2019
Annual Drinking Water Report

For:

Hamilton Drive Drinking Water System

Rockwood Drinking Water System

-And-

Gazer Mooney Subdivision Distribution System

Prepared by:

Guelph/Eramosa Township

February 28, 2020

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 Ontario Regulation (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 Rockwood, the Hamlets of Hamilton Drive and Prominade Park (Gazer Mooney Subdivision).

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, 2019

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

As per the Accessibility for Ontarians with Disabilities Act (AODA), this document is available in an alternate format by e-mailing the Township Clerk jspies@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 booster pumping station/standpipe 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 supplies 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 Pumphouse 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 a 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 the Hamilton Drive Hamlet 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 serving the Promenade Park Hamlet located in the Township of Guelph/Eramosa. It has approximately 72 metered water service connections, 1.5 kilometers of underground watermains, six fire hydrants and an approximate population of 216 residents.

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.

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 March 1, 2019. The terms of the agreement apply until February 29, 2024, with an automatic renewal extended to February 28, 2029.

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 (MECP) 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).

Hamilton Drive

The Hamilton Drive Drinking Water System Inspection was performed in September 2019 and covered the period from January 1, 2019 to September 15, 2019 resulting in an assessment score of 100 per cent (compliance).

Rockwood

The Rockwood Drinking Water System Inspection was performed in January of 2019 and covered the period from February 5, 2019 to October 15, 2019 resulting in an assessment score of 100 % per cent (compliance).

Gazer Mooney Subdivision Distribution System

The Gazer Mooney Water System Inspection was performed in October 2019 and covered the period from January 1, 2019 to September 30, 2019 resulting 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.

Rockwood & Hamilton Drive Drinking Water Systems

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

(Jan. 01 to Dec. 31, 2019)

Incident Date	AWQI #	Location	Parameter / Unit of measure	Corrective Action
There were no incidents of non-compliance associated with the Rockwood and Hamilton Drive Drinking Water System in 2019				

Gazer Mooney Subdivision Distribution System

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

(Jan. 01 to Dec. 31, 2019)

Incident Date	AWQI #	Location	Parameter / Unit of measure	Corrective Action
Mar. 26/19	145058	Gazer Mooney Lift Station	Sodium result of 26 mg/L at GM223	Wellington-Dufferin-Guelph Public Health (WDGPH), MECP, Spills Action Centre (SAC), and Guelph/Eramosa Township staff were notified. Re-samples taken and results of 24 mg/L were received on March 28, confirming Gazer Mooney treated water is above the aesthetic objective lower limit of 20 mg/L. Resample results were communicated to the WDGPH and the AQWI was closed.

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 Conservation and Parks Drinking Water Standards or Municipal Drinking Water licence requirements.

There were no critical control limit deviations over the period of this report.

d) The Effectiveness of the Risk Assessment Process

A risk assessment must be conducted for all municipal residential drinking water systems, as part of the operational plans for those systems. These operational plans form the basis upon which third party auditors assess conformance to the Drinking Water Quality Management Standard.

This section confirms the occurrence of reviews and re-assessments 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).

The annual risk assessment review was conducted by on June 13, 2019. The updated risk assessment outcomes were provided at a Management Review Meeting on November 7, 2019. The results of the Risk Assessment are not made available to the public but are made available to Drinking Water System Owners (Council).

Emergency and Standard Operating Procedures (SOPs) were considered during the 2019 risk review process. Staff considered the operational procedure relationship to the associated risk and the applicability to emergency or nonemergency processes.

This year's risk review outcomes were unchanged however multiple SOPs previously living within the Emergency Plan have moved to the Standard Procedures Binder. Additionally, some SOPs considered to have a similar relationship are merged to eliminate repetitiveness.

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 are 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.

2019 Internal Audit

The 2019 internal audit was conducted on June 26 and 27th for the review period August 2019 and June 25, 2019.

The internal audit performed within the Guelph/Eramosa Water/Wastewater Department demonstrated that top management and staff are committed to ongoing maintenance and continual improvement of the Quality Management System. While opportunities for improvement were cited during the audit, they do not undermine the positive programs and attitudes already in place at the Guelph/Eramosa Township.

No nonconformities were identified during the 2019 internal audit. Various opportunities for improvement (OFI) noted during the internal audit are discussed at the internal audit closing meeting and are tracked as "action items" to be addressed by the Guelph/Eramosa Water/Wastewater

Department throughout the year and are reviewed during Management Review. Action items, if possible, are closed or are pending closure by the next scheduled internal audit.

Various opportunities for improvement (OFI) noted in 2019 are: review of procedures by operational staff, improved documentation of field notes within applicable work orders and providing updated communication on the relevant aspects of the Quality Management System to non-essential services.

2019 External Audit

Third party audit off-site system audit was performed on November 1st, 2019 by NSF International Inc. Accreditation to the Drinking Water Quality Management Standard Version 2.0 was maintained.

The audit results are summarized as follows; zero major non-conformities, one minor non-conformity and three opportunities for improvement.

