

# Annual & Summary Report

For:

Hamilton Drive Drinking Water System

Rockwood Drinking Water System

-And-

Gazer Mooney Subdivision Distribution System

Prepared by:



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## I. Introduction

### Purpose

The purpose of this report is to provide information to stakeholders and to satisfy the regulatory requirements of the Safe Drinking Water Act (SDWA) including the Drinking Water Quality Management Standard (DWQMS), and regulatory reporting required under O.Reg. 170/03 (Section 11 and Schedule 22). The report is a compilation of information that helps to demonstrate the ongoing provision of safe, consistent supply of high quality drinking water to customers located within the Rockwood, Hamilton Drive and the Gazer Mooney Subdivision.

The scope of this report represents January 1 to December 31, 2014 for Rockwood, Hamilton Drive and Gazer Mooney Drinking Water Systems.

### Scope

This Annual & Summary Water Services Report includes information for Rockwood, Hamilton Drive and the Gazer Mooney Subdivision Distribution System for the period of Jan.1 to Dec. 31, 2014

This report satisfies the requirements of both the Safe Drinking Water Act (SDWA) and Ontario Regulation 170/03:

- Section 11, Annual Reports which includes:
  - a brief description of the drinking water systems;
  - a list of water treatment chemicals used;
  - a summary of the most recent water test results required under O. Reg. 170/03 or an approval, Municipal Drinking Water Licence (MDWL) or order;
  - a summary of adverse test results and other issues reported to the Ministry including corrective actions taken;
  - a description of major expenses incurred to install, repair or replace required equipment;
  - the locations where this report is available for inspection.

And;

- Schedule 22, Summary Report which includes:
  - list the requirements of the Safe Drinking Water Act, the regulations, the system's approval, Drinking Water Works Permit (DWWP), Municipal Drinking Water Licence (MDWL), and any orders applicable to the system that were not met at any time during the period covered by the report;

- for each requirement that was not met, the duration of the failure and the measures that were taken to correct the failure;
- a summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows; and
- a comparison of this information to the rated capacity and flow rates approved in the system's approval, DWWP and/or MDWL.

A copy of this report is available for viewing at the Township of Guelph/Eramosa, 8348 Wellington Rd. 124, Rockwood and Online at [www.get.on.ca](http://www.get.on.ca)

*As per the Accessibility for Ontarians with Disabilities Act (AODA), this document is available in an alternate format by e-mailing the Township Clerk [mried@get.on.ca](mailto:mried@get.on.ca) or by calling 519-856-9596*

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## 1.0 Systems Overview

### 1.1 Rockwood Drinking Water System

The Rockwood (RWD) Water Supply System is a Class I Water Treatment Subsystem and a Class II Water Distribution Subsystem consisting of three municipal groundwater wells, a water tower and distribution system. Wells #1 and #2 are located at the Station Street Pumphouse and supply water directly to Zone 1 distribution system. Well #3 at the Bernardi Pumphouse supply water 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.

Station Street primary disinfection is achieved using a UV disinfection unit. Secondary disinfection is provided by the addition of sodium hypochlorite solution. The UV disinfection unit and the chemical feed pump that injects sodium hypochlorite solution are activated whenever a well pump is running.

Bernardi Pumphouse primary disinfection is achieved by the addition of sodium hypochlorite and provision of chlorine contact time in the grade-level reservoir. Sodium hypochlorite is injected after the flow control valve and prior to the water meter. Chlorine residual concentrations are maintained in the water leaving the pumphouse, providing secondary disinfection. The facility has duty and standby chemical feed pumps for chlorine dosing. The chemical pump is energized when the well pump is activated.

## **1.2 Hamilton Drive Drinking Water System**

The Hamilton Drive Water Supply System is a Class II Water Distribution and Supply Subsystem located in the Township of Guelph/Eramosa. The system services a residential area bounded by Victoria Road to the east, Conservation Road to the north, Highway 6 to the west and the Speed River to the south. The Hamilton Drive (HD) system 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.

## **1.3 Gazer Mooney Subdivision Distribution System**

The Gazer Mooney Subdivision Distribution System is a Class 1 Distribution Subsystem that serves approximately 200 people, is owned by the Township of Guelph/Eramosa. The system is operated by the City of Guelph Water Services by a legal agreement that was last signed by representatives of the City of Guelph and the Township of Guelph/Eramosa on July 30, 2009. The terms of the agreement apply until May 31, 2019. All of the water for the Gazer Mooney Subdivision Distribution System is supplied from the Guelph Drinking Water System. All water is treated to provincial standards in the Guelph Drinking Water System and no further treatment chemicals are added to the Gazer Mooney Subdivision Distribution System.

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## 2.0 Summary Water Services Report

### a) Incidents of Regulatory Non-Compliance

This section describes all incidents of non-compliance (excluding those defined as “Adverse Water Quality Incidents” (AWQI) reported in Section b) of this report). AWQI’s are required to be reported to the Ministry of the Environment and Climate Change (MOECC) with respect to the following Acts and related regulations: Ontario Water Resources Act (OWRA), Safe Drinking Water Act (SDWA), the Environmental Protection Act (EPA), and the Municipal Drinking Water Licences (MDWL) and Drinking Water Works Permits (DWWP).

#### **Rockwood and Hamilton Drive**

There were no incidents of non-compliance associated with Hamilton Drive or Rockwood Drinking Water Systems.

The most recent Ministry of Environment and Climate Change (MOECC) Annual Inspections in both Rockwood and Hamilton Drive Drinking Water systems resulted in an assessment score of 100 per cent (compliance). The MOECC’s Annual Inspection covered from December 10<sup>th</sup>, 2013 to October 31, 2014 for Hamilton Drive Water System with the Rockwood DW System covering up to December 15, 2014.

#### **Gazer Mooney Subdivision Distribution System**

There were no incidents of non-compliance associated with the Gazer Mooney Subdivision Distribution System in 2014 (Jan. 01 to Dec. 31).

The most recent assessment of compliance for the Gazer Mooney Subdivision Distribution System as determined by the Ministry of Environment and Climate Change (MOECC) during the 2013-14 Annual Inspection (for the period of June 2012 to Feb. 2014) resulted in an assessment score of 100 per cent (compliance).

### b) Adverse Water Quality Incidents

This section describes all “Adverse Water Quality Incidents” (AWQI). This term refers to any unusual test result from treated water that does not meet a provincial water quality standard, or situation where disinfection of the water may be compromised. An adverse water quality incident indicates that on at least one occasion, a water quality standard was not met.



