

ANNUAL REPORT

ONTARIO REGULATION 170/03
SECTION 11

BAXTER DISTRIBUTION SYSTEM



**FOR THE PERIOD:
JANUARY 1, 2016 – DECEMBER 31, 2016**

*Prepared for the Corporation of the Township of Essa
by the Ontario Clean Water Agency*



**ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX**

**Part III Form 2
Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	260086866
Drinking-Water System Name:	Baxter Distribution System
Drinking-Water System Owner:	The Corporation of the Township of Essa
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2016 – December 31, 2016

<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 Essa Municipal Office 5786 Simcoe County Road 21 Utopia, Essa Twp, ON. L0M 1T0 or on the following website: http://www.essatownship.on.ca</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <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: 80px; height: 20px; display: inline-block;"></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
Not applicable	Not applicable

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 [NA]

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

Description of the Baxter Distribution System

Source Water

On November 21, 2007 this water system was switched over to the Collingwood to Alliston treated water transmission main (pipeline). The Raymond A. Barker Ultrafiltration Plant (RAB) in Collingwood supplies safe drinking water through the pipeline to the Baxter Facility.

Re-chlorination System

Modifications to the chlorination system enable re-chlorination of the treated water in the pipeline prior to filling the storage tank. Treated water from Collingwood is monitored by an on-line free chlorine analyzer in the pumphouse.

Storage Reservoir and High Lift Pumping

An above ground water storage tank provides a storage capacity of 300 m³ and is equipped with a separate fill and discharge pipe. Two (2) high lift distribution pumps with VFD (one duty and one standby) are connected to the storage tank discharge pipe. An on-line free chlorine analyzer monitors the treated water from the storage tank.

Fire Truck Filling Station

A "dry hydrant" is provided for fire truck filling or for filling the storage tank (hauled water) if the pipeline was down for maintenance and unavailable.

Alarming of the System

The system is alarmed for a number of parameters and monitored by Huronia Alarms, Midland, Ontario.

Auxiliary Power

The Baxter Distribution System is equipped with a 35 kw generator and auto switch over to provide stand by power in the event of a power failure.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite 12% Solution NSF, Disinfection

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Please provide a brief description of any significant expenses incurred

Expenses incurred which were in addition to normal operating costs in 2016:

1. Purchased spare parts for chlorine pumps
2. Data plan for the Red Lion Data Management/Monitoring System
3. Drinking Water Quality Management Standard (DWQMS) audit of OCWA Quality & Environmental Management System (QEMS)
4. Repaired radar unit to eliminate false readings due to temperature changes, icing in the reservoir

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
No Incidents to Report for 2016					

Baxter Distribution System – Falls under Section 5 Exemptions: residential systems

This small municipal drinking water system obtains all of its water from the Raymond A. Barker Ultrafiltration Plant in Collingwood via the Collingwood to Alliston pipeline.

Table 1
Microbiological testing done under the Schedule 11 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 #)
DW - Distribution Water	52	0 - 0	0 - 0	52	0 - 26
TW – Treated Water from Storage Tank (monitoring purposes only)	52	0 - 0	0 - 0	52	0 - 80

Table 2
Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Treated Water from Storage Tank Free Chlorine Residual	8760	0.74 – 1.63 mg/L
Distribution Free Chlorine Residual	164	0.75 – 1.46 mg/L

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

Table 3
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
No Additional Testing and or Sampling Required				

Table 4
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				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite				
Nitrate				

Sample results can be found in the Collingwood Drinking Water System 2016 Annual Compliance Report located on the following website:
www.collingwood.ca/water/docs

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Table 5
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	Lead Results and Comments
Plumbing	Relief from all Plumbing Requirements
Distribution	No Lead Testing in the Distribution in 2016 Alkalinity tested during the two regulated sample periods had results between 172 mg/L to 187 mg/L

Table 6
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				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				

Sample results can be found in the Collingwood Drinking Water System 2016 Annual Compliance Report located on the following website:
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Polychlorinated Biphenyls(PCB)	47.25 (2016 - THM)
Prometryne	
Simazine	
THM (NOTE: show latest annual average)	
Temephos	
Terbufos	
Tetrachloroethylene	
2,3,4,6-Tetrachlorophenol	
Triallate	
Trichloroethylene	
2,4,6-Trichlorophenol	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	
Trifluralin	
Vinyl Chloride	

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
Please refer to the Collingwood Drinking Water System 2016 Annual Compliance Report located on the following website: www.collingwood.ca/water/docs			

(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)