

Part III Form 2
Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220002468
Drinking-Water System Name:	Belmont Water System
Drinking-Water System Owner:	Municipality of Central Elgin
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 [] 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;"> Central Elgin Administration Office 450 Sunset Drive St. Thomas Ontario, Canada N5R 5V1 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" 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 style="width: 100px; height: 20px;" 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 of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
-	-

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 [] 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 Belmont water system is a Large Municipal Residential system located in the Village of Belmont within the Municipality of Central Elgin. The drinking water is drawn from two artesian ground water wells. Sodium hypochlorite is used for disinfection and sodium silicate is added for iron sequestration. Each well pumps water through a water treatment facility where these chemicals are added. The well pumps also provide the hydraulic force required to pump the disinfected water through a large 750mm diameter by 136 meter long chlorine contact pipe and into the distribution system and eventually into the elevated water tower. The contact pipe provides adequate contact time between the water and the chlorine that is added to ensure proper disinfection before water enters the distribution system. The elevated water tower stores 2,100 cubic meters of water for peak demand and fire flows. The Water Treatment facility and Water Tower utilize a Supervisory Control and Data Acquisition system (S.C.A.D.A.). The treatment facility is located at 200 Caesar Road in the Village of Belmont and serves a population of approximately 2,330.

List all water treatment chemicals used over this reporting period.

There are two chemicals used in the treatment process in the Belmont Water System. They are Sodium Hypochlorite for disinfection and Sodium Silicate for iron sequestration. The amounts of these chemicals used in 2022 are as follows:

Sodium Hypochlorite: 3,705 Litres
Sodium Silicate: 2,996 Litres

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.

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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

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 #)	Number of Back Ground Samples	Range of Background Results (min #)-(max #)
Raw	104	0 to 0	0 to 0	0	-	104	0 to 10
Treated	52	0 to 0	0 to 0	51	<10 to 40	52	0 to 0
Distribution	311	0 to 0	0 to 0	305	<10 to 120	311	0 to 2

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 of Grab Samples (min#)-(max#)	Number of Continuous Monitoring Samples	Range of Results of Continuous Monitoring (min#)-(max#)	Average of Continuous Monitoring Samples
Turbidity (Raw)	169	0.06 to 1.14 NTU	0	N/A	N/A
Turbidity (Treated)	365	0.06 to 0.82 NTU	8760	0.08 to 10.2 NTU	0.12
Turbidity (Distribution)	934	0.03 to 1.59 NTU	0	N/A	N/A
pH (Raw)	0	N/A	0	N/A	N/A
pH (Treated)	0	N/A	8760	7.59 to 8.10	7.77
pH (Distribution)	4	7.39 to 7.57	8760	7.66 to 8.02	7.85
Free Chlorine (Treated)	365	0.72 to 1.77 mg/L	8760	0.52 to 2.10 mg/L	1.23 mg/L
Free Chlorine (Distribution)	935	0.40 to 1.56 mg/L	8760	0.74 to 1.76 mg/L	1.05 mg/L
Total Chlorine (Treated)	365	0.79 to 1.82 mg/L	8760	0.49 to 2.00 mg/L	1.37 mg/L
Total Chlorine (Distribution)	935	0.43 to 1.59 mg/L	0	N/A	N/A
Temperature (Raw)	0	N/A	0	N/A	N/A
Temperature (Distribution)	0	N/A	8760	1.80 to 24.82 Celsius	12.42 Celsius

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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	M.A.C.	Result Value	Unit of Measure	Exceedance
Antimony	Mar. 1/21	0.006	<0.0009	Mg/L	No
Arsenic	Mar. 1/21	0.010	0.0046	Mg/L	No
Barium	Mar. 1/21	1.0	0.192	Mg/L	No
Boron	Mar. 1/21	5.0	0.06	Mg/L	No
Cadmium	Mar. 1/21	0.005	0.000003	Mg/L	No
Chromium	Mar. 1/21	0.050	0.0008	Mg/L	No
Lead	See	Table	Below		
Mercury	Mar. 1/21	0.001	<0.00001	Mg/L	No
Selenium	Mar. 1/21	0.050	<0.0004	Mg/L	No
Sodium	Mar. 1/21	20.0	19.9	Mg/L	No
Uranium	Mar. 1/21	0.02	0.000093	Mg/L	No
Fluoride	Mar. 6/18	1.5	0.85	Mg/L	No
Nitrite	2022 RAA	1	<0.003	Mg/L	No
Nitrate	2022 RAA	10	<0.006	Mg/L	No
Nitrite	Feb. 28/22	1	<0.003	Mg/L	No
Nitrate	Feb. 28/22	10	<0.006	Mg/L	No
Nitrite	May 31/22	1	<0.003	Mg/L	No
Nitrate	May 31/22	10	<0.006	Mg/L	No
Nitrite	Aug. 31/22	1	<0.003	Mg/L	No
Nitrate	Aug. 31/22	10	<0.006	Mg/L	No
Nitrite	Dec. 5/22	1	<0.003	Mg/L	No
Nitrate	Dec. 5/22	10	<0.006	Mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	M.A.C.	Range of Lead Results	Number of Exceedances
Plumbing	0	0.10 mg/L	N/A	N/A
Distribution	0	0.10 mg/L	N/A	N/A

