

COBOURG DRINKING WATER SYSTEM 2022 ANNUAL REPORT

Drinking Water System Number:	220000825
Drinking Water System Name:	Cobourg Drinking Water System
Drinking Water System Owner:	Corporation of the Town of Cobourg
Drinking Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2022 to December 31, 2022

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking Water System serve more than 10,000 people? Yes [x] No []</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;"> <p>Lakefront Utility Services Inc. Office 207 Division Street, Cobourg, Ontario</p> <p>https://www.lakefrontutilities.com/regulatory-water/</p> </div>	<p><u>Complete for all other Categories</u></p> <p>Number of Designated Facilities served: <input type="text"/></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"/></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
Hamilton Township Distribution System	260039208

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 _____

Describe your Drinking Water System

The Cobourg Water Treatment Plant (WTP) takes water from Lake Ontario through an 860m-long intake pipe. Raw water is pre-chlorinated for zebra-mussel control before it enters a full conventional treatment process. The treatment process includes coagulation, flocculation, sedimentation, and filtration. Aluminum sulphate is used as the coagulation agent, with an addition of Flopam AN 934 PWG (polymer) to aid in the process. Primary disinfection is achieved with gaseous chlorine after water undergoes an appropriate contact time, after which the water is stored in a 6240 m³ in-ground reservoir, from where it is then pumped to the distribution system. The distribution system consists of two pressure zones, with an elevated water storage tank in each of the zones. The WTP supplies water to the Zone 1 tower, with a holding capacity of 1332 m³. The booster station, located at the boundary of the two zones, supplies water to the Zone 2 tower, with a holding capacity of 3734 m³. Zone 1 tower, Zone 2 tower and the booster station are all equipped with sodium hypochlorite and rechlorination equipment to maintain proper chlorine residuals. Water from the Cobourg DWS is conveyed to Hamilton Township, as an extension of the Cobourg DWS, agreed upon in writing.

List all water treatment chemicals used over this reporting period

Aluminum Sulphate
 Polymer – Flopam AN 934 PWG
 Chlorine
 Sodium Hypochlorite

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

PROJECT	ESTIMATED COST
Distribution Valve Repair Tools	\$16,000.00
Rebuilding Chlorinators	\$20,000.00
CIMA+ EA Process Elevated Tower Zone 1 and Zone Booster Pumping Station	\$100,000.00
Cobourg Distribution Air Relief Valves Replacement/Repairs	\$40,000.00
Cobourg WTP Low Lift Pump & motor Repairs	\$50,000.00
WTP Total Chlorine Residual Report- Lagoon System	\$10,000.00
Cobourg WTP Reservoir Leak Detection Investigation/ Report	\$40,000.00
Cobourg WTP Chlorine Contact Chamber Actuators Installation	\$50,000.00
Cobourg WTP & Booster Pump Station Pump Vibration Analysis	\$10,000.00
Water Main Replacement- Blake/ Burke & Victoria Streets	\$800,000.00
Cobourg Water Main Design	\$100,000.00
Water Main Replacement Rankin BLVD	\$294,000.00
Water Main Replacement Green Street	\$268,000.00
Water Main Replacement Furnace Street	\$348,000.00
ICI Water Meter Audit	\$30,000.00
Water Meter Replacement Program	\$174,000.00

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
There were no Adverse Water Quality Incidents during the reporting period					

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	53	0 - 1	0 - 140	-	-
Treated	53	0	0	53	0 - 2
Distribution	416	0	0	260	0 - 28

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	8760	0.008 – 0.1	NTU
Chlorine	8760	1.21 – 2.14	mg/L
Fluoride (If the DWS provides fluoridation)	NA		

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

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
June 8, 2021	Suspended Solids	Yearly Average	2.17	mg/L
	Total Chlorine Residual	Yearly Average	0.015	mg/L

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	1-Feb-2022	0.6 < MDL	ug/L	No
Arsenic	1-Feb-2022	0.2 < MDL	ug/L	No
Barium	1-Feb-2022	20.7	ug/L	No
Boron	1-Feb-2022	22	ug/L	No
Cadmium	1-Feb-2022	0.006	ug/L	No
Chromium	1-Feb-2022	0.18	ug/L	No
Mercury	1-Feb-2022	0.01 < MDL	ug/L	No
Selenium	1-Feb-2022	0.14	ug/L	No
Sodium	16-Sep-2019	12.6	mg/L	No
Uranium	1-Feb-2022	0.025	ug/L	No
Fluoride	16-Feb-2019	0.06	mg/L	No
Nitrite	30-Nov-2022	0.003 < MDL	mg/L	No
Nitrate	30-Nov-2022	0.344	mg/L	No

