

Appendix A

Ontario Regulation 170 Section 11 Annual Report - Rockwood

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, 2013 – December 31, 2013

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people?

Yes [] No [X]

Is your annual report available to the public at no charge on a web site on the Internet?

Yes [X] No []

Location where Summary Report required under Ontario Regulation 170/03 Schedule 22 will be available for inspection.

The Corporation of the Township of
Guelph Eramosa
PO Box 700
8348 Wellington Road, 124
Rockwood ON

Complete for all other Categories.

Number of Designated Facilities served: None

Did you provide a copy of your annual report to all Designated Facilities? N/A

Number of Interested Authorities you report N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

N/A

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 Township Website
- Public access/notice via Government Office
- Public access/electronic newsletter
- Public access/notice via Public Request

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.

Wells #1 and #2 at the Station Street Pumphouse and Well #3 at the Bernardi Pumphouse supply water directly to Zone 1 of the distribution system and to the in-distribution standpipe. When the well pumps are running, they deliver water to meet the demand in Zone 1 of the distribution system and any excess water produced is directed to the standpipe and stored there. The water level in the standpipe maintains pressure in Zone 1. A Supervisory Control and Data Acquisition / Programmable Logic Controller (SCADA/PLC) system monitors and controls the operation of the Station Street well pumps and the Bernardi high lift pumps (HLPs) based on the water level in the standpipe.

The booster pumping station draws water from the standpipe and pumps to Zone 2 of the distribution system. The station uses variable frequency drive booster pumps that allow each pump to provide a range of flow rates depending on the system demand. The booster pumps are controlled by the SCADA/PLC to maintain constant pressures in this zone. When the demand for water in Zone 2 rises, the system immediately senses the associated drop in pressure and calls the pump(s) to ramp up to meet the demand. Likewise, when the demand falls, the system senses the associated rise in pressure and calls the pumps to ramp down. At least one pump must run at all times to ensure pressures are maintained in Zone 2. Any excess pressure sensed at the booster pumping station is re-circulated back into the standpipe.

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

Please provide a brief description and a breakdown of monetary expenses incurred

Activity Description	Activity Type	Approximate Expenditure
Air scouring & video inspection of well at Bernardi Pumphouse	Service	\$12,334.48
Well pump sensor replacement at Bernardi Pumphouse	Replace	\$1,915.35
Flow meter replacements at Bernardi and Station St. Pumphouses	Replace	\$22,062.81
Rebuilding of Sodium Hypochlorite Board at Bernardi Pumphouse	Replace	\$2,654.45
Service and Repair to UV System at Station St. Pumphouse	Repair	\$1,930.22
Repair to Pitless Adaptor at Station St. Pumphouse	Repair	\$4,181.00
Turbidity Analyzer replacement at Station St. Pumphouse	Replace	\$3,832.00
Emergency Pump # 1 - motor and pump repair at the Rockwood Booster Station	Repair	\$4,839.84
Total:		\$53,750.15

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	N/A	N/A	N/A	N/A	N/A

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	# of Samples	E.Coli (min – max)	Total Coliform (min – max)	# of HPC Samples	HPC (min – max)
Raw	156	0-0	0-0	N/A	N/A
Treated	104	0-0	0-0	104	0-2
Distribution	214	0-0	0-0	214	0-10

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)	21	0.07-0.42 NTU's
Turbidity (Station Street; Well 1-76)	20	0.11-0.36 NTU's
Turbidity (Bernardi)	22	0.06-0.34 NTU's
Treated Water		
Free Chlorine Residual (Station St)	8760	0.57-1.77 mg/L
Free Chlorine Residual (Bernardi)	8760	0.58-1.67 mg/L
Distribution System		
Free Chlorine Residual	2543	0.33-1.80 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.

Test Parameter	Units	MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
Antimony (Sb)	µg/L	6	0.87	0.75	Naturally occurring metalloid rarely detected in Ontario Drinking Water
Arsenic (As)	µg/L	25	< 1.0	< 1	Sometimes found in high concentrations in ground water in hard rock areas through the natural dissolution of arsenic-containing minerals
Barium (Ba)	µg/L	1000	80	41	Common in sedimentary rocks
Boron (B)	µg/L	5000	23	< 10	Normally found in very small levels in drinking water
Cadmium (Cd)	µg/L	5	< 0.1	< 0.1	Rare element unlikely to be present as natural contaminant in drinking water

Test Parameter	Units	MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
Chromium (Cr)	µg/L	50	< 5.0	< 5.0	Trivalent chromium naturally occurs and is not considered toxic
Mercury (Hg)	µg/L	1	< 0.10	< 0.10	Sources in drinking water can be air pollution, waste incineration and metal refining operations
Selenium (Se)	µg/L	10	< 2.0	< 2.0	Naturally occurs in water at trace levels
Uranium (U)	µg/L	20	0.80	0.25	Normally occurring in granite and other mineral deposits, leaches into water
Sodium	mg/L	20	97	8.7	Naturally occurring or due to water softening. Sodium has an offensive taste at higher concentrations (> 175 mg/L), thus, low levels of sodium in water are desirable for consumer acceptance.
Fluoride (F)	mg/L	1.5	0.90	1.36	Fluoride occurs naturally in surface water due to atmospheric deposition from industry and volcanic eruptions, leaching from fertilizers, and the weathering of rocks and soils containing fluoride. Groundwater may be especially rich in fluoride depending on local geology.
Nitrite (NO ₂)	mg/L as N	1.0	<0.01	<0.01	Present in ground water, and is oxidized to nitrate when chlorinated
			<0.01	<0.01	
			<0.01	<0.01	
			<0.01	<0.01	
Nitrate (NO ₃)	mg/L as N	10.0	<0.01	<0.01	Present in ground water as a result of plant or animal material decay, fertilizers, sewage or treated wastewater
			<0.01	<0.01	
			<0.01	<0.01	
			<0.01	<0.01	

Note: Nitrate and Nitrite are sampled quarterly

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	Exempt	No history of exceedance	n/a
Distribution	pH and alkalinity		n/a

Summary of Organic parameters sampled during this reporting period or the most recent sample results (Treated except where noted)

