

**OPTIONAL ANNUAL REPORT TEMPLATE**

<b>Drinking-Water System Number:</b>	220000825
<b>Drinking-Water System Name:</b>	Cobourg Drinking Water System
<b>Drinking-Water System Owner:</b>	Corporation of the Town of Cobourg
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2017 to December 31, 2017

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></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>- www.lusi.on.ca</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b></p> <div style="border: 1px solid black; width: 40px; text-align: center; margin: 5px;">1</div> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ X ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b> <input style="width: 40px;" type="text"/></p> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></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:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
Twp. Of Hamilton Water Agreement Dist. 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 856 metre long intake pipe to the WTP. The water is pre-chlorinated and travels through a full treatment process including coagulation, flocculation, sedimentation and granular activated carbon filtration. 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 their own elevated water storage tower. The WTP supplies water to the lower 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 does the Zone 1 and Zone 2 storage towers.

**List all water treatment chemicals used over this reporting period**

Aluminum Sulphate  
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**

Filter Refurbishment/ Upgrade Phase 2: \$1,075,000.00- replacement of under drains/filter material  
 Low lift Pumps 1 & 2- 40 HP AB VFDs- 25,000  
 James Street Watermain Replacement: \$ 375,000  
 Residential Water Meter Replacement Project: \$ 375,000- RF meter program  
 Commercial Water Meter Replacement Project: \$ 75, 000- RF meter up-grades  
 HACH Turbidity Meters- \$ 45,000  
 Underground electrical replacement at WTP- \$30,000  
 Filter Effluent Mag Meters- \$ 78,000  
 LED Lighting WTP- \$ 20,000  
 Replace Clarifier Drive Motor- \$ 11,600.00

**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
June 14, 2017	Observation- Improperly Disinfected Water Directed to Water Users, etc:  Tie in to new constructed watermain. Length of watermain to be installed greater than 6.0m.	n/a	n/a	Reported to MOECC and MOH. BWA issued. Notified affected residents. Completed tie in. Flushed affected area. Final chlorine residual at 3 sample points 1.18F, 1.25F, and 1.18F 19:54 and 20:10. Collected and analyzed 2 sets of bacteriological samples. Bleeder line was run until advisory lifted.	June 16, 2017

**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 – 4	0 – 132	N/A	N/A
Treated	52	0 – 0	0 – 0	52	0 – 82
Distribution	371	0 – 0	0 – 0	213	0 – 91

**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	0.00 – 1.00
Chlorine (mg/l)	8760	0.99 – 1.89
Fluoride (If the DWS provides fluoridation)	N/A	

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

**Note:** System is programmed to shut down when chlorine residual reaches 0.60 mg/l or when turbidity reaches 0.30 NTU. The numbers shown in the range represent instantaneous events in the system caused by power flickers, calibrations, and other operational anomalies. These numbers are not representative of normal operating conditions.

**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	# of samples	Result	Unit of Measure
June 23, 2016 MDWL	Suspended Solids	Yearly Avg.	11	3.0 (no monthly exceedances)	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	0.14	6	ug/l	no	18-Jan-2017
Arsenic	0.2	25	ug/l	no	18-Jan-2017
Barium	21.5	1000	ug/l	no	18-Jan-2017
Boron	23	5000	ug/l	no	18-Jan-2017
Cadmium	0.005	5	ug/l	no	18-Jan-2017
Chromium	0.56	50	ug/l	no	18-Jan-2017
Mercury	0.01 <MDL	1	ug/l	no	18-Jan-2017
Selenium	0.16	10	ug/l	no	18-Jan-2017
Uranium	0.046	20	ug/l	no	18-Jan-2017
Nitrite	0.003 <MDL	1	mg/l	no	Nov. 13/17
Nitrate	0.370	10	mg/l	no	Nov. 13/17
Fluoride	0.09	1.5	mg/L	no	Jan. 12/15
Sodium	17.7	20	mg/l	no	Jan. 12/15