The process of water quality sampling and testing can result in false positive results for contaminants; these results can be caused by contaminated sampling containers and equipment, sampling technique, sample handling and transportation, and sample analysis. In almost all cases, mandatory follow-up sampling and analysis confirms that contaminants are not present in the water provided to customers.

**Table 1: Summary of Rockwood and Hamilton Drive Water System Adverse Water Quality Incidents**

(Jan. 01 to Dec. 31, 2014)

Incident Date	AWQI #	Location	Parameter / Unit of measure	Corrective Action
Jan 7/14	115658	Rockwood Booster Station – Distribution Zone 1 Station St - Treated	Sodium 91 mg/L 110 mg/L	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) notified. Notified public on website and letters out to local medical doctors
Jan 7/14	115659	Hamilton Drive Standpipe - Distribution	Sodium 22 mg/L	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) notified. Notified public on website and letters out to local medical doctors
Aug. 25/14	119831	Hamilton Drive Cross Creek/Hwy 6	Total Coliforms <u>110 mg/L</u> Resample X 2 Aug. 26/14 - 0 mg/L Aug. 27/14 - 0 mg/L	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) notified. Resample results show no adverse results. No further action required.

## Gazer Mooney Subdivision Distribution System

From Jan. 1 – Dec. 31, 2014 there was one adverse water quality incident (AWQI #116159), as can be seen in Table 2: Summary of Gazer Mooney Subdivision Distribution System Adverse Water Quality Incidents.

**Table 2: Summary of Gazer Mooney Subdivision Distribution System Adverse Water Quality Incidents**

(Jan. 01 to Dec. 31, 2014)

Incident Date	AWQI #	Location	Parameter / Unit of measure	Corrective Action
Feb. 24	116159	Gazer Mooney Lift Station	Sodium 26 mg/L 25 mg/L	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) notified. Resample results are comparable to initial results. No further action required.

### c) Deviations from Critical Control Point (CCP) Limits and Response Actions

This section describes any deviation from essential steps or points in the drinking water system at which control can be applied to prevent or eliminate a drinking water hazard or to reduce it to an acceptable level. These essential steps or points in the system are known as critical control points (CCP). The CCPs are used to identify control measures that are in place to address hazards and hazardous events. Critical Control Limits (CCLs) are self-imposed limits and are typically more stringent than Ministry of Environment and Climate Change Drinking Water Standards or Municipal Drinking Water licence requirements.

These include:

- primary disinfection,
- secondary disinfection, and
- backflow prevention

In the early part of 2014 there were Supervisory Control and Data Acquisition (SCADA) failures at each of the Drinking Water Systems. SCADA is used to monitor and record critical control point data and alarms at predetermined set points for the Hamilton Drive and Rockwood Drinking Water Systems. In each case the resulting outcome was a temporary loss of record monitoring data.

There were no critical control limit deviations over the period of this report as the systems have been designed to alarm and shut down the pumphouse before an adverse incident would take place. On all occasions the SCADA system was re-established using a laptop. Shortly after new computers and software were installed and tested. This was a scheduled capital upgrade. The system has been stable since.

#### **d) The Efficacy of the Risk Assessment Process**

This section confirms the occurrence of reviews of the risk assessment process to determine the effectiveness of the process in identifying and appropriately assessing the risk of hazardous events and hazards, and in identifying the appropriate control measures, critical control points (CCPs) and related critical control limits (CCLs).

Risks associated with cross connection from buildings were increased from a 5 to 7 due to lack of confirmed devices installed within Rockwood. Risk Ratings are based on the risk calculation (likelihood rating, detectable x consequence rating), as included in the "QMS" 08 Risk Assessment Outcome" within the Guelph/Eramosa Operational Plan.

In the later part of 2013 the Public Works, Water Department Certified one of our Licenced Operators in Backflow prevention and inspection.

#### **e) Internal and Third-Party Audit Results**

This section describes any of the audit outcomes identified to date that require follow-up actions.

Internal auditing and third-party auditing is performed to fulfill the mandatory requirements of the Drinking Water Quality Management Standard (DWQMS). The internal audit is completed using trained auditors. The purpose of audits is to evaluate the level of conformance to the DWQMS. Audits identify both conformance and non-conformance with the Standard as well as opportunities for improvement.

The 2014 internal audit review was conducted on March 24, 25 and considers the entire 2013 calendar year (the "review period") and where appropriate, touches on activities continuing in 2014.

The DWQMS sets out a mandatory list of 16 issues to be examined during annual reviews and reports.

The results have been reviewed by Management in accordance with the DWQMS management review system procedure.

Internal audit findings are related to QMS Infrastructure review process for completion (QMS 14), documenting processes and improved record control of operator activity (QMS 5). Various opportunities for improvement suggested by staff were also noted in the internal audit report.

In 2015 two internal audits will be conducted; one in April then again in October so that we can alter the date but maintain the twelve month internal audit requirement as stipulated within element 19 of the Drinking Water Quality Management Standard. Third party audits (external audits) are performed in June by NSF International Inc.; altering the internal audit date will allow a greater time separation between internal and external audits and provide greater opportunity for follow up on corrective actions and opportunities for improvement.

The 2014 third-party external off-site audit was completed on June 13, 2014. The required corrective action findings were related to risk assessment critical control point threshold ratings (QMS 8) and the process for employee communication was not implemented as stated in Operational Plan (QMS 12). Appropriate corrective actions were implemented and approved by the auditor. These corrective actions will be verified for effectiveness by the auditor at the next off-site audit in June, 2015.

Noted opportunities for improvement by the auditor were related to improving the following processes: Policy and Endorsement referencing website location (QMS 2 & 3); Roles, Responsibilities and authorities (QMS 9); Emergency Plan testing frequency (QMS 18). These opportunities for improvement will be followed-up on by the auditor at the next off-site audit in June 2015.

#### **f) Results of Emergency Response Testing**

Reviews of emergency procedures are conducted at staff meetings. Emergency response testing is conducted following emergencies from actual events. Information is gathered during debriefing sessions and the applicable emergency procedures are updated and provided for sign off by applicable staff.

Incident Management System training is conducted at the county level with annual reviews involving critical infrastructure. The Supervisor of Water/Wastewater renewed his certification in “IMS 100 - Introduction to Incident Management” in 2013. The remaining Operating Authority staff members obtained the same certification in October of 2014. Future certifications are pending for “IMS 200 – Basic Emergency Management” and “IMS 250 Emergency Management in the EOC (Emergency Operations Centre).

#### **g) Operational Performance and Statistics**

This section describes the various pieces of information that are used to gauge the performance of the Drinking Water System, including reasoning for changes or observations.

