

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

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

<b>Drinking-Water System Number:</b>	220005599
<b>Drinking-Water System Name:</b>	Rockwood Water Supply System
<b>Drinking-Water System Owner:</b>	The Corporation of the Township of Guelph-Eramosa
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2005 – December 31, 2005

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></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; margin-top: 5px;">                 Township of Guelph-Eramosa                  PO Box 3000                  8348 Wellington Road, 124                  Rockwood                  Ontario, N0B 2K0             </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto;"></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 auto;"></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
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?

Yes [ ] No [ ] Not Applicable [X]

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 - notice via Water or Tax Bills

**Describe your Drinking-Water System**

The Rockwood Water Supply System is located in the Township of Guelph-Eramosa. The water system consists of three municipal groundwater wells, a water tower and distribution system. Two of the wells are located at the Station Street pumphouse and the other at the Bernardi Pumphouse. The water level in the water tower starts and stops the well pumps. The raw water from the wells is chlorinated prior to discharge into the distribution system. Once the low level in the water tower has been reached, the pump station is called upon to operate and supply the distribution system with the excess water filling the tower. This water system is known as a demand/storage system. Once the water tower is full, the well pumps shut down until the water level drops in the water tower and the pumps are required to run again.

The two wells located within the Station Street pumphouse are approved to supply water at a maximum combined flow rate of 1,360 L/min and a maximum daily flow of 1,964 m<sup>3</sup>/day. The well located within the Bernardi pumphouse is approved to supply water at a maximum flow rate of 910 L/min and a maximum daily flow of 1,310 m<sup>3</sup>/day. Before entering the distribution system from these wells, the raw water is treated by adding a disinfectant to protect against microbial contaminants. The water is disinfected with sodium hypochlorite solution (chlorine) and iron sequestering (sodium silicate), which is injected during the pump cycle.

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

Sodium Hypochlorite (12% solution) - disinfection  
 Sodium Silicate (34.8% solution) – iron sequestering

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**

- Metcon metering control panel (Bernardi station).
- Security fencing around the water station (Bernardi Station).

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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
Feb.11/05	Fluoride	1.65	mg/L	Resample	Feb.11/05
Feb.19/05	Chlorine	<20.0	mg/L	Disinfectant Restored/Increased Flushed Mains/Pipes	Feb.19/05
Feb. 24/05	Chlorine	<0.05	mg/L	Disinfectant Restored/Increased	Feb.24/05
June 25/05	Chlorine	<0.20	mg/L	Re-test Disinfectant Restored/Increased Flushed Mains/Pipes	June 25/05
June 30/05	Chlorine	6.7	mg/L	Disinfectant Restored/Lowered Flushed Mains/Pipes	June 30/05

Microbiological testing done under the Schedule 10 of Regulation 170/03, during this reporting period.

	# of Samples	E.Coli (min – max)	Total Coliform (min – max)	# of HPC Samples	HPC (min – max)	# of Bkgnd Samples	Bkgnd (min - max)
<b>Raw</b>	147	0 - 0	0 - 2	1	150 - 150	2	0 - 0
<b>Treated</b>	88	0 - 0	0 - 0	52	0 - 2	38	0 - 18
<b>Distribution</b>	175	0 - 0	0 - 0	118	0 - 27	53	0 - 39

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)
<b>Raw Water</b>		
Turbidity (Station St - Well #1)	13	0.10 - 0.48NTU
Turbidity (Station St - Well #2)	13	0.09 - 0.64NTU
Turbidity (Bernardi)	17	0.04 – 1.24NTU
<b>Treated Water</b>		
Turbidity (Station St.)	8760	0.00 - 4.0 NTU <sup>1</sup>
Turbidity (Bernardi)	8760	0.00 - 4.0 NTU <sup>1</sup>
Chlorine Residual (Station St)	8760	0 - 4
Chlorine Residual (Bernardi)	8760	0 - 4
<b>Distribution System</b>		
Chlorine Residual	8760	0.08-3.40
<b>Fluoride</b> (If the DWS provides fluoridation)	N/A	N/A

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

<sup>1</sup> Turidity Spikes Mechanically Related.