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
Alachlor	µg/L	5	< 0.5	< 0.5	Herbicide for weed control banned in 1985
Aldicarb	µg/L	9	< 5	< 5	Insecticide used in low quantities for control of specified insects. Banned in 1990s
Aldrin + Dieldrin	µg/L	0.7	< 0.01	< 0.01	Pesticides for insect control banned in 1969
Atrazine + N-dealkylated metabolites	µg/L	5	< 1	< 1	Herbicide on corn crops for annual grass control. It is highly persistent and moderately mobile in soil
Azinphos-methyl	µg/L	20	< 2	< 2	Insecticide against foliage-feeding insects
Bendiocarb	µg/L	40	< 2	< 2	Insecticide used in buildings and greenhouses
Benzene	µg/L	5	< 0.10	< 0.10	Present in gasoline and other refined petroleum products
Benzo(a)pyrene	µg/L	0.01	< 0.009	< 0.009	Formed during the incomplete burning of organic matter and poorly adjusted diesel exhaust
Bromoxynil	µg/L	5	< 0.5	< 0.5	Herbicide for control of specific weeds
Carbaryl	µg/L	90	< 5	< 5	Insecticide used in agriculture and forestry
Carbofuran	µg/L	90	< 5	< 5	Insecticide used in agriculture
Carbon Tetrachloride	µg/L	5	< 0.10	< 0.10	Only found in ground water from old chlorinated solvent industry sites

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
Chlordane (Total)	µg/L	7	< 0.01	< 0.01	Insecticide once used in agriculture, banned in 1994
Chlorpyrifos	µg/L	90	< 1	< 1	Common insecticide for insect control
Cyanazine	µg/L	10	< 1	< 1	Herbicide for control of weeds in crop and non-crop areas
Diazinon	µg/L	20	< 1	< 1	Insecticide for dwelling pests, flies, ants and cockroaches
Dicamba	µg/L	120	< 1	< 1	Herbicide for weed control in grain crops
1,2-Dichlorobenzene	µg/L	200	< 0.20	< 0.20	Used in chemical blends
1,4-Dichlorobenzene	µg/L	5	< 0.20	< 0.20	Was widely used in toilet pucks and mothballs, banned in 1988
(DDT) + metabolites	µg/L	30	< 0.02	< 0.02	DDT use was banned in Ontario in 1998
1,2-Dichloroethane	µg/L	5	< 0.20	< 0.20	Used as a solvent and fumigant
1,1-Dichloroethylene	µg/L	14	< 0.10	< 0.10	Used in the food packaging industry and the textile industry for furniture and automotive upholstery
Dichloromethane	µg/L	50	< 0.50	< 0.50	Industrial solvent for paint and degreasing agent
2-4 Dichlorophenol	µg/L	900	< 0.5	< 0.5	Present in drinking water only as a result of industrial contamination
2,4-Dichlorophenoxy acetic acid (2,4-D)	µg/L	100	< 1	< 1	Herbicide for cereal crop and lawn weed control
Diclofop-methyl	µg/L	9	< 0.9	< 0.9	Herbicide grass control in grains and vegetables
Dimethoate	µg/L	20	< 3	< 3	Miticide and insecticide
Dinoseb	µg/L	10	< 1	< 1	Contact herbicide and desiccant. It is no longer used in Ontario
Diquat	µg/L	70	< 7	< 7	Herbicide used as a crop desiccant in seed crops
Diuron	µg/L	150	< 10	< 10	Herbicide for control of vegetation in crop and non-crop areas
Glyphosate	µg/L	280	< 10	< 10	Herbicide for weed control
Heptachlor + Heptachlor Epoxide	µg/L	3	< 0.01	< 0.01	Insecticide once used in agriculture, banned in 1969

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
Lindane (Total)	µg/L	4	< 0.006	< 0.006	Insecticide used for seed treatment
Malathion	µg/L	190	< 5	< 5	Insecticide used in fruits and vegetables
Methoxychlor	µg/L	900	< 0.02	< 0.02	Insecticide
Metolachlor	µg/L	50	< 0.5	< 0.5	Selective herbicide for pre-emergence and pre-plant broad leaf weed control
Metribuzin	µg/L	80	< 5	< 5	Herbicide for control of weed and grasses
Monochlorobenzene	µg/L	80	< 0.10	< 0.10	Industrial solvent
Paraquat	µg/L	10	< 1	< 1	Highly toxic herbicide used for desiccation of seed crops
Pentachlorophenol	µg/L	60	< 0.5	< 0.5	It is rarely found today but was extensively used as a pesticide and wood preservative
Phorate	µg/L	2	< 0.5	< 0.5	Insecticide for sucking insects and larvae
Picloram	µg/L	190	< 5	< 5	Herbicide for broad leaf weed and brush control on roads
Polychlorinated Biphenyls(PCB)	µg/L	3	< 0.05	< 0.05	Primarily produced by the reaction of chlorine and natural organics
Prometryne	µg/L	1	< 0.3	< 0.3	Herbicide used on select grass and weeds
Simazine	µg/L	10	< 1	< 1	Herbicide for pre-emergence weed control
Total Trihalomethanes * (THM's)	µg/L	100	0.02423		Primarily produced by the reaction of chlorine and natural organics
Temephos	µg/L	280	< 10	< 10	Insecticide for mosquito and black fly larvae control
Terbufos	µg/L	1	< 0.5	< 0.5	Insecticide
Tetrachloroethylene	µg/L	30	< 0.1	< 0.1	Industrial solvent
2,3,4,6-Tetrachlorophenol	µg/L	100	< 0.5	< 0.5	Was normally used to preserve wood
Triallate	µg/L	230	< 1	< 1	Herbicide for wilds oat control in crops
Trichloroethylene	µg/L	5	< 0.12	< 0.12	Industrial solvent
2,4,6-Trichlorophenol	µg/L	5	< 0.5	< 0.5	Pesticide

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Parameter Information
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	µg/L	280	< 1	< 1	Herbicide
Trifluralin	µg/L	45	< 1	< 1	Herbicide for summer weed control
Vinyl Chloride	µg/L	2	< 0.2	< 0.2	Synthetic chemical used in making PVC

* THM: Annual running average of samples collected quarterly in the water distribution system.

* MAC: Maximum acceptable concentration

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Test Parameter	Units	MAC	Rockwood - Treated	
			Station St.	Bernardi
Sodium	mg/L	20	97	8.7
Fluoride	mg/L	1.5	0.90	1.36

Ontario Regulation 170/03 Section 11 Annual Report Hamilton Drive

Drinking-Water System Number:	220009194
Drinking-Water System Name:	Hamilton Drive 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, 2013– December 31, 2013

<u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u>	<u>Complete for all other Categories.</u>
<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 Ontario Regulation 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>The Corporation of the Township of Guelph Eramosa PO Box 700 8348 Wellington Road, 124 Rockwood ON</p> </div>	<p>Number of Designated Facilities served: None</p> <p>Did you provide a copy of your annual report to all Designated Facilities? N/A</p> <p>Number of Interested Authorities you report N/A</p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? N/A</p>

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 Township Website
- Public access/notice via Government Office
- Public access/electronic newsletter
- Public access/notice via Public Request

Describe your Drinking-Water System

The Hamilton Drive Water Supply System is located in the Township of Guelph/Eramosa. A residential development obtains its entire water supply from two groundwater wells (Huntington and Cross Creek) each with its own Pumphouse and grade-level reservoir.