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A 100 % rating for microbiological quality indicates that the treatment process effectively removed pathogens at all times. Chemical water quality test results indicate that all water quality meet with the provincial and federal standards for safe drinking water with the exception of Sodium levels which remain outside of the provincial standard.

### Assessment of Flow Rates and Quantities of Water Supplied

The following tables list 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.

**Table 3: Summary of Raw Water Flows – Rockwood and Hamilton Drive**

#### Rockwood

Station St. Well TW# 1- 67 (Rated Capacity 1,964 m<sup>3</sup>/day) (Rated Daily Peak 1,360 L/min)

MONTH	Avg. Daily Volume m <sup>3</sup>	% Of Approved Volume	MAX Daily Volume m <sup>3</sup> /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	358.57	18.25	1655.00	84.22	1206.00	88.42
FEBRUARY	239.60	12.19	649.80	33.07	1194.00	87.54
MARCH	261.45	13.31	772.70	39.32	1206.00	88.42
APRIL	271.60	13.82	785.70	39.98	1202.40	88.15
MAY	443.01	22.55	1189.50	60.53	1206.00	88.42
JUNE	417.15	21.23	1246.00	63.41	1206.00	88.42
JULY	487.27	24.80	1410.00	71.76	1194.00	87.54
AUGUST	423.93	21.57	1002.00	50.99	1194.00	87.54
SEPTEMBER	280.23	14.26	844.00	42.95	1188.00	87.10
OCTOBER	250.56	12.75	720.00	36.64	1206.00	88.42
NOVEMBER	261.38	13.30	821.00	41.78	1206.00	88.42
DECEMBER	247.73	12.61	647.00	32.93	1206.00	88.42

## Rockwood

Station St. Well TW# 1- 76

(Rated Capacity 1,964 m<sup>3</sup>/day)

(Rated Daily Peak 1,360 L/min)

MONTH	Avg. Daily Volume m <sup>3</sup>	% Of Approved Volume	MAX Daily Volume m <sup>3</sup> /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	297.63	15.15	668.80	34.04	1164.00	85.34
FEBRUARY	265.57	13.51	796.70	40.54	1164.00	85.34
MARCH	221.92	11.29	868.70	44.21	1140.00	83.58
APRIL	357.34	18.19	963.10	49.01	1158.00	84.90
MAY	357.66	18.20	840.30	42.76	1146.00	84.02
JUNE	472.50	24.05	1076.00	54.76	1206.00	88.42
JULY	524.03	26.67	1471.00	74.86	1194.00	87.54
AUGUST	503.45	25.62	1103.00	56.13	1164.00	85.34
SEPTEMBER	356.37	18.14	1057.00	53.79	1182.00	86.66
OCTOBER	320.36	16.30	798.00	40.61	1182.00	86.66
NOVEMBER	282.30	14.37	679.00	34.55	1176.00	86.22
DECEMBER	312.57	15.91	863.00	43.92	1176.00	86.22

## Rockwood

## Bernardi Well # 3

(Rated Capacity 1,310 m<sup>3</sup>/day)

(Rated Daily Peak 910.0 L/min)

MONTH	Avg. Daily Volume m <sup>3</sup>	% Of Approved Volume	MAX Daily Volume m <sup>3</sup> /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	359.89	27.47	854.20	65.21	756.00	83.08
FEBRUARY	591.75	45.17	778.10	59.40	738.00	81.10
MARCH	638.96	48.78	761.00	58.09	726.00	79.78
APRIL	315.93	24.12	902.00	68.85	780.00	85.71
MAY	326.16	24.90	1075.00	82.06	774.00	85.05
JUNE	347.89	26.56	1071.00	81.76	798.00	87.69
JULY	224.59	17.14	1035.00	79.01	804.00	88.35
AUGUST	287.27	21.93	1012.00	77.25	816.00	89.67
SEPTEMBER	339.61	25.92	762.00	58.17	906.00	99.56
OCTOBER	402.06	30.69	1137.00	86.79	768.00	84.40
NOVEMBER	385.57	29.43	713.00	54.43	828.00	90.99
DECEMBER	425.45	32.48	1142.00	87.18	858.00	94.29

## Hamilton Drive

Cross Creek Well # 1

(Rated Capacity 812 m<sup>3</sup>/24 hours)

(Rated Daily Peak 725 L/min)

MONTH	Avg. Daily Volume m <sup>3</sup>	% Of Approved Volume	MAX Daily Volume m <sup>3</sup> /d	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	71.73	8.83	141.00	17.36	660.00	91.03
FEBRUARY	78.72	9.69	146.00	17.98	660.00	91.03
MARCH	99.26	12.22	168.00	20.69	720.00	99.31
APRIL	99.91	12.30	248.00	30.54	660.00	91.03
MAY	124.56	15.34	254.00	31.28	666.00	91.86
JUNE	101.92	12.55	291.00	35.84	660.00	91.03
JULY	147.00	18.10	325.00	40.02	720.00	99.31
AUGUST	161.00	19.83	353.00	43.47	660.00	91.03
SEPTEMBER	116.96	14.40	229.00	28.20	660.00	91.03
OCTOBER	126.28	15.55	209.00	25.74	660.00	91.03
NOVEMBER	93.39	11.50	191.00	23.52	660.00	91.03
DECEMBER	86.10	10.60	129.00	15.89	660.00	91.03



**Hamilton Drive  
Huntington Well # 2**

**(Rated Capacity 916 m<sup>3</sup>/day)**

**(Rated Daily Peak 452 L/min)**

MONTH	Avg. Daily Volume	% Of Approved Volume	MAX Daily Volume	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
	m <sup>3</sup>		m <sup>3</sup> /d			
<b>JANUARY</b>	84.61	9.24	161.50	17.63	606.00	95.28
<b>FEBRUARY</b>	67.14	7.33	139.70	15.25	582.00	91.51
<b>MARCH</b>	46.62	5.09	100.60	10.98	618.00	97.17
<b>APRIL</b>	85.37	9.32	218.60	23.86	588.00	92.45
<b>MAY</b>	142.88	15.60	325.30	35.51	564.00	88.68
<b>JUNE</b>	195.26	21.32	358.90	39.18	552.00	86.79
<b>JULY</b>	143.57	15.67	350.80	38.30	576.00	90.57
<b>AUGUST</b>	102.01	11.14	230.40	25.15	576.00	90.57
<b>SEPTEMBER</b>	108.08	11.80	223.70	24.42	546.00	85.85
<b>OCTOBER</b>	104.04	11.36	218.20	23.82	576.00	90.57
<b>NOVEMBER</b>	88.12	9.62	214.90	23.46	570.00	89.62
<b>DECEMBER</b>	82.85	9.04	155.80	17.01	582.00	91.51

**i. Water Production vs. Water Consumption**

Water Production vs. Water Consumption for 2013 shows an overall percentage loss of 9 percent for Rockwood and a 3 percent loss for Hamilton Drive. Water loss in 2014 remained the same for Hamilton Drive while Rockwood has increased by 1 percent compared to 2013. The Grand River Conservation Authority was our highest consumer of water in both 2013 and 2014 at an average rate of 15,663 and 22,160 L/day over their 7 month (April to October) operational season.

