



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

<b>Drinking-Water System Number:</b>	220000013
<b>Drinking-Water System Name:</b>	ERIN DRINKING WATER SYSTEM
<b>Drinking-Water System Owner:</b>	CORPORATION OF THE TOWN OF ERIN
<b>Drinking-Water System Category:</b>	LARGE MUNICIPAL RESIDENTIAL
<b>Period being reported:</b>	JANUARY 1 – DECEMBER 31, 2016

<p><u><i>Complete if your Category is Large Municipal Residential or Small Municipal Residential</i></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>TOWN OF ERIN COMPLIANCE ADMINISTRATOR'S OFFICE 5684 TRAFALGAR ROAD HILLSBURGH, ONTARIO N0B 1Z0</p> </div>	<p><u><i>Complete for all other Categories.</i></u></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></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 type="text" value="N/A"/></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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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
N/A	N/A

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? N/A  
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 Public Request



**Describe your Drinking-Water System**

The Erin Drinking Water System is a Class 3 Water Distribution and Supply Subsystem serving a population of approximately 3000 residential and commercial customers, located in the former Village of Erin. The distribution system has 26 km of water mains with 154 fire hydrants.

The water system is a ground water system supplied from two wells drilled into the fractured limestone bedrock, with a total rated capacity of 4,128 m<sup>3</sup>/day. The pressure in most of the Erin Drinking Water System is maintained by a 1,703 m<sup>3</sup> water tower, however 65 residences in the Erin Heights Subdivision require a booster pump to maintain adequate pressure.

Well No. 7, located at 46 Shamrock Road, Erin, is a 260 mm diameter, 43m deep drilled ground water well, with casing to a depth of 19.1m. The well is located inside the pump house and is equipped with a submersible pump rated at 1,800 L/min. The neighboring land is used for both industrial and agricultural purposes. There is also undeveloped land in the vicinity of the pumphouse.

Well No. 8, located on Lot 17, concession 8-9, Erin, is a 200 mm diameter, 46 m deep drilled groundwater well, with double casing to depths of 6.7 m (outer casing) and 8.53 m (inner casing). The well is located approximately 4 m northwest of the pump house and is equipped with a submersible pump rated at 1,636 L/min. The neighboring land is used for both residential and agricultural purposes. A golf course runs adjacent to the pumphouse along with undeveloped land.

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

**Gaseous 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**

<b>Erin Well House Maintenance</b>	<b>\$ 35,777</b>
<b>Erin Distribution Maintenance</b>	<b>\$ 29,770</b>
<b>Erin Water Tower Maintenance</b>	<b>\$ 8,003</b>
<b>Hydro</b>	<b>\$ 76,351</b>
<b>1 Hydrant Replacement</b>	<b>\$ 6,106</b>
<b>Well # 7 Fixed Generator (Insurance Claim)</b>	<b>\$ 38,882</b>
<b>Meter Replacement Program (Erin &amp; Hillsburgh)</b>	<b>\$ 11,356</b>
<b>Testing/Sampling</b>	<b>\$ 9,120</b>



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
N/A					

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 #)	Number of Samples	Range of Total Coliform Results (min #)-(max #)	Number of HPC & Background Bacteria Samples	Range of HPC & Background Bacteria Results (min #)-(max #)
Raw	104	0-0	104	0-0	104	0-3cfu/100mL
Treated	104	0-0	104	0-0	208	0-1cfu/100mL
Distribution	209	0-0	209	0-0	418	0-250cfu/100mL

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 #)
Turbidity (E7)	11 *	0.09 – 0.55 NTU
Turbidity (E8)	12	0.07 – 0.24 NTU
Chlorine (continuous) (E7)	8760	*0.000 – 1.440
Chlorine (continuous) (E8)	8760	*0.000 – 2.000
Chlorine (grab samples)	366	0.51 – 1.10
Fluoride (If the DWS provides fluoridation)	N/A	N/A

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

*\*This reading is not considered to be adverse. It was due to power failures, alarm testing and programming changes.*

*\*Turbidity sample not completed at E7 in October 2016 due to equipment malfunction.*

*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. N/A

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
<i>None to report</i>				

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 (min#) – (max #)	Number of Exceedances
Plumbing	N/A	-	-
Distribution	N/A	-	-