The raw water from each well is chlorinated to protect against microbial contaminants prior to discharge into the reservoir. The raw water is disinfected with a sodium hypochlorite solution (chlorine) for primary and secondary disinfection requirements. The water level in the reservoir starts and stops the well pumps.

The Huntington and Cross Creek Pumphouses supply treated water directly to the distribution system and to the in-distribution standpipe. As the water level in the standpipe drops, the system calls the pumps at the Huntington or Cross Creek Pumphouse to start pumping water into the distribution system. The system alternates successive pump starts between the Huntington and Cross Creek facilities. When the water demand exceeds the capacity being supplied by the Pumphouse, the supply is supplemented with water from the standpipe. When the demand is less than the amount being supplied from the Pumphouse, the excess flow is used to replenish the depleted standpipe reserves.

Water pressures are maintained throughout the distribution system by the water level in the standpipe. This system is a demand/storage system; once the standpipe is full, the high lift pumps shut down until the water level drops in the tower and the pumps are required again.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite (12% solution) - disinfection

Please provide a brief description and a breakdown of monetary expenses incurred

Activity Type	Activity Type	Approximate Expenditure
Air scouring & video inspection of well. Pump and motor replacements of well and reservoir at Huntington Pumphouse	Replace	\$31,770.23
Repair to Programable Logic Controller (Miltronics Unit communication system) at Huntington Pumphouse	Repair	\$3,562.53
Replaced Starter in the High Lift Pump at both Cross Creek and Huntington Pumphouse's	Replace	\$1,555.21
High Lift pump replacement at Cross Creek Pumphouse	Replace	\$12,295.53
Rebuilding of Sodium Hypochlorite Board at Cross Creek Pumphouse	Replace	\$2,596.15
New roof at Cross Creek Pumphouse	Replace	\$3,328.98
Flow meter replacements at Cross Creek and Huntington Pumphouse's	Replace	\$20,957.50
Thermostat replaced at Hamilton Drive Standpipe	Replace	\$251.03
Total:		\$76,317.16

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.

	# of Samples	E.Coli (min – max)	Total Coliform (min – max)	# of HPC Samples	HPC (min – max)
Raw	105	0-0	0-0	N/A	N/A
Treated	104	0-0	0-0	104	0-3
Distribution	159	0-0	0-0	159	0-5

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 (Cross Creek Well 1)	19	0.07-0.31 NTU's
Turbidity (Huntington Well 2)	24	0.11-0.55 NTU's
Treated Water		
Free Chlorine Residual (Cross Creek)	8760	0.31-1.97 mg/L
Free Chlorine Residual (Huntington)	8760	0.86-1.56 mg/L
Distribution System		
Free Chlorine Residual	2543	0.37-1.51 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.

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
Antimony (Sb)	µg/L	6	< 0.50	< 0.51	Naturally occurring metalloid rarely detected in Ontario Drinking Water
Arsenic (As)	µg/L	25	< 1.0	< 1.0	Sometimes found in high concentrations in ground water in hard rock areas through the natural dissolution of arsenic-containing minerals
Barium (Ba)	µg/L	1000	37	43	Common in sedimentary rocks
Boron (B)	µg/L	5000	27	34	Normally found in very small levels in drinking water
Cadmium (Cd)	µg/L	5	< 0.10	< 0.10	Rare element unlikely to be present as natural contaminant in drinking water

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
Chromium (Cr)	µg/L	50	< 5.0	< 5.0	Trivalent chromium naturally occurs and is not considered toxic
Mercury (Hg)	µg/L	1	< .10	< 0.10	Sources in drinking water can be air pollution, waste incineration and metal refining operations
Selenium (Se)	µg/L	10	< 2.0	< 2.0	Naturally occurs in water at trace levels
Uranium (U)	µg/L	20	< 0.10	< 0.10	Normally occurring in granite and other mineral deposits, leaches into water
Sodium	mg/L	20	11.0	25.0	Naturally occurring or due to water softening. Sodium has an offensive taste at higher concentrations (> 175 mg/L), thus, low levels of sodium in water are desirable for consumer acceptance.
Fluoride (F)	mg/L	1.5	0.13	0.16	Fluoride occurs naturally in surface water due to atmospheric deposition from industry and volcanic eruptions, leaching from fertilizers, and the weathering of rocks and soils containing fluoride. Groundwater may be especially rich in fluoride depending on local geology.
Nitrite (NO ₂)	mg/L as N	1.0	<0.01	<0.01	Present in ground water, and is oxidized to nitrate when chlorinated
			<0.01	<0.01	
			<0.01	<0.01	
			<0.01	<0.01	
Nitrate (NO ₃)	mg/L as N	10.0	<0.01	<0.01	Present in ground water as a result of plant or animal material decay, fertilizers, sewage or treated wastewater
			<0.01	<0.01	
			<0.01	<0.01	
			<0.01	<0.01	

Note: Nitrate and Nitrite are sampled quarterly

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	Exempt	No history of exceedance	n/a
Distribution	pH and alkalinity		n/a

Summary of Organic parameters sampled during this reporting period or the most recent sample results (Treated except where noted)

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
Alachlor	µg/L	5	< 0.5	< 0.5	Herbicide for weed control banned in 1985
Aldicarb	µg/L	9	< 5	< 5	Insecticide used in low quantities for control of specified insects. Banned in 1990s
Aldrin + Dieldrin	µg/L	0.7	< 0.01	< 0.01	Pesticides for insect control banned in 1969
Atrazine + N-dealkylated metabolites	µg/L	5	< 1	< 1	Herbicide on corn crops for annual grass control. It is highly persistent and moderately mobile in soil
Azinphos-methyl	µg/L	20	< 2	< 2	Insecticide against foliage-feeding insects
Bendiocarb	µg/L	40	< 2	< 2	Insecticide used in buildings and greenhouses
Benzene	µg/L	5	< 0.10	< 0.10	Present in gasoline and other refined petroleum products
Benzo(a)pyrene	µg/L	0.01	< 0.009	< 0.009	Formed during the incomplete burning of organic matter and poorly adjusted diesel exhaust
Bromoxynil	µg/L	5	< 0.5	< 0.5	Herbicide for control of specific weeds