Possible explanations for water loss is associated with infrastructure service breaks and one water main break occurred during 2013 and early 2014 in the Rockwood Distribution System.

## ii. Other Operational Performance Data

The following tables provide a brief description of expenses incurred within Rockwood (Table 4) and Hamilton Drive (Table 5).

**Table 4: Rockwood Expenses**

Activity Description	Activity Type	Approximate Expenditure
Generator – Booster Station	Repair	\$1,001 - \$5,000
Air conditioner – Booster Station	Replace	< \$1000
High lift pump # 1 soft start - Bernardi Pumphouse	Replace	\$5,001 - \$10,000
Variable frequency drive (VFD) on Booster pump 2	Replace	\$5,001 - \$10,000
UV System cooling fan – Station St. Pumphouse	Replace	< \$1000
Frozen water service	Service	\$1,001 - \$5,000
Watermain break	Repair	\$10, 001 - \$20,000
Water service repairs	Repair	\$5,001 - \$10,000
Distribution curb stops	Replace	\$1,001 - \$5,000
Distribution valve maintenance (including fire hydrants)	Repair/replace	\$5,001 - \$10,000

**Table 5: Hamilton Drive Expenses**

Activity Type	Activity Type	Approximate Expenditure
Water tower leak	Repair	\$1,001 - \$5,000
High lift pump starter – Huntington Pumphouse	Replace	\$1,001 - \$5,000
Frozen water services	Service	\$5,001 - \$10,000
Distribution valve maintenance (including fire hydrants)	Repair/replace	\$5,001 - \$10,000

### iii. Other Operational Performance Data

#### h) Raw and Treated Water Quality – Guelph Drinking Water System

This section describes the water quality monitoring, both regulatory and operational, that has been completed in 2014 (Jan. 01 to Dec. 31).

Under the Safe Drinking Water Act (SDWA), municipalities are required to monitor both the raw and treated quality of the source water supplied. This monitoring is performed for both regulatory compliance and due diligence and is expected to identify any changes within the treated water as well as in raw source waters.

Both Rockwood and Hamilton Drive Drinking Water Systems use 12 per cent Sodium Hypochlorite (that is NSF 601 certified) for both primary and secondary disinfection at all facility locations with the exception of the Rockwood Station Street location. Here ultraviolet light is also applied as part of multi-barrier primary disinfection. Additionally, NSF 60-certified sodium silicate is used for aesthetic purposes to sequester dissolved iron and manganese.

**Table 6: Operational testing done under Schedule 8 of O. Reg.170/03 Rockwood**

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)
<b>Raw Water</b>		
Turbidity (Station Street; Well 1-67)	24	0.1-0.4 NTU's
Turbidity (Station Street; Well 1-76)	23	0.1-0.84 NTU's
Turbidity (Bernardi)	23	0.01-0.39 NTU's
<b>Treated Water</b>		
Free Chlorine Residual (Station St)	8760	0.11-3.01 mg/L
Free Chlorine Residual (Bernardi)	8760	0.6-1.92 mg/L
<b>Distribution System</b>		
Free Chlorine Residual	1982	0.42-1.85 mg/L

**Table 7: Operational testing done under Schedule 8 of O. Reg.170/03 Hamilton Drive**

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)
<b>Raw Water</b>		
Turbidity (Cross Creek Well 1)	23	0.09-0.40 NTU's
Turbidity (Huntington Well 2)	24	0.05-0.61 NTU's
<b>Treated Water</b>		
Free Chlorine Residual (Cross Creek)	8760	0.81-1.85 mg/L

<sup>1</sup> NSF/ANSI Standard 60: Drinking Water Treatment Chemicals -- Health Effects

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)
Free Chlorine Residual (Huntington)	8760	0.80- 1.99 mg/L
<b>Distribution System</b>		
Free Chlorine Residual	1522	0.43-1.83 mg/L

**Table 8: O. Reg. 170/03 Schedule 13 – Rockwood/Hamilton Drive Summary of Inorganic parameters tested during this reporting period or the most recent sample results.**

Test Parameter	Units	MAC	Rockwood Station St.	Rockwood Bernardi	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington
Antimony (Sb)	µg/L	6	<0.50	0.75	< 0.50	< 0.51
Arsenic (As)	µg/L	25	< 1.0	< 1.0	< 1.0	< 1.0
Barium (Ba)	µg/L	1000	80	41	37	43
Boron (B)	µg/L	5000	23	< 10	27	34
Cadmium (Cd)	µg/L	5	< 0.1	< 0.1	< 0.10	< 0.10
Chromium (Cr)	µg/L	50	< 5.0	< 5.0	< 5.0	< 5.0
Mercury (Hg)	µg/L	1	< 0.10	< 0.10	< 0.10	< 0.10
Selenium (Se)	µg/L	10	< 2.0	< 2.0	< 2.0	< 2.0
Uranium (U)	µg/L	20	1.1	0.25	< 0.10	< 0.10
Sodium	mg/L	20	110	8.7	11.0	25.0
Fluoride (F)	mg/L	1.5	0.90	1.36	0.13	0.16

**Table 9 summarizes Schedule 13-3 Hamilton Drive/Rockwood Summary of Organic parameters sampled during this reporting period or the most recent sample results (treated water)**

**Table 9: O. Reg. 170/03 Schedule 13-3, Organic Parameter Sampling Summary**

(Jan. 01 to Dec. 31, 2014)