The corrective action finding was related to Measurement and Recording Equipment Calibration & Maintenance (QMS 17). An instance was identified where a new set of calibration standards were not verified as being used. Appropriate corrective action was implemented and approved by the auditor. The corrective action will be verified for effectiveness by the auditor at the next audit in the fall of 2020.

Noted opportunities for improvement by the auditor were related to improving the following processes: Measurement and Recording Equipment, Calibration and Maintenance (QMS 17); Risk Assessment Outcomes (QMS 7&8) Communication (QMS 12) Continual Improvement (QMS 21). These opportunities for improvement will be followed-up on by the auditor at the next off-site audit in Fall of 2020.

f) Results of Emergency Response Testing

Emergency Response testing, training and review of potential emergencies are conducted regularly as part of the Drinking Water Quality Management System to ensure that Water Department and related staff maintains a reasonable readiness to deal with emergencies and abnormal events.

An emergency exercise was conducted on October 24, 2019 at a training workshop with other Wellington Municipalities. The Objective was to create an opportunity for individuals to share response plans and procedures threatening the municipal water and wastewater systems and to learn about others response procedures in order to foster county wide information sharing.

Recommendations and lessons learned were discussed and documented to improve applicable procedures.

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.

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 five (5) tables list the quantities and flow rates of the water supplied during the reporting period covered by this report (Jan. 01 to Dec. 31, 2019) 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 Well # 1 Station St. (TW# 1-67)

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

MONTH	Avg. Daily Volume **m^3**	% Of Approved Volume	MAX Daily Volume **m^3**/day	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	242.23	12%	1077.54	55%	1211.54	89%
FEBRUARY	277.91	14%	815.61	42%	1214.84	89%
MARCH	277.92	14%	802.22	41%	1208.97	89%
APRIL	229.91	12%	711.52	36%	1215.20	89%
MAY	279.98	14%	687.20	35%	1219.23	89%
JUNE	393.28	20%	1116.96	57%	1245.60	91%
JULY	312.49	16%	828.62	42%	1308.42	96%
AUGUST	319.04	16%	871.61	44%	1207.33	89%
SEPTEMBER	294.38	15%	924.63	47%	1204.58	88%
OCTOBER	243.67	12%	922.37	47%	1202.93	88%
NOVEMBER	322.49	16%	912.87	46%	1207.14	89%
DECEMBER	261.46	13%	767.77	39%	1208.79	89%

Table 4: Summary of Raw Water Flows – Rockwood Well # 2 Station St. (TW# 1-76)

Station St. Well TW# 1- 76 (Rated Capacity 1,964 m^3/day) (Rated Daily Peak 1,360 L/min)

MONTH	Avg. Daily Volume **m^3**	% Of Approved Volume	MAX Daily Volume **m^3**/day	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	277.85	14%	937.53	48%	1319.96	97%
FEBRUARY	215.64	11%	673.37	34%	1331.68	98%
MARCH	259.14	13%	704.31	36%	1311.36	96%
APRIL	261.37	13%	833.99	42%	1317.03	97%
MAY	339.36	17%	1105.65	56%	1318.68	97%
JUNE	268.04	14%	761.00	39%	1312.82	96%
JULY	401.11	20%	1178.60	60%	1314.65	96%
AUGUST	416.41	21%	1083.54	55%	1302.38	95%
SEPTEMBER	340.09	17%	778.59	40%	1309.89	96%
OCTOBER	301.60	15%	1025.66	52%	1299.82	95%
NOVEMBER	266.30	14%	990.49	50%	1318.13	97%
DECEMBER	226.75	12%	638.81	33%	1318.50	97%

Table 5: Summary of Raw Water Flows – Rockwood Well # 3 Bernardi

Bernardi Well # 3 (Rated Capacity 1,310 m^3/day) (Rated Daily Peak 1100 L/min)

MONTH	Avg. Daily Volume **m^3**	% Of Approved Volume	MAX Daily Volume **m^3/day**	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	*354.82*	*27%*	*948.63*	*72%*	*892.71*	*81%*
FEBRUARY	338.07	26%	825.75	63%	890.06	81%
MARCH	276.72	21%	841.63	64%	894.36	81%
APRIL	354.39	27%	766.49	59%	900.31	82%
MAY	303.10	23%	1101.41	84%	905.25	82%
JUNE	274.11	21%	1077.78	82%	911.84	83%
JULY	374.38	29%	1099.48	84%	817.55	74%
AUGUST	361.05	28%	1053.78	80%	818.46	74%
SEPTEMBER	301.03	23%	756.24	58%	828.26	75%
OCTOBER	336.42	26%	1058.47	81%	831.92	76%
NOVEMBER	309.35	24%	814.26	62%	840.80	76%
DECEMBER	449.28	34%	1085.57	83%	889.80	81%

Table 6: Summary of Raw Water Flows – Hamilton Drive Well # 3 Cross Creek

Cross Creek Well # 3 (Rated Capacity 812 m^3/day) (Rated Daily Peak 725 L/min)