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
Carbaryl	µg/L	90	< 5	< 5	Insecticide used in agriculture and forestry
Carbofuran	µg/L	90	< 5	< 5	Insecticide used in agriculture
Carbon Tetrachloride	µg/L	5	< 0.10	< 0.10	Only found in ground water from old chlorinated solvent industry sites
Chlordane (Total)	µg/L	7	< 0.01	< 0.01	Insecticide once used in agriculture, banned in 1994
Chlorpyrifos	µg/L	90	< 1	< 1	Common insecticide for insect control
Cyanazine	µg/L	10	< 1	< 1	Herbicide for control of weeds in crop and non-crop areas
Diazinon	µg/L	20	< 1	< 1	Insecticide for dwelling pests, flies, ants and cockroaches
Dicamba	µg/L	120	< 1	< 1	Herbicide for weed control in grain crops
1,2-Dichlorobenzene	µg/L	200	< 0.20	< 0.20	Used in chemical blends
1,4-Dichlorobenzene	µg/L	5	< 0.20	< 0.20	Was widely used in toilet pucks and mothballs, banned in 1988
(DDT) + metabolites	µg/L	30	< 0.02	< 0.02	DDT use was banned in Ontario in 1998
1,2-Dichloroethane	µg/L	5	< 0.20	< 0.20	Used as a solvent and fumigant
1,1-Dichloroethylene	µg/L	14	< 0.10	< 0.10	Used in the food packaging industry and the textile industry for furniture and automotive upholstery
Dichloromethane	µg/L	50	< 0.50	< 0.50	Industrial solvent for paint and degreasing agent
2-4 Dichlorophenol	µg/L	900	< 0.5	< 0.5	Present in drinking water only as a result of industrial contamination

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
2,4-Dichlorophenoxy acetic acid (2,4-D)	µg/L	100	< 1	< 1	Herbicide for cereal crop and lawn weed control
Diclofop-methyl	µg/L	9	< 0.9	< 0.9	Herbicide grass control in grains and vegetables
Dimethoate	µg/L	20	< 3	< 3	Miticide and insecticide
Dinoseb	µg/L	10	< 1	< 1	Contact herbicide and desiccant. It is no longer used in Ontario
Diquat	µg/L	70	< 7	< 7	Herbicide used as a crop desiccant in seed crops
Diuron	µg/L	150	< 10	< 10	Herbicide for control of vegetation in crop and non-crop areas
Glyphosate	µg/L	280	< 10	< 10	Herbicide for weed control
Heptachlor + Heptachlor Epoxide	µg/L	3	< 0.01	< 0.01	Insecticide once used in agriculture, banned in 1969
Lindane (Total)	µg/L	4	< 0.006	< 0.006	Insecticide used for seed treatment
Malathion	µg/L	190	< 5	< 5	Insecticide used in fruits and vegetables
Methoxychlor	µg/L	900	< 0.02	< 0.02	Insecticide
Metolachlor	µg/L	50	< 0.5	< 0.5	Selective herbicide for pre-emergence and pre-plant broad leaf weed control
Metribuzin	µg/L	80	< 5	< 5	Herbicide for control of weed and grasses
Monochlorobenzene	µg/L	80	< 0.10	< 0.10	Industrial solvent
Paraquat	µg/L	10	< 1	< 1	Highly toxic herbicide used for desiccation of seed crops
Pentachlorophenol	µg/L	60	< 0.5	< 0.5	It is rarely found today but was extensively used as a pesticide and wood preservative

Test Parameter	Units	MAC	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington	Parameter Information
Phorate	µg/L	2	< 0.5	< 0.5	Insecticide for sucking insects and larvae
Picloram	µg/L	190	< 5	< 5	Herbicide for broad leaf weed and brush control on roads
Polychlorinated Biphenyls(PCB)	µg/L	3	< 0.05	< 0.05	Primarily produced by the reaction of chlorine and natural organics
Prometryne	µg/L	1	< 0.3	< 0.3	Herbicide used on select grass and weeds
Simazine	µg/L	10	< 1	< 1	Herbicide for pre-emergence weed control
Total Trihalomethanes * (THM)	µg/L	100	0.010		Primarily produced by the reaction of chlorine and natural organics
Temephos	µg/L	280	< 10	< 10	Insecticide for mosquito and black fly larvae control
Terbufos	µg/L	1	< 0.5	< 0.5	Insecticide
Tetrachloroethylene	µg/L	30	< 0.1	< 0.1	Industrial solvent
2,3,4,6-Tetrachlorophenol	µg/L	100	< 0.5	< 0.5	Was normally used to preserve wood
Triallate	µg/L	230	< 1	< 1	Herbicide for wilds oat control in crops
Trichloroethylene	µg/L	5	< 0.12	< 0.12	Industrial solvent
2,4,6-Trichlorophenol	µg/L	5	< 0.5	< 0.5	Pesticide
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	µg/L	280	< 1	< 1	Herbicide
Trifluralin	µg/L	45	< 1	< 1	Herbicide for summer weed control
Vinyl Chloride	µg/L	2	< 0.2	< 0.2	Synthetic chemical used in making PVC

* THM: Annual running average of samples collected quarterly in the water distribution system.

* MAC: Maximum acceptable concentration

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Test Parameter	Units	MAC	Hamilton Dr. Huntington - Treated
Sodium	mg/L	20	25.0

Appendix “B”

Ontario Regulation 170 Schedule 22 Summary Report for Rockwood and Hamilton Drive

Summary

This report is a summary of water quality and quantity information submitted in accordance with schedule 22 of Ontario’s Drinking Water System regulation for the reporting period of January 01, 2013 to December 31, 2013 for the Rockwood and Hamilton Drive Drinking Water System, located in the Township of Guelph/Eramosa.

The summary includes any requirements of the Act and Regulation, System Approval (s), Drinking Water Works Permit, Municipal Drinking Water Licence and any Orders that the system failed to meet during the reporting period and the measures taken to correct each failure.

Included are the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows with comparison of the average and monthly maximum daily flows to the approved capacity specified in the System Approval.

Schedule 22 of Ontario Regulation 170/03 requires a report to Owner/Council be made by March 31st of each year.

Issues of Non Compliance

The Ministry of the Environment began a focused system inspection on December 9, 2013 for the period of February 20, 2013 to December 9, 2013. During this time period, no issues of non-compliance were noted by staff or the MOE. Inspection ratings for both Hamilton Drive and Rockwood were 100%.