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington
Alachlor	µg/L	5	< 0.5	< 0.5	< 0.5	< 0.5
Aldicarb	µg/L	9	< 5	< 5	< 5	< 5
Aldrin + Dieldrin	µg/L	0.7	< 0.006	< 0.01	< 0.01	< 0.01
Atrazine + N-dealkylated metabolites	µg/L	5	< 1	< 1	< 1	< 1
Azinphos-methyl	µg/L	20	< 2	< 2	< 2	< 2
Bendiocarb	µg/L	40	< 2	< 2	< 2	< 2
Benzene	µg/L	5	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	µg/L	0.01	< 0.009	< 0.009	< 0.009	< 0.009
Bromoxynil	µg/L	5	< 0.5	< 0.5	< 0.5	< 0.5
Carbaryl	µg/L	90	< 5	< 5	< 5	< 5
Carbofuran	µg/L	90	< 5	< 5	< 5	< 5
Carbon Tetrachloride	µg/L	5	< 0.10	< 0.10	< 0.10	< 0.10
Chlordane (Total)	µg/L	7	< 0.01	< 0.01	< 0.01	< 0.01
Chlorpyrifos	µg/L	90	< 1	< 1	< 1	< 1
Cyanazine	µg/L	10	< 1	< 1	< 1	< 1
Diazinon	µg/L	20	< 1	< 1	< 1	< 1
Dicamba	µg/L	120	< 1	< 1	< 1	< 1

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington
1,2-Dichlorobenzene	µg/L	200	< 0.20	< 0.20	< 0.20	< 0.20
1,4-Dichlorobenzene	µg/L	5	< 0.20	< 0.20	< 0.20	< 0.20
(DDT) + metabolites	µg/L	30	< 0.02	< 0.02	< 0.02	< 0.02
1,2-Dichloroethane	µg/L	5	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethylene	µg/L	14	< 0.10	< 0.10	< 0.10	< 0.10
Dichloromethane	µg/L	50	< 0.50	< 0.50	< 0.50	< 0.50
2-4 Dichlorophenol	µg/L	900	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenoxy acetic acid (2,4-D)	µg/L	100	< 1	< 1	< 1	< 1
Diclofop-methyl	µg/L	9	< 0.9	< 0.9	< 0.9	< 0.9
Dimethoate	µg/L	20	< 3	< 3	< 3	< 3
Dinoseb	µg/L	10	< 1	< 1	< 1	< 1
Diquat	µg/L	70	< 7	< 7	< 7	< 7
Diuron	µg/L	150	< 10	< 10	< 10	< 10
Glyphosate	µg/L	280	< 10	< 10	< 10	< 10
Heptachlor + Heptachlor Epoxide	µg/L	3	< 0.006	< 0.01	< 0.01	< 0.01
Lindane (Total)	µg/L	4	< 0.006	< 0.006	< 0.006	< 0.006
Malathion	µg/L	190	< 5	< 5	< 5	< 5
Methoxychlor	µg/L	900	< 0.02	< 0.02	< 0.02	< 0.02
Metolachlor	µg/L	50	< 0.5	< 0.5	< 0.5	< 0.5
Metribuzin	µg/L	80	< 5	< 5	< 5	< 5

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington
Monochlorobenzene	µg/L	80	< 0.10	< 0.10	< 0.10	< 0.10
Paraquat	µg/L	10	< 1	< 1	< 1	< 1
Pentachlorophenol	µg/L	60	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	µg/L	2	< 0.5	< 0.5	< 0.5	< 0.5
Picloram	µg/L	190	< 5	< 5	< 5	< 5
Polychlorinated Biphenyls(PCB)	µg/L	3	< 0.05	< 0.05	< 0.05	< 0.05
Prometryne	µg/L	1	< 0.3	< 0.3	< 0.3	< 0.3
Simazine	µg/L	10	< 1	< 1	< 1	< 1
Temephos	µg/L	280	< 10	< 10	< 10	< 10
Terbufos	µg/L	1	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethylene	µg/L	30	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	µg/L	100	< 0.5	< 0.5	< 0.5	< 0.5
Triallate	µg/L	230	< 1	< 1	< 1	< 1
Trichloroethylene	µg/L	5	< 0.12	< 0.12	< 0.12	< 0.12
2,4,6-Trichlorophenol	µg/L	5	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	µg/L	280	< 1	< 1	< 1	< 1
Trifluralin	µg/L	45	< 1	< 1	< 1	< 1
Vinyl Chloride	µg/L	2	< 0.2	< 0.2	< 0.2	< 0.2

Table 10 summarizes Treated and Distribution Samples taken under Schedule 13-6 and 13-7 for the period of Jan. 01 to Dec. 31, 2014.

**Table 10: O. Reg. 170/03 Schedule 13-6, 13-7 Rockwood and Hamilton Drive Quarterly Results**

(Jan. 01 to Dec. 31, 2014)

Test Parameter	Units	*MAC	Rockwood Station St.	Rockwood Bernardi	Hamilton Dr. Cross Creek	Hamilton Dr. Huntington
Nitrite (NO <sub>2</sub> )	mg/L as N	1.0	<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
Nitrate (NO <sub>3</sub> )	mg/L as N	10.0	<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
			<0.01	<0.01	<0.01	<0.01
Test Parameter	Units	MAC	Rockwood Zone 1 / Zone 2		Hamilton Drive Standpipe	
Trihalomethanes	mg/L	0.1	0.018 / 0.022		0.010	

The following table presents summary results for lead sampling in the Rockwood and Hamilton Drive Drinking Water Systems as for the period of Jan. 1 to Dec. 31, 2014:

**Table 11: O. Reg. 170/03 Schedule 15.1 Rockwood/Hamilton Lead Testing Summary 2014**  
**Rockwood**

Location Type	Number of Samples	Range of Lead Results (min#) – (max #) mg/L		Number of Exceedances
Plumbing	Exempt			n/a
Distribution	pH and alkalinity - 6	300	320	0



Location Type	Number of Samples	Range of Lead Results (min#) – (max #) mg/L		Number of Exceedances
Distribution	Lead - 6	< 0.00050	< 0.00050	0

### Hamilton Drive

Location Type	Number of Samples	Range of Lead Results (min#) – (max #) mg/L		Number of Exceedances
Plumbing	Exempt			n/a
Distribution	pH and alkalinity - 4	220	230	0
Distribution	Lead - 4	< 0.00050	0.00071	0

### Treated Water Quality Review– Gazer Mooney Subdivision Distribution System

This section describes the Regulatory water quality monitoring that has been collected in the Gazer Mooney Subdivision Distribution System in 2014 (Jan. 01 to Dec. 31, 2014). For regulatory sampling schedules that do not occur in 2014 related to the Gazer Mooney System, the most recent historical data is listed.