Summary of alkalinity testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	M.A.C.	Range of alkalinity Results	Number of Exceedances
Distribution	4	N/A	180 to 197 mg/L	N/A

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

Parameter	Sample Date	M.A.C.	Result Value	Unit of Measure	Exceedance
Alachlor	Mar. 1/21	0.005	<0.00002	Mg/L	No
Atrazine + N-dealkylated metabolites	Mar. 1/21	0.005	<0.00001	Mg/L	No
Azinphos-methyl	Mar. 1/21	0.02	<0.00005	Mg/L	No
Benzene	Mar. 1/21	0.001	<0.00032	Mg/L	No
Benzo(a)pyrene	Mar. 1/21	0.00001	<0.000004	Mg/L	No
Bromoxynil	Mar. 1/21	0.005	<0.00033	Mg/L	No
Carbaryl	Mar. 1/21	0.09	<0.00005	Mg/L	No
Carbofuran	Mar. 1/21	0.09	<0.00001	Mg/L	No
Carbon Tetrachloride	Mar. 1/21	0.002	<0.00017	Mg/L	No
Chlorpyrifos	Mar. 1/21	0.09	<0.00002	Mg/L	No
Diazinon	Mar. 1/21	0.02	<0.00002	Mg/L	No
Dicamba	Mar. 1/21	0.120	<0.0002	Mg/L	No
1,2-Dichlorobenzene	Mar. 1/21	0.2	<0.00041	Mg/L	No
1,4-Dichlorobenzene	Mar. 1/21	0.005	<0.00036	Mg/L	No
1,2-Dichloroethane	Mar. 1/21	0.005	<0.00035	Mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Mar. 1/21	0.014	<0.00033	Mg/L	No
Dichloromethane	Mar. 1/21	0.05	<0.00035	Mg/L	No
2-4 Dichlorophenol	Mar. 1/21	0.9	<0.00015	Mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar. 1/21	0.1	<0.00019	Mg/L	No
Diclofop-methyl	Mar. 1/21	0.009	<0.0004	Mg/L	No
Dimethoate	Mar. 1/21	0.02	<0.00006	Mg/L	No
Diquat	Mar. 1/21	0.07	<0.001	Mg/L	No
Diuron	Mar. 1/21	0.15	<0.00003	Mg/L	No
Glyphosate	Mar. 1/21	0.28	<0.001	Mg/L	No
Total Haloacetic Acids (HAA5)	2022 Avg.	R.A.A. 0.08	R.A.A. <0.0053	mg/L	No
Malathion	Mar. 1/21	0.19	<0.00002	Mg/L	No
Metolachlor	Mar. 1/21	0.05	<0.00001	Mg/L	No
Metribuzin	Mar. 1/21	0.08	<0.00002	Mg/L	No
Monochlorobenzene	Mar. 1/21	0.08	<0.0003	Mg/L	No
Paraquat	Mar. 1/21	0.01	<0.001	Mg/L	No
Pentachlorophenol	Mar. 1/21	0.06	<0.00015	Mg/L	No
Phorate	Mar. 1/21	0.002	<0.00001	Mg/L	No
Picloram	Mar. 1/21	0.19	<0.001	Mg/L	No
Polychlorinated Biphenyls (PCB)	Mar. 1/21	0.003	<0.04	Mg/L	No
Prometryne	Mar. 1/21	0.001	<0.00003	Mg/L	No
Simazine	Mar. 1/21	0.01	<0.00001	Mg/L	No

THM (Total) (NOTE: show latest annual average)	2022 Avg.	R.A.A. 0.10	R.A.A. 0.01875	Mg/L	No
Terbufos	Mar. 1/21	0.001	<0.00001	Mg/L	No
Tetrachloroethylene	Mar. 1/21	0.010	<0.00035	Mg/L	No
2,3,4,6-Tetrachlorophenol	Mar. 1/21	0.1	<0.0002	Mg/L	No
Triallate	Mar. 1/21	0.23	<0.00001	Mg/L	No
Trichloroethylene	Mar. 1/21	0.005	<0.00044	Mg/L	No
2,4,6-Trichlorophenol	Mar. 1/21	0.005	<0.00025	Mg/L	No
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	Mar. 1/21	0.1	<0.00012	Mg/L	No
Trifluralin	Mar. 1/21	0.045	<0.00002	Mg/L	No
Vinyl Chloride	Mar. 1/21	0.001	<0.00017	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.

Parameter	Result Value	Unit of Measure	Date of Sample

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)