Drinking Water System	Requirement	Non-Compliance	Action Required
Rockwood	No issues of non-compliance		
Hamilton Drive			

Assessment of Flow Rates and Quantities of Water Supplied

The following tables lists the quantities and flow rates of the water supplied during the reporting period covered by this report, including monthly average and maximum daily flows and a comparison to the rated capacity and flow rates specified in the system approval.

Summary of Raw Water Flows - Station Street PumphouseWell TW# 1- 67 (Rated Capacity 1,964 m³/day) (Rated Daily Peak 1,360 L/min)

MONTH	Avg. Daily Volume m ³	% Of Approved Volume	MAX Daily Volume m ³ /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	293.17	14.92	972.00	49.47	1050.00	77.09
FEBRUARY	341.72	17.39	771.00	39.24	1080.00	79.30
MARCH	346.07	17.61	781.00	39.75	1050.00	77.09
APRIL	390.47	19.87	881.00	44.83	1080.00	79.30
MAY	567.10	28.86	1437.00	73.13	1050.00	77.09
JUNE	445.39	22.67	1346.00	68.50	1200.00	88.11
JULY	398.85	20.30	967.40	49.23	1188.00	87.22
AUGUST	333.28	16.96	895.80	45.59	1194.00	87.67
SEPTEMBER	269.66	13.72	910.30	46.33	1194.00	87.67
OCTOBER	285.11	14.51	822.90	41.88	1200.00	88.11
NOVEMBER	331.77	16.88	739.80	37.65	1200.00	88.11
DECEMBER	458.54	23.34	510.10	280.41	1206.00	88.55

Summary of Raw Water Flows - Station Street PumphouseWell TW# 1- 76 (Rated Capacity 1,964 m³/day) (Rated Daily Peak 1,360 L/min)

MONTH	Avg. Daily Volume m ³	% Of Approved Volume	MAX Daily Volume m ³ /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	320.14	16.29	873.00	44.43	1080.00	79.30
FEBRUARY	228.77	11.64	632.00	32.16	1080.00	79.30
MARCH	295.00	15.01	570.00	29.01	1080.00	79.30
APRIL	359.00	18.27	728.00	37.05	1110.00	81.50
MAY	443.00	22.54	1117.00	56.84	1080.00	79.30
JUNE	511.99	26.06	1275.00	64.89	1080.00	79.30
JULY	341.67	17.39	835.20	42.50	1110.00	81.50
AUGUST	422.05	21.48	892.40	45.41	1134.00	83.26
SEPTEMBER	373.21	18.99	1064.90	54.19	1134.00	83.26
OCTOBER	281.04	14.30	820.10	41.74	1140.00	83.70
NOVEMBER	284.64	14.49	871.50	44.35	1146.00	84.14
DECEMBER	322.06	16.39	939.90	47.83	1164.00	85.46

Summary of Raw Water Flows – Bernardi PumphouseWell # 3 (Rated Capacity 1,310 m³/day) (Rated Daily Peak 910.0 L/min)

MONTH	Avg. Daily Volume m ³	% Of Approved Volume	MAX Daily Volume m ³ /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	324.90	24.80	869.50	66.37	720.00	79.47
FEBRUARY	358.11	27.34	773.80	59.07	750.00	82.78
MARCH	285.70	21.81	876.50	66.91	780.00	86.09
APRIL	148.17	11.31	776.00	59.24	750.00	82.78
MAY	218.99	16.72	636.10	48.56	810.00	89.40
JUNE	105.63	8.06	637.70	48.68	720.00	79.47
JULY	356.59	27.22	1101.00	84.05	762.00	84.11
AUGUST	390.67	29.82	1068.00	81.53	852.00	94.04
SEPTEMBER	381.70	29.14	1132.00	86.41	768.00	84.77
OCTOBER	296.74	22.65	785.60	59.97	804.00	88.74
NOVEMBER	326.16	24.90	777.50	59.35	798.00	88.08
DECEMBER	387.66	29.59	1062.10	81.08	786.00	86.75

Summary of Raw Water Flows - Cross CreekWell # 1 (Rated Capacity 812 m³/24 hours) Rated Daily Peak 725 L/min)

MONTH	Avg. Daily Volume m ³	% Of Approved Volume	MAX Daily Volume m ³ /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	77.03	9.49	186.60	22.98	330.00	45.53
FEBRUARY	89.91	11.07	160.30	19.74	300.00	41.39
MARCH	83.29	10.26	153.70	18.93	270.00	37.25
APRIL	83.53	10.29	158.80	19.56	270.00	37.25
MAY	258.04	31.78	464.90	57.25	600.00	82.78
JUNE	124.71	15.36	239.30	29.47	600.00	82.78
JULY	189.99	23.40	431.80	53.18	600.00	82.78
AUGUST	103.31	12.72	165.90	20.43	600.00	82.78
SEPTEMBER	120.69	14.86	654.80	80.64	630.00	86.92
OCTOBER	109.83	13.53	423.00	52.09	600.00	82.78
NOVEMBER	81.65	10.06	126.80	15.62	600.00	82.78
DECEMBER	70.09	8.63	123.20	15.17	600.00	82.78

Summary of Raw Water Flows – HuntingtonWell # 2 (Rated Capacity 916 m³/day)

(Rated Daily Peak 452 L/min)

MONTH	Avg. Daily Volume m³	% Of Approved Volume	MAX Daily Volume m³/d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	87.49	9.55	139.40	15.22	450.00	70.75
FEBRUARY	89.63	9.79	134.10	14.64	450.00	70.75
MARCH	77.73	8.49	133.90	14.62	450.00	70.75
APRIL	110.14	12.02	222.30	24.27	498.00	78.30
MAY	262.83	28.69	523.40	57.14	516.00	81.13
JUNE	176.22	19.24	833.00	90.94	516.00	81.13
JULY	210.54	22.98	565.90	61.78	510.00	80.19
AUGUST	114.77	12.53	223.50	24.40	510.00	80.19
SEPTEMBER	103.43	11.29	156.40	17.07	510.00	80.19
OCTOBER	86.31	9.42	139.50	15.23	516.00	81.13
NOVEMBER	80.80	8.82	129.50	14.14	516.00	81.13
DECEMBER	89.44	9.76	138.40	15.11	510.00	80.19

Appendix “C”

Quality Management System Report to Owner

A requirement of the Ontario Drinking Water Quality Management Standard (DWQMS) Operational Plan is for the Quality Management System (QMS) Representative to ensure annual management review results are conveyed to Top Management and the Owner (Council). This report fulfills that requirement.