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

**Well E7**

Parameter	Sample Date	Result Value	Unit of Measure	MAC (Maximum Acceptable Concentration)
Antimony	2015/06/23	ND	mg/L	<b>0.006</b>
Arsenic	2015/06/23	ND	mg/L	<b>0.025</b>
Barium	2015/06/23	0.031	mg/L	<b>1</b>
Boron	2015/06/23	0.017	mg/L	<b>5</b>
Cadmium	2015/06/23	ND	mg/L	<b>0.005</b>
Chromium	2015/06/23	ND	mg/L	<b>0.05</b>
Lead	2015/06/23	ND	mg/L	<b>0.01</b>
Mercury	2015/06/23	ND	mg/L	<b>0.001</b>
Selenium	2015/06/23	ND	mg/L	<b>0.01</b>
Sodium	2013/06/20	6.2	mg/L	<b>20</b>
Uranium	2015/06/23	0.00042	mg/L	<b>0.02</b>
Fluoride	2013/06/20	0.2	mg/L	<b>1.5</b>
Nitrite	2016/11/14	ND	mg/L	<b>1</b>
Nitrate	2016/11/14	ND	mg/L	<b>10</b>

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

**Well E7**

Parameter	Sample Date	Result Value	Unit of Measure	MAC (Maximum Acceptable Concentration)
Alachlor	2015/06/23	ND	ug/L	<b>5</b>
Aldicarb	2015/06/23	ND	ug/L	<b>9</b>
Aldrin + Dieldrin	2015/06/23	ND	ug/L	<b>0.7</b>
Atrazine + N-dealkylated metabolites	2015/06/23	ND	ug/L	<b>5</b>
Azinphos-methyl	2015/06/23	ND	ug/L	<b>20</b>
Bendiocarb	2015/06/23	ND	ug/L	<b>40</b>
Benzene	2015/06/23	ND	ug/L	<b>5</b>
Benzo(a)pyrene	2015/06/23	ND	ug/L	<b>0.01</b>
Bromoxynil	2015/06/23	ND	ug/L	<b>5</b>
Carbaryl	2015/06/23	ND	ug/L	<b>90</b>
Carbofuran	2015/06/23	ND	ug/L	<b>90</b>
Carbon Tetrachloride	2015/06/23	ND	ug/L	<b>5</b>
Chlordane (Total)	2015/06/23	ND	ug/L	<b>7</b>
Chlorpyrifos	2015/06/23	ND	ug/L	<b>90</b>
Cyanazine	2015/06/23	ND	ug/L	<b>10</b>
Diazinon	2015/06/23	ND	ug/L	<b>20</b>
Dicamba	2015/06/23	ND	ug/L	<b>120</b>



Parameter	Sample Date	Result Value	Unit of Measure	MAC (Maximum Acceptable Concentration)
1,2-Dichlorobenzene	2015/06/23	ND	ug/L	200
1,4-Dichlorobenzene	2015/06/23	ND	ug/L	5
Dichlorodiphenyltrichloroethane (DDT) + metabolites	2015/06/23	ND	ug/L	30
1,2-Dichloroethane	2015/06/23	ND	ug/L	5
1,1-Dichloroethylene (vinylidene chloride)	2015/06/23	ND	ug/L	14
Dichloromethane	2015/06/23	ND	ug/L	50
2-4 Dichlorophenol	2015/06/23	ND	ug/L	900
2,4-Dichlorophenoxy acetic acid (2,4-D)	2015/06/23	ND	ug/L	100
Diclofop-methyl	2015/06/23	ND	ug/L	9
Dimethoate	2015/06/23	ND	ug/L	20
Dinoseb	2015/06/23	ND	ug/L	10
Diquat	2015/06/23	ND	ug/L	70
Diuron	2015/06/23	ND	ug/L	150
Glyphosate	2015/06/23	ND	ug/L	280
Heptachlor + Heptachlor Epoxide	2015/06/23	ND	ug/L	3
Lindane (Total)	2015/06/23	ND	ug/L	4
Malathion	2015/06/23	ND	ug/L	190
Methoxychlor	2015/06/23	ND	ug/L	900
Metolachlor	2015/06/23	ND	ug/L	50
Metribuzin	2015/06/23	ND	ug/L	80
Chlorobenzene	2015/06/23	ND	ug/L	80
Paraquat	2015/06/23	ND	ug/L	10
Parathion	2015/06/23	ND	ug/L	50
Pentachlorophenol	2015/06/23	ND	ug/L	60
Phorate	2015/06/23	ND	ug/L	2
Picloram	2015/06/23	ND	ug/L	190
Polychlorinated Biphenyls(PCB)	2015/06/23	ND	ug/L	3
Prometryne	2015/06/23	ND	ug/L	1
Simazine	2015/06/23	ND	ug/L	10
THM (Distribution) (NOTE: latest annual average)	2016/11/14	5.13	ug/L	100
Temephos	2015/06/23	ND	ug/L	280
Terbufos	2015/06/23	ND	ug/L	1
Tetrachloroethylene	2015/06/23	ND	ug/L	30
2,3,4,6-Tetrachlorophenol	2015/06/23	ND	ug/L	100
Triallate	2015/06/23	ND	ug/L	230
Trichloroethylene	2015/06/23	ND	ug/L	5
2,4,6-Trichlorophenol	2015/06/23	ND	ug/L	5
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2015/06/23	ND	ug/L	280
Trifluralin	2015/06/23	ND	ug/L	45
Vinyl Chloride	2015/06/23	ND	ug/L	2



