260022152
City of Waterloo Distribution System	260002473

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 [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** _____

Describe your Drinking-Water System

The City of Kitchener owns, operates and maintains the distribution system and all associated appurtenances (valves, hydrants, etc.) that supply water to the residents of Kitchener. The distribution system receives its supply from the Region of Waterloo pumping and treatment centres including Mannheim Water Treatment Plant, Mannheim Reservoir, Greenbrook, Strange Street Pumping Station and Parkway Pumping Station.

List all water treatment chemicals used over this reporting period

N/A – See Region of Waterloo

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

N/A – See Region of Waterloo

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



**Table 1 – Adverse Water Quality Incident Summary –
January 1 to December 31, 2023**

#	Adverse Type	AWQI Date (verbal)	AWQI #	Site Name	Site Location	Results/Notes
1	Lead	March 27/23	161585	Hydrant 1230	205 Brandon Ave	10.6ug/L
2	Total Coliform	May 10/23	161921	Patricia St Temp main	Sp4	TC=present
3	Self Imposed Boil Water Advisory	May 17-20//23	161969	River Rd E between Victoria St N and Frederick St (139 residential units plus 11 commercial units)	86 River Rd E	Precautionary, sample results were free from contamination.
4	Low Chlorine	June 7/23	162126	Hydrant 12765	75 Otterbein Rd	F=0.01mg/L T=0.08mg/L C=0.07mg/L
5	Total Coliform	June 29/23	162357	Westwood Cres Stage 2 Temp main	S2-Lot 87	TC=present
6	Total Coliform	June 30/23	162373	Westwood Cres Stage 2 Temp main	S2-Lot 87	TC=1
7	Total Coliform	July 6/23	162432	Rosford Cres Stage 2 Temp main	S5-Lot 107	TC=present
8	Total Coliform	July 6/23	162452	Sherwood Ave Stage 2 Temp main	T2-4-Lot 558	TC=present
9	Total Coliform	July 12/23	162532	Bruce St Temp main	SP4 - 70 Heather Ave	TC=present
10	Total Coliform	July 12/23	162537	Bruce St Temp main	SP2 – 169 Bruce	TC=present
11	Total Coliform	July 18/23	162625	Westwood Cres Stage 2 Temp main	S2-Lot 87	TC=present
12	Total Coliform	July 18/23	162627	Westwood Cres Stage 2 Temp main	S4-Lot 86	TC=present
13	Total Coliform	July 28/23	162812	KID 15	600 Heritage Dr	TC=present
14	Total Coliform	August 17/23	163055	Sherwood Ave Stage 2 Temp main	T2-4-Lot 558	TC=present
15	Total Coliform	August 31/23	163260	McKenzie Ave Temp Main	T1-3 97 McKenzie	TC=present
16	Total Coliform	August 31/23	163265	McKenzie Ave Temp Main	T1-5 113 McKenzie	TC=present
17	Total Coliform	Oct. 13/23	163788	34 Lancaster St W (new service)	34 Lancaster St W	TC=present
18	Low Chlorine	Oct. 23/23	163858	KID 140	80 Tartan Ave	F=0.04mg/L T=0.22mg/L C=0.18mg/L
19	Low Chlorine	Nov 9/23	164008	Hydrant 1848	89 Maple Hill Dr	F=0.03mg/L T=0.17m/L C=0.14mg/L
20	Self-Imposed BWA Nov 14-17	Nov 13/23	164020	273 Belleview Ave		Potential contamination – 2 sample rounds were



					free from contamination
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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					
Treated					
Distribution	2151*	0/Absent – 0/Absent	0/Absent - 1/Present	639	0 - 350CFU/mL

*number of samples completed by the laboratory for routine sampling and temporary water mains. Samples taken from newly commissioned water mains are not included.

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	<i>NOTE: For continuous monitors use 8760 as the number of samples.</i>
Turbidity				
Chlorine	3980Total*	0.04-2.13	mg/L	
	3980Free*	0.00-0.77	mg/L	
Fluoride (If the DWS provides fluoridation)				

*includes samples taken by the laboratory for routine sampling, temporary water mains, dead end main flushing, autoflushers, main break/valve replacements, water quality investigations and water main cleaning. Samples taken for newly commissioned water mains are not included.

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

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				
Arsenic				



Barium				
Boron				
Cadmium				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite				
Nitrate				

*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)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	124	<0.200 – 14.7	ug/L	3 exceedances
Distribution	22	<0.200 – 10.6	ug/L	1 exceedance

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				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				



Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)		16.11	µg/L	No
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

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