*NOTE: Record the unit of measure if it is not milligrams per litre.*

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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
<b>BERNARDI</b>				
Antimony	Feb. 07/05	<0.6	ug/l	No
Arsenic	Feb. 07/05	<2	ug/l	No
Barium	Feb. 07/05	35	ug/l	No
Boron	Feb. 07/05	9.0	ug/l	No
Cadmium	Feb. 07/05	<0.1	ug/l	No
Chromium	Feb. 07/05	4.0	ug/l	No
Lead (Distribution)	Jan. 17/05	0.3	ug/l	No
	Apr. 11/05	0.1		
	July 07/05	0.2		
Mercury	Feb. 07/05	<0.02	ug/l	No
Selenium	Feb. 07/05	<3	ug/l	No
Sodium	Feb. 07/05	3.19	mg/l	No
Uranium	Feb. 07/05	<0.05	ug/l	No
Fluoride	Feb. 07/05	1.65	mg/l	Yes
	Feb. 11/05	1.54		
Nitrite	Jan. 17/05	<0.005	mg/l	No
	Apr. 11/05	<0.005		
	July 07/05	<0.005		
	Oct 10/05	<0.005		
Nitrate	Jan. 17/05	0.015	mg/l	No
	Apr. 11/05	0.026		
	July 07/05	<0.013		
	Oct 10/05	<0.013		

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>STATION STREET</b>				
Antimony	July 07/05	<0.6	ug/l	No
Arsenic	July 07/05	2.0	ug/l	No
Barium	July 07/05	94.0	ug/l	No
Boron	July 07/05	22.0	ug/l	No
Cadmium	July 07/05	<0.1	ug/l	No
Chromium	July 07/05	6.0	ug/l	No

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STATION STREET (cont'd)				
<b>Lead (Distribution)</b>	Jan. 17/05	0.3	ug/l	No
	Apr. 11/05	0.1		
	July 7/05	0.2		
<b>Mercury</b>	July 07/05	<0.02	ug/l	No
<b>Selenium</b>	July 07/05	<3.0	ug/l	No
<b>Sodium</b>	Aug. 18/03	70.2	mg/l	Yes
<b>Uranium</b>	July 07/05	1.13	ug/l	No
<b>Fluoride</b>	Aug. 08/03	0.92	mg/l	No
<b>Nitrite</b>	Jan. 17/05	<0.005	mg/l	No
	Apr. 11/05	<0.005		
	July 07/05	<0.005		
	Oct 10/05	<0.005		
<b>Nitrate</b>	Jan. 17/05	0.027	mg/l	No
	Apr. 11/05	0.048		
	July 07/05	<0.013		
	Oct 10/05	<0.013		

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>BERNARDI</b>				
<b>Alachlor</b>	Feb. 07/05	<0.11	ug/l	No
<b>Aldicarb</b>	Feb. 07/05	<0.30	ug/l	No
<b>Aldrin + Dieldrin</b>	Feb. 07/05	<0.067	ug/l	No
<b>Atrazine + N-dealkylated metabolites</b>	Feb. 07/05	<0.12	ug/l	No
<b>Azinphos-methyl</b>	Feb. 07/05	<0.21	ug/l	No
<b>Bendiocarb</b>	Feb. 07/05	<0.13	ug/l	No
<b>Benzene</b>	Feb. 07/05	<0.36	ug/l	No
<b>Benzo(a)pyrene</b>	Feb. 07/05	<0.004	ug/l	No
<b>Bromoxynil</b>	Feb. 07/05	<0.094	ug/l	No
<b>Carbaryl</b>	Feb. 07/05	<0.16	ug/l	No
<b>Carbofuran</b>	Feb. 07/05	<0.37	ug/l	No
<b>Carbon Tetrachloride</b>	Feb. 07/05	<0.34	ug/l	No
<b>Chlordane (Total)</b>	Feb. 07/05	<0.11	ug/l	No
<b>Chlorpyrifos</b>	Feb. 07/05	<0.18	ug/l	No
<b>Cyanazine</b>	Feb. 07/05	<0.18	ug/l	No
<b>Diazinon</b>	Feb. 07/05	<0.081	ug/l	No
<b>Dicamba</b>	Feb. 07/05	<0.17	ug/l	No
<b>1,2-Dichlorobenzene</b>	Feb. 07/05	<0.56	ug/l	No
<b>1,4-Dichlorobenzene</b>	Feb. 07/05	<0.25	ug/l	No
<b>Dichlorodiphenyltrichloroethane (DDT) + metabolites</b>	Feb. 07/05	<0.14	ug/l	No