The following section summarizes daily Distribution free chlorine residual test results required by O. Reg. 170/03 for the period of Jan. 01 to Dec. 31, 2014 are summarized in table 12. There was no instance of an adverse result in 2014 between Jan. 01 and Dec. 31:

**Table 12: O. Reg. 170/03 Schedule 7-2, Gazer Mooney - Distribution Manual Free Chlorine Residual Summary**

Parameter	Number of Grab Samples	Range of Results (min # - (max #)
Free Chlorine Residual	365	0.57 -1.06 mg/L

Table 13 summarizes bacteriological sampling and test results required by O. Reg. 170/03 Schedule 10 for the period of Jan. 01 to Dec. 31, 2014. There was no instance of an exceedance for a Regulatory microbiological parameter in 2014 between Jan. 01 and Dec. 31:

- Number of Distribution samples taken: 52
- Number of Distribution analyses: 573

**Table 13: O. Reg. 170/03 Schedule 10-2, Gazer Mooney Treated Bacteriological Sampling Summary**

Parameter	# of Samples	Total Outside ODWQS Criteria	Range	Units
Distribution - E. coli	52	0	n/a	cfu/100 mL
Distribution - Total Coliform	52	0	n/a	cfu/100 mL
Distribution – HPC	52	0	0 - 22	cfu/mL
Distribution – Background	52	n/a	n/a	cfu/100 mL
Distribution– Free Chlorine Residual	365	0	0.57 – 1.06	mg/L

**Table 14: O. Reg. 170/03 Schedule 13-7, Gazer Mooney - Quarterly Sampling Results Summary**

Test Parameter	Units	MAC	Gazer Mooney Subdivision Distribution
Trihalomethanes	mg/L	0.1	0.019

\* MAC: Maximum acceptable concentration for THM's is 0.1 mg/L. However, for this parameter the MAC uses a running annual average of quarterly samples

### Treated Water Quality Statistics – General Chemistry Results Summary

In addition to the Regulatory sampling and analysis required for the operation of the Gazer Mooney Subdivision, the City of Guelph samples for parameters as listed in \_in order to gather additional data and answer common inquiries from the public.

**Table 15: Gazer Mooney General Chemistry Results Summary**

Parameter	MAC mg/L	ODWQS AO	½ MAC mg/L	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Sodium	20	n/a	n/a	3	3	3	25	26	25.3
Chloride	n/a	250	n/a	1	1	0	45	45	45

### i) Follow up on Action Items from previous management reviews

Engineering Consultants play a role in overseeing the Drinking Water System (e.g./ tender documents, design documents and drawings and site inspection services). Therefore verification should be provided for Competencies (QMS 10) and Essential Supplies and Services (QMS 13) Ref: sec. 5 of the Drinking Water Works Licence.

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## j) Status of Ongoing and Emerging Water Quality, Supply and Distribution Initiatives

### **Source Water Protection Plan**

The Risk Management Official has created a working group from all eight Municipalities within Wellington County to address items related to Source Water Protection. A website is being developed to assist in providing information on how the program is developing, how significant threats will be dealt with and how the public may participate in source water protection. The Municipality is actively participating in the working group.

## k) Expected Future Changes That Could Affect the DWS or the QMS

### **Changes Affecting the Drinking Water System (DWS) / Licence Approvals / Amendments**

**Licensing Renewal Process** – The renewal application for all of the Guelph/Eramosa Drinking Water Systems Municipal Drinking Water Licences are scheduled for resubmission on August 2, 2015. In preparation for renewal the following is required;

- the Council Resolution related to the approval of the updated Financial Plan
- a copy of the e-mail confirming submission of the Financial Plan to Ministry of Municipal Affairs and Housing (MMAH);
- a copy of the updated Operational Plan
- the Status of Permits to Take Water application for renewals;
- updated Raw Water Assessment; and
- updated mapping for Hamilton Drive, Rockwood and Gazer Mooney Distribution System Information

## l) Consumer Feedback

There were a very small number of complaints related to water quality covering the audit period of 2013 most of which were related to “discoloured water” complaints during the flushing program. The content of most calls were related their lack of awareness that flushing was taking place on their specific street. In addition to the current advertising program, the Public Works, Water Department has purchased “flushing in progress” signs which are now posted on the applicable street during flushing.

## m) The Resources Needed to Maintain the QMS

Guelph/Eramosa Public Works Water/Wastewater Department currently has one full-time Water/Wastewater Compliance Administrative Assistant, who is also the Quality Management System

Representative, three Water/Wastewater Operators, one of which is the Overall Responsible Operator and one temporary full time Operator In-training. Additional staff should be considered for succession planning for Operators planning to retire within the next 5 years.

Challenges continue for more efficient and effective processes and ongoing communication between staff, council and residents. e.g./ education and outreach related to conservation and safeguarding our water quality.

#### **n) The Results of Infrastructure Review**

The review of infrastructure requirements is achieved by reviewing the needs of existing infrastructure and of new infrastructure requirements.

Listed below are outstanding items for the 2013/2014 year.

- Documenting “found” water valves previously unidentified in preparation for updates to infrastructure mapping.
- Providing asset identification numbers to fire hydrants.
- Additional generators to enhance our ability to efficiently manage the system.

#### **o) Operational Plan Currency, Content and Updates**

See agenda item “k) Expected Future Changes That Could Affect the DWS or the QMS” for Operational Plan updates.

#### **p) Staff Suggestions**

Staff suggestions are discussed during staff and operational meetings and taken into account during annual budget processes.

### 3.0 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 2015 include the following:

Month of 2015	Scheduled DWQMS
February	<ul style="list-style-type: none"> <li>• Policy and Commitment Sign-off Top Management (Owner Representatives).</li> </ul>
March	<ul style="list-style-type: none"> <li>• Council update - Report to Owner</li> </ul>
April	<ul style="list-style-type: none"> <li>• DWQMS internal audit (April 8<sup>th</sup> &amp; 9<sup>th</sup>)</li> <li>• DWQMS management review</li> </ul>
June	<ul style="list-style-type: none"> <li>• NSF International Strategic Registrations off-site verification audit of the Drinking Water Quality Management System</li> </ul>
July	<ul style="list-style-type: none"> <li>• Council resolution for the Financial Plan in preparation of license renewal for HD and RWD</li> </ul>
August	<ul style="list-style-type: none"> <li>• Deadline for application licence renewal both HD and RWD</li> <li>• Licence expiry date February 1, 2016</li> <li>• Documents required for submission are;</li> <li>• Licence Renewal Application.</li> <li>• Council Resolution related to approval of Financial Plan</li> <li>• E-mail confirming submission of Financial Plan to Jim Gordon (MMAH).</li> <li>• Operational Plan</li> <li>• Status of Permits to Take Water</li> </ul>
September	<ul style="list-style-type: none"> <li>• Risk Assessment Review / Infrastructure Review</li> </ul>
October	<ul style="list-style-type: none"> <li>• DWQMS internal audit (repeat to move to a fall date)</li> </ul>