2013 Management Review

The Management review was conducted on April 29th, 2013 and considers the entire 2012 calendar year (the “review period”) and where appropriate, touches on activities continuing in 2013.

The following is a summary of information that Top Management must review annually in accordance with the Ontario DWQMS. The following 16 aspects must be considered in the annual review:

- a. Incidents of regulatory non-compliance
- b. Incidents of adverse drinking water tests
- c. Deviations from critical control point limits and response actions
- d. Efficacy of the risk assessment process
- e. Results of audits (internal and external)
- f. Results of relevant emergency response testing
- g. Operational performance
- h. Raw water supply and drinking water quality trends
- i. Follow-up action items from previous management reviews
- j. Status of management action items identified between reviews
- k. Changes that could affect the QMS
- l. Summary of consumer feedback
- m. Resources needed to maintain the QMS
- n. Results of the infrastructure review
- o. Operational Plan currency, content and updates
- p. Summary of staff suggestions

The review of these aspects encompasses both Hamilton Drive and Rockwood Drinking Water Systems owned and operated by the Township of Guelph/Eramosa.

Management Review Items

a) Incidents of regulatory non-compliance

All waterworks were inspected during 2011 or early 2012 by the Ministry of the Environment. There were no items of regulatory non-compliance or “Best Practice” recommendations made. Each water system received an inspection rating of 100 % for the 2012 calendar year.

The Township of Guelph/Eramosa water quality testing program provides more than the required amount of sampling and testing to meet regulations. All Ontario requirements for microbiological, inorganic and organic testing were met.

There were no cases of daily “raw” water taking exceeding the permitted values stipulated in the Permits to Take Water.

Rockwood and Hamilton Drive Water Systems are currently exempt from sampling for lead in private plumbing, as we have met the criteria noted within the Community Lead Testing Program (requirement O. Reg. 170/03) under the Safe Drinking Water Act, 2002.

Distribution system sampling for pH and alkalinity for every "winter, summer" period is still required and met acceptable guidelines.

Lead samples are taken annually in the distribution system under Schedule 13-3 (2).

Ontario Regulation 170/03 requires the Owner and the Operating Authority to prepare Annual Reports and Summary Reports for each of the waterworks. The Annual Reports for 2013 was completed within the required time frame (by February 28, 2014) and is posted on the Guelph/Eramosa website. Furthermore, the Summary Reports for 2013 are completed and are included in this report to Council.

b) Incidents of adverse drinking water tests

The drinking water regulations identify several Indicators of Adverse Water Quality Incidents (AWQI) for which the waterworks must immediately notify health officials and the MOE, and carry out specific corrective actions.

On January 7th/2013 The Township of Guelph/Eramosa tested for Sodium in both Hamilton Drive and Rockwood drinking water systems. The results for both systems were above the indicator of adverse quality of 20 mg/L.

The last adverse reporting for sodium was found while sampling for lead in the distribution on January 16, 2009 at 88/20 mg/L. The last officially required test for treated Sodium was September 4th, 2008.

As we are not required to sample for Sodium again for another 60 months (as set out under Regulation 170 of The Safe Drinking Water Act) we thought it prudent to re-inform the public of the continuance of high sodium even though a report under subsection 18(1) of the Act was made within the last 60 months.

Notification was provided to the public in the form of newsletters that were sent out with taxes and posting to our Township website. The Ministry of Health was notified as were the East Wellington Family Health Centre.

c) Deviations from critical control point limits and response actions

Critical Control Limits (CCLs) are self-imposed limits and are typically more stringent than Ministry of Environment Drinking Water Standards or Municipal Drinking Water licence requirements.

Primary and Secondary Disinfection are the Critical Control Points identified within the Guelph/Eramosa Township's Risk Assessment. There were no deviations over the period of this report.

d) Efficacy of the risk assessment process

The risk assessment outcomes from 2009 were critically reviewed during the 2012 risk assessment using the existing assessment process documented within the Operational Plan. This process provided clarification as to how much the Risk Assessment is linked with Emergency Management and its' processes. In some cases Emergency Management System (EMS) procedures are not actually emergencies.

Future reviews of EMS Procedures will reference the risk assessment in order to eliminate non-EMS processes or vice versa.

e) Results of audit (internal & external)

The DWQMS requires the Operating Authority to conduct an internal audit at least once every 12 months. Furthermore, as part of the DWQMS Accreditation process for Operating Authorities, an external audit is conducted by an Accreditation body in response to an Operating Authority's application for accreditation.

Internal Audit:

The internal audit was performed on April 17 & 18, 2013 and considered the entire 2012 calendar year (the "review period") and where appropriate, touched on activities continuing in 2013.

Internal audit findings were related to improving communication as related to the documentation of staff meetings and the control of documents and records (Element 12 and element 5).

External Audit:

External on-site audits were completed on June 10 and 11, 2013. Findings are related to lack of demonstrating that communication meetings are held throughout the year (element 12). Management review did not document which personnel are responsible for decisions made and timelines for implementation as per the requirement (element 20) and current documents available (element 5).

Appropriate corrective actions were implemented and approved by the auditor. These corrective actions will be verified for effectiveness by the auditor at the next on-site audit in June of 2014.

f) Results of relevant emergency response testing

Emergency response testing is conducted following emergencies in the form of tailgate meetings held by the Supervisor of Water/Wastewater. In addition reviews of emergency procedures are conducted at staff meetings.

Incident Management System training is conducted at the county level with annual reviews involving critical infrastructure. This year the Supervisor of Water/Wastewater renewed his certification in Basic Emergency Management.

g) Operational performance

Performance indicators for water distribution show effectiveness and efficiency of the corrective and preventative maintenance programs. During the 2012 calendar year there were a total of 2 water main breaks in the distribution system and one service break. These were the result of environmental conditions, (frost/ground movement). Water Operators were able to complete the required repairs while maintaining pressure in the system. Capital projects are expected to level off within the next two years.

h) Raw water supply and drinking water quality trends

Raw water quality monitoring for 2012 exceeds the MOE requirements. There were no indications of raw water quality that would cause difficulties for the treatment process.

The 2012 performance measures for Water Quality indicate ongoing high quality drinking water. A 100 % rating for microbiological quality indicates that the treatment process effectively removed pathogens at all times. A 100 % rating for chemical water quality indicates that all water quality tests were within the provincial and federal standards for safe drinking water.

