

O. Reg. 170 Section 11 Annual Report

Drinking-Water System Number:	220005599
Drinking-Water System Name:	Rockwood Water Supply System
Drinking-Water System Owner:	The Corporation of the Township of Guelph Eramosa
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2009 – December 31, 2009

<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; margin-top: 5px;"> Office of Township of Guelph Eramosa PO Box 700 8348 Wellington Road, 124 Rockwood ON N0B 2K0 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: 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: 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	

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.

- [X] Public access/notice via the web
- [X] Public access/notice via Government Office
- [] Public access/notice via a newspaper
- [X] Public access/notice via Public Request
- [] Public access/notice via a Public Library
- [X] Public access/notice via other method Notice via Water or Tax Bills

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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 1,364 L/min and a maximum daily flow of 1,965 m³/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 m³/day. Before entering the distribution system from these wells, the raw water is treated (UV- Station St.) 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 UV Swift – Station St.
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

Bernardi Pump House - Replacement of 25 horsepower pump motor
Station St. Pump House – Well # 2 pitless seal replaced
Station St. Pump House - Well # 1 & Well # 2 – clay valves repaired
Total incurred: \$6,450.00

Notices submitted in accordance with O.Reg 170/03; Schedule 16 during this reporting period.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Jan 12/09	Lead (Dist.)	(Sodium) 88	mg/l	Reported to SAC and Health Unit received AWQI # 86140	Notified local doctors Jan 21/09

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Microbiological testing done under 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 Bkgrd Samples	Bkgnd (min - max)
Raw	150	0-0	0-0	N/A	N/A		
Treated	105	0-0	0-0	105	0-33		
Distribution	208	0-0	0-0	208	0-7.0		

Operational testing done under Schedule 8 of Regulation 170/03 during the period covered by this Annual Report.

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)
Raw Water		
Turbidity (Station Street; Well 1-67)	12	0.12-0.48 NTU's
Turbidity (Station Street; Well 1-76)	10	0.11-0.31 NTU's
Turbidity (Bernardi)	12	0.09-0.28 NTU's
Treated Water		
Chlorine Residual (Station St) (free)	8760	0.37-2.03 mg/L
Chlorine Residual (Bernardi) (free)	8760	0.24-2.24 mg/L
Distribution System		
Chlorine Residual (free)	1178	0.22-1.65 mg/L

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date 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
BERNARDI				
Antimony	Jul. 15/08	<0.86	ug/l	No
Arsenic	Jul. 15/08	2.1	ug/l	No
Barium	Jul. 15/08	39.7	ug/l	No
Boron	Jul. 15/08	7.6	ug/l	No
Cadmium	Jul. 15/08	0.009	ug/l	No
Chromium	Jul. 15/08	<0.5	ug/l	No
Lead (Distribution)	Jan. 06/09	<0.5	ug/l	No
Mercury	Jul. 15/08	<0.02	ug/l	No
Selenium	Jul. 15/08	<1	ug/l	No
Sodium	Mar. 09/09	5.3	mg/l	No
Uranium	Jul. 15/08	0.320	ug/l	No
Fluoride	Mar. 09/09	1.4	mg/l	No
Nitrite	Jan. 12/09	< 0.01	mg/l	No
	Apr.14/09	< 0.01		
	July 06/09	< 0.01		
	Oct 05/09	< 0.01		
Nitrate	Jan. 12/09	< 0.1	mg/l	No
	Apr.14/09	< 0.1		
	July 06/09	< 0.1		
	Oct 05/09	< 0.1		

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
STATION STREET				
Antimony	Jan.06/09	< 0.5	ug/L	No
Arsenic	Jan.06/09	< 1	ug/L	No
Barium	Jan.06/09	81	ug/L	No
Boron	Jan.06/09	21	ug/L	No
Cadmium	Jan.06/09	< 0.1	ug/L	No
Chromium	Jan.06/09	< 5	ug/L	No
Lead (Distribution)	Jan.06/09	< 0.5	ug/L	No
Mercury	Jan.06/09	< 0.1	ug/L	No
Selenium	Jan.06/09	< 2	ug/L	No
Sodium	Mar. 02/09	97.0	mg/L	Yes
Uranium	Jan.06/09	1.0	ug/L	No
Fluoride	Mar. 2/09	0.8	mg/L	No
Nitrite	Jan. 12/09	< 0.01	mg/l	No
	Apr.14/09	< 0.01		
	July 06/09	< 0.01		
	Oct 05/09	< 0.01		
Nitrate	Jan. 12/09	< 0.1	mg/l	No
	Apr.14/09	< 0.1		
	July 06/09	< 0.1		
	Oct 05/09	< 0.1		