MONTH	Avg. Daily Volume m^3	% Of Approved Volume	MAX Daily Volume m^3/day	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	102.76	13%	205.00	25%	701.63	97%
FEBRUARY	86.80	11%	123.00	15%	699.23	96%
MARCH	90.85	11%	131.00	16%	701.11	97%
APRIL	96.36	12%	222.00	27%	715.25	99%
MAY	168.65	21%	392.72	48%	703.34	97%
JUNE	149.21	18%	262.00	32%	710.27	98%
JULY	141.50	17%	318.00	39%	714.80	99%
AUGUST	158.84	20%	312.00	38%	693.62	96%
SEPTEMBER	151.39	19%	272.00	33%	720.12	99%
OCTOBER	96.95	12%	328.00	40%	692.67	96%
NOVEMBER	136.57	17%	314.00	39%	601.60	83%
DECEMBER	62.93	8%	231.00	28%	603.09	83%

Table 7: Summary of Raw Water Flows – Hamilton Drive Well # 2 Huntington

Huntington Well # 2 (Rated Capacity 916 m^3/day) (Rated Daily Peak 636L/min)

MONTH	Avg. Daily Volume **m^3**	% Of Approved Volume	MAX Daily Volume **m^3**/day	% Of Approved Volume	Peak Flow Rate L/min	% Of Approved Flow Rate
JANUARY	110.85	12%	225.00	25%	613.82	97%
FEBRUARY	109.56	12%	175.75	19%	607.38	95%
MARCH	107.18	12%	226.78	25%	610.98	96%
APRIL	137.01	15%	336.00	37%	609.88	96%
MAY	163.23	18%	294.00	32%	614.95	97%
JUNE	172.30	19%	282.00	31%	610.73	96%
JULY	149.13	16%	274.00	30%	595.35	94%
AUGUST	204.29	22%	426.00	47%	599.17	94%
SEPTEMBER	187.41	20%	332.00	36%	594.22	93%
OCTOBER	100.11	11%	254.54	28%	599.56	94%
NOVEMBER	44.48	5%	324.00	35%	601.60	95%
DECEMBER	79.70	9%	272.00	30%	603.09	95%

i. Water Production vs. Water Consumption

Water Production vs. Water Consumption for 2019 shows an overall percentage loss of 2 % for Rockwood consistent with 2019. Hamilton Drive shows a large loss of 30% up by 22% from 2019. This large increase in water loss for the Hamilton Drive system is suspected to have been a recently repaired service leak. Confirmation is pending following a check of the first billing cycle of 2020 against the volume of treated water produced.

Additional considerations for non-revenue water loss are unauthorized water use, customer meter inaccuracies, distribution and service connection piping leaks.

The soccer field at 120 Rockmosa Park was our highest consumer of water in 2019 at a rate of 22,000 L/day (21.9 m^3) with calculations based on a May to October (157 days) operational season. Total annual consumption was 3,452 cubic meters. Grand River Conservation Area was the second highest consumer of water at 14,040 L/day (14.04 m3) with calculations based on their April to October (214 days) operational season. 2019 total annual consumption was 3005 m^3.

ii. Other Operational Performance Data

The following table provides a brief description of expenses incurred within Rockwood and Hamilton Drive Drinking Water Systems

Table 8: Rockwood and Hamilton Drive 2019 Maintenance Activity

Major Maintenance Activity / Expenditure	Location
Supervisory Control and Data Acquisition (SCADA) maintenance & upgrades	RWD & HD
Distribution System Maintenance; watermain valve, hydrants, service connections	RWD & HD
Water meter replacement program	RWD & HD
Water Tower Mixer - prevent freeze up in winter	HD
Generator maintenance & repairs	RWD
Chlorine analyzer replacements	RWD & HD
Facility pump repairs	RWD
Ultra-Violet (UV) system maintenance	RWD
Watermain replacement and extension	RWD & HD

* RWD: Rockwood Drinking Water System * HD: Hamilton Drive Drinking Water System

h) Raw and Treated Water Quality – Rockwood, Hamilton Drive and Gazer Mooney Drinking Water System

This section describes the water quality monitoring, both regulatory and operational, that has been completed in 2019 (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 61 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 9: Operational testing done under Schedule 7 of O. Reg.170/03 Rockwood

Location	Parameter	*ODWQS Criteria *MDWL Criteria	Number of Grab Samples	Range of Results
Station St Pumphouse Well 1	Turbidity	1.0	50	0.07 – 0.44 NTUs
Station St Pumphouse Well 2			50	0.07 – 0.40 NTUs
Bernardi Pumphouse Well 3		n/a	47	0.08 – 0.47 NTUs
Station St Pumphouse	Free Chlorine Residual	0.05 – 4.0	8760	0.14-2.45 mg/L
Bernardi Pumphouse			8760	0.58-2.62 mg/L
Rockwood Distribution			416	0.23-1.63 mg/L

*** MDWL= Municipal Drinking Water Licence requirement**

Table 10: Operational testing done under Schedule 7 of O. Reg.170/03 Hamilton Drive

Location	Parameter	ODWQS Criteria	Number of Grab Samples	Range of Results
Huntington Pumphouse Well 2	Turbidity	n/a	47	0.60-3.70 mg/L
Cross Creek Pumphouse Well 3			46	0.09-0.47 NTU's
Huntington Pumphouse	Free Chlorine Residual	0.05 – 4.0	8760	0.60-3.70 mg/L
Cross Creek Pumphouse			8760	0.59-2.42 mg/L
Hamilton Drive Distribution			362	0.51-1.82 mg/L