2012 summer performance measures indicate the existing wells were maintaining water supply under a strict level 3 watering ban. Supply demand is used throughout day with the towers filling during night time.

i) Follow up items from previous management review

Owner responsibilities are not clearly documented within the Emergency Management Plan. Following the 2013 Management Review roles and responsibilities of Owner/Council have been clarified within section 4.0 of the Emergency Management Plan.

j) Status of management action items identified between reviews

A Risk Management Official (RMO) has been hired at the county level with the operations centre located in Centre Wellington. RMO will be coordinating with the Township Staff for risk management.

k) Changes that could affect the QMS

Township Engineers, R. J. Burnside are expected to complete the design for the Seaton Well TW2/02 (Well 4) in 2014.

Since the last Management Review a category 2 (medium risk designation) Permit to Take Water (PTTW) application was submitted for Well # 4 in February of 2014. An assessment of the local hydrogeology as it relates to pumping at Well #4 will be produced to support a category 3 (high risk & must include a study conducted by a qualified person) PTTW application.

GUDI (Groundwater Under the Direct Influence of surface water) Terms of Reference are under review by the Ministry of Environment and may result in classification changes for source waters as related to treatment requirements. No changes have been made since 2001.

l) Summary of consumer feedback

The Compliance Administrative Assistant generally answers water quality questions, interview customers and initiate "service requests". If a customer service visit is required, the results are communicated to the customer on site by the attended Water Operator. Operations Staff document their actions and provide the record for processing.

There were a small number of complaints regarding water quality and these were reported in spring during our distribution flushing.

m) Resources needed to maintain the QMS

Resources required to support the implementation of the continual improvement process under the DWQMS involve the dedication of staff to support the Drinking Water System. Efforts are ongoing to address the needs and priorities within the Drinking

Water System by dedicating time and resources for the development of required procedures and documents.

n) Results of the infrastructure review

Brief overview – review of infrastructure necessary to operate and maintain the system

The Operations Department is aware of capital needs for water related infrastructure renewal. The program may be communicated verbally identifying needs on an on-going basis (e.g. maintenance inspections) or periodic (e.g. site specific risk assessments). Based on the information collected, needs are assessed, prioritized and communicated to the owner through the annual budget process.

A copy of the 2012 infrastructure review was provided during the management review. Communication is provided to the owner through the budget process.

o) Operational plan currency, content and updates

Since last year's management review, the DWQMS Operational Plan has gone through two minor revisions. Revision 5 was submitted on May 10th 2013 to our new accreditation body – NSF International, one month prior to a scheduled external audit for obtaining our full scope accreditation.

Re-endorsement by Council was not required as both Operating Authorities (City of Guelph for Gazer Mooney and Guelph/Eramosa for Hamilton Drive and Rockwood) obtained re-endorsement in January of 2012 (existing council) and did not have significant changes to their Operational Plans.

p) Summary of staff suggestions

Staff suggestions are generally tabled at meetings and are implemented by revising Standard Operating Procedures or if necessary, through the budget process. Others remain on the Opportunity for Improvement list and are revisited during the next Management Review.

Next Steps

An effective management system requires ongoing commitment by staff and management. A challenge will be to ensure the maintenance and improvement of the system continues to be a high priority of the Operating Authority. Next steps related to the DWQMS in 2014 include the following:

Month of 2014	Scheduled DWQMS
March	<ul style="list-style-type: none">• Council update - Report to Owner• DWQMS internal audit
April	<ul style="list-style-type: none">• DWQMS management review
June	<ul style="list-style-type: none">• NSF International Strategic Registrations on-site verification audit of the Drinking Water Quality Management System
September	<ul style="list-style-type: none">• Risk Assessment Review / Infrastructure Review

Appendix "D"

Gazer Mooney Distribution System Report

The City of Guelph's Water Services Summary Report not only satisfies the Ontario Regulation 70/03 Section 11 and Schedule 22 requirements for the Gazer Mooney Subdivision Distribution System and includes conformance with its QMS 12-02 Reporting to Owner policy.

Since the Gazer Mooney Distribution System makes up less than ¼ of a percent of the Guelph System, Management thought it would be beneficial to highlight certain aspects of the report concerning Gazer Mooney. The full report is available for viewing at the Township Office or on our Website.

Bacteriological Samples:

- There were no adverse Bacteriological samples in the Gazer Mooney distribution systems.

Distribution System Process Parameters:

- Daily samples were taken for chlorine residuals and there were no health exceedence in the Gazer Mooney distribution systems.

Miscellaneous Water Quality Result:

- There were no health exceedences for lead, or trihalomethanes in the Gazer Mooney distribution system.
- There was one SODIUM adverse test result in the Gazer Mooney distribution system.

Adverse Test Results and Corrective Action:

- 26 mg/L Sodium Adverse was reported to the Ministry of Health and Long Term Care, and the SPILLS Action Centre as per Ontario Regulation 170/03.
- Notification was provided to Owner of the Drinking Water System
- Notification was posted on the Guelph/Eramosa website.

Summary of Maintenance:

- Standard hydrant flushing and valve exercising took place during 2013 in the Gazer Mooney Subdivision.

Drinking Water Quality Management System Report to Owner:

- The 2013 Report to Owner has satisfied the requirements for the Gazer/Mooney Subdivision Distribution System. To view copies of these reports please contact the Quality Management Representative for the Township or view via link from our website at www.get.on.ca
- ✓ Note: The Gazer Mooney Distribution System (DWS # 260057967) had not been inspected by the MOE until February, 2014. The Inspection Report ANQ15. There were no non-compliance issues. The MOE Inspection Summary Rating Record for the system was 100%.

Appendix “E”

Legal and other Requirements update

Date - 2013	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Jan. 4	Ontario Drinking Water News	<u>More Hands-on Training Courses Offered Provincewide in 2013</u> Recognizing that training for practical skills is more effective with hands-on components the Walkerton Clean Water Centre is pleased to offer hands-on training courses in 2013-14.	No action required.
Jan. 5	Ontario Gazette	Definitions within Ontario Regulation 170/03 Drinking Water Systems were updated for “delivery agent care facility”, “interested authority”, “social care facility”.	Administrative amendment. No action required.
Jan. 13	Ontario Court Bulletin	<u>Municipality/Operators Fined \$154,500 And Operator Received Jail Sentence for Drinking Water Violations</u> St. Thomas – The Municipality of West Elgin and three of its water distribution system operators were fined \$154,500 in St.Thomas Provincial Offences Court on Friday January 4, 2013 for drinking water violations including providing false information and failing to report adverse test results. Additionally one of the operators was sentenced to 30 days in jail and received a Court Order as a result of charges by the Ministry’s Investigation and Enforcement Branch.	No action required.
Feb. 8	Ontario Drinking Water News	<u>Operator Certification eBulletin, 2012 Winter Edition</u> The winter edition of the Operator Certification eBulletin is now available. Read it for the latest news and information on operator certification issues.	No action required.
Feb. 13	Ontario MOE E- mail	Issue 4 of the <u>Municipal Drinking Water Licensing Program Bulletin</u> is now available on the Drinking Water Ontario website. This bulletin has been created to communicate	Forwarded the e-mail for information to top management and continual