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

**Well E8**

Parameter	Sample Date	Result Value	Unit of Measure	MAC (Maximum Acceptable Concentration)
Antimony	2015/06/23	ND	mg/L	<b>0.006</b>
Arsenic	2015/06/23	ND	mg/L	<b>0.025</b>
Barium	2015/06/23	0.045	mg/L	<b>1</b>
Boron	2015/06/23	0.011	mg/L	<b>5</b>
Cadmium	2015/06/23	ND	mg/L	<b>0.005</b>
Chromium	2015/06/23	ND	mg/L	<b>0.05</b>
Lead	2015/06/23	ND	mg/L	<b>0.01</b>
Mercury	2015/06/23	ND	mg/L	<b>0.001</b>
Selenium	2015/06/23	ND	mg/L	<b>0.01</b>
Sodium	2013/06/20	5.2	mg/L	<b>20</b>
Uranium	2015/06/23	0.00011	mg/L	<b>0.02</b>
Fluoride	2013/06/20	0.27	mg/L	<b>1.5</b>
Nitrite	2016/11/14	ND	mg/L	<b>1</b>
Nitrate	2016/11/14	ND	mg/L	<b>10</b>

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

**Well E8**

Parameter	Sample Date	Result Value	Unit of Measure	MAC (Maximum Acceptable Concentration)
Alachlor	2015/06/23	ND	ug/L	<b>5</b>
Aldicarb	2015/06/23	ND	ug/L	<b>9</b>
Aldrin + Dieldrin	2015/06/23	ND	ug/L	<b>0.7</b>
Atrazine + N-dealkylated metabolites	2015/06/23	ND	ug/L	<b>5</b>
Azinphos-methyl	2015/06/23	ND	ug/L	<b>20</b>
Bendiocarb	2015/06/23	ND	ug/L	<b>40</b>
Benzene	2015/06/23	ND	ug/L	<b>5</b>
Benzo(a)pyrene	2015/06/23	ND	ug/L	<b>0.01</b>
Bromoxynil	2015/06/23	ND	ug/L	<b>5</b>
Carbaryl	2015/06/23	ND	ug/L	<b>90</b>
Carbofuran	2015/06/23	ND	ug/L	<b>90</b>
Carbon Tetrachloride	2015/06/23	ND	ug/L	<b>5</b>
Chlordane (Total)	2015/06/23	ND	ug/L	<b>7</b>
Chlorpyrifos	2015/06/23	ND	ug/L	<b>90</b>
Cyanazine	2015/06/23	ND	ug/L	<b>10</b>
Diazinon	2015/06/23	ND	ug/L	<b>20</b>
Dicamba	2015/06/23	ND	ug/L	<b>120</b>

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1,2-Dichloroethane	2015/06/23	ND	ug/L	5
1,1-Dichloroethylene (vinylidene chloride)	2015/06/23	ND	ug/L	14
Dichloromethane	2015/06/23	ND	ug/L	50
2-4 Dichlorophenol	2015/06/23	ND	ug/L	900
2,4-Dichlorophenoxy acetic acid (2,4-D)	2015/06/23	ND	ug/L	100
Diclofop-methyl	2015/06/23	ND	ug/L	9
Dimethoate	2015/06/23	ND	ug/L	20
Dinoseb	2015/06/23	ND	ug/L	10
Diquat	2015/06/23	ND	ug/L	70
Diuron	2015/06/23	ND	ug/L	150
Glyphosate	2015/06/23	ND	ug/L	280
Heptachlor + Heptachlor Epoxide	2015/06/23	ND	ug/L	3
Lindane (Total)	2015/06/23	ND	ug/L	4
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Tetrachloroethylene	2015/06/23	ND	ug/L	30
2,3,4,6-Tetrachlorophenol	2015/06/23	ND	ug/L	100
Triallate	2015/06/23	ND	ug/L	230
Trichloroethylene	2015/06/23	ND	ug/L	5
2,4,6-Trichlorophenol	2015/06/23	ND	ug/L	5
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2015/06/23	ND	ug/L	280
Trifluralin	2015/06/23	ND	ug/L	45
Vinyl Chloride	2015/06/23	ND	ug/L	2



# Ontario Drinking-Water Systems Regulation O. Reg. 170/03

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
n/a			