*** NTUs =** Nephelometric **Turbidity** Units *__ODWQS=Ontario Municipal Drinking Water Standards__

Table 11: O. Reg. 170/03 Schedule 10 - Rockwood / Hamilton Drive Microbiological Testing

(Jan. 01 to Dec. 31, 2019)

Drinking Water System	Parameter	# of Samples	E. coli (min –max)	Total Coliform (min – max)	# of HPC Samples	HPC (min – max)
			Units = CFU/mL			
Rockwood	Raw	159	0-0	0-0	N/A	N/A
	Treated	106	0-0	0-0	106	0-3
	Distribution	219	0-0	0-0	219	0-12
Hamilton Drive	Raw	106	0-0	0-0	N/A	N/A
	Treated	106	0-0	0-0	106	0-1
	Distribution	168	0-0	0-0	168	0-31

HPC = Heterotrophic plate count

Table 12: O. Reg. 170/03 Schedule 13-2 13-4 Chemical testing results – Rockwood Well Supply

Rockwood Well Supply –Station Street and Bernardi Pumphouse(s) Organic/Inorganic parameters for reporting period January 01 to December 31, 2019.

LEGEND			Project Name	ROCKWOOD WELL SUPPLY	
Bold & Red = Exceedance			Sample location	STATION ST. PUMPHOUSE	BERNARDI PUMPHOUSE
*DL = Laboratory Detection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC**	***Units***	***DL**	***Result***	***Result***
Antimony (Sb)	6	ug/L	0.5	<0.50	<0.50
Arsenic (As)	10	ug/L	1	<1.0	<1.0
Barium (Ba)	1000	ug/L	2	90	46
Boron (B)	5000	ug/L	10	26	12
Cadmium (Cd)	5	ug/L	0.1	<0.10	<0.10
Chromium (Cr)	50	ug/L	5	<5.0	<5.0
Lead (Pb)	10	ug/L	0.5	<0.50	<0.50
Selenium (Se)	50	ug/L	2	<2.0	<2.0
Sodium (Na)	20000	ug/L	100	**140000**	17000
Uranium (U)	20	ug/L	0.1	0.99	0.37
Mercury (Hg)	0.001	mg/L	0.0001	<0.0001	<0.0001
Diquat	70	ug/L	7	<7.0	<7.0
Paraquat	10	ug/L	1	<1.0	<1.0
Glyphosate	280	ug/L	10	<10	<10
Diuron	150	ug/L	10	<10	<10
Guthion (Azinphos-methyl)	20	ug/L	2	<2.0	<2.0
2,3,4,6-Tetrachlorophenol	100	ug/L	0.5	<0.50	<0.50

LEGEND			Project Name	ROCKWOOD WELL SUPPLY	
Bold & Red = Exceedance			Sample location	STATION ST. PUMPHOUSE	BERNARDI PUMPHOUSE
*DL = Laboratory Detection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC***	***Units***	***DL***	***Result***	***Result***
2,4,6-Trichlorophenol	5	ug/L	0.5	<0.50	<0.50
2,4-D	100	ug/L	1	<1.0	<1.0
2,4-Dichlorophenol	900	ug/L	0.25	<0.25	<0.25
Alachlor	5	ug/L	0.5	<0.50	<0.50
Atrazine		ug/L	0.5	<0.50	<0.50
Des-ethyl atrazine		ug/L	0.5	<0.50	<0.50
Atrazine + Desethyl-atrazine	5	ug/L	1	<1.0	<1.0
Bromoxynil	5	ug/L	0.5	<0.50	<0.50
Carbaryl	90	ug/L	5	<5.0	<5.0
Carbofuran	90	ug/L	5	<5.0	<5.0
Chlorpyrifos (Dursban)	90	ug/L	1	<1.0	<1.0
Diazinon	20	ug/L	1	<1.0	<1.0
Dicamba	120	ug/L	1	<1.0	<1.0
Diclofop-methyl	9	ug/L	0.9	<0.90	<0.90
Dimethoate	20	ug/L	2.5	<2.5	<2.5
Malathion	190	ug/L	5	<5.0	<5.0
MCPA	100	ug/L	10	<10	<10
Metolachlor	50	ug/L	0.5	<0.50	<0.50
Metribuzin (Sencor)	80	ug/L	5	<5.0	<5.0
Pentachlorophenol	60	ug/L	0.5	<0.50	<0.50
Phorate	2	ug/L	0.5	<0.50	<0.50
Picloram	190	ug/L	5	<5.0	<5.0
Prometryne	1	ug/L	0.25	<0.25	<0.25
Simazine	10	ug/L	1	<1.0	<1.0
Terbufos	1	ug/L	0.5	<0.50	<0.50
Triallate	230	ug/L	1	<1.0	<1.0
Trifluralin	45	ug/L	1	<1.0	<1.0
Benzo(a)pyrene	0.01	ug/L	0.009	<0.0090	<0.0090
1,1-Dichloroethylene	14	ug/L	0.1	<0.10	<0.10
1,2-Dichlorobenzene	200	ug/L	0.2	<0.20	<0.20
1,2-Dichloroethane	5	ug/L	0.2	<0.20	<0.20
1,4-Dichlorobenzene	5	ug/L	0.2	<0.20	<0.20
Benzene	1	ug/L	0.1	<0.10	<0.10
Bromodichloromethane		ug/L	0.1	0.2	0.78
Bromoform		ug/L	0.2	<0.20	0.3
Carbon Tetrachloride	2	ug/L	0.1	<0.10	<0.10