Date - 2013	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		program updates to municipal drinking water system owners and operators. In this issue: Continual Improvement: Element 21 of the DWQMS, Changing your Operating Authority, Common Questions about the DWQMS, Common Questions about the Licence & DWWP, Pre-authorization Conditions in the DWWP.	improvement team members on Feb. 13, 2013.
Feb. 25	Ontario MOE News Release	Restoring Great Lakes to Protect Ontario's Future Ontario is re-introducing legislation today that, if passed, would ensure cleaner and healthier Great Lakes that are protected for future generations.	No action required.
Mar. 28	Ontario Drinking Water News	New Chief Drinking Water Inspector for Ontario Sue Lo has been appointed Ontario's new Chief Drinking Water Inspector and Assistant Deputy Minister, Drinking Water Management Division.	No action required.
Apr. 2	Ontario Court Bulletin	Municipality Fined \$17,000 For Safe Drinking Water Violations The Corporation of the Municipality of North Middlesex is the owner and operating authority of a municipal drinking water distribution system that provides drinking water to its residents. Joseph Adams and Glen Bullock were operators of the drinking water distribution system. Ministry staff conducted an inspection of the drinking water distribution system and identified that Mr. Adams and Mr. Bullock were operating with expired certificates. The municipality was also responsible for failing to collect a sample following water main repairs.	No action required.
May 31	Ontario Court	The City of Ottawa and its Contractor Fined	No action required.

Date - 2013	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
	Bulletin	\$120,000 for Discharging Sediment to Local Creek Ottawa – The City of Ottawa and its contractor were fined \$120,000 for failing to comply with a permit to take water and discharging sediment into Stillwater Creek, a tributary of the Ottawa River.	
Jun. 4	Ontario Drinking Water News	New Operator Code of Conduct for Water and Wastewater Operator Certification & Exams The Ministry of the Environment's Water and Wastewater Operator Certification and Exam Code of Conduct must be submitted before writing a ministry certification exam.	No action required.
Jun. 28	Ontario Drinking Water News	Operator Certification eBulletin, 2013 Spring Edition The spring edition of the Operator Certification eBulletin is now available. Read it for the latest news and information on operator certification issues.	No action required.
Jul. 8	OETC Regulatory Newsletter	Health Canada – Guideline for Total Coliforms – and – Health Canada – Guideline for Escherichia coli are now available.	No action required. Verified that Ontario's legislation have same MAC for both TC and E. coli.
Jul. 11	Ontario Drinking Water News	Ministry of the Environment releases Water Quality in Ontario 2012 Report The third Water Quality in Ontario Report highlights findings from our water monitoring programs that directly relate to the government's environmental priorities.	No action required.
Oct. 1	Willms & Shier Special Report	Will water charges more than triple for major users in Ontario? The province spent \$16.2 million on water quantity programs to promote the conservation, protection and sustainable use of Ontario's waters in 2012. Approx. \$750,000	No action required.

Date - 2013	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		of those costs could be attributed to Phase 1 facilities (using more than 50,000 litres of water per day and where water is incorporated into their product), with the remainder related to other industrial and commercial water users or other sectors. The shortfall was due largely to the difference between the allowable withdrawals in the facilities' PTTWs and their more modest actual water usage totals.	
Oct. 9	Ontario Drinking Water News	<u>Bill to Protect Great Lakes Passes Second Reading</u> Today, Bill 6, the proposed Great Lakes Protection Act 2013 passed second reading in the Ontario Legislature. The proposed act, if passed, would ensure cleaner and healthier Great Lakes that are protected for future generations.	No action required.
Nov. 1	Ontario MOE News Release	<u>Helping Small Rural Communities Protect Drinking Water</u> Ontario is strengthening the protection of local drinking water sources in small, rural municipalities.	No action required.
Nov. 15	Ontario MOE Court Bulletin	<u>Municipality Fined \$18,000 for Failing to Comply With a Ministry Order</u> Atikokan – A municipality was fined \$18,000 for failing to comply with a ministry approval and a ministry order in relation to a drinking water system, contrary to the Safe Drinking Water Act.	No action required.
Nov. 15	Ontario MOE Court Bulletin	<u>Municipality Fined \$20,000 for Failing to Comply with a Ministry Approval</u> London – A municipality was fined \$20,000 for failing to comply with a ministry approval for a wastewater treatment plant, contrary to the Ontario Water Resources Act.	No action required.
Nov. 16	Canada Gazette	Regulations Amending the Transportation of Dangerous Goods Regulations (Update of Standards). The proposed Regulations Amending the Transportation of Dangerous Goods Regulations would update the references to the safety standards, to 49 CFR,	Once passed, need to update references within Water Services documents related to

Date - 2013	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		<p>to the UN Recommendations and to the UN Manual of Tests and Criteria, the IMDG Code and the ICAO Technical Instructions and its Supplement.</p> <p>This regulatory proposal would adopt five new standards for new types of means of containment and update nine standards on means of containment already in the TDG Regulations.</p>	transportation of dangerous goods.
Dec. 17	Ontario Drinking Water News	<p><u>Protecting Niagara-Area Drinking Water</u></p> <p>Ontario has approved the Niagara Peninsula Source Protection Plan to strengthen local source-to-tap drinking water protection.</p>	No action required.
Dec. 18	Ontario Drinking Water News	<p><u>Operator Certification eBulletin, 2013 Fall/Winter Edition</u></p> <p>The Fall/Winter edition of the Operator Certification eBulletin is now available.</p>	No action required.
Dec. 28	Ontario Gazette	<p>Administrative changes to Ontario Water Resources Act O. Reg. 903/90 and Safe Drinking Water Act O. Reg. 170/03, O. Reg. 171/03. O. Reg. 903/90 s. 12(1)(a) and (b) changed reference from O. Reg. 350/06 to O. Reg. 332/12. O. Reg. 170/03 s. 2-12(1)(e) changed reference from O. Reg. 403/07 to O. Reg. 332/12. O. Reg. 171/03 s.3 changed references from O. Reg. 403/97 to O. Reg. 332/12.</p>	No action required.

Appendix “F”

**Policy Statement
And
Commitment and Endorsement
Of the
Drinking Water Quality Management System**