## 4.0 Legal and other Requirements update

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and Status Update
Jan. 9	The Star	<p>West Elgin water system employee jailed for falsifying records</p> <p>A former West Elgin county water system operator has been sentenced to 30 days in jail and fined \$15,000 for falsifying records for a period of five years and failing to report dangerously low chlorine levels. Additionally, two other employees received \$6,000 and \$4,500 in fines and the municipality was fined \$129,000.</p>	No action required. This information was shared among Water staff.
Feb. 10	Health Canada re: Toluene, Ethylbenzene and Xylenes in Drinking Water	<p>Toluene, Ethylbenzene and Xylenes in Drinking Water</p> <p>The Federal-Provincial-Territorial Committee on Drinking Water (CDW) has assessed the available information on toluene, ethylbenzene and xylenes with the intent of establishing drinking water guidelines. The purpose of this consultation is to solicit comments on the proposed guideline. Interested parties are encouraged to provide comments and suggestions by March 31st, 2014.</p>	No action required.
Feb. 13	Willms & Shier Article: New Voluntary "Excess Soil" Guidelines	<p>MOE Encourages Industry, Municipalities and Conservation Authorities To Implement New Voluntary "Excess Soil" Guidelines</p> <p>The Ontario Ministry of the Environment (MOE) has released new voluntary guidelines for the handling, transport and temporary storage of "excess soil" generated during construction or redevelopment activities (Guidelines). The MOE is encouraging municipalities and Conservation Authorities to consider the Management of Excess Soil – A Guide for Best Management Practices when establishing</p>	No action completed; future revision in by-law

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
		by-laws and issuing permits or approvals. The MOE anticipates that industry will develop complementary codes of practice to support the Guidelines.	
Mar. 6	OMWA  E-mail Communi- cation	Operator-in-Training Exams at Municipal Operating Authority Sites  The Ministry of the Environment will be discontinuing operator certification exams at municipal and operating authority sites as of March 31st, 2014. After this date, applicants must write Operator-in-Training (OIT) exams at a Program Administrator (OWWCO) examination site. OWWCO exam dates and locations are posted at <a href="http://www.owwco.ca">www.owwco.ca</a> . Students enrolled in a college program may still write at an approved college examination site.	No action required.
Mar. 12	MOE E-mail	Issue 5 of the Municipal Drinking Water Licensing Program Bulletin  Includes: Upcoming DWQMS Workshops; DWQMS Workshops – Best Practices; Innovative Operations – DR3 Program; Accreditation Related Appeals – How & Why; Financial Plan Requirements for Municipal Drinking Water Licences	No action required.
March	Ontario.ca	Ministry of the Environment: Minister's Annual Report on Drinking Water 2013 The Minister's Annual Report on Drinking Water 2013 includes an overview of Ontario's drinking water systems' performance, highlights of our efforts to protect the Great Lakes, and our first report on the progress we have made under the Water Opportunities Act.	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
April	Ontario.ca	<p>Chief Drinking Water Inspector Annual Report 2011-2012</p> <p>Ontario continues to be a world leader on the environmental stage in drinking water protection, conservation and innovative clean water technologies. Our programs complement Ontario's rigorous legislative requirements. Together, these comprehensive measures and regulations help ensure the safety of our drinking water in Ontario. In reading the report, you will also find that Ontario continues to set the bar for excellence in drinking water protection.</p>	No action required.
Apr. 7	AWWA e-mail	Newly Revised AWWA Standard M28 – Rehabilitation of Water Mains is available.	No action completed
Apr. 10	Ontario.ca Newsroom	<p>Protecting Timmins-Area Drinking Water</p> <p>Ontario has approved the Mattagami Region Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan was developed by the Mattagami Region Source Protection Committee, made up of municipal and community partners, with implementation scheduled for fall 2014.</p>	No action required.
Apr. 15	Health Canada re: Guidance for Issuing and Rescinding Boil Water	<p>Guidance for Issuing and Rescinding Boil Water Advisories</p> <p>The Federal-Provincial-Territorial Committee on Drinking Water (CDW) has assessed the available information on issuing and rescinding boil water advisories for drinking water supplies with the intent of establishing a drinking water guidance document</p>	Comment was submitted on behalf of the province-wide Municipal Water / Wastewater Regulatory Committee



Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
	Advisories	The purpose of this consultation is to solicit comments on this guidance document...All comments must be received before June 16, 2014.	(MWWRC).
Apr. 15	Ontario MOECC	Ontario MOE – Drinking Water Website – Changes  The MOE has once again changed their website portal for acquiring forms, documents and interacting with the MOE. Unfortunately, this change breaks all previous links to documents. Every guideline and form now has a new web address and location within the MOE website. This change is not for the better as it is now much more difficult to find documents.	No Action Required
May 9	City of Guelph Media Release	Media Release: Tribunal grants City's request for hearing; opens opportunity to address Dolime quarry risks  The Environmental Review Tribunal has granted the City's application for leave to appeal the Ministry of Environment's decision to grant River Valley Developments Inc.'s amended permit to take water at the Dolime quarry. The decision, made May 2, opens up an opportunity to address the City of Guelph's concerns about the risks posed to the City's water supply by the quarry operations at Wellington Road and the Hanlon Expressway.	
Jun. 24	Ontario.ca Newsroom	Ottawa Company Fined \$35,000 for Drinking Water System and Sewage Work Violations Brockville - Following an investigation, 7064512 Canada Ltd. and Tony Guiseppe Coccimiglio were fined \$35,000 for failing to comply with regulatory requirements and a ministry order involving a drinking water system and a ministry approval for a municipal	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and Status Update
		<p>sewage works ...</p> <p>Ministry staff conducted inspections of the Westport drinking water system. The inspections revealed that the operator's certificate for Mr. Coccimiglio was not displayed as required. The log book for the facility was not available during the inspection. There also were missing entries and data for the entire facility and the alarm for the low chlorine residual was improperly set. They also failed to comply with a ministry order to report the daily minimum free chlorine residual results and provided false information that the minimum chlorine residual was always above 1 mg/L when in fact it had fallen below that level on numerous occasions.</p>	
Summer	OETC Newsletter	<p>Operator Certification Bulletin - Summer 2014</p> <p>Includes: Requirement Changes for Renewing Drinking Water Operator and Analyst Temporary Certificates; Enhanced Drinking Water Renewal Notifications; CHEATING... Definitely Not Worth The Risk; Updates from the Walkerton Clean Water Centre; Ridgetown College's Water Quality Technical Program Graduates Have Greater Employability; Training Tools You Can Use; Operator Certification Working Group – Topics at their most recent meetings; Modernizing the Environmental Compliance Approvals Process for Sewage Works; Information - Drinking Water System Owners &amp; Operators on Blue-Green Algae; OIT Exams at Non-municipal Sites...</p>	No action required.
Aug. 28	Ontario.ca Newsroom	<p>Protecting Mississippi-Rideau-Area Drinking Water</p> <p>Ontario has approved the Mississippi-Rideau Source</p>	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
		Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Mississippi-Rideau Source Protection Committee, will take effect Jan.1, 2015.	
Sep. 11	Ontario.ca Newsroom	Protecting Quinte-Area Drinking Water  Ontario has approved the Quinte Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Quinte source protection committee, will take effect Jan. 1, 2015.	No action required.
Sep. 11	Ontario.ca Newsroom	Protecting Kettle Creek-Area Drinking Water  Ontario has approved the Kettle Creek Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Lake Erie region source protection committee, will take effect Jan. 1, 2015.	No action required.
Sep. 25	AMO E-mail / Ontario Newsroom	2014 Mandate Letter: Environment and Climate Change: Premier's instructions to the Minister on priorities for the year 2014. Related to Guelph's drinking water system, the most relevant statement is related to: "Enhancing Polluter Responsibility" where the legislative framework will be reviewed to ensure that there is a comprehensive approach to holding polluters responsible for decisions that affect the environment.	No action required.
Sep. 25	AMO E-mail / Ontario	2014 Mandate Letter: Natural Resources and Forestry: Premier's instructions to the Minister on priorities for the year 2014. Related to Guelph's	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
	Newsroom	drinking water system, the most relevant statement is related to: "Managing Aggregates" where stakeholders will be engaged to address the recommendations of the Standing Committee on General Government's Report on the Review of the Aggregate Resources Act.	
Sep. 30	Ontario.ca Newsroom	Protecting Sudbury-Area Drinking Water  Ontario has approved the Sudbury Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by municipal and community partners on the Sudbury source protection committee, will take effect Apr. 1, 2015.	No action required.
Sep. 30	Ontario.ca Newsroom	Protecting Catfish Creek-Area Drinking Water  Ontario has approved the Catfish Creek Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Lake Erie region source protection committee, will take effect Jan. 1, 2015.	No action required.
Oct. 31	Ontario.ca Newsroom	Protecting Trent Conservation Coalition Region Drinking Water  Ontario has approved the Trent Conservation Coalition Source Protection Plans to strengthen local source-to-tap drinking water protection. The plans, developed by local municipal and community partners on the Trent Conservation Coalition source protection committee, will take effect Jan. 1, 2015.	No action required.
Oct. 31	Ontario.ca	Protecting Raisin-South Nation Region Drinking	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
	Newsroom	<p>Water</p> <p>Ontario has approved the Raisin-South Nation Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Raisin-South Nation source protection committee, will take effect April 1, 2015.</p>	
Nov. 7	UW NSERC E-mail	Updated Guidelines for Canadian Drinking Water Quality - Summary Table	No action required.
Nov. 8	St. Albert Gazette	<p>Tap water release nets \$185,000 fine</p> <p>\$185,000 fine (\$5,000 under Fisheries Act and \$180,000 to Environment Canada's Environmental Damages Fund) issued to Norelco Contractors Ltd. after 35,000 litres of chlorinated water overflowed into the Sturgeon River from a watermain break in 2012. In a similar recent case, Clark Builders was fined \$285,000 for releasing 12 million litres of chlorinated water into the North Saskatchewan River in 2009.</p>	No Action Required
Nov. 27	Ontario.ca Newsroom	<p>Protecting Kingston-Area Drinking Water</p> <p>Ontario has approved the Cataraqui Source Protection Plan to strengthen local source-to-tap drinking water protection. The plan, developed by local municipal and community partners on the Cataraqui source protection committee, will take effect April 1, 2015.</p>	No action required.
Dec. 13	Ontario Gazette	<p>Updates to OWRA O. Reg. 387/04 – "Water Taking and Transfer"</p> <p>1. Amendments to Ontario Regulation 387/04 under</p>	No action required.

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
		<p>OWRA to:</p> <ul style="list-style-type: none"> <li>- Manage water takings according to provisions of the Agreement;</li> <li>- Regulate new or increased transfers of water from one Great Lake watershed to another based on standards of the Agreement; and</li> <li>- Retain existing exemptions for watering livestock or for domestic purposes unless a new or increased transfer of 379,000 litres per day or more is established.</li> </ul> <p>2. Amendments to Classification of Proposals for Instruments Regulation (O. Reg 681/94 under the Environmental Bill of Rights) to identify that proposals for water transfers would be subject to posting on the Environmental Registry in a manner consistent with existing rules for posting water-taking proposals, including existing exemptions.</p>	
Dec. 17	MOECC E-mail	<p>The Ministry of the Environment and Climate Change has released a new technical bulletin on taking samples from plumbing. This bulletin discusses O. Reg. 170/03 requirements for reporting adverse drinking water test results when a municipality takes chlorine and/or microbiological samples from plumbing in response to customer complaints. Read the new technical bulletin to better understand reporting requirements. For inquiries about this technical bulletin contact:</p> <p style="text-align: center;">Safe Drinking Water Branch, MOECC – 40 St. Clair Avenue West, Toronto ON M4V 1L5 - 416-314-4599</p>	Guelph/Eramosa policy: no samples to be taken from internal plumbing in response to customer complaints.
Dec.	MOECC	Municipal operating authorities are required to use AWWA Standard C651 (Disinfecting Water Mains)	DRAFT ONLY – Final for January

Date - 2014	Source of Posting / Reference	Title of Legal & Other Requirement  Highlights of posting	Action and  Status Update
2014	E-mail	for addition, replacement or repair of pipes forming the distribution system, as per condition 2.3.2 of Drinking Water Works Permits. The province has worked with stakeholders to clarify the requirements of C651, and to develop alternative procedures to be used during emergency repairs. The Watermain Disinfection Procedure will result in some changes to the procedures. The document outlines minimum requirements for compliance, and operating authorities will be able to use their discretion to adopt more stringent standard operating procedures. Requirements for disinfection will also apply to temporary watermains, as well as service pipes of 100 mm diameter or greater.	2015
Jan. 19/15	Ontario.ca Newsroom	A local source protection committee for drinking water source protection has praised the Province of Ontario for approval of source protection plans for the Maitland Valley and Ausable Bayfield Source Protection Areas. "The Plans will reduce this risk through a practical and local approach to manage threats in the most vulnerable areas of our region." The date they take effect is April 1, 2015.	No action required.