LEGEND			Project Name	ROCKWOOD WELL SUPPLY	
Bold & Red = Exceedance			Sample location	STATION ST. PUMPHOUSE	BERNARDI PUMPHOUSE
*DL = Laboratory Detection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC***	***Units***	***DL***	***Result***	***Result***
Chlorobenzene	80	ug/L	0.1	<0.10	<0.10
Chloroform		ug/L	0.1	0.3	0.53
Dibromochloromethane		ug/L	0.2	0.3	0.96
Methylene Chloride(Dichloromethane)	50	ug/L	0.5	<0.50	<0.50
Ethylbenzene	140	ug/L	0.1	<0.10	<0.10
Tetrachloroethylene	10	ug/L	0.1	<0.10	<0.10
Toluene	60	ug/L	0.2	<0.20	<0.20
Trichloroethylene	5	ug/L	0.1	<0.10	<0.10
Vinyl Chloride	1	ug/L	0.2	<0.20	<0.20
Total Xylenes	90	ug/L	0.1	<0.10	<0.10
Total Trihalomethanes		ug/L	0.2	0.79	2.56

Table 13: O. Reg. 170/03 Schedule 13-2 13-4 Chemical testing results – Hamilton Drive Well Supply

Hamilton Drive Well Supply –Huntington and Cross Creek Pumphouse(s) Organic/Inorganic parameters for reporting period January 01 to December 31, 2019.

LEGEND			Project Name	Hamilton Drive Well Supply	
Bold & Red = Exceedance			Sample location	Huntington Pumphouse	Cross Creek Pumphouse
*DL = Laboratory Dectection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC***	***Units***	***DL***	***Result***	***Result***
Antimony (Sb)	6	ug/L	0.5	<0.50	<0.50
Arsenic (As)	10	ug/L	1	<1.0	<1.0
Barium (Ba)	1000	ug/L	2	45	40
Boron (B)	5000	ug/L	10	37	30
Cadmium (Cd)	5	ug/L	0.1	<0.10	<0.10
Chromium (Cr)	50	ug/L	5	<5.0	<5.0
Lead (Pb)	10	ug/L	0.5	<0.50	1.6
Selenium (Se)	50	ug/L	2	<2.0	<2.0
Sodium (Na)	20000	ug/L	100	**28000**	9700
Uranium (U)	20	ug/L	0.1	<0.10	<0.10
Mercury (Hg)	0.001	mg/L	0.0001	<0.0001	<0.0001

LEGEND			Project Name	Hamilton Drive Well Supply	
Bold & Red = Exceedance			Sample location	Huntington Pumphouse	Cross Creek Pumphouse
*DL = Laboratory Dectection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC**	***Units***	***DL**	***Result***	***Result***
Diquat	70	ug/L	7	<7.0	<7.0
Paraquat	10	ug/L	1	<1.0	<1.0
Glyphosate	280	ug/L	10	<10	<10
Diuron	150	ug/L	10	<10	<10
Guthion (Azinphos-methyl)	20	ug/L	2	<2.0	<2.0
2,3,4,6-Tetrachlorophenol	100	ug/L	0.5	<0.50	<0.50
2,4,6-Trichlorophenol	5	ug/L	0.5	<0.50	<0.50
2,4-D	100	ug/L	1	<1.0	<1.0
2,4-Dichlorophenol	900	ug/L	0.25	<0.25	<0.25
Alachlor	5	ug/L	0.5	<0.50	<0.50
Atrazine		ug/L	0.5	<0.50	<0.50
Des-ethyl atrazine		ug/L	0.5	<0.50	<0.50
Atrazine + Desethyl-atrazine	5	ug/L	1	<1.0	<1.0
Bromoxynil	5	ug/L	0.5	<0.50	<0.50
Carbaryl	90	ug/L	5	<5.0	<5.0
Carbofuran	90	ug/L	5	<5.0	<5.0
Chlorpyrifos (Dursban)	90	ug/L	1	<1.0	<1.0
Diazinon	20	ug/L	1	<1.0	<1.0
Dicamba	120	ug/L	1	<1.0	<1.0
Diclofop-methyl	9	ug/L	0.9	<0.90	<0.90
Dimethoate	20	ug/L	2.5	<2.5	<2.5
Malathion	190	ug/L	5	<5.0	<5.0
MCPA	100	ug/L	10	<10	<10
Metolachlor	50	ug/L	0.5	<0.50	<0.50
Metribuzin (Sencor)	80	ug/L	5	<5.0	<5.0
Pentachlorophenol	60	ug/L	0.5	<0.50	<0.50
Phorate	2	ug/L	0.5	<0.50	<0.50
Picloram	190	ug/L	5	<5.0	<5.0
Prometryne	1	ug/L	0.25	<0.25	<0.25
Simazine	10	ug/L	1	<1.0	<1.0
Terbufos	1	ug/L	0.5	<0.50	<0.50
Triallate	230	ug/L	1	<1.0	<1.0
Trifluralin	45	ug/L	1	<1.0	<1.0
Benzo(a)pyrene	0.01	ug/L	0.009	<0.0090	<0.0090
1,1-Dichloroethylene	14	ug/L	0.1	<0.10	<0.10
1,2-Dichlorobenzene	200	ug/L	0.2	<0.20	<0.20