<b>BERNARDI (cont'd)</b>				
<b>1,2-Dichloroethane</b>	Feb. 07/05	<0.32	ug/l	No
<b>1,1-Dichloroethylene (vinylidene chloride)</b>	Feb. 07/05	<0.52	ug/l	No
<b>Dichloromethane</b>	Feb. 07/05	<1.17	ug/l	No
<b>2-4 Dichlorophenol</b>	Feb. 07/05	<0.15	ug/l	No
<b>2,4-Dichlorophenoxy acetic acid (2,4-D)</b>	Feb. 07/05	<0.11	ug/l	No
<b>Diclofop-methyl</b>	Feb. 07/05	<0.13	ug/l	No
<b>Dimethoate</b>	Feb. 07/05	<0.12	ug/l	No
<b>Dinoseb</b>	Feb. 07/05	<0.084	ug/l	No
<b>Diquat</b>	Feb. 07/05	<1	ug/l	No
<b>Diuron</b>	Feb. 07/05	<0.087	ug/l	No
<b>Glyphosate</b>	Feb. 07/05	<6	ug/l	No
<b>Heptachlor + Heptachlor Epoxide</b>	Feb. 07/05	<0.11	ug/l	No
<b>Lindane (Total)</b>	Feb. 07/05	<0.056	ug/l	No
<b>Malathion</b>	Feb. 07/05	<0.091	ug/l	No
<b>Methoxychlor</b>	Feb. 07/05	<0.14	ug/l	No
<b>Metolachlor</b>	Feb. 07/05	<0.092	ug/l	No
<b>Metribuzin</b>	Feb. 07/05	<0.12	ug/l	No
<b>Monochlorobenzene</b>	Feb. 07/05	<0.46	ug/l	No
<b>Paraquat</b>	Feb. 07/05	<1	ug/l	No
<b>Parathion</b>	Feb. 07/05	<0.18	ug/l	No
<b>Pentachlorophenol</b>	Feb. 07/05	<0.15	ug/l	No
<b>Phorate</b>	Feb. 07/05	<0.11	ug/l	No
<b>Picloram</b>	Feb. 07/05	<0.20	ug/l	No
<b>Polychlorinated Biphenyls(PCB)</b>	Feb. 07/05	<0.04	ug/l	No
<b>Prometryne</b>	Feb. 07/05	<0.23	ug/l	No
<b>Simazine</b>	Feb. 07/05	<0.15	ug/l	No
<b>THM (Distribution)</b> (NOTE: show latest annual average) average – 6.38 ug/l	Jan. 17/05 Apr. 11/05 July 07/05 Oct 10/05	0.92 4.7 5.9 14.0	ug/l	No
<b>Temephos</b>	Feb. 07/05	<0.31	ug/l	No
<b>Terbufos</b>	Feb. 07/05	<0.12	ug/l	No
<b>Tetrachloroethylene</b>	Feb. 07/05	<0.48	ug/l	No
<b>2,3,4,6-Tetrachlorophenol</b>	Feb. 07/05	<0.14	ug/l	No
<b>Triallate</b>	Feb. 07/05	<0.10	ug/l	No
<b>Trichloroethylene</b>	Feb. 07/05	<0.54	ug/l	No
<b>2,4,6-Trichlorophenol</b>	Feb. 07/05	<0.25	ug/l	No
<b>2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)</b>	Feb. 07/05	<0.14	ug/l	No
<b>Trifluralin</b>	Feb. 07/05	<0.12	ug/l	No
<b>Vinyl Chloride</b>	Feb. 07/05	<0.08	ug/l	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>STATION STREET</b>				
Alachlor	July 07/05	<0.11	ug/l	No
Aldicarb	July 07/05	<0.30	ug/l	No
Aldrin + Dieldrin	July 07/05	<0.067	ug/l	No
Atrazine + N-dealkylated metabolites	July 07/05	<0.12	ug/l	No
Azinphos-methyl	July 07/05	<0.21	ug/l	No
Bendiocarb	July 07/05	<0.13	ug/l	No
Benzene	July 07/05	<0.36	ug/l	No
Benzo(a)pyrene	July 07/05	<0.004	ug/l	No
Bromoxynil	July 07/05	<0.094	ug/l	No
Carbaryl	July 07/05	<0.16	ug/l	No
Carbofuran	July 07/05	<0.37	ug/l	No
Carbon Tetrachloride	July 07/05	<0.34	ug/l	No
Chlordane (Total)	July 07/05	<0.11	ug/l	No
Chlorpyrifos	July 07/05	<0.18	ug/l	No
Cyanazine	July 07/05	<0.18	ug/l	No
Diazinon	July 07/05	<0.081	ug/l	No
Dicamba	July 07/05	<0.17	ug/l	No
1,2-Dichlorobenzene	July 07/05	<0.56	ug/l	No
1,4-Dichlorobenzene	July 07/05	<0.25	ug/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	July 07/05	<0.14	ug/l	No
1,2-Dichloroethane	July 07/05	<0.32	ug/l	No
1,1-Dichloroethylene (vinylidene chloride)	July 07/05	<0.52	ug/l	No
Dichloromethane	July 07/05	<1.17	ug/l	No
2-4 Dichlorophenol	July 07/05	<0.15	ug/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 07/05	<0.11	ug/l	No
Diclofop-methyl	July 07/05	<0.13	ug/l	No
Dimethoate	July 07/05	<0.12	ug/l	No
Dinoseb	July 07/05	<0.084	ug/l	No
Diquat	July 07/05	<1	ug/l	No
Diuron	July 07/05	<0.087	ug/l	No
Glyphosate	July 07/05	<6	ug/l	No
Heptachlor + Heptachlor Epoxide	July 07/05	<0.11	ug/l	No
Lindane (Total)	July 07/05	<0.056	ug/l	No
Malathion	July 07/05	<0.091	ug/l	No
Methoxychlor	July 07/05	<0.14	ug/l	No
Metolachlor	July 07/05	<0.092	ug/l	No
Metribuzin	July 07/05	<0.12	ug/l	No
Monochlorobenzene	July 07/05	<0.46	ug/l	No
Paraquat	July 07/05	<1	ug/l	No

