

COBOURG DRINKING WATER SYSTEM 2021 ANNUAL REPORT FOR WATER WORKS (R.170/03, Sec.11)

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, 2021 to December 31, 2021

<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 <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; margin-top: 10px;"> <p>Lakefront Utility Services Inc. Office 207 Division Street, Cobourg Ontario</p> <p>https://www.lakefrontutilities.on.ca/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 <input type="checkbox"/> No <input type="checkbox"/></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 <input type="checkbox"/> No <input type="checkbox"/></p>
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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
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 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

Water is drawn from Lake Ontario via an 860m intake pipe to the WTP. The water is pre-chlorinated and travels through a full treatment process including coagulation, flocculation, sedimentation, and filtration with sand media and granular activated carbon. The water is then disinfected with chlorine and after an appropriate detention time, it enters an in-ground reservoir. From there, water is pumped to the distribution system as needed.

The distribution system contains two pressure zones, each with its own elevated water storage tower. The WTP supplies water to the Zone 1, while a booster pumping station located between the two zones, supplies water to the higher Zone 2. The booster station also has re-chlorination facilities, as do the Zone 1 and Zone 2 storage towers.

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
Granular Activated Carbon Replacement- WTP	\$ 240,000.00
SCADA Computer & Software Replacement- WTP	\$ 27,000.00
Chlorine Analyzers Replacement- WTP	\$ 23,000.00
Waste Pump Replacement- WTP	\$ 7,500.00
Install Waste Flow Meter- WTP	\$ 3,700.00
Alum Pump Replacement- WTP	\$ 8,000.00
Raw Water Intake Cleaning/ Repairs	\$ 7,500.00
High Lift Pump Well Cleaning- WTP	\$ 9,000.00
Electric Hoist for Gas Chlorine Containers, Replacement- WTP	\$ 14,000.00
Water Main Replacement- Albert Street	\$ 375,000.00
Water Main Replacement- Harden Street & Harden Crescent	\$ 700,000.00
Water Main Design	\$ 75,000.00
Water Model-Data Calibration	\$ 10,000.00
TSSA Generator Up-grades 230kW- WTP	\$ 41,000.00
TSSA Generator Up-grades- Victoria Street Water Tower	\$ 30,000.00
Distribution Truck	\$ 50,000.00
WTP Truck	\$ 50,000.00
Cobourg Water Master Plan	\$ 30,000.00
Neptune RF Meter Replacement- ICI & Residential	\$ 907,000.00
Kerr Street Water Main	\$ 42,000.00
	\$ 2,649,700.00

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 #1 – May 18, 2021

On May 18, 2021, during an inspection of the stormwater line to the man-made lagoon in Lake Ontario, a milky-colored discharge was identified. The spill was considered a major spill and handled as a Level 2: Minor Emergency, which did not require activation of the emergency task force.

An inspection of the sewage lift station indicated that it had been operating at a higher-than-normal liquid level due to a faulty float switch. The level in the sewage lift station surcharged to an overflow lateral, which is connected to the storm water line, and was consequently conveying sludge to the lagoon.

All sludge waste was discharged into the sanitary collection system on site. A compression sewer plug was installed in the overflow pipe of the sewage lift station on the same day to eliminate the possibility of a repeat event. The supernatant system was taken offline for the night so as not to disturb the lagoon. A contractor removed the remaining sludge on the rocks, sand, etc. in the lagoon and transported it to the Northumberland County Landfill in Brighton.

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	52	0 – 1	0 – 53	N/A	N/A
Treated	52	0 – 0	0 – 0	52	0 – 1
Distribution	365	0 – 0	0 – 0	250	0 – 195

Note: Distribution Samples are representative of samples taken within the Cobourg DWS and Hamilton Township DWS

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 #)
Filter Turbidity (NTU)	8760	0.008 – 0.1
Chlorine (mg/l)	8760	1.21 – 2.14
Fluoride (If the DWS provides fluoridation)	N/A	

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	# of samples	Result	Unit of Measure
June 08, 2021 MDWL	Suspended Solids	Yearly Avg.	12	2.08	mg/L

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

Parameter	Result Value	Standard	Unit of Measure	Exceedance	Sample Date
Antimony	6	0.9 < MDL	ug/L	No	11-Jan-2021
Arsenic	10	0.2	ug/L	No	11-Jan-2021
Barium	1000	21.8	ug/L	No	11-Jan-2021
Boron	5000	19	ug/L	No	11-Jan-2021
Cadmium	5	0.007	ug/L	No	11-Jan-2021
Chromium	50	0.36	ug/L	No	11-Jan-2021
Mercury	1	0.01 < MDL	ug/L	No	11-Jan-2021
Selenium	50	0.14	ug/L	No	11-Jan-2021
Uranium	20	0.031	ug/L	No	11-Jan-2021
Nitrite	0.003 <MDL	1	mg/L	No	9-Nov-2021
Nitrate	0.343	10	mg/L	No	9-Nov-2021
Fluoride	0.06	1.5	mg/L	No	16-Sep-2019
Sodium	12.6	20	mg/L	No	16-Sep-2019

Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (ug/L) (min#) – (max #)	Number of Exceedances
Distribution	8	0.01-0.18	0

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

Parameter	Sample Date	Result Value	Standard	Unit of Measure	Exceedance
Benzene	11-Jan-2021	0.32 < MDL	1	ug/L	NO
Carbon tetrachloride	11-Jan-2021	0.17 < MDL	2	ug/L	NO
1,2-Dichlorobenzene	11-Jan-2021	0.41 < MDL	200	ug/L	NO
1,4-Dichlorobenzene	11-Jan-2021	0.36 < MDL	5	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	11-Jan-2021	0.33 < MDL	14	ug/L	NO
1,2-Dichloroethane	11-Jan-2021	0.35 < MDL	5	ug/L	NO
Dichloromethane	11-Jan-2021	0.35 < MDL	50	ug/L	NO
Monochlorobenzene	11-Jan-2021	0.3 < MDL	80	ug/L	NO
Tetrachloroethylene (perchloroethylene)	11-Jan-2021	0.35 < MDL	30	ug/L	NO
Trichloroethylene	11-Jan-2021	0.44 < MDL	5	ug/L	NO
Vinyl Chloride	11-Jan-2021	0.17 < MDL	1	ug/L	NO
Diquat	11-Jan-2021	1 < MDL	70	ug/L	NO
Paraquat	11-Jan-2021	1 < MDL	10	ug/L	NO
Glyphosate	11-Jan-2021	1 < MDL	280	ug/L	NO
Polychlorinated Biphenyls (PCBs) - Total	11-Jan-2021	0.04 < MDL	3	ug/L	NO
Benzo(a)pyrene	11-Jan-2021	0.004 < MDL	0.01	ug/L	NO
Alachlor	11-Jan-2021	0.02 < MDL	1	ug/L	NO
Atrazine + N-dealkylated metabolites	11-Jan-2021	0.05	5	ug/L	NO
Atrazine	11-Jan-2021	0.03	--	ug/L	NO
Desethyl atrazine	11-Jan-2021	0.02	--	ug/L	NO
Azinphos-methyl	11-Jan-2021	0.05 < MDL	20	ug/L	NO
Carbaryl	11-Jan-2021	0.05 < MDL	90	ug/L	NO
Carbofuran	11-Jan-2021	0.01 < MDL	90	ug/L	NO
Chlorpyrifos	11-Jan-2021	0.02 < MDL	90	ug/L	NO
Diazinon	11-Jan-2021	0.02 < MDL	20	ug/L	NO
Dimethoate	11-Jan-2021	0.06 < MDL	20	ug/L	NO
Diuron	11-Jan-2021	0.03 < MDL	150	ug/L	NO
Malathion	11-Jan-2021	0.02 < MDL	190	ug/L	NO
Metolachlor	11-Jan-2021	0.01 < MDL	50	ug/L	NO
Metribuzin	11-Jan-2021	0.02 < MDL	80	ug/L	NO
Phorate	11-Jan-2021	0.01 < MDL	2	ug/L	NO
Prometryne	11-Jan-2021	0.03 < MDL	1	ug/L	NO
Simazine	11-Jan-2021	0.01 < MDL	10	ug/L	NO
Terbufos	11-Jan-2021	0.01 < MDL	1	ug/L	NO
Triallate	11-Jan-2021	0.01 < MDL	230	ug/L	NO
Trifluralin	11-Jan-2021	0.02 < MDL	45	ug/L	NO
2,4-dichlorophenoxyacetic acid (2,4-D)	11-Jan-2021	0.19 < MDL	100	ug/L	NO
Bromoxynil	11-Jan-2021	0.33 < MDL	5	ug/L	NO
Dicamba	11-Jan-2021	0.20 < MDL	120	ug/L	NO
Diclofop-methyl	11-Jan-2021	0.40 < MDL	9	ug/L	NO
MCPA	11-Jan-2021	0.00012 < MDL	0.1	mg/L	NO
Picloram	11-Jan-2021	1 < MDL	190	ug/L	NO
2,4-dichlorophenol	11-Jan-2021	0.15 < MDL	900	ug/L	NO
2,4,6-trichlorophenol	11-Jan-2021	0.25 < MDL	5	ug/L	NO
2,3,4,6-tetrachlorophenol	11-Jan-2021	0.20 < MDL	100	ug/L	NO
Pentachlorophenol	11-Jan-2021	0.15 < MDL	60	ug/L	NO
THM: Annual Average	9-Nov-2021	22	100	ug/l	NO
HAA: Annual Average	9-Nov-2021	5.3 < MDL	80	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
NONE			