LEGEND			Project Name	Hamilton Drive Well Supply	
Bold & Red = Exceedance			Sample location	Huntington Pumphouse	Cross Creek Pumphouse
*DL = Laboratory Dectection Limit			Sample Date	15-Jan-19	
* MAC = Maximum Acceptable Concentration as per Reg 170 & Reg 169 DW - MAC				TREATED WATER	
Parameter Name	***MAC***	***Units***	***DL***	***Result***	***Result***
1,2-Dichloroethane	5	ug/L	0.2	<0.20	<0.20
1,4-Dichlorobenzene	5	ug/L	0.2	<0.20	<0.20
Benzene	1	ug/L	0.1	<0.10	<0.10
Bromodichloromethane		ug/L	0.1	0.64	0.75
Bromoform		ug/L	0.2	0.75	0.67
Carbon Tetrachloride	2	ug/L	0.1	<0.10	<0.10
Chlorobenzene	80	ug/L	0.1	<0.10	<0.10
Chloroform		ug/L	0.1	0.28	0.27
Dibromochloromethane		ug/L	0.2	1.2	1.27
Methylene Chloride(Dichloromethane)	50	ug/L	0.5	<0.50	<0.50
Ethylbenzene	140	ug/L	0.1	<0.10	<0.10
Tetrachloroethylene	10	ug/L	0.1	<0.10	<0.10
Toluene	60	ug/L	0.2	<0.20	<0.20
Trichloroethylene	5	ug/L	0.1	<0.10	<0.10
Vinyl Chloride	1	ug/L	0.2	<0.20	<0.20
Total Xylenes	90	ug/L	0.1	<0.10	<0.10
Total Trihalomethanes		ug/L	0.2	2.86	2.96

Table 14 summarizes treated and distribution samples taken at the Rockwood and Hamilton Drive Drinking Water Systems for the period of Jan. 01 to Dec. 31, 2019.

Table 14: O. Reg. 170/03 Schedule 13-6, 13-7 Rockwood and Hamilton Drive quarterly results

(Based on 4 sample results)

Location Type	Test Parameter	MAC mg/L	Rockwood mg/L	Hamilton Drive mg/L
Distribution (expressed as running average)	Trihalomethanes	0.100	0.021	0.014
	Haloacetic Acids	0.08	0.005	0.005
Treated	Nitrate (NO3)	10.0	<0.010 – 0.010	<0.10 – 0.10
	Nitrite (NO2)		<0.010 - <0.010	<0.010 - <0.010
	NO3 +NO2 (as nitrogen)		<0.10 - <0.10	<0.10 - <0.10

MAC: Maximum Acceptable Concentration

Summary results for schedule 15.1 of Ontario Regulation 170/03.

Rockwood and Hamilton Drive Drinking Water Systems are required to sample from the distribution systems as follows:

- Sample for pH and alkalinity every “winter” and “summer” period each year.
- Sample for lead once every three years, both “winter” and “summer” periods.

2019 is a “no lead” sampling period, therefore pH and alkalinity is the only testing required for the period of Jan. 1 to Dec. 31, 2019

Table 15: O. Reg. 170/03 Schedule 15.1 Rockwood/Hamilton Testing Summary 2019

Location	Location Type	Number of Samples	Lead Range (mg/L)	pH Range	Alkalinity Range (mg/L)
Rockwood	Distribution	6	N/A	7.32 – 7.53	250 - 320
Hamilton Drive	Distribution	4	N/A	7.72 – 7.80	210 - 220

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 2019 (Jan. 01 to Dec. 31, 2019). For regulatory sampling schedules that do not occur in 2019 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, 2019 are summarized in table 16. There was no instance of an adverse result in 2019 between Jan. 01 and Dec. 31:

Table 16: 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	105	0.49 - 1.07 mg/L

Table 17 summarizes bacteriological sampling and test results required by O. Reg. 170/03 Schedule 10 for the period of Jan. 01 to Dec. 31, 2019. There was no instance of an exceedance for a Regulatory microbiological parameter in 2019 between Jan. 01 and Dec. 31:

Table 17: O. Reg. 170/03 Schedule 10-2, Gazer Mooney Microbiological Testing Summary

Drinking Water System	Parameter	# of Samples	E. coli (min –max)	Total Coliform (min – max)	# of HPC Samples	HPC (min – max)
			Units = Cfu/100 mL			
Gazer Mooney Subdivision	Distribution only	52	0-0	0-0	52	0-3

