

PETERBOROUGH UTILITIES SERVICES INC.

ANNUAL REPORT

FOR

MILLBROOK DRINKING WATER SYSTEM

PERIOD: January 1, 2017 – December 31, 2017



MOECC Waterworks # 220000781
February 14, 2018

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220000781
Drinking-Water System Name:	Millbrook Drinking Water System
Drinking-Water System Owner:	Township of Cavan Monaghan
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2017 to December 31, 2017

<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;"> <p>Township of Cavan Monaghan 988 County Road 10 Millbrook, ON L0A 1G0 www.cavanmonaghan.net</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </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: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div></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** Bill Stuffers in water bill

Describe your Drinking-Water System

The Millbrook Drinking Water System and distribution system is operated by Peterborough Utilities Services Inc. under contract with the Township of Cavan Monaghan.

The Millbrook Drinking Water System municipal water system consists of the following

- Three non-GUDI groundwater wells
- Sodium hypochlorite disinfection feed system with metering pumps
- 71 m of 900 mm oversized contact pipe
- Continuous on-line chlorine analyzers
- Continuous on-line flow meters
- Standpipe with 1,527 m³ of storage

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite (Chlorine)

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

None

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
2017/07/26	Total Coliform Brookside AWQI 134600	1	CFU/100 ml	Re-sampled location and 2 additional locations	2017/07/27

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 RW1	52	0 - 0	0 - 0	50	0 - 138
Raw RW2	52	0 - 0	0 - 1	52	0 - 104
Raw RW3	52	0 - 0	0 - 2	52	0 - 17
Treated	52	0 - 0	0 - 0	56	0 - 3
Distribution	212	0 - 0	0 - 1	207	0 - 21

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			
Well 1	52	0.06 – 4.85	NTU
Well 2	52	0.07 – 0.530	
Well 3	52	0.11 – 0.800	
Chlorine – Free Treated Water	8760	0.29 – 2.77	mg/L
Chlorine – Free Distribution	218	1.42 – 1.79	mg/L
Fluoride (If the DWS provides fluoridation)			

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
N/A				

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	Jan 29	<0.02	µg/L	No
Arsenic	Jan 29	0.5	µg/L	No
Barium	Jan 29	118	µg/L	No
Boron	Jan 29	11	µg/L	No
Cadmium	Jan 29	0.003<MDL	µg/L	No
Chromium	Jan 29	0.14	µg/L	No
Mercury	Jan 29	0.01 <MDL	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Selenium	Jan 29	0.10	µg/L	No
Uranium	Jan 29	0.443	µg/L	No
Fluoride	July 19	0.1	mg/L	No
Nitrite	Jan 25	0.05	mg/L	No
	April 12	0.05		
	July 05	0.05		
	Oct 18	0.05		
Nitrate	Jan 25	0.66	mg/L	No
	April 12	0.96		
	July 05	0.35		
	Oct 18	0.79		

Summary of lead testing under Schedule 15.1 during this reporting period

*The Millbrook Municipal Water System was granted relief from regulatory lead sampling in Schedule 15.1 of O. Reg. 170/03, as described in Schedule D of the Municipal Drinking Water Licence #136-101, Issue #5, dated January 5, 2017.

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	0	0	µg/L	0
Distribution	3	0 – 0.0005	µg/L	0

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	Jan 29	0.02<MDL	µg/L	No
Atrazine + N-dealkylated metabolites	Jan 29	0.01<MDL	µg/L	No
Azinphos-methyl	Jan 29	0.05<MDL	µg/L	No
Benzene	Jan 29	0.32<MDL	µg/L	No
Benzo(a)pyrene	Jan 29	0.004<MDL	µg/L	No
Bromoxynil	Jan 29	0.33<MDL	µg/L	No
Carbaryl	Jan 29	0.05<MDL	µg/L	No
Carbofuran	Jan 29	0.01<MDL	µg/L	No
Carbon Tetrachloride	Jan 29	0.16<MDL	µg/L	No
Chlorpyrifos	Jan 29	0.02<MDL	µg/L	No
Diazinon	Jan 29	0.02<MDL	µg/L	No
Dicamba	Jan 29	0.20<MDL	µg/L	No
1,2-Dichlorobenzene	Jan 29	0.41<MDL	µg/L	No
1,4-Dichlorobenzene	Jan 29	0.36<MDL	µg/L	No
1,2-Dichloroethane	Jan 29	0.35<MDL	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 29	0.33<MDL	µg/L	No
Dichloromethane	Jan 29	0.35<MDL	µg/L	No
2-4 Dichlorophenol	Jan 29	0.15<MDL	µg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 29	0.19<MDL	µg/L	No
Diclofop-methyl	Jan 29	0.40<MDL	µg/L	No
Dimethoate	Jan 29	0.03<MDL	µg/L	No
Diquat	Jan 29	1<MDL	µg/L	No
Diuron	Jan 29	0.03<MDL	µg/L	No
Glyphosate	Jan 29	1<MDL	µg/L	No
Malathion	Jan 29	0.02<MDL	µg/L	No
2-Methyl-4-chlorophenoxyacetic acid MCPA	Jan 29	0.00012 <MDL	µg/L	No
Metolachlor	Jan 29	0.01<MDL	µg/L	No
Metribuzin	Jan 29	0.02<MDL	µg/L	No
Monochlorobenzene	Jan 29	0.30<MDL	µg/L	No
Paraquat	Jan 29	1<MDL	µg/L	No
Pentachlorophenol	Jan 29	0.15<MDL	µg/L	No
Phorate	Jan 29	0.01<MDL		
Picloram	Jan 29	1<MDL	µg/L	No
Polychlorinated Biphenyls(PCB)	Jan 29	0.04<MDL	µg/L	No
Prometryne	Jan 29	0.10	µg/L	No
Simazine	Jan 29	0.01<MDL	µg/L	No
THM (NOTE: show latest annual average)	Average	4.9	µg/L	No
Terbufos	Jan 29	0.01<MDL	µg/L	No
Tetrachloroethylene	Jan 29	0.35<MDL	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan 29	0.20<MDL	µg/L	No
Triallate	Jan 29	0.01<MDL	µg/L	No
Trichloroethylene	Jan 29	0.44<MDL	µg/L	No
2,4,6-Trichlorophenol	Jan 29	0.25<MDL	µg/L	No
Trifluralin	Jan 29	0.02<MDL	µg/L	No
Vinyl Chloride	Jan 29	0.17<MDL	µg/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			