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	Not required, plumbing exemption and only pH and Alkalinity required in distribution samples			
Distribution	4	NA – pH (7.02-7.38), Alkalinity (83-87 mg/L)		

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	1-Feb-2022	0.02<MDL	ug/L	No
Atrazine + N-dealkylated metabolites	1-Feb-2022	0.01<MDL	ug/L	No
Azinphos-methyl	1-Feb-2022	0.05<MDL	ug/L	No
Benzene	1-Feb-2022	0.32<MDL	ug/L	No
Benzo(a)pyrene	1-Feb-2022	0.004<MDL	ug/L	No
Bromoxynil	1-Feb-2022	0.33<MDL	ug/L	No
Carbaryl	1-Feb-2022	0.05<MDL	ug/L	No
Carbofuran	1-Feb-2022	0.01<MDL	ug/L	No
Carbon tetrachloride	1-Feb-2022	0.17<MDL	ug/L	No
Chlorpyrifos	1-Feb-2022	0.02<MDL	ug/L	No
Diazinon	1-Feb-2022	0.02<MDL	ug/L	No
Dicamba	1-Feb-2022	0.2<MDL	ug/L	No
1,2-Dichlorobenzene	1-Feb-2022	0.41<MDL	ug/L	No
1,4-Dichlorobenzene	1-Feb-2022	0.36<MDL	ug/L	No
1,2-Dichloroethane	1-Feb-2022	0.35<MDL	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	1-Feb-2022	0.33<MDL	ug/L	No
Dichloromethane	1-Feb-2022	0.35<MDL	ug/L	No
2,4-dichlorophenol	1-Feb-2022	0.15<MDL	ug/L	No
2,4-dichlorophenoxyacetic acid (2,4-D)	1-Feb-2022	0.19<MDL	ug/L	No
Diclofop-methyl	1-Feb-2022	0.4<MDL	ug/L	No
Dimethoate	1-Feb-2022	0.06<MDL	ug/L	No
Diquat	1-Feb-2022	1<MDL	ug/L	No
Diuron	1-Feb-2022	0.03<MDL	ug/L	No
Glyphosate	1-Feb-2022	1<MDL	ug/L	No
Malathion	1-Dec-2022	0.02<MDL	ug/L	No
MCPA	1-Feb-2022	0.00012<MDL	mg/L	No
Metolachlor	1-Feb-2022	0.01<MDL	ug/L	No
Metribuzin	1-Feb-2022	0.02<MDL	ug/L	No
Monochlorobenzene	1-Feb-2022	0.3<MDL	ug/L	No
Paraquat	1-Feb-2022	1<MDL	ug/L	No
Pentachlorophenol	1-Feb-2022	0.15<MDL	ug/L	No
Phorate	1-Feb-2022	0.01<MDL	ug/L	No
Picloram	1-Feb-2022	1<MDL	ug/L	No
Polychlorinated Biphenyls (PCBs) Total	1-Feb-2022	0.04<MDL	ug/L	No
Prometryne	1-Feb-2022	0.03<MDL	ug/L	No
Simazine	1-Feb-2022	0.01<MDL	ug/L	No
Terbufos	1-Feb-2022	0.01<MDL	ug/L	No
Tetrachloroethylene (perchloroethylene)	1-Feb-2022	0.35<MDL	ug/L	No
2,3,4,6-tetrachlorophenol	1-Feb-2022	0.2<MDL	ug/L	No
Triallate	1-Feb-2022	0.01<MDL	ug/L	No
Trichloroethylene	1-Dec-2022	0.44<MDL	ug/L	No

2,4,6-trichlorophenol	1-Feb-2022	0.25<MDL	ug/L	No
Trifluralin	1-Feb-2022	0.02<MDL	ug/L	No
Vinyl Chloride	1-Feb-2022	0.17<MDL	ug/L	No
HAAs (show latest running annual average)	1-Dec-2022	5.3<MDL	ug/L	No
THMs (show latest running annual average)	1-Dec-2022	27.75	ug/L	No

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
No parameters exceeded half the standard			