Table 18: O. Reg. 170/03 Schedule 13-7, Gazer Mooney - Quarterly Sampling Results Summary

Test Parameter expressed as annual running average	Units	MAC	Range of Results (based on 4 sample results) (min # - max #)
Trihalomethanes	mg/L	0.100	0.013 – 0.020
Haloacetic Acids	mg/L	0.08	<0.005 - <0.005

MAC: Maximum acceptable concentration

In 2019, Gazer Mooney Subdivision Distribution System was sampled and analyzed for the Schedule 13-8 and 13-9 Fluoride parameter as per O. Reg. 170/03. In 2019, Fluoride (naturally present and not added as part of the treatment process) was detected; the analytical result was under the maximum allowable concentration (MAC).

Table 19: O. Reg. 170/03 Schedule 13.8 and 13-9 Gazer Mooney "Five Year" Sampling Results 2019

Parameter	Aesthetic objective (AO)	Maximum acceptable concentration (MAC)	Total samples	Min (mg/L)	Max (mg/L)
Sodium	200	20	2	24	26
Fluoride	2.4	1.5	1	0.17	0.17

i) Follow up on Action Items from previous management reviews

Management review was held on November 7, 2019 and covers the period between September 2018 to October 15, 2019. Below is a summary of action items discussed.

Action Item

- Provide guidance document for the building permit applicant noting the requirements of their contractor as related to "one offs" that do not have services.
- Consideration could be given to adding SCADA maintenance/upgrades as a standing agenda item to the monthly operations meeting so that all operators are aware of changes or pending upgrades by Engineering Contractor.
- Review of Emergency and Standard Operating Procedures
- Clarifying required communications with essential suppliers relating to DWQMS, including the intended scope of 'Information and Acknowledgement form'.
- Clarifying protocols for receiving and responding to consumer complaints relating to drinking water quality.

Decisions

- More frequent meetings to update the "Action Items" list and keep the responsibilities for pending improvements at the forefront of our minds.

- Implemented meter seals to any newly installed RF water meters to deter water meter tampering
- "Supplier Contractor Statement" creation for providing suppliers & services performing work for the Township a level of quality expectations. The existing "Information Acknowledgement Form" will be revised for use by developers and their contractors only.

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

Source Water Protection Plan Reporting

For reporting purposes, Guelph / Eramosa Township is subject to one Source Protection Plan (based on watershed or Conservation Authority boundaries): Grand River Plan. In 2019, all Source Protection Plans were in effect. Please see Appendix A for the full 2019 Risk Management Official and Municipal Annual Report.

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

Milne Well # 4 Pumphouse under construction since early 2019 is expected to be online by spring of 2020 and will be included as part of the Municipal Drinking Water Licencing renewal process.

Licensing Renewal Process – The renewal application for all of the Guelph/Eramosa Drinking Water Systems Municipal Drinking Water Licences are scheduled for resubmission 90 days before the date of licence expiry - on July 25, 2020. 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 including all schedules and appendices
- a completed copy of the subject system description form within the Directors Direction schedule C form
- a copy of Guelph/Eramosa's Accreditation Certificate from NSF
- 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

Please view 3.0 Legal and other Requirements update from January 1 to December 31, 2019 that could affect the Drinking Water System and/or the Quality Management System.

l) Consumer Feedback

Water pressure issues and high consumption complaints are the most frequent complaints of 2019. All were determined to be related to private issues. Other noted complaints were related to the Harris Street watermain replacement/extension or curb stop deficiencies.

m) The 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 review and development of required procedures and documents.

n) Infrastructure Review

In order to satisfy the current and pending requirements of the Drinking Water Quality Management Standard, the Director of Public Works and Operations Manager conduct an annual review of its water treatment, pumping, storage and watermain infrastructure. Taken into consideration is long term forecasting of major infrastructure renewal. The program is 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 is communicated to the owner through the annual budget process.

o) Operational Plan currency, content and updates

The DWQMS Operational Plan has not gone through any significant revisions during the 2019 calendar year. Revisions and updates made to procedures and supporting documentation have been completed as per schedule or as required in a timely manner and updated. Controlled hard copies were distributed.

p) Staff suggestions

1 Add the power usage to the SCADA trends screens so operators can monitor more efficiently

2 Rotate sampling operator to ensure well roundedness

3 Assign asset numbers to municipal fire hydrants to easily keep track of hydrant maintenance and use by contractors and Fire Emergencies or training.