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STATION ST. WELL (cont'd)				
Parathion	July 07/05	<0.18	ug/l	No
Pentachlorophenol	July 07/05	<0.15	ug/l	No
Phorate	July 07/05	<0.11	ug/l	No
Picloram	July 07/05	<0.20	ug/l	No
Polychlorinated Biphenyls(PCB)	July 07/05	<0.04	ug/l	No
Prometryne	July 07/05	<0.23	ug/l	No
Simazine	July 07/05	<0.15	ug/l	No
THM (Distribution) (NOTE: show latest annual average) average – 6.38 ug/l	Jan. 17/05	0.92	ug/l	No
	Apr. 11/05	4.7		
	July 07/05	5.9		
	Oct 10/05	14.0		
Temephos	July 07/05	<0.31	ug/l	No
Terbufos	July 07/05	<0.12	ug/l	No
Tetrachloroethylene	July 07/05	<0.48	ug/l	No
2,3,4,6-Tetrachlorophenol	July 07/05	<0.14	ug/l	No
Triallate	July 07/05	<0.10	ug/l	No
Trichloroethylene	July 07/05	<0.54	ug/l	No
2,4,6-Trichlorophenol	July 07/05	<0.25	ug/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	July 07/05	<0.14	ug/l	No
Trifluralin	July 07/05	<0.12	ug/l	No
Vinyl Chloride	July 07/05	<0.08	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
Fluoride (Bernardi)	1.65	mg/L	February 7, 2005
Fluoride (Bernardi)	1.54	mg/L	February 11, 2005

**(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)**