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 #) ug/L	Number of Exceedances
Plumbing	176	<0.5-61	1
Distribution	16	<0.5-2.9	None

- 44 sampling points with 2 samples at each point (plumbing per session)

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
BERNARDI				
Alachlor	Jul. 15/08	<0.11	ug/l	No
Aldicarb	Jul. 15/08	<0.30	ug/l	No
Aldrin + Dieldrin	Jul. 15/08	<0.067	ug/l	No
Atrazine + N-dealkylated metabolites	Jul. 15/08	<0.12	ug/l	No
Azinphos-methyl	Jul. 15/08	<0.21	ug/l	No
Bendiocarb	Jul. 15/08	<0.13	ug/l	No
Benzene	Jul. 15/08	<0.37	ug/l	No
Benzo(a)pyrene	Jul. 15/08	<0.004	ug/l	No
Bromoxynil	Jul. 15/08	<0.33	ug/l	No
Carbaryl	Jul. 15/08	<0.16	ug/l	No
Carbofuran	Jul. 15/08	<0.37	ug/l	No
Carbon Tetrachloride	Jul. 15/08	<0.41	ug/l	No
Chlordane (Total)	Jul. 15/08	<0.11	ug/l	No
Chlorpyrifos	Jul. 15/08	<0.18	ug/l	No

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
BERNARDI Continued...				
Cyanazine	Jul. 15/08	<0.18	ug/l	No
Diazinon	Jul. 15/08	<0.081	ug/l	No
Dicamba	Jul. 15/08	<0.20	ug/l	No
1,2-Dichlorobenzene	Jul. 15/08	<0.50	ug/l	No
1,4-Dichlorobenzene	Jul. 15/08	<0.21	ug/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Jul. 15/08	<0.14	ug/l	No
1,2-Dichloroethane	Jul. 15/08	<0.43	ug/l	No
1,1-Dichloroethylene (vinylidene chloride)	Jul. 15/08	<0.41	ug/l	No
Dichloromethane	Jul. 15/08	<0.34	ug/l	No
2-4 Dichlorophenol	Jul. 15/08	<0.15	ug/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jul. 15/08	<0.19	ug/l	No
Diclofop-methyl	Jul. 15/08	<0.40	ug/l	No
Dimethoate	Jul. 15/08	<0.12	ug/l	No
Dinoseb	Jul. 15/08	<0.36	ug/l	No
Diquat	Jul. 15/08	<1	ug/l	No
Diuron	Jul. 15/08	<0.087	ug/l	No
Glyphosate	Jul. 15/08	<6	ug/l	No
Heptachlor + Heptachlor Epoxide	Jul. 15/08	<0.11	ug/l	No
Lindane (Total)	Jul. 15/08	<0.056	ug/l	No
Malathion	Jul. 15/08	<0.091	ug/l	No
Methoxychlor	Jul. 15/08	<0.14	ug/l	No
Metolachlor	Jul. 15/08	<0.092	ug/l	No
Metribuzin	Jul. 15/08	<0.12	ug/l	No
Monochlorobenzene	Jul. 15/08	<0.58	ug/l	No
Paraquat	Jul. 15/08	<1	ug/l	No
Parathion	Jul. 15/08	<0.18	ug/l	No
Pentachlorophenol	Jul. 15/08	<0.15	ug/l	No
Phorate	Jul. 15/08	<0.11	ug/l	No
Picloram	Jul. 15/08	<0.25	ug/l	No
Polychlorinated Biphenyls(PCB)	Jul. 15/08	<0.04	ug/l	No
Prometryne	Jul. 15/08	<0.23	ug/l	No
Simazine	Jul. 15/08	<0.15	ug/l	No
THM (Distribution) (NOTE: show latest annual average) average – 13.5 ug/L	Jan. 12/09 Apr. 14/09 July 06/09 Oct 05/09			
Temephos	Jul. 15/08	<0.31	ug/l	No
Terbufos	Jul. 15/08	<0.12	ug/l	No
Tetrachloroethylene	Jul. 15/08	<0.45	ug/l	No
2,3,4,6-Tetrachlorophenol	Jul. 15/08	<0.14	ug/l	No
Triallate	Jul. 15/08	<0.10	ug/l	No
Trichloroethylene	Jul. 15/08	<0.38	ug/l	No
2,4,6-Trichlorophenol	Jul. 15/08	<0.25	ug/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Jul. 15/08	<0.22	ug/l	No
Trifluralin	Jul. 15/08	<0.12	ug/l	No
Vinyl Chloride	Jul. 15/08	<0.17	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
STATION STREET				
1,1-Dichloroethylene	12-Jan-09	< 0.0001	mg/L	No
1,2-Dichlorobenzene	12-Jan-09	< 0.0002	mg/L	No
1,2-Dichloroethane	12-Jan-09	< 0.0002	mg/L	No
1,4-Dichlorobenzene	12-Jan-09	< 0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	12-Jan-09	< 0.0005	mg/L	No
2,4,5-Trichlorophenoxyacetic acid / 2,4,5-T	12-Jan-09	< 0.001	mg/L	No
2,4,6-Trichlorophenol	12-Jan-09	< 0.0005	mg/L	No
2,4-Dichlorophenol	12-Jan-09	< 0.0005	mg/L	No
2,4-Dichlorophenoxyacetic acid / 2,4-D	12-Jan-09	< 0.001	mg/L	No
Alachlor	12-Jan-09	< 0.0005	mg/L	No
Aldicarb	12-Jan-09	< 0.005	mg/L	No
Aldrin + dieldrin	12-Jan-09	< 0.00001	mg/L	No
Atrazine + N-dealkylated metabolites	12-Jan-09	< 0.001	mg/L	No
Atrazine	12-Jan-09	< 0.0005	mg/L	No
Atrazine-desethyl	12-Jan-09	< 0.5	ug/L	No
Azinophos-methyl	12-Jan-09	< 0.002	mg/L	No
Bendiocarb	12-Jan-09	< 0.002	mg/L	No
Benzene	12-Jan-09	< 0.0001	mg/L	No
Benzo[a]pyrene	12-Jan-09	< 0.000009	mg/L	No
Bromoxynil	12-Jan-09	< 0.0005	mg/L	No
Carbaryl	12-Jan-09	< 0.005	mg/L	No
Carbofuran	12-Jan-09	< 0.005	mg/L	No
Carbon tetrachloride	12-Jan-09	< 0.0001	mg/L	No
Chlorpyrifos	12-Jan-09	< 0.001	mg/L	No
Cyanazine	12-Jan-09	< 0.001	mg/L	No
DDT + metabolites	12-Jan-09	< 0.00002	mg/L	No
Diazinon	12-Jan-09	< 0.001	mg/L	No
Dicamba	12-Jan-09	< 0.001	mg/L	No
Dichloromethane	12-Jan-09	< 0.0005	mg/L	No
Diclofop-methyl	12-Jan-09	< 0.0009	mg/L	No
Dimethoate	12-Jan-09	< 0.003	mg/L	No
Dinoseb	12-Jan-09	< 0.001	mg/L	No
Diquat	12-Jan-09	< 0.007	mg/L	No
Diuron	12-Jan-09	< 0.01	mg/L	No
Glyphosate	12-Jan-09	< 0.01	mg/L	No