3.0 Legal and other Requirements update

Date - 2019	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Jan. 21	MECP Email	2015 Watermain Disinfection Procedure A reminder that comments on the Environmental Registry The first regulation proposal (ERO #013-1840) is being made under the Safe Drinking Water Act, 2002. A second proposal (ERO #013-1839) outlines proposed amendments to the 2015 Watermain Disinfection Procedure are due by January 24, 2019.	Summary of proposed changes was sent by email sent to Operations Manager and staff.
Feb. 1	MECP Email	The Ministry released the draft Terms of Reference: Determination of Minimum Treatment for Residential Drinking Water Systems using Subsurface Raw Water Supplies for comments. If adopted, this will replace the 2001 GUDI Terms of Reference document. Comments due by April 3, 2019.	Email sent to Consulting Engineers for discussion.
Mar. 8	Gov't of Canada	Based on the latest science, Health Canada has updated the drinking water guideline to reduce the maximum acceptable concentration of lead from 0.01 mg/L, which was set in 1992, to 0.005 mg/L. The guideline was updated in collaboration with the provinces, territories and other federal departments.	For your information
Mar. 22	Ontario News	Ontario Convening Leaders to Discuss Great Lakes, Water Protection.	For your information
Apr. 25	Ontario News email	The government has released a discussion paper that outlines a more modern environmental assessment process, including immediate, short-term fixes to reduce burden and serve the interest of Ontario families and communities.	For your information

Date - 2019	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Apr. 29	Guelph.ca	The City has announced that Jennifer Rose is the new General Manager of Environmental Services, replacing Peter Busatto who is retiring after 35 years with the City.	For your information
May 2	Ontario News email	Ontario is proposing to introduce changes that will make it safer and easier for more excess soil to be reused locally. This will be achieved through a new excess soil regulation and consequential amendments to O. Reg. 153/04 (Record of Site Condition Regulation) and Regulation 347 (General - Waste Management) under the Environmental Protection Act (EPA). Ontario is also introducing changes O. Reg 153/04 under the EPA to clarify rules and remove unnecessary barriers to redevelopment and revitalization of historically contaminated lands.	For your information
May 10	Health Canada	Health Canada has released the Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Manganese. The maximum acceptable concentration (MAC) for total manganese in drinking water is 0.12 mg/L (120 µg/L). The aesthetic objective (AO) for total manganese in drinking water is 0.02 mg/L (20 µg/L).	For your information
May 16	MECP	The Ministry of the Environment, Conservation and Parks has recently released an updated version of "Taking Care of Your Drinking Water": A Guide for Members of Municipal Councils".	Link to website was provided at Council Standard of Care Training. The previously provided link works for updated version.
Aug. 23	TheRecord.com	New drinking water protections in place for Grand River watershed The updated Grand River Source Protection Plan was approved by Environment Minister Jeff Yurek on Aug. 16 and took effect that day.	For your information

Date - 2019	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Sept. 20	ERO	The Ministry of Natural Resources and Forestry is proposing changes to the Aggregate Resources Act, which would strengthen protection of water resources by creating a more robust application process for existing operators that want to expand to extract aggregate within the water table, allowing for increased public engagement on applications that may impact water resources. This would allow municipalities and others to officially object to an application and provide the opportunity to have their concerns heard by the Local Planning Appeal Tribunal.	For your information
Oct. 3	Wellington Advertiser	Puslinch Township is considering options to provide water and wastewater services to residents in Aberfoyle. One of the options is to connect to the Guelph Water System.	For your information
Oct. 24	Orangeville Today	Orangeville to explore water softener rebate to cut salt discharge into the Credit River.	For your information
Oct. 31	Ontario News email	Ontario taking action to protect the environment and hold polluters accountable Environmental violations where administrative monetary penalties may be used under the new proposal include illegal sewage discharges into waterways, selling pesticides without a permit, failing to have a certified operator when operating a drinking water system, or violating terms of a permit to take water.	For your information
Oct. 31	Guelph.ca	Notice of study commencement: City of Guelph Municipal Class Environmental Assessment for the Water Supply Master Plan Update. The City of Guelph is updating the 2014 Water Supply Master Plan (WSMP) to review our municipal water supply sources and identify priorities, including sustainable water supply options from now until 2041.	For your information

Date - 2019	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Nov. 14	Canadian Council of Ministers of the Environ. email	Draft Canadian Groundwater Quality Guidelines for the Protection of Environmental and Human Health for 101 contaminants of concern are available for public review and comment until January 10, 2020.	For your information
Dec. 4	ERO	Excess Soil Management Regulatory Proposal Ontario has finalized and is implementing new regulatory changes that will make it safer and easier for more excess soil to be reused locally and will reduce barriers to revitalize historically contaminated lands.	For your information
Dec. 9	ERO	Amendment to the Record of Site Condition (Brownfields) Regulation related to the Requirement to Sample Ground Water Ontario is proposing changes to O. Reg. 153/04 that would provide flexibility for a qualified person (a licensed professional engineer or geoscientist) to exercise professional judgement regarding the need for ground water testing where there is no soil and under key conditions.	For your information
Dec. 19	ERO	Final Decision: Ministry is holding polluters accountable by expanding the use of administrative monetary penalties for environmental contraventions.	For your information
Dec. 20	MECP Email	Today, the Ministry of the Environment, Conservation and Parks released the Minister's Annual Report on Drinking Water 2019 and the 2018-2019 Chief Drinking Water Inspector Annual Report.	For your information
Dec. 20	ERO	Amendments to the Wells Regulation to come in effect January 1, 2020.	For your information

4.0 Appendix A Source Water Protection

Pending update by March 15, 2020

Wellington Source Water Protection

Risk Management Office | 7444 Wellington Rd 21, Elora, ON, N0B 1S0

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