**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 (ug/L) (min#) – (max #)	Number of Exceedances
<b>Plumbing</b>	66	<0.00001 – 4.89	0
<b>Distribution</b>	4	0.08 – 0.47	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	18-Jan-2017	0.32	1	ug/L	NO
Carbon tetrachloride	18-Jan-2017	0.16	2	ug/L	NO
1,2-Dichlorobenzene	18-Jan-2017	0.41	200	ug/L	NO
1,4-Dichlorobenzene	18-Jan-2017	0.36	5	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	18-Jan-2017	0.33	14	ug/L	NO
1,2-Dichloroethane	18-Jan-2017	0.35	5	ug/L	NO
Dichloromethane	18-Jan-2017	0.35	50	ug/L	NO
Monochlorobenzene	18-Jan-2017	0.30	80	ug/L	NO
Tetrachloroethylene (perchloroethylene)	18-Jan-2017	0.35	30	ug/L	NO
Trichloroethylene	18-Jan-2017	0.44	5	ug/L	NO
Vinyl Chloride	18-Jan-2017	0.17	1	ug/L	NO
Diquat	18-Jan-2017	1	70	ug/L	NO
Paraquat	18-Jan-2017	1	10	ug/L	NO
Glyphosate	18-Jan-2017	1	280	ug/L	NO
Polychlorinated Biphenyls (PCBs) - Total	18-Jan-2017	0.04	3	ug/L	NO
Benzo(a)pyrene	18-Jan-2017	0.004	0.01	ug/L	NO
Alachlor	18-Jan-2017	0.02	1	ug/L	NO
Atrazine + N-dealkylated metabolites	18-Jan-2017	0.02	5	ug/L	NO
Atrazine	18-Jan-2017	0.02	--	ug/L	NO
Desethyl atrazine	18-Jan-2017	0.01 <MDL	--	ug/L	NO
Azinphos-methyl	18-Jan-2017	0.05 <MDL	20	ug/L	NO
Carbaryl	18-Jan-2017	0.05 <MDL	90	ug/L	NO
Carbofuran	18-Jan-2017	0.01 <MDL	90	ug/L	NO
Chlorpyrifos	18-Jan-2017	0.02 <MDL	90	ug/L	NO
Diazinon	18-Jan-2017	0.02 <MDL	20	ug/L	NO
Dimethoate	18-Jan-2017	0.03 <MDL	20	ug/L	NO
Diuron	18-Jan-2017	0.03 <MDL	150	ug/L	NO
Malathion	18-Jan-2017	0.02 <MDL	190	ug/L	NO
Metolachlor	18-Jan-2017	0.01 <MDL	50	ug/L	NO
Metribuzin	18-Jan-2017	0.02 <MDL	80	ug/L	NO
Phorate	18-Jan-2017	0.01 <MDL	2	ug/L	NO
Prometryne	18-Jan-2017	0.03 <MDL	1	ug/L	NO
Simazine	18-Jan-2017	0.01 <MDL	10	ug/L	NO
Terbufos	18-Jan-2017	0.01 <MDL	1	ug/L	NO
Triallate	18-Jan-2017	0.01 <MDL	230	ug/L	NO
Trifluralin	18-Jan-2017	0.02 <MDL	45	ug/L	NO
2,4-dichlorophenoxyacetic acid (2,4-D)	18-Jan-2017	0.19 <MDL	100	ug/L	NO
Bromoxynil	18-Jan-2017	0.33 <MDL	5	ug/L	NO
Dicamba	18-Jan-2017	0.20 <MDL	120	ug/L	NO
Diclofop-methyl	18-Jan-2017	0.40 <MDL	9	ug/L	NO
MCPA	18-Jan-2017	0.00012 <MDL	0.1	mg/L	NO
Picloram	18-Jan-2017	1 <MDL	190	ug/L	NO
2,4-dichlorophenol	18-Jan-2017	0.15 <MDL	900	ug/L	NO
2,4,6-trichlorophenol	18-Jan-2017	0.25 <MDL	5	ug/L	NO
2,3,4,6-tetrachlorophenol	18-Jan-2017	0.20 <MDL	100	ug/L	NO
Pentachlorophenol	18-Jan-2017	0.15 <MDL	60	ug/L	NO
THM: Annual Average	13-Nov-2017	21.50	100	ug/l	NO
HAA: Annual Average	13-Nov-2017	1.65	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
Sodium	17.7	mg/L	January 12, 2015