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
STATION STREET Continued...				
Heptachlor & Heptachlor Epoxide	12-Jan-09	< 0.00001	mg/L	No
Heptachlor epoxide	12-Jan-09	< 0.006	ug/L	No
Heptachlor	12-Jan-09	< 0.006	mg/L	No
Lindane (Total)	12-Jan-09	< 0.000006	mg/L	No
Malathion	12-Jan-09	< 0.005	mg/L	No
Methoxychlor	12-Jan-09	< 0.00002	mg/L	No
Metolachlor	12-Jan-09	< 0.0005	mg/L	No
Metribuzin	12-Jan-09	< 0.005	mg/L	No
Monochlorobenzene	12-Jan-09	< 0.0001	mg/L	No
Paraquat	12-Jan-09	< 0.001	mg/L	No
Parathion	12-Jan-09	< 0.001	mg/L	No
Pentachlorophenol / PCP	12-Jan-09	< 0.0005	mg/L	No
Phorate	12-Jan-09	< 0.0005	mg/L	No
Picloram	12-Jan-09	< 0.005	mg/L	No
Polychlorinated Biphenyls / PCBs	12-Jan-09	< 0.00005	mg/L	No
Prometryne	12-Jan-09	< 0.0003	mg/L	No
Simazine	12-Jan-09	< 0.001	mg/L	No
THMS (Distribution)	12-Jan-09			No
(NOTE: show latest annual average)	14-Apr-09			No
Average – 13.5 ug/L	6-July-09			No
	5-Oct-09			No
Temephos	12-Jan-09	< 0.01	mg/L	No
Terbufos	12-Jan-09	< 0.0005	mg/L	No
Tetrachloroethylene	12-Jan-09	< 0.0001	mg/L	No
Toluene	12-Jan-09	< 0.0002	mg/L	No
Chlordane (Total)	12-Jan-09	< 0.00001	mg/L	No
Triallate	12-Jan-09	< 0.001	mg/L	No
Trichloroethylene	12-Jan-09	0.0001	mg/L	No
Trifluralin	12-Jan-09	< 0.001	mg/L	No
Vinyl chloride	12-Jan-09	< 0.0002	mg/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
N/A			